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MAPS-II Study Final Report for the Initiative “Museums and Public Schools” on behalf of Museums In the Park and Chicago Public Schools

Steven R Rogg

Available at: http://works.bepress.com/steven_rogg/6/
MAPS-II STUDY FINAL REPORT
for the initiative
MUSEUMS AND PUBLIC SCHOOLS
on behalf of
MUSEUMS IN THE PARK / CHICAGO PUBLIC SCHOOLS

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EXECUTIVE SUMMARY

The Museums and Public Schools (MAPS) initiative intends to “create a lasting impact on teaching and learning by integrating museum resources into the educational process and serve as a national model.” It is conceived as a “sustained partnership of museums and schools, students and teachers,” engaging them in “authentic learning experiences.” 1 This is to be accomplished primarily via the explicit incorporation of relevant (as indicated by the Chicago Academic Standards) cultural, historical, and scientific resources of Chicago’s world-class museums into the curriculum of Chicago Public Schools. The result is to be an experience of education that is powerfully rich, engaging, meaningful, and relevant - transcending common limitations of school-building circumstances and classroom isolation. Inspired by this vision of “classrooms without walls”, these bold expectations seem suitable for the nation’s third largest school district and the city’s internationally esteemed cultural institutions.

The MAPS initiative has now completed two years of program development and delivery. During this period, a MAPS Evaluation Committee has been charged with the design, development, and oversight of the initiative’s research agenda. The subject of this report, the MAPS-II Study, is that research agenda for the second program year. Built on the foundation established by the first MAPS Study, the MAPS-II Study advanced the research focus from the participant’s perspective of MAPS to a greater emphasis on teachers’ and students’ learning experiences during the implementation of MAPS curriculum.

An outcome of the original MAPS Study was to establish that participants in the “MAPS experiment” demonstrated a high degree of confidence in the “MAPS concept” and the potential viability of this initiative. The MAPS-II Study proceeds from this belief in concept viability to an examination of specific influences expected to affect its potential as an agent of school-based reform. This is a step toward a design, deemed essential, needed to test the attribution of positive reform to the MAPS intervention. As the MAPS initiative begins to provide “authentic learning experiences” it needs evidence of consequential student learning. In this respect, the MAPS-II Study serves as an initial study of the potential for MAPS to develop its capacity to achieve this evidence.

1 MAPS mission statement: http://www.museumsandpublicschools.org/About/about.shtml
Primary activities of the MAPS-II Study included:

1. monitoring of the Teacher Development Days (workshops);
2. investigation of teachers’ perception of the value of a variety of support options;
3. field observations of the implementation of MAPS;
4. informing the second revision of the MAPS curriculum guides; and,
5. testing the viability of curriculum-embedded assessment for evidence of student learning and program impact.

It is significant that the work was conducted collaboratively with the MAPS Curriculum Committee, MAPS Educators, and the MAPS program directors. Indeed, this spawned new and enhanced understandings and capabilities within MAPS. For example, collaboration on the revision of the curriculum guides and assessments resulted in a necessary awareness among the Curriculum Committee of the Understanding by Design (Wiggins and McTighe 1998) model for standards-based curriculum development. This work also revealed the critical need for a comprehensive focus on assessment in the development of curriculum, as a professional development priority for both Museum Educators and MAPS Teachers, during the teaching of MAPS, and for the evaluation of MAPS sites as well as the MAPS initiative overall. Additional findings from the activities of the MAPS-II Study include:

♦ Teacher Beliefs and Practice. Teachers are highly enthusiastic about the MAPS concept and readily commit to participation. They are also notably appreciative of the materials and expertise that MAPS provides. Teachers often comment about how important MAPS has been for themselves as educators and for their students as learners. They also tend to recognize that the materials are specifically designed to align with academic standards. Some teachers respond by designing creative learning experiences that extend or supplement the learning goals of the MAPS Units.

♦ Student Learning. There is a high degree of consensus among participants that MAPS promotes characteristically integrative, engaging, and meaningful learning. MAPS made noteworthy progress by focussing attention on student learning through: (1) initiating the development of assessment tasks to be seamlessly embedded in the curriculum materials; and, (2) dedicating its third Teacher Development Day to the examination and analysis of actual “student work artifacts” from this year’s cohort of students.

♦ Museum Experiences. Consistent with last year’s findings, MAPS teachers and their students are taking advantage of the museums and museum resources. MAPS museum excursions are substantially “more” than typical field trips because purpose, focus, and follow-up characterize them.

♦ Classroom Interaction. Students are highly engaged by the activities and materials. Teachers tend to interact in more individual ways with students while using MAPS materials.
Distinct differences in teacher-student-curriculum interactions are observed when teachers are using MAPS materials and when they “revert” to usual classroom practices.

♦ ** Teachers’ Response. ** MAPS places new demands on teachers, especially with respect to management and organization and their role identity as educators. Teachers seem to appreciate these demands and respond accordingly. Teachers especially appreciate the professional camaraderie and instructional support that MAPS facilitates.

♦ ** Principals’ Response. ** Principals see MAPS as a positive initiative in their school and they believe that their primary role is to support their MAPS teachers. Two orientation meetings for principals have begun to develop among the principals some concrete ideas about how they can realize the success of MAPS in their school.

♦ ** Museum Educators’ Response. ** Museum Educators continue to be optimistic about the importance of MAPS and have demonstrated a strong commitment to its success. Support site visits to MAPS schools have promoted understanding between MAPS Educators and school personnel. The MAPS Educators are very highly esteemed by the MAPS teachers.

As a result of the study of the 1999-2000 program year, a set of “assumptions” about the evolving MAPS initiative were identified. These assumptions, refined as five assertions, continue to be applicable at the start of the new 2001-02 program year. The Evaluation Committee believes that the serious consideration of these assertions will be particularly useful for the formation of ongoing priorities of the initiative. The assertions are:

1. The MAPS initiative is conceived as a scalable and viable engine of worthy school reform, not an auxiliary program among many available alternatives.

2. Foundational to MAPS are exemplary curricular materials that are carefully and explicitly aligned to learning standards in ways that provide powerful learning experiences which effectively utilize content, artifacts, and other relevant resources of Chicago's world-class museums and cultural institutions.

3. Successful implementation of MAPS will require substantial and sustained support of teachers including, but not limited to, exceptional professional development experiences sited at the museums and particularly grounded in the development of deep understanding of the curriculum, compatible pedagogy, and effective exploitation of museum resources.

4. Attention to what must be learned from MAPS at all levels – program level, community-level events, and in individual classrooms - is necessary to establish accountability and credibility at each level as well as to inform progressive development and scale-up. Thus, actionable research, evaluation, and assessment must continue to be developed as an integral component of the initiative.

5. MAPS must continue to develop as a capable and carefully structured organization with distinct identity yet seamlessly integrated into related structures of Museums in the Park, the individual museums, and in the Chicago Public Schools system.
Recommendations for the continued development of the MAPS initiative are grounded in these assertions about MAPS and specific results of the MAPS-II Study. In most cases, these recommendations are updated from those of the first MAPS Study, representing both the significant progress made and the needs that persist. Other recommendations spring from insights resulting from the MAPS-II Study’s new focus on teacher support and the realities of the implementation of MAPS from the vantage of the Chicago Public School classroom.

♦ Completion of the strategic plan remains a priority concern for the MAPS initiative. The plan must be comprehensive in nature with a strong emphasis on achieving the results specified in MAPS’ objectives. In this regard, it will be of utmost importance that the plan promotes best practices in curriculum development, adult education, assessment, leadership, and teaching and learning in diverse settings. This suggests an “inward” focus on program and program outcomes. Simultaneously, the Strategic Plan must have an “outward” focus that responds to a myriad of contextual influences and opportunities. Relationships between and within partner agencies will continue to require definition, commitment, and measured accountability. Strategic alliances with compatible agencies, organizations and individuals must be fostered in order to secure stable funding, expertise, and capacity to sustain growth.

♦ The next generation of MAPS curriculum materials must certainly retain the “distinctively MAPS” integration of museum resources with the Chicago Public Schools’ curriculum as defined by learning standards. In addition, new materials will need to show a more explicit match to the familiar topics “covered” at each grade. This topical match is found to be important for engaging teachers in the implementation of the materials. It is, however, insufficient to have only a topical match and the potential for alignment to learning standards. The materials, activities, and environments must be carefully designed so that, in the service of well-prepared teachers, the learning intended by the standards (i.e., knowledge, skills, and habits of mind) is likely to be achieved. Furthermore, this learning would take place under characteristically MAPS conditions of relevancy, authenticity, and creativity.

♦ The MAPS professional development events had initially been targeted at the orientation of teachers to the museums and their introduction to the MAPS curriculum. Significant new features implemented this year included: (1) identification of viable teacher support alternatives; (2) implementation of on-site support visits; and (3) consideration of the centrality of assessment in MAPS instruction and program design, management, and evaluation. It is recommended that MAPS undertake very deliberate development of a progressive professional development program that supports (1) significant professional growth over time; (2) opportunities tailored to individual specific needs; and, (3) targeted strategic needs of the initiative (i.e., assessment). Professional development needs to be seen as applicable not only to teachers but also to MAPS Educators, principals, and other leaders. Simply put, everyone in MAPS finds themselves in distinct new roles, and none possesses the full complement of knowledge and experience required to contribute at full potential. Yet, the entire burden for this must not be contained within MAPS, nor borne by MAPS Educators. Instead, the program should engage the best available resources. For example, teachers who demonstrate exemplary ability and commitment represent an untapped leadership resource that must be incorporated into the program. Likewise, the initiative can “piggy-back” on the best work of allied organizations and initiatives within Chicago Public Schools (i.e., the
Chicago Urban Systemic Program) and beyond (i.e., the North Central Regional Education Laboratory).

♦ An ongoing challenge is the development of credible **assessments** and an assessment system. The MAPS-II Study tested the viability of embedding common assessments within the curriculum materials. This was based in the belief that the most promising “place” to find evidence of the influence of MAPS on student learning is “at the site of learning.” Samples of student work, or “student work artifacts”, challenge our assumptions about the curriculum materials and what student might have learned. There would be particular value if these assessments were so carefully constructed as to provide aggregated data across the MAPS initiative. Such instruments would assess students’ performance but also the teachers’ approach to implementation and relevant contextual influences.

♦ Following from the previous recommendations, MAPS still needs to clearly articulate its **instructional model** and unique contribution to student learning. What does teaching MAPS successfully look like in the classroom? What is the teacher doing? The students? What does the learning environment look like? Clarification of an instructional model would promote coherence across the professional development settings, the classroom, and field excursions. In addition, an effective model would clarify potential opportunities and expectations for MAPS Educators, Teachers, principals of MAPS Schools, MAPS partners, and allied organizations.

♦ The MAPS initiative would be served by explicitly defining its conceptual **foundation** and promoting a “community of learners” among all participants. Access to ideas and exemplary resources would serve as intangible benefits of individual and institutional participation and also promote a more informed and capable MAPS organization. A number of perspectives are possible, but it seems that the greatest need is to set forth, as a credible publication, the rationale for MAPS as a viable education reform initiative. The criteria for the MAPS instructional model (above) could be published as well. A similar need is to describe the MAPS professional development model, especially how support for teachers is to be sustained over time and how the model is sustainable and capable of reaching critical scale.

What will it take for MAPS to realize its mission to “…create a lasting impact on teaching and learning…” to “…serve as a national model…” and to assure that “…students and teachers will be engaged in authentic learning experiences?” Careful consideration of this question, and reflection on the findings of this MAPS-II Study has led us to the recommendations just stated. We can also conclude that in its first two years MAPS has undergone rapid and significant development and growth in sophistication. It is the sincere hope of every current member of the Evaluation Committee that MAPS continues to mature and that it will do so always with the best interests of the children of the Chicago Public Schools as its greatest concern.

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2 Source: http://www.museumsandpublicschools.org/About/about.shtml
Museums and Public Schools (MAPS-II) Study  
Final Report

ABOUT THIS DOCUMENT

The Center for the Advancement and Renewal of Learning and Teaching in Mathematics Science and Technology (Center@IMSA) of the Illinois Mathematics and Science Academy (IMSA) was contracted to provide research and evaluation services on behalf of the Museums in the Park and the Chicago Public Schools. This document presents the methods and findings of the MAPS-II Study conducted in support of the Museums and Public Schools initiative and overseen by the MAPS Evaluation Committee. The time period covered by this report is September 2000 through July 2001 although references are also made to the previous year’s “MAPS-I” Study.

The report begins with a brief description of the MAPS-II Initiative and the MAPS-II Study itself. This is followed by a more complete description of the design of the MAPS-II Study including study activities, structure and methodologies. Key findings from the study are presented and this section, in turn, is followed by a concise summary of recommendations. It is worth noting that most, if not all, of the findings and recommendations should not surprise the principal animators of MAPS. This is simply because the Study was intentionally very collaborative, interactive, emergent, and naturalistic (c.f. Guba and Lincoln 1989). And finally, the appendices contain the detailed activity sequence and timeline, the full set of survey instruments and protocol, and transcripts of key contributors’ responses to open-ended questions. In this sense, the appendices are rather “generous” in content with respect to typical project reports. There are two important reasons for this. First, this document is produced solely on behalf of the MAPS Initiative itself, and therefore, there is good reason for MAPS to possess the totality of related information. Second, a prime purpose of this report is to inform future research and evaluation effort as MAPS develops. Therefore, this document is provided in the sincere hope that it will be of tangible value to those responsible for the MAPS-III Study.
The MAPS-II Initiative: Overview

The MAPS initiative is a significant opportunity for viable collaboration of the Chicago Public Schools (CPS) and the Museums In the Park (see Figure 1). The effort was founded on the expectation that the museums can be a powerful curricular resource - in both the experiential and material sense - for teachers and their students.

Figure 1: Museums In the Park (MIP) Institutions

- Adler Planetarium & Astronomy Museum
- Art Institute of Chicago
- Peggy Notebaert Nature Museum of the Chicago Academy of Sciences
- Chicago Historical Society
- DuSable Museum of African American History
- The Field Museum
- Mexican Fine Arts Center Museum
- Museum of Science and Industry
- John G. Shedd Aquarium

Toward this end, teachers are provided curriculum modules and professional development opportunities specifically designed to correlate with the CPS academic standards and Illinois Learning Standards (ISBE 1997) through the integrative utilization of museum resources. The initial MAPS program was described in March of 1999 in the following way:

Guided by the Chicago and Illinois academic standards, (MAPS) …will, over time, make museum resources a creative and integral part of classroom learning and teaching. In so doing, this partnership will enhance teacher knowledge and skills, enrich student educational experiences and advance the educational attainment of all children in Chicago’s public schools. In short, this collaboration is an investment in Chicago’s future.3

Intended outcomes or benefits of the MAPS “partnership” and “collaboration” include teacher professional development and student achievement. The current mission statement for MAPS continues to suggest this primary concern for teaching and learning, but it also specifies its intention to “serve as a national model”, presumably as a collaborative partnership and as a school improvement intervention. Here is that mission statement:

Museums And Public Schools (MAPS), a new direction for teaching Chicago’s children, will create a lasting impact on teaching and learning by integrating

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museum resources into the educational process and serve as a national model. Through this sustained partnership of museums and schools, students and teachers will be engaged in authentic learning experiences. 4

A description of MAPS from its new web site adds a bit more detail both by identifying the partner organizations, its adoption of relevant local and state standards, the development of curriculum “models”, and explicit statement of intent to be an agent of school improvement.

The MAPS initiative was created to strengthen the educational relationship between the nine “Museums In the Park” … and the Chicago Public Schools teaching community. The vast resources of these institutions serve as an indispensable learning tool for Chicago Public Schools in establishing a commitment for lifelong learning among its students.

MAPS is aimed at accelerating classroom practices of new and creative approaches to teaching. It is guided by the Chicago Academic Standards and Framework Statements and the Illinois Learning Standards with the intention of incorporating museum resources as an integral part of classroom learning and teaching. Through curriculum models developed by museum and CPS educators, classroom instruction will be enlivened while fulfilling specific academic standards. This collaboration will advance school improvement and is an investment in Chicago’s future.

These ideas are stated succinctly in recent MAPS Program Objectives:

MAPS is designed to:

♦ Implement innovative teacher development training that integrates collections of the nine world class museums into the curriculum and classroom.
♦ Increase teacher awareness and capacity in using museums as educational resources;
♦ Engage teachers and students with authentic educational experiences;
♦ Provide concrete educational experiences for long term impact on teachers, students and families
♦ Demonstrate that the Chicago Public Schools is a model for the nation in using museum effectiveness in serving teachers and students;
♦ Influence institutional systemic change; and
♦ Make MAPS a model for educational reform.

Individuals directly targeted for this intervention are teachers of grades three through six and museum educators representing each of the nine Museums in the Park institutions. The teachers are grouped as school teams of four teachers each with one teacher from each grade level. There are ten school teams from each of the six regions in the school district (see Figure 2).

It was anticipated that the teacher-participants would benefit from having the curriculum modules, access to museum educators, and access to the museums themselves as

4 Source: http://www.museumsandpublicschools.org/About/about.shtml
teaching/learning resources. The students of these teachers are expected to benefit from the experience of this new integrative curriculum experience. And finally, museum educators were expected to benefit from the experiences associated with the design of the modules and from opportunities to interact with teachers during MAPS program sessions, teacher/student museum visits linked to the curriculum, and site visits to classrooms.

The design of the MAPS-II initiative changed dramatically with respect to the initial experimental year, 1999-2000. An expected consequence is that the program would engage a greater number of teachers, they would participate as school-based teams, and they would be engaged in more significant ways. Unlike the previous year, school principals were also given defined roles in the program. Significant revisions have been completed on the original set of MAPS Curriculum Units. Each museum had one museum educator position dedicated to MAPS and the Chicago Public Schools has assigned a full-time Project Director to act in parallel with the Project Director based at Museums in the Park. And finally, the MAPS organization is in the process of developing a comprehensive strategic plan, facilitated by an external consultant.

The changes in the program design are also indicated by the definition of the target groups. These groups also represent the sample for the MAPS-II Study. Figure 2 illustrates how changes in program design have redefined the MAPS-II Study sample.

**Figure 2: Comparison of MAPS-II Sample with Initial Year**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>MAPS-I Realized</th>
<th>MAPS-II Intended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>Children in grades 3, 4, 5, or 6 whose teacher is in MAPS</td>
<td>-</td>
<td>7,200</td>
</tr>
<tr>
<td>Teacher-</td>
<td>Teachers of grades 3, 4, 5, or 6 workshop participation:</td>
<td>84</td>
<td>240</td>
</tr>
<tr>
<td>Participants</td>
<td>Teacher implementation of the MAPS Units:</td>
<td>18</td>
<td>240</td>
</tr>
<tr>
<td>Principals</td>
<td>Support for each school’s team of four teachers (one teacher of each grade 3-6)</td>
<td>-</td>
<td>60</td>
</tr>
<tr>
<td>Museum Educators</td>
<td>Representatives of each of the nine MIP museums. (9 of the 12 are dedicated to MAPS)</td>
<td>18</td>
<td>9</td>
</tr>
<tr>
<td>CPS Lead</td>
<td>Experienced CPS teachers who participate in the development of the modules and instructional design.</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>Teachers</td>
<td>Regional Education Officers</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>REOs</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
THE MAPS-II STUDY: OVERVIEW

During reviews of findings of the first MAPS Study, project leaders and key contributors expressed perspectives about ways in which the MAPS-II Study might develop as the MAPS initiative itself evolves. These included:

♦ determination of the impact on the professional development dimension of MAPS on teachers' pedagogical practices;

♦ exploration of evidence of transference of materials and teaching practices among teachers;

♦ the extent (the "footprint") to which MAPS materials influence the enacted curriculum in the classrooms of MAPS-supported teachers, and beyond;

♦ potential use of embedded assessment strategies for documenting student learning within the classroom and also to document the influence of MAPS more broadly;

♦ role of the principal and local leadership in support of MAPS teachers;

♦ voice and perspective of the student and, potentially, systematic observation of MAPS in the classroom context; and,

♦ redefinition of the roles and responsibilities of Museum Educators.

These perspectives have been used to frame the purposes, focus, and subsequent methodologies of the MAPS Study. The general purposes of the initial study was to provide: (1) the Evaluation Committee with viable formative data to inform the implementation and evolution of MAPS; (2) a summative perspective of the first year activities that inform future plans; and, (3) baseline data for ongoing evaluation of the initiative should it continue as planned beyond this first year. The MAPS-II Study continued with these general objectives (see Figure 3), building on the foundation provided by the initial study. However, the focus of the Study shifted from being primarily descriptive of the educators’ experience of MAPS to the students’ experience.

This move to a more student-centered perspective included exploration of the interactions and contextual factors relevant to the students’ experience of MAPS. What we call “interactions” include, for example, how the student interacts with the curricular materials, and how the students interact with one another and with their teacher while engaged in MAPS activities. Contextual factors included: access to instructional materials; availability of museum resources; access to technical, pedagogical, and content-domain assistance; and administrative support. The
performance of program administrators, managers, or instructors was not assessed directly, only as reflected in participants’ (especially students’) experiences of the MAPS program.

Figure 3: General Purposes of the MAPS-II Study

The purposes of the MAPS-II Study are to provide:
♦ the Evaluation Committee with viable, formative, “just in time” interim reports to inform the implementation and evolution of MAPS;
♦ a summative report of the second year activities to inform future planning; and,
♦ baseline data for ongoing study of the initiative as it continues beyond its second year, especially for the assessment of the MAPS contribution to student achievement.

The Study, then, was both formative and summative—it has provided feedback to guide the ongoing evolution of the initiative and this final report documenting the second year of implementation. A mixed-methods approach (Frechtling 1995; Frechtling and Sharpe 1997) was implemented in order to provide an “array of credible evidence” (i.e., avoiding sole reliance on self-report surveys) with triangulation of confirmatory evidence for more significant questions. The new focus of the Study resulted in a revision of the Focus Questions. The comparison of the initial and the new questions (Figure 4) illustrates how the MAPS Study is built on the foundation established in the initial MAPS Study.

Significant here is the initiation of a shift from a focus on MAPS as experimental (“descriptive, exploratory and self-reported”) toward a more student-centered, more value-added, orientation (“observed factors influencing students’ experiences”). In making this distinction, the MAPS Evaluation Committee understood that the focus of the Study for MAPS-I was appropriately descriptive and, essentially, a test of the perceived viability of the MAPS concept among initial participants. In the initial year, MAPS was simultaneously creating and testing program components (e.g., project management, professional development, and curriculum writing) and had yet to develop a long-term or strategic plan. As a consequence, traditional program evaluation – assessment against program goals – may not have been sensible, and may have even been somewhat counter-productive. Instead, effort was made to facilitate the learning of the “MAPS Community” about MAPS, even as it’s identity was just beginning to take shape.
**MAPS-II Study Focus Questions**

<table>
<thead>
<tr>
<th>MAPS-I Study Focus Questions</th>
<th>MAPS-II Study Focus Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focus is descriptive, exploratory and self-reported.</strong></td>
<td><strong>Focus on observed factors influencing students’ experiences.</strong></td>
</tr>
<tr>
<td>In what ways do teacher-participants view their participation in MAPS as being of professional importance? (To what extent do they recognize and value the alignment to academic standards? Do they recognize and value the integrative nature of the modules and museum resources?)</td>
<td>How does participation in MAPS influence teachers’ professional beliefs (i.e., efficacy) and practices? What evidence is there that, when engaged in MAPS activities, students are learning ideas defined in the standards, and in ways congruent with the standards?</td>
</tr>
<tr>
<td>What evidence can we provide that teacher-participants’ familiarity with museum resources has changed as a result of their participation in MAPS?</td>
<td>In what ways, and to what extent, are students experiencing museums and museum resources?</td>
</tr>
<tr>
<td>In what ways and to what extent do teacher-participants report implementing the MAPS modules in their enacted curriculum?</td>
<td>In what observed ways, and to what extent, are teachers and their students interacting with the MAPS curricular materials and with one another?</td>
</tr>
<tr>
<td>What was the experience of implementing the curriculum like for them? (Was it easy or difficult? What were the challenges? What went well?)</td>
<td>What action steps are teachers taking to increase the time and extent that their students engage with MAPS materials, museums, and museum resources?</td>
</tr>
<tr>
<td>What is the teacher-participants’ commitment to continue using these materials?</td>
<td>What action steps are principals taking to promote and support implementation of MAPS in the classroom?</td>
</tr>
<tr>
<td>What is the teacher-participants’ commitment to continue using museum resources?</td>
<td></td>
</tr>
<tr>
<td>What support do teachers perceive that they need to continue using these materials and museum resources?</td>
<td></td>
</tr>
<tr>
<td>How did the mentor teachers and museum educators who participated in the development of the curriculum modules perceive that experience? (In what ways was the experience significant? How might it be improved next time?)</td>
<td></td>
</tr>
<tr>
<td>To what extent do the curriculum modules meet the design specifications? (Are they of high quality? Are they aligned with the academic standards? Are they integrative? Do they effectively utilize museum resources? Are they accurate and correct?)</td>
<td></td>
</tr>
<tr>
<td>In what ways have the work habits and priorities of the museum educators changed as a result of the MAPS initiative? How do museum educators see their role with respect to the Chicago Public Schools, its teachers, and its students?</td>
<td>In what ways have the work habits and priorities of the museum educators changed as a result of the MAPS initiative and how do museum educators see their role with respect to the Chicago Public Schools, its teachers, and its students?</td>
</tr>
</tbody>
</table>

Circumstances were also very different in the second year. Already concerns were raised about “getting standardized test score results from students in MAPS classrooms”. The reader should wonder whether it is possible to have already attained what most involved would agree to be exemplary MAPS Classrooms. Could this happen simply as a result of the distribution of curriculum units, providing introductory workshops, and a field trip or two? Clearly the answer is “No!” - unless the vast literature on teacher change and professional development is ignored.

- 7 -
It is even more difficult to imagine that limited “exposure” to MAPS, even if conducted with utmost fidelity, might produce observable differences in standardized test scores (e.g., ITBS). Are these tests appropriate - or adequate - measures of the intended learning outcomes? Is the students’ encounter of MAPS so powerful as to cause a marked improvement in scores on tests taken that very spring? Can we adequately account for the plethora of other influences?

Important political considerations notwithstanding, the application of extant measures to MAPS in its second year would be extremely difficult to justify. For those convinced that contrasts using extant measures are needed to assess MAPS inevitably, there is comfort in knowing that the Chicago Public Schools do retain these data. The study could be accomplished post-hoc.

Yet, and with marked passion, the MAPS Evaluation Committee wants to (and needs to) demonstrate the benefits of MAPS for its students. The alignment of the MAPS curricular experience (the enacted curriculum) with the Chicago Academic Standards is crucial in this regard. It will be necessary to demonstrate that MAPS supports them, not simply by intent, but by result. Therefore, the approach adopted for the MAPS-II Study, was to initiate assessment, linked to the Chicago Academic Standards, as close as possible to the MAPS intervention.

In short, if the MAPS-I Study was fundamentally a test of the perceived viability of the MAPS concept, the MAPS-II Study was a test of the perceived viability of assessment embedded in the MAPS curriculum. If successful, seamlessly embedded assessment holds promise both for informing instruction at the classroom level and for demonstrating the “value-added” of MAPS at the program level. The importance to MAPS of realizing this potential, and soon, cannot be overstated.


**STUDY DESIGN**

The design of the MAPS-II Study is best described as mixed-methods (Frechtling 1995; Frechtling and Sharpe 1997) and naturalistic or emergent (Guba and Lincoln 1989) inquiry. The reader might also recognize in this report the ethnographic nature of the site studies (Van Maanen 1988) and that some consideration is made about the “systemic” placement of MAPS as an engine for reform (O’Day and Smith 1993; Fullan 1994).

The MAPS-II Study is decidedly not an experimental, quasi-experimental, or “controlled” design. Why not? It is easy to argue that even the second year implementation of MAPS itself is not itself firmly “controlled”, per se. A reading of participants’ comments illustrate this point (see appendices). Yet, this is certainly not a negative comment about MAPS. On the contrary, it is an acknowledgment that the Initiative is being invented, rapidly evolving, and gaining definition. In fact, MAPS has been, at the time of this report, working in earnest on writing its new strategic plan. It is apparent, then, that a controlled design applied to a rapidly evolving enterprise is not likely to succeed, much less contribute to inform the development of the effort. Full understanding of this point is crucial for fair interpretation of the design attributes and findings from the MAPS-II Study.

Having established (we hope) the methodological archetype of the MAPS-II Study, the remainder of this section provides the reader with more specific detail. We begin by examining the fundamental design parameters, which are determined by the design of the MAPS-II Initiative itself. This precludes a structure (definition of “sample”) for the MAPS-II Study design. Identification and scheduling of Study activities, its survey instruments, and its protocols follow.

Much about the Study becomes clear simply by examining the activities and activity sequence or timeline (Appendix B: Detailed MAPS-II Study Timeline). It will be seen, for example, how MAPS-II Study activities and MAPS Teacher Development events are so integrated at times to be virtually indistinguishable from the participant’s vantage. This was, at least, our intent.
DESIGN PARAMETERS AND STRUCTURE

In the second year the MAPS-II initiative requested each of the Regional Education Officers (REOs) of the six regions of the Chicago Public Schools to identify 10 schools to participate in MAPS. Principals at each of these schools were informed that the commitment would involve one teacher from each of grades 3, 4, 5, and 6. Each teacher would be provided two MAPS curriculum units (a.k.a. “themes”) over the course of the year, participate in MAPS Teacher Development days, and conduct two field trip visits to museums. MAPS would cover costs of admission to the museums and round trip bus transportation.

The sixty “MAPS Schools”, therefore, are uniformly distributed (by region) throughout the Chicago Public Schools’ territory. There are approximately 456 eligible elementary schools in the system\(^5\), and hence, the sixty MAPS schools represent \((60/456)\times 100\% = 13.16\%\) of the system.

**Are MAPS Schools Representative of CPS?**

Are the selected schools representative of the system? To test this question, we compared the distribution of grade 6 norm grade equivalent reading scores on the Illinois Test of Basic Skills (ITBS) of the selected MAPS schools with the set of other eligible schools (see: Figure 5).

The distribution shows that mean ITBS reading scores (Medial Grade Equivalent) for grade 6 are higher among the group of MAPS schools than CPS schools in general\(^6\). (Note the sloping blue line connecting the group means.) However, it is evident that the MAPS schools do vary considerably on this measure. Although average performance on this measure indicates a positive bias favoring MAPS schools, MAPS schools do not appear to be a highly select subgroup of CPS schools. From Table 1 we see that the group mean difference is on the order of one-third of grade level equivalent (6.58214 - 6.23909 = 0.34). This will need to be kept in mind, for example, when MAPS begins to use test measures to evaluate this intervention.

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5 The count of eligible elementary schools was defined as the number of schools with sixth grade scores for reading on the ITBS. Source: http://acct.multil.cps.k12.il.us/download.html/itbs_grade.txt.gz

6 That the means are significantly different is confirmed by the t-test \((t = -3.652, df. = 448, P > |t| = 0.0003)\). Homogeneity of variance was confirmed by Bartlett’s test \((F = 1.8861, P > F = 0.1696)\).
Figure 5: Comparison of CPS and MAPS schools on Grade 6 Reading Scores

Table 1: Comparison of ITBS Reading Median Grade Equivalent

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std Error</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPS</td>
<td>394</td>
<td>6.23909</td>
<td>0.03314</td>
<td>6.1740</td>
<td>6.3042</td>
</tr>
<tr>
<td>MAPS</td>
<td>56</td>
<td>6.58214</td>
<td>0.08790</td>
<td>6.4094</td>
<td>6.7549</td>
</tr>
</tbody>
</table>

Another illustration of the diversity among MAPS schools is provided by Figure 6. Here we see that the MAPS schools tend to have a higher percentage of children of families classified as low income, but they also tend to have lower percentages of children classified as having limited English proficiency. Again, it is instructive to note that the MAPS schools are certainly not homogeneous on these demographic indicators. This lends support to our conclusion that this cohort of MAPS schools is somewhat but not perfectly representative of the Chicago Public Schools. Because the Focus Questions of the MAPS-II Study (Figure 4, Page 7) do not demand a representative sample, per se, this level of verification is deemed sufficient for our purposes.
MAPS-II Study Design Parameters Summary

Already we have specified some of the MAPS-II design parameters pre-determined by the program design of the MAPS-II initiative. Namely, these are the number and identity of schools and the number and grade level assignments of teachers. Other such parameters include the instructional and curriculum development staff of the MAPS Initiative. These thirteen individuals, collectively called “MAPS Educators”, are employees of either the museums or Chicago Public Schools. For the 2000-01 program year, nine MAPS Educators were from museums and four were CPS Lead Teachers. This information is provided in Table 2.

Here we need another set of definitions because the MAPS Schools were divided into three subgroups. Half of the schools, which we will simply continue to call “MAPS Schools”, are schools that received the “standard” MAPS benefits, let’s say. A second set of 24 received the standard MAPS benefits as well, and in addition they were provided on-site support visits from MAPS Educators. For the sake of this report, we’ll call these the “MAPS+” group of schools. And finally, there is a group of six schools that we will call “MAPS6”. These can be thought of...
as MAPS+ schools because they received the same benefits of the 24. In addition, the research team visited the MAPS6 Schools. This is also illustrated in Table 2.

Table 2: MAPS-II Study Design Parameters

<table>
<thead>
<tr>
<th>Value</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>Schools</td>
</tr>
<tr>
<td>4</td>
<td>Teachers per School</td>
</tr>
<tr>
<td>30</td>
<td>Students per Teacher</td>
</tr>
<tr>
<td>6</td>
<td>Site-Based Study “MAPS-6” Schools</td>
</tr>
<tr>
<td>9</td>
<td>a. Museum Educators</td>
</tr>
<tr>
<td>4</td>
<td>b. CPS Lead Teachers</td>
</tr>
<tr>
<td>13</td>
<td>c. MAPS Educators (a + b)</td>
</tr>
<tr>
<td>30</td>
<td>Site-Based Support “MAPS+” Schools</td>
</tr>
<tr>
<td>4</td>
<td>Teachers Visited per “MAPS+” School</td>
</tr>
</tbody>
</table>

The reason for these distinctions among MAPS-II Schools is twofold because it serves both program and research needs. Programmatically, the MAPS+ sites provided MAPS Educators with opportunities to meet with teachers in their classrooms. It was expected that the MAPS Educators would use these opportunities to provide direct support for teachers as they implemented MAPS, and also to initiate development of an overall MAPS program for providing sustained support devices (such as web-based resources).

Why provide on-site support to only half (6 MAPS6 schools plus 24 MAPS+ schools) of the 60 MAPS schools? The consideration here was one of resource allocation. MAPS leaders wanted each school to be visited at least twice by MAPS Educators so that the Educators could both learn about the needs of the schools and have an opportunity to respond. Given all other duties of MAPS Educators for curriculum development, design and delivery of Teacher Development Day workshops, etc., it was determined that only half of the schools could be supported this year. The other half would be visited next year. Although this approach was not entirely comfortable, it was sufficient for accomplishing the immediate need to develop understanding of support needs and to initiate the design of a sustained support program.

**MAPS-II Study Nested Design**

Two primary objectives determined the design of the MAPS+ site support program and in a similar way, two primary objectives defined the ultimate design of the MAPS-II Study. In both
cases, resource allocation was a necessary consideration. Both designs – on-site support and MAPS Study - were, in fact, established concurrently.

For the MAPS-II Study, the two drivers were the need for (1) information which fairly represented the overall realities of the MAPS Initiative; and (2) rich information about the experiences with MAPS of schools, teachers, and their children. This boils down to a non-negotiable requirement of both breadth and depth.

The use of the mixed-methods approach addresses this need in part because the use of self-report survey information facilitates the broad perspective while interviews and direct observations support the development of “thick description” (Van Maanen 1988). All of these activities are resource intensive, and therefore, represent a significant investment.

A nested design was adopted in order to accomplish the objectives for both depth and breadth, and to do so with necessary efficiency. This structure was first illustrated in Table 2 and more explicitly in Table 3, below. What makes this design nested? Recall the definitions given earlier in this report for the MAPS, MAPS+, and MAPS6 subgroups of the MAPS-II Schools. Note how the MAPS6 schools are effectively nested within the MAPS+ schools, which in turn are nested within the “standard” MAPS schools.

### Table 3: MAPS-II Study Nested Design

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
<th>Principals</th>
<th>Teachers</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAPS</td>
<td>All regular MAPS activities and benefits.</td>
<td>30</td>
<td>120</td>
<td>3,600</td>
</tr>
<tr>
<td>MAPS+</td>
<td>MAPS schools plus Site Support visits.</td>
<td>24</td>
<td>96</td>
<td>2,880</td>
</tr>
<tr>
<td>MAPS6</td>
<td>MAPS+ schools plus MAPS-II Study visits.</td>
<td>6</td>
<td>24</td>
<td>720</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>60</td>
<td>240</td>
<td>7,200</td>
</tr>
</tbody>
</table>

Therefore, all MAPS teachers contributed to certain MAPS-II Study activities, particularly the Teachers Development Days and surveys. Then, from the MAPS+ schools, the Study draws from the observations and impressions of the MAPS educators. This provides perspectives and information that the observation of Teacher Development Days and that the self-report surveys do not. And finally, school visits conducted by the external research team from the Illinois Mathematics and Science Academy (IMSA) provides additional thick description from six “well-

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7 This speaks volumes about the high level of responsiveness of the MAPS organization. There are numerous examples were research and program decisions were made to result in a highly integrated design. The design of the final Teacher Development Day is a prime example.
selected” sites (one from each region). The members of the IMSA research team, being in a role very distinct from that of the MAPS Educators, are in a position to seek more depth during site visits. A full development of the partition of these roles is provided in Appendix A: MAPS Schools Studies Protocol.

**Selection of MAPS6 Sites**

The MAPS6 sites were well-selected with the intention of providing a diverse selection of settings. These observations were expected to provide thick description to extend what MAPS Educators observed during site support visits, to explicate survey data, and to inform the emergent development of the Study itself. With these purposes in mind, the Evaluation Committee defined three requirements for the selection of MAPS6 sites. First, there would be one school selected from each of the six Chicago Public Schools regions (recall that there are 60 MAPS schools, ten from each region). Second, the MAPS6 schools would be embedded within the MAPS+ schools in order to maintain a nested design (described earlier). And finally, the schools would be selected for both demographic and achievement diversity. How this was accomplished is shown in Figure 7 and the following discussion.

**Figure 7: Selection of MAPS6 Sites**
The demographic factors of concern to the Committee were poverty, English proficiency, mobility, and ethnic diversity. Proxy indicators for these were respectively: (1) percent of students qualified for free or reduced price lunch, (2) percent of students classified as limited English proficient, (3) percent mobility, and (4) a composite diversity index. For the sake of simplicity, the demographic index was defined as the composite average of these four indicators.

We should note that the fourth indicator, a “diversity index” was constructed as a simple linear transformation on the standard deviation of the percentages of students in each of the four available ethnicity classifications: “White”, “Black”, “Hispanic” and “Asian”. Thus, the value of this index for a relatively homogeneous school (by ethnic composition) is lower than that of a heterogeneous school. The linear transformation was used to conveniently establish the scale such that “0” indicates absolute homogeneity and “100” indicates maximum heterogeneity.

Then, since CPS administers the Iowa Test of Basic Skills (ITBS) it was convenient to use school level mathematics and reading rates for the required achievement indicators. Again, for simplicity, this index was defined as the average of the mathematics and reading percentages of students at or above national norms.

When this achievement index is plotted against the demographics index, as in Figure 7, the MAPS+ schools are suitably dispersed in this two-dimensional space. The graph confirms the demographic diversity among the schools that was previously illustrated in Figure 6. It also reveals the differential achievement of the MAPS+ schools with respect to their demographics. This provided the MAPS Evaluation Committee with a means to select the MAPS6 sites from among the MAPS+ schools also with some assurance that the schools vary by demographics and achievement. The schools thus selected for the MAPS6 site studies are circled on the graph.

Finally, it is worth noting that the original intent, and preference, was to use a productivity index derived from Hierarchical Linear Modeling (HLM) because this would have produced a more valid, less distorted, dispersion. However, recent data were not readily available and since our purpose was site selection the less elegant approach seemed very sufficient. What was required was to select sites with confidence that the result would be a diverse group. The indices are not required for any other purpose, i.e., to provide contrasts of school sites, and so the rudimentary nature of these rather contrived indices is tolerable.
ACTIVITIES AND TIMELINE

Having established the project’s parameters and the corresponding structure and methodology of the Study, it was possible to chart primary activities and timeline. These are listed in Appendix B: Detailed MAPS-II Study Timeline. These details, representing the realized schedule, are provided both to inform the reader about how the Study and MAPS itself played out, but also to inform subsequent research and evaluation endeavors.

Notice that the activities include not only the expected work of design, instrument development, and analysis, but it also included significant interaction with the MAPS Project Directors and MAPS Curriculum Committee. In part this reflects the Study’s function to provide “just in time information”. An example of this is the design of a new Curriculum Unit Survey to quickly inform the revision of the existing curriculum units (see: Appendix C: Survey Instruments).

More significantly, however, these activities additionally illustrate the role of the Study as a promoter of real-time learning of the MAPS community about itself. The perspective is that all MAPS leaders and participants were, in some way, members of the MAPS-II Study team. What does this mean? Perhaps an example might help explain.

On the timeline (page 75) for October 11, 2000 there are activities listed as “Orientation on School Visit Model (Site Support Inventory)” and “Orientation on student assessment”. These were sessions conducted in collaboration with the MAPS Curriculum Committee to prepare for Site Support Visits and also to explore the potential for designing embedded assessment tasks for the curriculum units. The members of the MAPS Curriculum Committee, primarily MAPS Educators, were, therefore, collaborators in these aspects of the design and conduct of the MAPS Study.

As will be reported later, the MAPS Study “learned” from the MAPS Educators’ site visits. While their primary task was to support implementation at MAPS sites, they were also responsible for reporting impressionistic non-evaluative observations on behalf of the Study. Likewise, MAPS Educators contributed significantly to the design and development of embedded performance tasks, resulting in what we called “student work artifacts” - an activity of the MAPS-II Study. The point is that MAPS Educators were, at appropriate times, active collaborators (as opposed to passive objects) of the MAPS-II Study.
MAPS Teachers were, at times, agents of the MAPS-II Study as well, although to a lesser extent than MAPS Educators were. This was the case for the MAPS6 sites where the local MAPS Lead Teacher assisted with setting-up and conducting the site visits. More significantly, the third and final Teacher Development Day was intended not only to instruct teachers in the importance of assessment, but also to engage teachers in discerning the potential for embedded assessment tasks to inform both MAPS teachers and the MAPS program. More is written about these ideas later in this report (see Appendix G: Student Work Artifacts and Appendix H: Teacher Development Day III).

In summary, the activities of the MAPS-II Study included the usual expectations for a research and evaluation component. Additionally, much of the work involved the development of MAPS personnel and participants as collaborators in the Study. This was seen as an important approach not only for reasons of economy, i.e., by enlisting additional observers. Perhaps the more important reason is to promote among the MAPS community an “inquiry mentality”. This, it seems, would be a natural posture for this particular partnership as a consequence of the scholarly characteristics of the institutions involved. But it may also be a necessary habit. MAPS is experimental and it is also complex. It unequivocally needs to demonstrate “value added” with respect to student learning. This seems that it would require a whole community effort, not the kind of thing to subcontract to a vendor who works independently of the Initiative and without a shared stake. The program aspects of MAPS and its on-going learning (and demonstration of value) are highly interdependent.

**Survey Instruments**

Self-report surveys were used to collect demographic information, participant satisfaction and impressions, and baseline data for future longitudinal study. For the most part, these were surveys that were continued, sometimes revised, from the MAPS-I Study. A summary of the instruments and the events for which they were completed is provided in Table 4. The forms themselves are reproduced in Appendix C: Survey Instruments. In addition, an illustration of the initial (intended) plan for administration of surveys, in the context of the mixed-method nested design, is given by Figure 8. In order to present the information in context of the nested design, additional information about specific instruments or survey items is discussed in the Findings section, which begins on page 20 of this report.
### Table 4: Summary of Survey Instruments

<table>
<thead>
<tr>
<th>Survey Form</th>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAPS Teacher</td>
<td>Kick-Off Event</td>
<td>September 28, 2000</td>
</tr>
<tr>
<td>MAPS Principal</td>
<td>Kick-Off Event</td>
<td>September 28, 2000</td>
</tr>
<tr>
<td>Workshop Feedback</td>
<td>Teacher Development Day-I</td>
<td>October 27, 2000</td>
</tr>
<tr>
<td>Workshop Feedback</td>
<td>Teacher Development Day-II</td>
<td>January 19, 2001</td>
</tr>
<tr>
<td>Principal Feedback</td>
<td>Principal Orientation Day-II</td>
<td>February 7, 2001</td>
</tr>
<tr>
<td>Curriculum Unit Revision</td>
<td>(re-publication editing of extant units)</td>
<td>April 4, 2001</td>
</tr>
</tbody>
</table>

### Figure 8: Instrumentation Plan

<table>
<thead>
<tr>
<th>MAPS-II Study Group</th>
<th>Role</th>
<th>Role Count</th>
<th>MAPS Impressions</th>
<th>Teaching/Learning</th>
<th>MAPS Support Survey</th>
<th>TDD 1 Feedback</th>
<th>Unit 1 Activity</th>
<th>TDD 2 Feedback</th>
<th>Unit 2 Activity</th>
<th>Unit II Feedback</th>
<th>Site Study Inventory</th>
<th>Site Study Observations</th>
<th>Site Study Interviews</th>
<th>MAPS Impressions II</th>
<th>Teaching/Learning II</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Principal</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>B Principal</td>
<td>30</td>
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<td>C Teacher</td>
<td>24</td>
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<td></td>
</tr>
<tr>
<td>A Student</td>
<td>2,880</td>
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<td>B Student</td>
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<tr>
<td>C Student</td>
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</table>
FINDINGS

The MAPS-II Study contribution to the ongoing development of the MAPS Initiative falls into four general areas. First, the Study continued to monitor Teacher Development Days, both to monitor teachers’ satisfaction with these events and to understand to extent to which these events were relevant, useful, and sufficient. The second area is the initiation of the MAPS+ “site support” concept and the assessment of teachers’ perceived needs for support. A third area refers to collaboration with the MAPS Curriculum Committee on the review and revision of the extant curriculum units. And finally, the last - and most demanding of the three - is the initiation and testing of the MAPS Initiative’s potential to design, develop, and implement a system for the assessment of student learning attributable to MAPS.

MAPS TEACHER DEVELOPMENT DAYS

The MAPS Teacher Development Days were typically attended by members of the Evaluation Committee and the research team. A feedback survey was administered at the end of each session (see Appendix C: Survey Instruments, Page 77). This provided an opportunity to observe teachers’ response to the MAPS program over the course of the year.

Observations of these events confirm teachers’ high regard for the museums and the potential that the museum resources represent for their classrooms. In addition, the workshops themselves continue to be regarded by teachers as essential. Teachers value the workshops not only for the orientation they provide but also for the professional exchange of ideas among grade-level colleagues and the museum educators. Findings from the Teacher Development Days speak to two questions. First, they contribute to answering questions about teachers’ views of MAPS. And second, they provide some insight into ways that the MAPS Initiative might design a more effective professional development program-beyond mere orientation to the MAPS materials, museum resources and other museum programs.

Teachers’ Perspectives on MAPS

Teachers’ support for the “MAPS concept” remains very strong. This was demonstrated in the MAPS-I Study and confirmed here as Figure 9 (below) shows. Notice that all responses are
highly biased toward the “Strongly Agree” end of the scale. Also apparent is the increase between TDD-I and TDD-III on two of the items: “MAPS is important to me as a professional teacher”, and “I use museum resources in my classroom”.

Figure 9: Changes in Teachers’ Perspectives of MAPS from TDD-I to TDD-III

For the first Teacher Development Day (TDD-I) there were N=212 responses to these items and N=72 for TDD-III. It is possible that the differential attendance in the first and final events accounts to some extent for these differences. For example, the N=72 teachers participating in the final event may, in general, may be among the more committed MAPS Teachers. This possibility should be kept in mind when considering these results. Recall that the assessment of changes in teachers’ perspectives from TDD-I to TDD-III was not an objective to the MAPS-II Study. The suggestion that changes may have been detected is important, however, because it indicates that these data should be useful for longitudinal monitoring of the MAPS program. This contributes to the objective of the MAPS-II Study to provide baseline data (Figure 3, page 6). This also implies that MAPS should continue to utilize these instruments and maintain these data in a structure suitable for longitudinal analysis.

Having said this, a look at how teacher report using museum resources “in my classroom” is worth a second look. Figure 10 provides the frequency distribution and box plot of the N=72 responses to this item at TDD-III.

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8 In this analysis, individual teacher’s responses at TDD-I were not matched with their response at TDD-III. This could be done with these data if the question is found to be important to resolve.
Figure 10: Response to: “I use museum resources in my classroom” at TDD-III

<table>
<thead>
<tr>
<th>Label</th>
<th>Level</th>
<th>Count</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>1</td>
<td>38</td>
<td>0.52778</td>
</tr>
<tr>
<td>Agree</td>
<td>2</td>
<td>30</td>
<td>0.41667</td>
</tr>
<tr>
<td>Disagree</td>
<td>3</td>
<td>4</td>
<td>0.05556</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>4</td>
<td>0</td>
<td>0.00000</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>72</td>
<td>1.00000</td>
</tr>
</tbody>
</table>

Figure 11: Comments of four teachers who indicated "Disagree"

<table>
<thead>
<tr>
<th>ID</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>There were too many lessons and the curriculum was already planned, so it was difficult to fit them all in. The teacher booklet should have all the activities and he/she can make copies for the students if he/she has or wants to use them. The activities were fine and they helped with the curriculum. The standards had a more clear experience and meaning in the role of the museums in learning. It's not just a place to visit like a park.</td>
</tr>
<tr>
<td>15</td>
<td>The students are willing as the teachers are learning?</td>
</tr>
<tr>
<td>39</td>
<td>Most of the lessons were enjoyed by the students. The design of some activities could have give more specific directions. I do think they helped students understand the curriculum and enjoyed learning it. I going over these forms with other teachers-it was evident that all teachers had different expectations for their students as to how specific the answers should be.</td>
</tr>
<tr>
<td>70</td>
<td>I am not convinced that Maps addresses all the standards for science. I am a new teacher so I may have overlooked this. I seemed to have trouble being certain the students were exposed to all the standards through the Maps units for my grade level. I am much more inclined to implement the program if I have clarity it address everything, specifically ITBS and ISAT type questions. If I could have administrative help with lesson planning to insure I'm doing my job right, that would be more helpful.</td>
</tr>
</tbody>
</table>

It is expected that all participants in MAPS would have used the MAPS curricular units and therefore, would agree to this statement. Notice that there are four teachers who had responded “Disagree”. Cross-referencing to open-ended responses to items on the same instrument (page 87) suggests that at least three of the four teachers had at least tried the materials. This can be seen in Figure 11. It is possible that these teachers interpreted the item to imply, for
example, use of museum resources other than that provided by MAPS. At any rate, it seems appropriate to treat these four responses as outliers.

**Teachers’ Perspectives on MAPS Events**

Figure 12 and Figure 13 summarize teachers’ perspectives on the workshops themselves. Consistent with findings from the MAPS-I Study, the MAPS Teacher Development Days continue to earn high ratings from participants. The two examples provided above are representative of two different kinds of experiences. Both in the first and second years of MAPS, the first two Teacher Development Days were primarily to orient teachers to the MAPS program, the MAPS units, and museum resources.

**Figure 12: Participants’ Perspectives of the TDD-I Event**

The third event (TDD-III) is characteristically very different. In both MAPS-I and MAPS-II the third session was used to reflect on the program year just completed, and to anticipate new developments for the next school year. Also, professional development staff from the Illinois Mathematics and Science Academy, rather than MAPS Educators, facilitated the “main event” of these sessions. In MAPS-I, the TDD-III was designed to capture teachers’ views and recommendations for improving MAPS. The information gained at this session was immediately available to a retreat of the Strategic Planning Committee and several significant revisions were determined.

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9 These four records were inspected to see if perhaps the teachers had reverse-coded responses. Since the response pattern across items was similar to adjacent records (mostly “1” and “2”) misunderstanding the scale is not a viable explanation for this response to this item.
For MAPS-II the session was also taken as an opportunity to inform “MAPS-III.” The session was more focussed, however, than it’s MAPS-I counterpart. Rather than survey a broad array of issues and ideas, the final session of MAPS-II was used to examine the multiple roles of assessment in MAPS. Findings from this session are developed in more detail later (see Assessment of MAPS and Student Learning, page 30). At this point, though, it is sufficient to acknowledge the distinct difference between the first Teacher Development Days and the final event.

**SUPPORT OF MAPS TEACHERS**

The Professional Development Day Feedback Questionnaire completed by teachers at the October 27 event contained items under the heading: “How might MAPS support you?” The questionnaire is reproduced starting on page 81 in the appendices. Our purpose for including these items was twofold. First, this information was expected to be of potential value for the MAPS Educators as they prepared for their initial site-based support visit to thirty MAPS+ schools. It was also expected that the information might have utility for selecting the sites most in need of assistance this year. These results were reported to the MAPS Evaluation Committee on November 20, 2000. Members were invited to share these results with MAPS Educators and other leadership.
Completion Rate and Contact Information

The first item requested contact information including name, school name, and e-mail address. There were 210 questionnaires returned.\textsuperscript{10} Of these, 192 teachers provided their name and 85 provided an e-mail address. This suggests that approximately 44\% of the teachers knew and were willing to provide their e-mail address. This provides the current best estimate of the proportion of MAPS teachers for whom e-mail might be a viable tool for access to support services. Note that only three teachers provided district e-mail addresses (i.e., name@cps.il.k12.us), the rest appear to be personal accounts from a variety of service providers.

Results of Rating and Ranking Item

Preliminary results of the item number 2 (see page 82) are provided below. Note that the six support alternatives listed are those described in the “Site-Based Support Model” (Figure 28, Page 73). Descriptive statistics and bar charts are provided below for both the rating (perceived importance) and the ranking of the support alternatives provided. The rating approach is intended to determine the extent to which teachers see each of the support alternatives as generally important. In contrast, the ranking is to show the extent to which teachers find some forms of support more important than other supports. The results should be considered with these distinctions in mind.

The trend in Figure 14 suggests that teachers were generally favorable about all six of the support alternatives provided. Comparing Figure 14 with Figure 15, an apparent trend is the affirmation of the importance of the Professional Development Days, as well as considerable interest in a MAPS website.

The support alternatives showing the lesser degree of importance are “E-mail access to MAPS Educators” and “On-site classroom visits by MAPS Educators”. Note however, that this does not suggest that these items are not important, only that they are, in general, perceived as being relatively less important that the other alternatives. In fact, Figure 14 indicates that teachers, in general, saw these items as being important. Note also that the corresponding means from Table 5 (1.98 and 2.01) are virtually at the value for “Important” (2.0). In summary, teachers

\textsuperscript{10} Teachers were asked to respond to 32 items on the questionnaire. Forms with fewer than five total responses were not included in the analyses.
appear to agree that all of the support options listed are important to them, even if some are somewhat more important than others.

**Figure 14: Perception of Importance of MAPS Teacher Support Alternatives**

<table>
<thead>
<tr>
<th>Item</th>
<th>a. Professional Development Days</th>
<th>b. Telephone Access to MAPS Educators</th>
<th>c. E-mail access to MAPS Educators</th>
<th>d. The websites of the nine Museums in the Park member museums</th>
<th>e. A MAPS website with the units, links to resources, etc.</th>
<th>f. On-site classroom visits by MAPS Educators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key</td>
<td>1 = Very Important</td>
<td>2 = Important</td>
<td>3 = Unimportant</td>
<td>4 = Very Unimportant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>1.50</td>
<td>1.64</td>
<td>1.98</td>
<td>1.65</td>
<td>1.54</td>
<td>2.01</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.0509</td>
<td>0.0524</td>
<td>0.0631</td>
<td>0.0550</td>
<td>0.0546</td>
<td>0.0649</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.6296</td>
<td>0.6464</td>
<td>0.7726</td>
<td>0.6753</td>
<td>0.6707</td>
<td>0.7927</td>
</tr>
<tr>
<td>Minimum</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Maximum</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
<td>4.00</td>
</tr>
<tr>
<td>Count</td>
<td>153</td>
<td>152</td>
<td>150</td>
<td>151</td>
<td>151</td>
<td>149</td>
</tr>
</tbody>
</table>

Given that the general trend shows that all of the support options are seen as important, it is a good idea to examine the distribution of teachers’ responses. This is provided as Figure 16 and the corresponding Table 7. Note that it was relatively common for “Professional Development Days” (alternative “a.”) to be selected as the teachers’ choice for ranking “1” = MOST IMPORTANT. However, 15 teachers ranked “Professional Development Days” as LEAST IMPORTANT. Of the 116 responses to the ranking items, these 15 teachers represent 13% of the group. The distribution curve for “Professional Development Days” is just slightly bimodal.
Figure 15: Relative Ranking of Importance of MAPS Teacher Support Alternatives

Table 6: Descriptive Statistics for Importance Ranking of Support Alternatives

<table>
<thead>
<tr>
<th>Item:</th>
<th>a.</th>
<th>b.</th>
<th>c.</th>
<th>d.</th>
<th>e.</th>
<th>f.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.595</td>
<td>3.353</td>
<td>4.353</td>
<td>3.759</td>
<td>2.716</td>
<td>4.224</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.178</td>
<td>0.147</td>
<td>0.125</td>
<td>0.133</td>
<td>0.128</td>
<td>0.158</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>1.92</td>
<td>1.584</td>
<td>1.347</td>
<td>1.43</td>
<td>1.382</td>
<td>1.7</td>
</tr>
<tr>
<td>Minimum</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Maximum</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Sum</td>
<td>301</td>
<td>389</td>
<td>505</td>
<td>436</td>
<td>315</td>
<td>490</td>
</tr>
<tr>
<td>Count</td>
<td>116</td>
<td>116</td>
<td>116</td>
<td>116</td>
<td>116</td>
<td>116</td>
</tr>
</tbody>
</table>

A similar argument should be made for the items that tend to be ranked as lesser importance. For example, the item “On-site classroom visits by MAPS Educators” has the lowest mean rating (Table 5) yet 41 teachers (35%) ranked this alternative as one of their top three preferences. There may be value in giving a preference, as possible, to these teachers for the On-Site option of the Site-Based Support Model.
**Figure 16: Distributions of Ranking of Support Alternatives**

<table>
<thead>
<tr>
<th>Rank</th>
<th>a.</th>
<th>b.</th>
<th>c.</th>
<th>d.</th>
<th>e.</th>
<th>f.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>58</td>
<td>19</td>
<td>1</td>
<td>4</td>
<td>27</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>12</td>
<td>19</td>
<td>13</td>
<td>23</td>
<td>30</td>
<td>19</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>24</td>
<td>16</td>
<td>28</td>
<td>24</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>21</td>
<td>30</td>
<td>17</td>
<td>23</td>
<td>17</td>
</tr>
<tr>
<td>5</td>
<td>14</td>
<td>22</td>
<td>26</td>
<td>30</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>6</td>
<td>15</td>
<td>11</td>
<td>30</td>
<td>14</td>
<td>4</td>
<td>42</td>
</tr>
</tbody>
</table>

N=116.

**Results of the Open-Ended Item**

The last item on the questionnaire invited teachers to express their own ideas about the kind of support that they see needing. The items asked: “How can MAPS Educators assist you in a successful implementation of the program in your school/classroom? Please be specific!” These responses (n=116) were transcribed (see Appendices, page 104) and the text analyzed to determine general themes and categories. Results of this initial review are provided as Table 8. Note that because this is an open-ended item, it is not expected that categories will necessarily be represented with proportionally high counts.
Table 8: Support Alternatives Requested by Teachers

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>35</td>
</tr>
<tr>
<td>Materials and Resources</td>
<td>20</td>
</tr>
<tr>
<td>On-Site Support</td>
<td>12</td>
</tr>
<tr>
<td>Communication</td>
<td>12</td>
</tr>
<tr>
<td>Workshops/Inservice/Seminars</td>
<td>9</td>
</tr>
<tr>
<td>Telephone Access (“just in time” access)</td>
<td>8</td>
</tr>
<tr>
<td>Schedule/Help with scheduling</td>
<td>7</td>
</tr>
<tr>
<td>Demonstrate/Demonstrations</td>
<td>7</td>
</tr>
<tr>
<td>Curriculum (Extensions of the MAPS Units)</td>
<td>6</td>
</tr>
<tr>
<td>Colleagues/Peer Assistance</td>
<td>6</td>
</tr>
<tr>
<td>Classroom Aids/Adult Assistance</td>
<td>5</td>
</tr>
<tr>
<td>Procedures in support of implementation</td>
<td>4</td>
</tr>
<tr>
<td>WWW Site</td>
<td>3</td>
</tr>
<tr>
<td>E-Mail (lists, access to Museum Educators)</td>
<td>3</td>
</tr>
<tr>
<td>Content/Subject Knowledge</td>
<td>2</td>
</tr>
<tr>
<td>Mail (notices by mail)</td>
<td>1</td>
</tr>
<tr>
<td>Assessments</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>141</strong></td>
</tr>
</tbody>
</table>

In general, these results support the previous analyses. However, there is a clear desire of the teachers to have ready access to MAPS Educators on a “as needed/when needed” basis. The terms “access” and “availability” were frequently seen in the text. A selection of some of the responses is provided here. These are somewhat representative of the categories resulting for the analysis of the full set.

**Curriculum Unit Revision**

In preparation for a second printing of the MAPS Curriculum Units, information was sought from teachers about necessary corrections and improvement. While the Curriculum Committee conducted the revision of the units, the MAPS-II Study contributed to the effort by collaborating in the development of the survey instrument. The Curriculum Unit Correction and Revision Survey is reproduced in the appendices on pages 91-92.

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11 The total adds to a number greater than the number of respondents as multiple categories were permitted for each response.
MAPS-II Study

Here, the MAPS-II Study encountered a conflict of purposes between the need to provide “just-in-time” information for curriculum revision and the longer-term need for trend data. The distribution of the Curriculum Unit Correction and Revision Survey was necessary to accommodate a particular need, as described earlier. However, this had the de-facto effect of trumping the use of the extant Curriculum Unit Feedback Survey (see pages: 89-90). An unfortunate consequence is that data on extent of teachers’ use of the curriculum units, as was reported in the 1999-2000 MAPS-I Study (Rogg 2000), was not available to the MAPS-II Study. Resumption of the monitoring of teachers’ use of curriculum units is advised.

**ASSESSMENT OF MAPS AND STUDENT LEARNING**

Perhaps the most significant programmatic challenge facing the MAPS initiative is the development of a viable assessment system. The MAPS leadership understands vividly that in today’s “accountability climate”, any reform initiative stands little chance of survival beyond even a few years without compelling evidence of positive impact on student learning. The belief, strongly held, is that the evidence that counts the most are scores from the Illinois Standards Achievement Test (ISAT) and Iowa Test of Basic Skills (ITBS). Passionate and frank debates about the relevance of these tests as valid evidence of value-added by the MAPS initiative led to certain agreements, perhaps tentative, of the MAPS Evaluation Committee and program leadership. Before continuing discussion of the MAPS-II Study findings about student achievement, it will be necessary to establish this context.

As quickly as possible, it is imperative that the MAPS initiative demonstrates that participation in MAPS results in improved scores on State and District mandated tests, namely the ISAT and ITBS, respectively. This is the belief of MAPS leadership, grounded in an acute awareness that these are the measures most valued (and understood) by chief administrators of Chicago Public Schools and, presumably, external funding agencies. How can MAPS accomplish this?

**What makes test scores increase?**

First, MAPS will need to carefully consider the multiple factors that influence ISAT and ITBS test scores and the dynamics of how these factors interact. Careful consideration must be made about what it takes, regardless of the specific intervention, to raise scores for any group of
students. These factors will suggest the design parameters that the MAPS program must accommodate to affect the intended results.

Second, once the parameters are understood, carefully consideration must be given to the tactical design of MAPS as an intervention program. Consider, for example, that the MAPS units had been developed with explicit citations to the Chicago Academic Standards. This alone, however, is wholly inadequate to assure that an outcome of participation in MAPS is apt to be increases in test scores. Several key linkages between the intended curriculum, the enacted curriculum, the learned curriculum, and the assessed curriculum must also be assured. It is not only necessary that the MAPS Units cite the specific standards, but the curricular activities must embody these standards in very robust ways. Then, teachers must be able to “teach” these activities both skillfully and with fidelity – the enacted curriculum. The student must have then “learned” that which was specified by the standards (the learned curriculum) and the test itself must adequately assess this learning (the assessed curriculum).

Thoughtful consideration of each of these “linkages”, and the explicit definition of related assumptions, would help to define specifications for program components. Clearly, simple lists of standards intended in the MAPS Units, although necessary, will be insufficient for improving test scores. A strong professional development program that attends to standards, curriculum, instruction, and assessment is a vital necessity.

The purpose of this example was to illustrate how design parameters can lead to program specifications given that test score gains are a goal. The point should be made that this example offers one perspective with respect to curriculum and instruction. Other critical parameters involving political, organizational, social, socioeconomic, cultural and language matters need due consideration as well. These are considerations being made in the MAPS Strategic Plan, currently in development (Museums and Public Schools (MAPS) 2001).

A third consideration is timing. It would be certainly naive to expect that any intervention should impact test scores before the program has developed a certain level of maturity and presence (a.k.a.: “critical mass”). Any premature attempt to detect changes in test scores attributable to the intervention would be a waste of resources and bears the dangerous risk of misinterpretation of findings. If the results appear positive, there might be a pressure to make
false (not replicable) claims of program impact. On the other hand, neutral or negative findings might damage the reputation of the program.

And finally, if a positive change in scores is indeed observed, MAPS must have considered how this change is attributable to the MAPS intervention and not simply correlated with some other cause. Earlier in this report we documented differences in ITBS scores between MAPS Schools and the rest of the eligible schools that were not MAPS (Figure 5, page 11). These differences exist prior to the MAPS intervention and the growth trajectory (average gain over time) of the comparison groups is currently undeterminable for MAPS. Let’s say, however, that longitudinal test data shows that the growth trajectory of the MAPS cohort (the children in MAPS classrooms) is found to be greater than that of CPS schools overall. This outcome would not necessarily be attributable to MAPS since factors prior to- or concurrent with the MAPS intervention could be the driver. The particular schools may have already had a growth trajectory prior to MAPS, or any combination of other circumstances (mobility, economics, other innovations, etc.) may have been the causal agents.

The point of this argument is simply to note that if MAPS is indeed expected to be a causal agent for increasing test scores then strategic planning must consider the many implications for program design and implementation. It would be an error to assume that a program - even if it does provide excellent learning experiences, has a defensible connection to academic standards, and is well implemented by teachers – will necessarily produce gains in test scores. Does the program deliver what the test measures? Does the test event occur at an appropriate grade level and time of year (after the ideas were encountered in the curriculum) for the assessment of the learning? Is there sufficient conceptual connectivity, for the learner, between the integrative content of museum–based curriculum and distinctly discipline-bounded test items?12

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12 A child may understand very complex ideas and relationships among ideas in a “real-world” context but not transfer this in any way to discipline-bounded test items. For example, consider the child that understands a MAPS Unit theme but simultaneously fails to realize that she had been using and developing particular ideas from language arts, mathematics, science, and social studies. This is a part of the concern that many educators have about the potential mismatch between testing technologies and learning that is most valued.
What must MAPS consider in developing an assessment system?

If the MAPS Initiative is expected to be accountable for raising ISAT and ITBS test scores, then the MAPS program leaders will need to seriously consider how this will be accomplished. Given this priority, however, there is also the MAPS priority to determine the impact that it has on teaching and learning. Standardized test scores such as ISAT and ITBS represent one kind of measure, and they may be important to constituents, but they are not sufficient for informing the development of MAPS. Moreover, it can be expected that alternatives to ISAT and ITBS that are more closely controlled and targeted on the learning of students in MAPS classrooms, might be far better indicators of the value-added benefits of the MAPS intervention. Some of the parameters that lead us to this conclusion are:

♦ MAPS curriculum units are each designed to address a specific subset of grade appropriate academic standards. They are not designed as a comprehensive Grade 3 through 6 curriculum that “covers” (an unfortunate, but common, term) all standards at each grade level. Therefore, assessments that sample from the whole collection of academic standards (ISAT) or those representing “standard” grade 3-6 curriculum (ITBS) are apt to prove unreliable tools for assessing how students benefit from MAPS units.

♦ Children who might learn from the MAPS units (in year 2) are those whose teachers sufficiently participated in MAPS and taught the units. Within the entire CPS system, there are 60 “MAPS Schools” with four “MAPS Teachers” in each school. In nearly all cases, the MAPS Teachers teach in self-contained classrooms. Most schools, however, have more than one class at each grade level. Therefore, school-level measures are likely to be unreliable measures of any impact of MAPS on student learning.

♦ There are nearly 240 “MAPS Classrooms” in the current program. This is an appreciable number. It is conceivable that classroom-level measures could be reliable indicators of the impact of MAPS for student learning. However, it must be understood that MAPS provides two curricular units/grade, and these represent only a part of what students are doing throughout the school year. Therefore, any instrument designed to sample, say, “what all CPS third-graders know and are able to do”, may still be an unreliable measure of the influence of MAPS on student learning.

♦ If the MAPS curriculum is very distinct from the rest (and we expect that it is), assessments benchmarked in grade-level expectations may not be valid measures of the particular kind of learning afforded by museum-based experiences. For example, assessments may stress recall of discrete factual information over interpretation, application, and relationships among ideas. Also, children may tend to partition, in their thinking, the learning done during MAPS activities from that of “schooling”. As a consequence, during a general assessment children might fail draw from the MAPS experiences for their responses to prompts.13 This situational

13 Cognitive science and research on assessment exists to inform these concerns although it is beyond the scope of this report to resolve these matters here. Instead, they are being raised as a means to explain the approach to student assessment adopted in the MAPS-II program year and MAPS-II Study.
detachment could occur even in the more restrictive case that the items are valid indicators for standards that happen to be addressed in the MAPS Units.

♦ Finally, it should be fully expected that the implementation of the MAPS curriculum is considerably variable between classes. To adequately assess the value (and potential) for MAPS to influence student learning it will be important to also determine the fidelity of implementation in each classroom. As a start, the assessment should consider the time spent on each unit both in the classroom and during field excursions. Likewise, some account should be given to the extent to which the teacher is familiar with the materials and how they were utilized in the specific classroom. It would not be advisable, for example, to assume that, in general, teachers are able to skillfully utilize the program upon their initial exposure.

These considerations lead us to conclude that the best chance that MAPS has to learn about its influence on student learning is at the student level with consideration of school, teacher-class, and student factors. In short, look first for student learning where you expect it to be found, and then look there for the kind of learning that you expected to bring about.

♦ Any device for the assessment of student learning attributable to MAPS will need to be a viable measure of the MAPS intended curriculum.

♦ Initially, the assessment should target those classrooms where the program is being implemented with apparent fidelity.14

♦ Simultaneously, MAPS might obtain and compile student-level ISAT and ITBS (relevant to grades 3–6) for future longitudinal trend analysis of growth trajectories of student in MAPS classes contrasted with the district overall. The model should account for school and class-level factors. Because of the longitudinal and organizational structure of these data (students within schools over time), Hierarchical Linear Modeling is a good fit to this task (Raudenbush and Bryk 2002).

Prerequisite to the design, implementation, analysis and reporting from any assessment system is the opportunity for MAPS leaders and key agents to grapple with the issues just presented. Because of the serious implications for the program itself, this is not a task that belongs entirely to the Evaluation Committee. The dialog on the assessment of student learning
attributable to MAPS transcends strategic planning, program design, and program evaluation. It is strongly advised that MAPS leadership initiate a forum for this dialog in the very near future.

**What will it take for MAPS to achieve a viable assessment system?**

An understanding was reached among the Evaluation Committee that the second year of MAPS was not yet an appropriate time to attempt the use of standardized test scores for the assessment of MAPS benefits. It was also understood that since the Chicago Public Schools already maintain these data, this work could commence at a later date as required. The efforts of the MAPS-II Study would focus instead on testing the viability of assessment embedded in the MAPS curriculum units themselves.

This idea, to test embedded assessment, is a response to many of the parameters described in the previous section. It can have several advantages, during this early period of the development of MAPS, if carefully designed to function simultaneously at three levels: student, classroom, and program. This approach might be more readily understood by starting at the student level, working “up” the hierarchy, and then back again to the student.

**Student-Level Assessment**

The MAPS units contain assessment activities both as an integral part of the instructional activities and as optional extensions. During the writing of the MAPS Units, the intent was to provide teachers with tools that they would expect and need. We found, however, that the assessment activities had been created rather independent of the expectation that they would provide the teachers with evidence related to the specific goals of the units – the academic standards. In other words, the primary referents of the assessment activities were the instructional activities rather than the stated learning goals.

When this was understood, the MAPS Curriculum Committee was asked to engage in reverse-engineering of selected curriculum unit assessments (see SWA Design Sequence, page 124). The approach adopted was that of *Understanding by Design* (Wiggins and McTighe 1998). The specific intent, then, was to focus the assessment activities as instruments for generating credible

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14 Including all MAPS classrooms, such as those with teachers that have just been introduced to the materials, would bias any estimate of the degree and nature of student learning. Some distinction needs to be made between MAPS classrooms-in-development and MAPS classrooms enabled to affect student learning.
evidence of students’ learning of the “essential understandings” intended in the instructional design.

At this level, the primary use of the “evidence” is both for the children and their teacher to determine what the children had come to understand as a result of being engaged in the instructional activities. This is assessment to inform instruction – not necessarily for the assignment of a grade. As will be discussed later, however, we found that, in general, teachers may not be appropriately prepared to conduct these assessments and act on the evidence in skillful ways.

Classroom Level Assessment
At the classroom level, the same assessments, properly designed and implemented, have potential for informing the improvement of MAPS materials and MAPS implementation. Careful development of trustworthy and credible methods (Guba and Lincoln 1989) of interpreting student work - robust rubrics, for example – provide means to aggregate individual students’ performance indicators across the entire class. An analogy to more common practice is to say that the teacher can learn something by examining the scores of the entire class, assuming that the assessment instruments are valid and reliable.

By interpreting the assessments at the classroom level, the teacher can come to understand what proportion of the class accomplished the learning goals, what might be some common misunderstandings, and what aspects of the materials or instruction might need special emphasis, for example. The teacher might determine to “reteach”, provide additional attention to a subgroup of children, extend activities for the entire class, or perhaps eliminate elements that are problematic. In other words, with viable information, the teacher can make data-driven decisions about instruction to the benefit of her class.

Program Level Assessment
It might be evident that if the assessment at the classroom level is of sufficient quality to provide meaningful information then the natural step in this progression is to the program level. This would require reliable interpretation of student work across classrooms and schools. This is important, however, considering that the initiative is indeed expected to be applicable both across classrooms and schools, even with the expected variation in conditions. If the achievement standards, MAPS curricular materials, and consequential instructional practices are
expected to transferable across settings, and if the assessments are strongly linked to learning goals (standards), then the assessments should certainly also transfer.

What is the significance of this? The ability to aggregate the results of the interpretation of the student work at the program level would have very important implications. It would then be possible to evaluate the extent to which MAPS is influencing student learning and the variability among MAPS Schools and classrooms. Analogous to questions at the classroom level, the MAPS program would then have information to inform the development of its most critical program elements: curriculum, professional development, field excursions, and sustained teacher support. For example, any tendency for children across sites to misunderstand a particular learning goal (as demonstrated in their work) would clearly indicate a need for correction. Unlike numerical test scores, the curriculum-embedded assessments are also likely to provide insight into the nature of the revision. Likewise, these data would be vital in understanding and accommodating variation in local school situations. It is almost absurdly obvious that perhaps the best way to inform the development of MAPS is to systematically examine student work and students at work!

**Capacity to Achieve a Viable Assessment System**

At this point it is necessary to acknowledge that the development of assessments of this caliber is far from a trivial task. Nor is the implementation trivial. However, significant progress in the technology of large-scale performance assessment indicates that this is possible. Considering the serious need for MAPS to provide evidence of this substance, it is our recommendation that the MAPS leadership give the approach serious consideration.

In other parts of this report, we describe activities of MAPS-II that provided a means to test the Initiative’s capacity to achieve a viable assessment system. What can we conclude from this experience? There are several important take-home lessons, and these are listed below, but overall it seems that the Initiative does have the potential but success would require expertise that MAPS does not currently possess and a significant, comprehensive, integrated, and sustained...
commitment. These requirements are very evident from the records of the assessment design process with MAPS Educators, from MAPS Teachers’ responses during the third Teachers Development Day (TDD-III), and from analysis of Student Work Artifacts (See: Appendix G: Student Work Artifacts beginning on page 124). Specific observations include:

♦ **MAPS Educators** did not design the MAPS Units with assessment of students’ learning gains as a chief concern. While assessment activities are included in the MAPS Units, they were not designed to assess explicitly students’ achievement with respect to specific learning goals. The MAPS Units contain activities and “assessment activities” about the indicated learning goals (“correlations”) but not explicitly designed to provoke and demonstrate learning of these learning goals. While it is clear that MAPS Teachers consider the activities to be worthwhile, engaging, and related to the correlations, MAPS is hard pressed to produce evidence, even extracted directly from the Units, of what children learned. Much can be said about what children did during MAPS, but it is far more difficult to show what they learned as a consequence. Consider, as example, the stark contrast between the “Essential Questions” listed in the MAPS Units and the use of this very term in *Understanding by Design* (Wiggins and McTighe 1998)16.

♦ **MAPS Teacher Development Days** have been primarily about introducing teachers to the MAPS Units and museum resources. This is important. However, there has not been an evident focus on what teachers should expect children to learn from the experience or how teachers will know (via assessment) what children have learned. This tends to communicate the MAPS program as being object-centered (Units, materials, museum artifacts) and activity-centered (in-class and field excursions) rather than learner-centered. While the current objectives of Teacher Development Days are very reasonable, sound, and favorable to MAPS Educators and Teachers alike, the Initiative should begin considering the implications of advancing its perspective beyond doing to learning - beyond activity to the demonstration of growth in knowledge, skills and habits of mind.

♦ **MAPS Teachers**, generally speaking, do not appear to be sensitive to the ways that students might demonstrate growth in knowledge, skills, and habits of mind. Rather, they seem to rely on a more intuitive sensing that any given child simply responded to the activity. It seems sufficient to MAPS Teachers that the child did something, did something more than usual or typical, or did something interesting or creative. During the TDD-III, teachers were provided samples of student work extracted from MAPS Units17. Teachers were asked to identify what the artifacts revealed about children. The research team was discouraged to see how prone teachers were to infer that children “achieved” a standard or learning goal when the evidence

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15 In some cases, districts and even state systems have implemented performance assessment and scoring rubrics with some success. Although this analysis of this is beyond the scope of this report, it is worth noting that MAPS, with full ownership of the curricular units and professional development for teachers in their use, has a key advantage over most systems.

16 It would be very worthwhile for the Curriculum Committee to review the “Essential Questions” as stated in the MAPS Units against the definition provided in *Understanding by Design*.

17 The author (SRR) coined the term “Student Work Artifact” (SWA) in part because this complements the common image of museums as places for exploration and discovery. The terms grew in meaningfulness however, as we saw the need to explain how any piece of student work is like a fragment or shard of evidence that invites thoughtful interpretation. Also, extrapolation beyond the available evidence is a concern.
simply was not there. It is possible that teachers’ familiarity with children and sympathetic concern for them is an incentive to see what is not evident in the artifact. It is also possible that teachers simply give students the benefit of the doubt since teachers did not have sufficient opportunity to come to their own understanding of the implications of the specified learning goals. Whatever the causes, the “gap” between the intended curriculum and the assessed curriculum is very evident in the comparison of stated learning goals with student Work Artifacts. Examples are provided in Appendix G: Student Work Artifacts.

Reflecting on the curriculum, instruction, and professional development aspects of MAPS from an assessor’s perspective underscores the position of MAPS administrators presented at the introduction of this section. A viable system for student assessment is imperative. However, this is not to be taken simply as an identified “gap” in the MAPS Initiative, or a component needing considerable development. More appropriately, the integration of coherent assessment throughout the intended curriculum, professional development programs (including Teachers, Educators, and Leaders), and instructional support represents a key strategy for MAPS to advance in its mission! This could be a key strategy in its potential to affect and document student learning by unequivocally targeting the Initiative’s programmatic focus. It is also a key strategy in its potential to contribute to the wider professional community to: “…create a lasting impact on teaching and learning by integrating museum resources into the educational process and serve as a national model (see: The MAPS-II Initiative: Overview, page 2).”

LESSONS FROM MAPS SCHOOLS

Site visits were conducted at MAPS Schools by MAPS Educators and by IMSA researchers as described in the Study Design section of this report, beginning on page 9. Recall that a nested design was used, with thirty “M30” schools visited by MAPS Educators and six “M06” schools visited also by IMSA researchers. Recall also that the full intent of the M30 visits was to provide support to MAPS Teachers. However, it was also understood that MAPS Educators, in order to provide effective support, would need to be observant and open to the needs and circumstances of the MAPS Teachers and Principals. The MAPS Educators were therefore asked to report on their observations. Some guidance was provided, however, we resisted being overly prescriptive a priori of site visits. There were two reasons for this. For one, there was a high interest in bringing the MAPS Educators to the schools as open-minded as possible. To experience the variety of school contexts and to see the MAPS Units in action was considered a priority. And second, most MAPS Educators have no formal experience in classroom-based research. There
would be no adequate opportunity to engage them in “training” to conduct classroom research, nor would this be necessarily appropriate. Thus, the support posture was seen as suited to their role in MAPS as instructional leaders.

This, however, does not imply that the MAPS educators would be unable to make observations relevant to the development of the Initiative. On the contrary, the Evaluation Committee was confident that, with minimal guidance and encouragement, the MAPS Educators would have numerous worthwhile observations to report. It was fully expected that if the site visits were of value to the MAPS Educators, then their collective observations would likely be of value to the Initiative. This, we expected, would make for worthy conversations among MAPS Educator Teams and the Curriculum Committee—more immediate and possibly more valuable than the formal synthesis report provided here. In other words, the greatest benefits of the site-based studies may have been already realized by the MAPS Educators.

One important concern with this approach should be addressed before reporting the findings, however. Would the observations reported by the MAPS Educators have external credibility given that they are also the instructional team? Is this a bit like the wolf guarding the hen house? To answer this concern, the M06 observations were conducted independently and at sites (6 of 30) already visited by MAPS Educators. Comparisons of reports from the MAPS Educators and from the Research Team are highly consistent with respect to both the accomplishments and the issues reported. The few exceptions to this claim will also be reported below.

Finally, a few words are necessary about the nature of these data. We have already reported that the MAPS Educators’ provided “observations” and that the approach was not to be prescriptive. We should acknowledge that our reasoned insistence to not be prescriptive did meet with some resistance. There were strong requests for observation “templates” among MAPS Educators and Leadership (we had suggested blank journals). Our response was to admit that while having a template (or structured protocol) would be helpful, the risk would be to constrain the on-site impressions. A subsequent concession was to provide a list of broad themes, derived from the first visit, in advance of the second site visit (see Figure 28, page 73). Ultimately, the observations returned by MAPS Educators are more-or-less as hoped—impressionistic notes in narrative, list, and/or outline form.

Qualitative analysis methods were used to identify recurrent themes from the MAPS Educators notes. In short, the notes were parsed into text units that relate to a single idea but may vary in
length from a few-word phrase to a paragraph. Each text unit is assigned a categorical label, a process which repeats recursively until the researcher is satisfied that the set of categories provide reasonable representation of the data. This is a process of model building from nonnumeric data and can be accomplished with specialized software (QSR Software 1998) or common database tools. The emergent categories, confirmed by M06 Site Visits, are presented as Figure 17 and subheadings in the remainder of this section.

Figure 17: Site Visit Emergent Themes and Relationships

A few comments about reading Figure 17 might be helpful. Notice that the themes are organized hierarchically from left to right. The four categories of observations are in the leftmost (yellowish) box. The second level (green) represents subordinate themes for each category. And finally, the third level (violet) represents observations subordinate to some level-2 themes. A more detailed map is possible, and may have been useful. However, this would have required a far more controlled observation protocol\(^{18}\) and significantly more observations. Still, these categories provide a reasonable framework for considering “lessons” from MAPS Schools.

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\(^{18}\) Observations were deliberately unstructured for a variety of reasons presented earlier in this report.
The reader is invited to also consider relationships of these MAPS School observations to the findings from surveys presented earlier.

**Context**

The context category encompasses observations related to the situational environment within which the MAPS Initiative was operating. Note that it was not the purpose of either the MAPS Educators or the IMSA research team to provide a description of the contextual influences at MAPS Schools. Recall that the MAPS Educators were instructed to report observations with respect to the support of MAPS Teachers. Likewise, the IMSA research team had been instructed to report on context only as observations were immediately associated with the implementation of MAPS. However, the Study did welcome the identification of potentially influential contextual factors, perhaps for consideration in strategic planning or for future investigation.

Hence, the context category contains observations related to the influences of the classroom and school environment, system-level influences, and the influences of the MAPS Study itself. With respect to the latter, these observations typically were about who participated in the observation. Two points are worth noting here. First, participation in school visits by both principals and MAPS teachers was generally high. Occasionally there would be one teacher unavailable, but this tended to be due to illness or a schedule conflict. The second point stems from one recorded request that MAPS teachers be more informed about the purpose of - and expectations for the visit, and that the visit was difficult to schedule. There was a complaint recorded at a MAPS6 visit that a MAPS Educator (during a previous MAPS+ visit to the same site) observed classes but offered no assistance or feedback. Overall, however, the visits were well received and appreciated. It is clear that the MAPS Initiative has established a reputation among both teachers and principals as “paying attention” and being responsive and very willing to make corrections and improvements.
At some schools, the implementation of MAPS is clearly influenced by school- and system-level contexts. For example, some MAPS schools, especially those on academic probation, seem very committed to raising ISAT and ITBS test scores. One teacher at an MAPS6 site described how her students had high interest in MAPS, that MAPS was “good material”, and that the “Kids get into it.” However, she continued that she also needed to “do the study guides for ISAT and ITBS, and also I need to grade them.” The pressure is not only about the status of the school, but also because ITBS scores determine summer school (along with grades and teacher recommendation) and whether a child is “held back.” In contrast, another teacher at the same MAPS6 site said that she simply is not concerned about the study guides because, in her view, if students are learning then the “tests will take care of themselves.” It does seem that there is high variation among teachers about how to respond to testing. Although some MAPS teachers stated that they believe that MAPS will help test scores, the trend seems to be in favor of direct explicit preparation for the test. A MAPS6 researcher noted: “Teachers seemed to see MAPS as an add-on rather than as integral to what they teach.” This is an issue certainly worth pursuit, especially as it relates to the previous discussion about assessment in MAPS. An example of one teacher’s creative response is provided here:

Ms {name} class was involved in lesson 6 of Unit II at the time of the visit. The lesson was particularly relevant since the class was studying geometric shapes in preparation for the ISAT Test. Class took a walking trip of the neighborhood noting the geometric shapes in the various buildings. The class participated in the activity of connecting paper clips with straws to form geometric shapes. Ms {name} noted that additional clips needed to be ordered for future implementation. Class discussion was lively and animated as they discussed what holds buildings up and the materials used in constructing skyscrapers. – MAPS Educator

Although MAPS is not seen uniformly as an intervention for improving test scores, it is almost unanimously seen as valuable to student learning. All principals expressed their support for the program, although it was also clear that some were perhaps more familiar with the concept than the specific impact in their school. One principal, for example, while praising the importance of MAPS at her school during an interview was unable to identify the grade levels involved. When asked how many other programs were at the school, another principal replied: “If you want me to, I could go down the list.” The MAPS Principal’s meetings are clearly important. Beyond orienting principals to the MAPS materials and methods, perhaps these meetings might also be utilized to explicitly address the difficult contextual influences such as testing and the role of MAPS as a reform initiative. However, as exemplified by the following observation, principals are already “sold” on MAPS.
The principal indicated that MAPS is a terrific instructional program and should be placed in more schools. She felt that all of Chicago Public Schools could benefit from the MAPS Program. Dr. {name} was especially pleased with the materials and noted that MAPS was the only CPS program that gave teachers ALL of the materials that were needed to implement a program. She voiced her pleasures of being one of the first principals to hear about MAPS and how happy she was to have been selected by the district REO to participate in the program. – MAPS Educator

Principals might be an important resource for learning how to leverage its potential benefits. For example, one principal was determined to involve every class at each grade. “We do it the {school name} way!” was how this principal explained this can do/will do approach to making MAPS available (one way or another) for very child.

**Curriculum**

Observations most relevant to the MAPS curriculum tended to fall into nine themes. These are listed below along with a brief explanation. Some examples are also provided.

**Adaptation:**

These are observations about creative ways that teachers modified or adapted the MAPS Units. Adaptation of the MAPS materials is expected, if not encouraged, by MAPS Educators. Creative examples were noted, lending additional support for the suggestion that the Teacher Development Days and the MAPS Internet site provide a forum for MAPS Teachers to exchange innovative ideas with one-another and with the MAPS Educators. Examples of creative adaptation to the local context are provided here. One teacher even suggested the creation of a MAPS Unit template so that teachers could write their own units. These could be reviewed, shared, and developed among MAPS Educators and MAPS Teachers. The *Understanding by Design* Internet site (http://www.ubdexchange.org/) is a fine example of the potential.

Teachers added more to the lessons. Ex. - The Trading Post activity became very elaborate. Teacher dressed in costume. Trading Post scenery was set up. Didn’t use trading cards but instead replicated objects. Had music playing. –MAPS Educator

5th grade - modified activities - used her cold windows in the classroom rather than ice, didn’t use a heat lamp. -MAPS Educator

Excellent Lesson!! In this classroom, the teacher and students read chapter of the Stuart Little book aloud. After reading, students discussed the story. It was evident that the students comprehended the story by their responses. Students completed their luggage tags
and engaged in the Take-Flight, simulated flight activity. The teacher gave the students roles to play during this activity: pilot, stewardess, and passengers. She also arranged the student chairs to resemble the layout of an airplane. Each student wrapped a long piece of velcro around their chairs, across their waist, that served as their seat belts. The stewardess also served juice and cookies, from a rolling cart, after the simulated flight took off.

–MAPS Educator

The students reviewed the three cultures: Mayan, Aztec, and Pawnee before they began Unit II. To introduce Unit II, the teacher had made changes in the classroom prior to student entry. She then asked students to look around the classroom and tell what was different. The student responses included: math charts were turned around, bulletin boards were covered, buttons for intercom system were covered, books were removed from shelf, etc. Teacher then solicited from the students why she removed or changed these items. Students replied: Learning aids were moved so that the teacher will have to explain everything, or the students will have to search for things themselves, they would not have to read anything, to make the room empty and boring, and to make their work more challenging. The also stated that the communication system was taken away so that they could only communicate with themselves and to handicap them from outside communication. After introducing the lesson, the teacher had the groups to go into their perspective cooperative groups to come up with ten ways their lives would be different if there were no such thing as the written language. Some of the changes that the groups orally reported were: "No knowledge of the world. They would be illiterate. No jobs. No books. They would not be able to talk. They would be unable to communicate with others." The teacher then told the class that no written language would mean a lot of chaos. She then talked about Early written communication Egyptians, Assyrians, and Mayans.

–MAPS Educator

Compatibility:

Compatibility is the label applied to designate observations about correspondence with grade-level expectations and existing curriculum. There could be considerable variability in the perception that MAPS Units are compatible with the CPS and Illinois standards or the CPS Structured Curriculum. These observations may be at least partially related to the differential perceptions about the relevance of MAPS for impacting ISAT and ITBS scores as discussed earlier. Unique to these observations however, are references to topics that are typically covered at particular grade levels. What is surprising is the apparent de facto separation of topics from learning goals identified in the standards. For example, the following observation illustrates how one teacher apparently understands the sixth grade curriculum in terms of “topics covered” rather than being defined by learning goals specified in the standards (and “correlated” to the MAPS Units).

Mrs. [teacher] appeared disillusioned with the MAPs curriculum. She voiced the opinion that much of the material did not pertain to the subjects taught in the sixth grade. She stated that the curriculum covered the Egyptian, Aztec, Pawnee, and Mayan cultures, however, only the Egyptian is covered in the sixth grade. Pawnee, Aztec, and Mayan cultures are taught in the fifth grade. She also stated that some parts of the lesson were ill-thought-out,
for example, having the students make and wear costumes to give the newscast. First, her students are required to wear uniforms to school, and second, she believes that it is much more important to rate a student on his or her speaking ability than it is to rate them on costume design. She stated that page 31 of the sixth grade SAB is worthless, and pages 19-21 were impossible to fit together properly and understand. She also did not see the value of including Spanish language pages in the books. –MAPS Educator

The distinction between “topic” and “learning goal” is essential. An excellent and thorough presentation is given in the text Designs for Science Literacy (Project 2061 (American Association for the Advancement of Science) 2001). MAPS Educators should seriously consider making this distinction clear and understood among MAPS teachers. This issue should probably be visited periodically during Teachers Development Days, in the newsletter, and on the Internet site.

Not all teachers confused topics with learning goals. A very different and more desirable response is illustrated in the following record:

This comment was given to me specifically from the Grade 5 MAPS teacher: "Theme I tied into the 5th grade curriculum perfectly! It was easy for us (class) to do this theme because it tied into our regular science class. The MAPS materials were correlated with the science and/or social studies/geography the class was working on. This is what made the lessons fun and enjoyable!" –MAPS Educator

**Demand:**

There is a demand placed on teachers in order to implement the MAPS curriculum but there was no indication found to indicate that this is excessive or unusual. Probably the opposite is more the case – that teachers greatly appreciate the lessons, guides, resources, and support.

Observations expression concerns about the demand on teachers seemed to be related to opportunity to become familiar with the materials and time to prepare. They have more to do with the learning curve for teachers learning the program than with the program itself.

The time needed to complete lessons was also mentioned. This might be related to the need for teachers to master the approach. Lessons are certainly not as efficient in terms of time the first time taught. Teachers are certainly able to continue lessons over two or three days as necessary. There is no indication that the ability to complete individual lessons within a single class session is a serious concern, however. Sensitivity to the potential concern is advisable.

...was just starting the first semester this week as the lessons came after they were involved in units. Looking for next year to be better because they will have the materials from September, etc. – MAPS Educator
Stated that the first semester was good but had "holes" in it meaning that she did not find resource material for the info she needed. It took a lot of research on her part.

- MAPS Educator

Teacher comments after class: MAPS lessons are fun and well-designed. Students enjoy the lessons. Biggest concern is the time factor. Today's lesson was divided into two days. Ms. (name) has been breaking up many of the MAPS lessons over two days due to the time constraints

Engagement:

Levels of engagement of teachers and students was markedly higher in MAPS-II compared to MAPS-I (Rogg 2000, page 16). The majority of teachers reported using the MAPS units and these were unanimous in reporting that students were highly engaged by the curriculum.

Without question, the ability of the curricular units to engage teachers and students in integrative learning is a strong characteristic of MAPS.

Grades 3, 5 and 6 have completed the first teaching units and grade 4 is 80% completed. All participants are extremely enthusiastic as to the contents, activities, correlations to state goals etc of the first units and eagerly await implementing the second unit. [This school] would really be an excellent source for the in-depth analysis of MAPS, administration and faculty have truly bought in to this program.

All of the teachers had started the program. Teachers in grades 3, 4, and 6 were working with Theme 1. Grade 5 teacher was teaching Theme II. All teachers voiced literally the same comments. Those including: "I love the program" "Students are enjoying the materials" "MAPS expose the students to something different" "Students are forced to use their critical thinking skills"

Materials:

Another strength of MAPS is that all materials required for the Unit are provided. In addition, it is common for the museum teams to include promotional and supplemental materials from their own museums, even if they tend to be unrelated to MAPS Units. Materials are clearly appreciated, and both teachers and their principals recognize this.

Two difficulties still face the MAPS programs, however. One is the effective and timely distribution of materials and the other is the annual maintenance of MAPS Units. For the most part, MAPS was able to distribute materials at Teacher Development Days. In some cases, teachers were asked to pick up their kits at the Medill Professional Development Center. But there were some glitches reported by teachers. This certainly will be addressed by MAPS
managers. As for the maintenance of the MAPS Units, no procedure is apparently in place to replace consumable materials. If the teachers are supported only during their initial year then a concern will need to be addressed about the sustainability of MAPS at sites. The history of kit-based curricular programs clearly shows that without ongoing support the program is apt to fade away in many sites, especially as it is displaced by new fads (c.f. Shymansky, Hedges et al. 1990).

The adequacy of materials provided is also sometimes a concern. For example, copies of MAPS Units are delivered as school or classroom sets. If the class size is smaller than the number delivered then the school will have extra copies. One teacher with a class of 34 students was not provided the additional copies needed. Teachers’ appreciation for the materials as well as the distribution and adequacy concerns are evident in sample observations provided here.

Felt the resources (cds, posters, books, etc.) were wonderful and made MAPS all worth it.

The resources given to teachers were adequate to teach the units, with the exception of the Stuart Little books. She didn’t have enough copies for each student which posed a problem.

–MAPS Educator

There are several items for the 2nd unit implementation which have not been delivered as yet to the schools (back ordered) teachers have been advised and (MAPS Staff) is working on a speedy resolution to this concern. –MAPS Educator

Some teachers reported that they had not received all of the materials needed for some of the lessons. The MAPS educator made a list of all needed materials, which was given to grade specific lead teachers. – MAPS Educator

Some teachers did not have enough materials (One teacher has a class of 34 students) Teachers would like more copies of the books (at least five copies for the class to share)

-MAPS Educator

Merit:

Teachers’ high regard for the academic merit of the MAPS Units was also evident. The tendency was to site how the MAPS Units are “different” from what is typically done in the classroom, that they have the potential to enhance learning of the “real world,” and that they promote “critical thinking skills.”

He believes the MAPS units will enhance student learning as the students are curious about the real world. Teacher said he looks forward to working with MAPS. –MAPS Educator

19 This is supported by quantitative evidence provided in the discussion of Field Excursions, beginning on page 50.
Teacher stated that her class is heading to closure for the first semester. She stated that the unit had a lot of critical thinking activities. The Amtrak train timetable was challenging but her students were tenacious and refused to quit until they had figured it out. She praised the integration between the two museums involved. She said her students went above and beyond the call in designing a rain forest from clay and they found it exciting.

- MAPS Educator

The teachers noted that the curriculum challenged the students to use higher order thinking skills. – MAPS Educator

Standards

As has been discussed in other sections of this report, MAPS teachers do not universally recognize the linkage of MAPS curriculum with academic standards. There does seem to be general recognition of the list of correlations at the start of lessons. Less clear, however, is the extent to which MAPS Teachers are convinced that the MAPS Units are a way (or the way) to achieve the standards. Indeed, the evaluation of the MAPS Units for their potential to achieve the learning specified in the standards has not been done. The reader might recall that this is presented earlier (see: Assessment of MAPS and Student Learning, page 30) as a critical need of the MAPS program – convincing evidence of the contribution of the MAPS Units to achieving the standards. In the interim, teachers are arriving at their own conclusions.

"The lessons are aligned with the CAS" - Teacher

Teacher stated that the Structured Curriculum unit on Chicago does not come until later in the school year and so he has not started the MAPS program. As a member of the Structured Curriculum team I was able to inform him that the unit can be moved to accommodate the needs of the grade and to meet the needs of the MAPS program so the two can be taught simultaneously. The principal had no problem with this and the other three MAPS teachers voiced strong agreement and encouragement. He says he will now start first semester MAPS this week. – MAPS Educator

Mrs. [teacher] felt that the units (especially the second) had a very general connection to the standards - that they might reflect the broad sense of the goal - for example they might fit under CAS A. but not specifically under the subheadings. – MAPS Educator

Suggestions

The final observation theme related to the “Units” category has suggestions for improving the materials. Findings need not be reported here because a deliberate effort to obtain specific feedback of this nature is already accomplished (Curriculum Unit Revision, page 29).
Field Excursions

A second major category has to do with the MAPS field excursions. Here, we again report findings from the MAPS School observations. In order to understand the level of participation, we also include an analysis of records provided by the MAPS office. And finally, as part of the MAPS6 school visits, members of the IMSA research team also observed two class field excursions. These turned out to be distinctly different and lend credibility to the argument for the sustained and comprehensive support of MAPS teachers.

Participation in MAPS Excursions

First, we consider the extent of participation in the field excursions. Here we define “field excursion” to indicate a MAPS field trip outing. These were typically intended to include stops at one or more museums in a single day, according to the grade level (MAPS Units) assignments of museum teams (Figure 18). It is worth noting at this time that making stops at more then one museum in a given day was problematic for at least some teachers. In these cases, the schedule was excessively aggressive, and transition/transportation time distracted from time with museum artifacts. The trade-off, we understand, is a budgetary one. In order to complete MAPS Units containing references to two or even three museums would otherwise require multiple museum visits for each unit (two units per grade level per year). This is a constraint that has been considered by the Curriculum Committee and MAPS leadership.

Figure 18: Museum Grade Level Teams

<table>
<thead>
<tr>
<th>Museum Teams</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHS/MSI</td>
<td>3</td>
</tr>
<tr>
<td>AIC/Shedd</td>
<td>4</td>
</tr>
<tr>
<td>DuSable/Nature</td>
<td>5</td>
</tr>
<tr>
<td>Adler/Field/MFACM</td>
<td>6</td>
</tr>
</tbody>
</table>

Given this context, it is impressive to note that in the initial MAPS-I (which was of a very different design) there were only 11 field trips recorded (Rogg 2000, page 2.) while in MAPS-II the total is 147 (see Table 9). The MAPS-II initial design anticipated as many as 480 excursions\(^{20}\) and so the “saturation” level achieved in MAPS-II was 31%.

\(^{20}\) Given the maximum possible 2 excursions per teacher, 4 teachers per school, and 60 MAPS schools.
A view of the distribution of field excursions by MAPS regions is provided in Table 9. Recall that the initial cohort of MAPS schools was defined as 10 schools from each region as nominated by Regional Education Officers. As the table shows, some schools were lost and there is also some variability in the engagement rates by region as indicated by the average number of field excursions per school within the region.

Table 9: Field Excursions by CPS Region

<table>
<thead>
<tr>
<th>CPS Region</th>
<th>MAPS Schools</th>
<th>Museum Excursions</th>
<th>Average per School</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>37</td>
<td>3.70</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>19</td>
<td>2.38</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>21</td>
<td>2.10</td>
</tr>
<tr>
<td>4</td>
<td>9</td>
<td>29</td>
<td>3.22</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
<td>17</td>
<td>2.13</td>
</tr>
<tr>
<td>6</td>
<td>10</td>
<td>24</td>
<td>2.40</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>147</td>
<td>2.67</td>
</tr>
</tbody>
</table>

Also of interest is the variability in the number of field excursions taken by each MAPS school. Records were available for N=55 schools – four of the original 60 MAPS schools were recorded as dropped out of the program on the records provided by the MAPS office. Note that 17 schools are recorded to have taken four excursions while two schools had taken none. Apparently, the variation in the use of the field excursions has more to do with within-school factors than between-school ones. This is most likely a reflection on the individual teacher's commitment. It could also be school-level factors such as limits on the numbers of total field trips permitted, although this seems rather unlikely to explain this distribution.

Figure 19: Distribution of Field Excursions by MAPS School

<table>
<thead>
<tr>
<th>Visits</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
</tr>
</tbody>
</table>
There is also some variability in the distribution of field excursions taken when viewed by grade level. If there had been an expectation at the school level that participation in MAPS means that all four grades experience the field excursion, then the distribution should be essentially uniform. Variation across grades suggests again that teachers are deciding to not complete this aspect of the program. The difference between 33 excursions of grade 5 classes and 40 excursions of grade 3 classes represents an 18% reduction. Could this indicate testing pressures? Might it indicate something about program delivery or communication (i.e., differential communication of the importance of the field component)? Without data to suggest a rationale, these conversations are left to MAPS personnel who may want to monitor participation trends.

**Figure 20: Distribution of Museum Excursions by Grade Level**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Excursions</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>40</td>
</tr>
<tr>
<td>4</td>
<td>35</td>
</tr>
<tr>
<td>5</td>
<td>33</td>
</tr>
<tr>
<td>6</td>
<td>39</td>
</tr>
<tr>
<td>Total</td>
<td>147</td>
</tr>
</tbody>
</table>

Finally, Table 10 provides the counts of visits to each museum. Recall that each “excursion” can include one, two, or three visits. Thus, the total number of excursions was 147 and the total number of museum visits was 248. The idea of “load” is calculated here as the number of visits divided by 55 (the number of MAPS schools) and expressed as a percentage. This provides a way to illustrate the differential load on each museum with respect to numbers of anticipated class visits.

**Table 10: Distribution of Museum Visits**

<table>
<thead>
<tr>
<th>Museum</th>
<th>Visits</th>
<th>Load (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adler</td>
<td>26</td>
<td>47.27%</td>
</tr>
<tr>
<td>AIC</td>
<td>26</td>
<td>47.27%</td>
</tr>
<tr>
<td>CHS</td>
<td>37</td>
<td>67.27%</td>
</tr>
<tr>
<td>DuSable</td>
<td>21</td>
<td>38.18%</td>
</tr>
<tr>
<td>Field</td>
<td>24</td>
<td>43.64%</td>
</tr>
<tr>
<td>MSI</td>
<td>24</td>
<td>43.64%</td>
</tr>
<tr>
<td>Nature</td>
<td>29</td>
<td>52.73%</td>
</tr>
<tr>
<td>Shedd</td>
<td>27</td>
<td>49.09%</td>
</tr>
<tr>
<td>MFACM</td>
<td>34</td>
<td>61.82%</td>
</tr>
<tr>
<td>Total</td>
<td>248</td>
<td></td>
</tr>
</tbody>
</table>
Observations from Site Visits

The site visits confirmed MAPS Teachers’ perspectives of the field excursions as both something that students very much enjoy and as an important component of the MAPS Units. Here is how one MAPS Educator recorded this observation:

Felt that the field trip was a more valuable experience because there is now an in-class component. [School] teachers always prepped for field trips - can do even more now – MAPS Educator

During some visits, teachers expressed concerns about difficulties they encountered making arrangements, particularly with access to museums. This included difficulties scheduling a suitable date, museum availability, and transportation.21

Unfortunately all of the MAPs teachers observed had not taken their classes to the museums integrated in their units this year. Zero MAPs field trips were taken. They listed a variety of reasons for this, including being an early dismissal school, and difficulty coordinating schedules with the museum, the MAPs office for busses, [school] administration, and CPS administration. – MAPS Educator

MAPS groups should be given priority when planning fieldtrips to the museums
– MAPS Educator

Reports tended to be very favorable about the museum experience itself. The suggestion for docent or MAPS Educator support during the excursion was made during some MAPS+ visits and confirmed at MAPS6 visits.

At the Art Institute, it would be better to have a docent rather than a self-guided tour
– MAPS Educator

It did seem that some of the difficulties reported may have had much to do with the newness of the program and the procedures for arranging field excursions. The MAPS Field Guide provided instructions for making schedule arrangements with each museum, but it was clear that some flexibility was required at times. From the teachers’ perspective, it would be terrific if the MAPS office were to provide “travel agency” services. The ideal, from the teachers’ view, would be to be able to place a single call to the MAPS office requesting date, times, and destination - knowing that all reservations, authorizations, payments, and transportation would be reliably arranged. As it stands, the process for teachers does involve some steps.

21 Transportation related matters presented especially difficult problems for some teachers. This is addressed in more detail in the following MAPS Program section.
Two Distinctly Different Excursions

During the conduct of the MAPS6 Site Visits, members of the IMSA research team were invited to accompany two classes (from different schools and on separate dates) on their field excursions. Both visits were at the Field Museum. Other than setting, these two experiences were distinctly different in many ways.

One was led by the teacher and one assistant. In this class, the children were maintained as a single group and moved through the museum as if on a group scavenger hunt for the specific artifacts, displays, and activities specified by the Unit. As children were drawn to objects and activities along the way, they were scolded, hurried along, and asked not to be distracted. While the children were visibly excited about the “target” displays and activities, and enjoyed the time spent with them, the pace was hurried. While the children saw artifacts identified in MAPS Units, there was no discussion of them, no time to ask questions, and no connections made to the ideas of the MAPS Units.

In contrast, the other teacher had prepared the children, including a guide booklet for each child. The guide helped groups to locate and identify objects and the required students to write about what they were seeing and also respond to questions from the MAPS Units. The class was divided into groups of four to six, each accompanied by an adult (parent or teacher) chaperone. Rather than move en-masse, groups moved independently to displays in an order and at a pace according to their needs. The class was late arriving due to an error with the transportation service, one of two busses ordered failed to show at the school. Cell phone in hand, the teacher had recruited the parent chaperones to drive their own children bringing the one bus to capacity. Despite this rocky start, the groups spend the time they needed at exhibits to observe, interact, and record in their journals.

On the field trip to the Field Museum, we observed third grade students actively engaged in using the MAPS materials. The teacher had prepared a separate “field trip” booklet for each student, with a carefully thought-out series of activities they were to accomplish during the visit. Activities appeared to be taken from different parts of the MAPS unit, and coordinated with other materials used by the students. For example, a reading from Stuart Little was used as part of the study of the boat exhibit. In addition, students completed a pre-visit journaling activity and a post-visit reflection developed by the teacher. There were also detailed instructions in the packet of which exhibits to go to with their chaperone, and what activities to complete at each site. Students appeared to be involved with each other as well as with their chaperones and with the materials and exhibits. – IMSA Researcher

We feel that these observations illustrate the importance of regular, substantive, and sustained support of MAPS teachers. There is much that they might learn from one another and in
partnership with MAPS Educators. Furthermore, the potential certainly exists for the selection and promotion of exemplary MAPS Teachers in their capacity to share successful strategies with peers. For the Teachers Development Days to introduce teachers to the MAPS Units, museum resources, and procedures is necessary but insufficient. The real potential of MAPS seems to lie in its potential to become an exemplary model of relevant and coherent curriculum, instruction, assessment, and professional development.

**Instruction**

Observations of teachers using the MAPS Units confirm much of what has already been reported. Compare, for example, the themes identified from the observations of instruction with the themes identified from teachers’ perspectives of the MAPS Units (page 44). We will refrain, therefore, from reiterating findings found to be common to both categories. However, we do want to highlight an aspect that is particularly vivid in the observations of instruction: student engagement. While this had also been reported in the discussion of the MAPS curriculum, the observations of instruction clearly serve to highlight this aspect of MAPS. It is no exaggeration to say that the MAPS Units are engaging. They also appear to encourage creativity, both on the part of teachers and students. And it is also clear that teachers respond to the relevancy and integrative nature of the MAPS approach. The following vignettes were selected to illustrate these points.

- Ms. {name} discussed astronomy and next fieldtrip to Adler. Students were divided into groups. Pictures of astronomy tools were circulated among the groups. All students were busy, involved in group work. Actively discussing, taking notes about each picture. Ms. {name} walking around the classroom answering questions. Adequate time for opening discussion and group activity. Students were able to form hypotheses about each of the pictures (lesson objective). – MAPS Educator

- Wonderful lesson!! The students revisited the story behind the Amazon Rising in their Season of River books. Students then worked in groups to create models of river environment. After completing their models, the students hypothesize how high the water levels would rise during raining seasons. After completing their discussion, student groups made their own Amazon Rising using materials set forth in the lesson. Each group seemed to really enjoy this activity. – MAPS Educator

- Teacher began the class by giving the students an oral Fact Quiz. Students orally answered questions like: People that study fish are? On yesterday the students had engaged in an assignment where they created fish that would blend in to the environment of the classroom.

- - 55 -
They then posted these fish where they would blend. They then invited the administration and other teachers to come in to locate as many of the 20 fish as possible. Now it was time for the students to develop a data sheet and bar graph around the number of fish located by each person. Below is the data collected and analyzed by the students. [not shown here] The students then were asked to use their Student Activity Books to develop their Bar Graphs from the data. – MAPS Educator

An IMSA research team had subsequently visited this very “fishy” classroom (above) during the MAPS6 visits. The children insisted that they too attempt to locate the camouflaged fish as they had previously invited in-school adults to do. The research team was impressed. They had been notably taken in by the response of the children to this creative activity. In addition, the team noticed that these children had an unusual grasp of- and ability to discuss- the various stealth survival strategies that have evolved among fish. We agree that this lesson provided an exemplar of the potential impact of MAPS in the classroom!

**MAPS Program**

The site visits were especially an opportunity to listen for principals’ and teachers’ perspectives about the programmatic aspects of MAPS.

**Communication:** A very serious concern of participants of MAPS-I, communication did not appear to be a problem in MAPS-II. Apparently, the new and regular mailings, newsletters, and announcements at events have resolved many of the concerns raised in the previous year. There were some requests for more advanced notice of scheduled events. This will be achieved as MAPS is able to begin event planning earlier in the program cycle. Other questions tended to be about operational matters and were readily dealt with by MAPS Educators – a noted advantage of the site visits.

**Dissemination and Enrollment:** The MAPS program was designed to support one teacher at each grade level three through six at each MAPS school. This, of course, establishes a “have” and “have not” circumstance for teachers and children within each school that has more than one teacher per grade. While there are cases of teachers who are not interested in using MAPS, there are also schools where all of the teachers, at least at certain grade levels, want to participate. In other cases, the principal wants MAPS to be available to all children. The rub, however, is that MAPS can only support a fixed number of teachers.

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22 The MAPS Internet site was brought online later in the program year but should help somewhat with MAPS-III.
In response to this very serious concern, we have seen that some sites have taken certain steps to achieve a local remedy. There are examples of actions taken at different levels, from the principal (“We do it the Chestnut way!”23), groups of teachers, and individual teachers. In at least one school, MAPS Teachers have formally presented the program to their peers during in-school staff development. In most cases this means sharing workbooks or making photocopies. This, however, works to some degree for the hard copy materials, to a lesser extent for manipulatives and objects, and to an even lesser extent for the field excursion component.

This is not a circumstance that the MAPS program can afford to ignore or dismiss as a consequence of budgetary limitations. The level of concern at some MAPS sites is already strong and this could increase. Moreover, important opportunities to promote sustainable reform would be lost. Although within-school dissemination is a priority at some MAPS sites, we also observed that at other schools the MAPS Teachers act completely autonomously. This is in part because they are, by design, working with different (grade level) materials. However, articulation both within and across grade levels, and support of MAPS Teachers as teams within schools, represent opportunities worthy of very serious consideration.

Program leaders should consider concrete ways that schools might build on the support that MAPS is able to provide in order to bring the program to full scale within schools. For example, periodic meetings with MAPS Educators during site visits could include all grade 3-6 teachers. MAPS curricular materials could be “licensed” at the school level with access to master documents from the MAPS Internet site. A relationship with an instructional materials vendor might be established in such way as to provide convenient and economical means for schools to furnish and maintain sets of materials (which otherwise would need to be ordered from multiple suppliers, including the museums themselves). And finally, some means to facilitate access to museums for field excursions should be developed – such as the “travel agency” proposal suggested earlier (page 53).

The teachers thought that any expansion of the program for next year should include all classrooms at each grade level 3-6 since this is a large school with 5-7 of each grade level and

23 The actual school name has been replaced by a pseudonym.
the other teachers not currently involved are jealous of the MAPS teachers.
– MAPS Educator

[Principal] Would like all third through sixth grade classrooms included next year so it can be evaluated for its impact on the testing scores for the year. [The school] would be willing to pay for some of this but would like to know what the costs would be to provide materials for the other students in the grades 3-6. – MAPS Educator

[Principal] In order for the program to be most effective next year should the classes be kept together so the same students would move to the next grade of MAPS? – MAPS Educator

Would like to see other classrooms in 3rd-6th do MAPS. Principal has heard a lot of complaints from parents "Why isn’t my child doing MAPS?" Principal felt MAPS needs to expand in the school to make it worthwhile - either all classrooms (3rd-6th) or add more grades. Teachers would like to team teach. Also issues of curriculum alignment - classes are learning different things and changes experiences when all classrooms are not involved.
– MAPS Educator

Support: The conversations of the site visit confirm the prior discussion about opportunities for supporting MAPS teachers (see: Support of MAPS Teachers, page 24). We will add here, however, two observations that illustrate the variation between schools in the applicability of technologically-based support.

MAPS Web site - would like them to include maps of each museum, a chat room, a list of resources for each museum (links to all museums), and images of the exhibits or works that students will see at the museum. – MAPS Educator

Didn’t feel that they would use the MAPS Web site often - computers are not readily accessible in the school. Does have a computer lab but they are very old. Computers that are in the classroom do not work. Didn’t feel that they would use a chat-room forum - doesn’t want to hear other teachers’ complaints. Thought that a "Frequently Asked Questions" section would be nice. Didn’t comment much on other areas of support. – MAPS Educator

Teacher Development Days: Again, the site visits only confirmed what has already been reported about the Teacher Development days. For details, refer to the section “MAPS Teacher Development Days” starting on page 20. One point is in order. Although no new insights about the TDD events were evident from the site visit reports, the effort does have confirmatory value. In addition, the Site Visits provided a forum for the MAPS Educators (MAPS+) and the MAPS Evaluation Committee (MAPS6) to hear directly from teachers and in a more timely manner than is possible in a summative report such as this.
**Teachers:** The general impression and regard that MAPS Educators had for MAPS Teachers is quite positive. While this does not represent a question that the Evaluation Committee had even considered, the occurrence of this trend in the site visit notes is worth noting. Recall that MAPS Educators were not asked to comment on teachers’ professionalism. Still, our impression is that the comments reflect a healthy respect for CPS teachers and this only bodes well for the MAPS Initiative. Here are some examples:

- *All teachers took a lot of pride in their work.* – MAPS Educator
- *Teachers were professional and enthusiastic about their field.* – MAPS Educator
- *The teacher was well prepared and thoroughly understood the lesson.* – MAPS Educator
- *All teachers took MAPS seriously.* – MAPS Educator

**Transport:** If teachers had any complaint at all with the programmatic aspects of MAPS, it tended to involve concerns related to the transportation of students for field excursions. Aside from working around ISAT and ITBS “testing season”, these concerns tend to be about:

1. the mismatch of museum schedules with school-day schedules, especially for early dismissal schools;
2. availability of museums on specific dates that match the schools’ needs and place in the MAPS Units (MAPS Schools compete with all other schools for museum dates); and,
3. transportation to and from the museums.

The most frequent and most strongly voiced concern was the one about transportation. The following vignettes serve to illustrate these concerns.

---

*Some teachers were told that only one class was allowed to come on the field trip. Would like field trips to be more flexible - they can fit two classes on a bus. The teachers realize that it is probably a financial situation.* – MAPS Educator

---

*All teachers had taken at least one field trip, but expressed extreme dissatisfaction and frustration with the planning aspects of this part of the program. Many comments dealt with transportation management, while others had to do with museum responsiveness, both positive and negative.*

*One teacher’s class walked to the Nature Museum, so were able to spend an adequate amount of time there. They were welcomed by the museum staff, and given a presentation before engaging in their planned activities.*

*The negative experiences of others deterred one teacher from planning a second field trip that would require buses. She expressed disappointment, but felt that there were enough other activities going on at this time of year to avoid the children feeling they had missed out.*

*Another teacher’s field trip to the Art Institute took multiple attempts at scheduling before it could be set up. When it was scheduled, buses arrived at 10 AM, but because the museum did not open until 11AM, students could not leave school immediately, and one bus left. The bus*
picked the students up at 1 PM, and the teacher felt they had not had enough time to do planned activities.

**Note** After venting their feelings about the frustrations of scheduling and conducting the field trips, the teachers expressed their fear that we should think they were unhappy with the program. They indicated that the students greatly enjoy the activities, and especially liked working together. They noted that they liked having all the materials available for the program, and hoped the project would continue. – IMSA Researcher

**Summary:** Besides offering their perceptions of MAPS, teachers also were free to express their views about ways to improve the program. Many suggestions that seemed to have broad implications for the MAPS Initiative have already been reported. Another class of suggestions, related to very specific immediate and/or individual teachers’ needs were expected to be handled by the MAPS Educators as promptly as possible after the site visit. There are two, however, that have been reserved for this point in the report. The first is from a MAPS Educator’s notes. It is reproduced here as a final example of the creative and innovative ideas that MAPS Teachers are contributing back to the Initiative. We agree the ideas presented are worth real consideration.

*This teacher had some suggestions for improving the program. She would like to set field trip dates and observation dates at the Teacher Development days, where she has face to face contact with representatives from the museums. She would also prefer the museums to come to the classroom, perhaps giving a slide presentation or bringing artifacts for the students to handle. She would also like to see a part of the MAPS website where teachers could ask questions and receive a response. Finally, she would like to see students receive family passes to the museums.* – MAPS Educator

The second is a reproduction of an entire letter sent to us from a MAPS Teacher. It provides a seemingly balanced and representative illustration of the MAPS Teachers’ perspective (Figure 21: A MAPS Teacher’s Reflections). We close this section with this letter both in gratitude to this individual teacher for her professional concern and initiative, and also because it struck us as a suitable summary of our findings.
To whom it may concern,

I think the MAPS program was a great success in my classroom. The children really enjoyed learning about the great migration. My students were delight with the whole progress of traveling. They especially loved packing for their trip. It was fun looking through their finished products because many of my students packed more “want” than “needs”. For example, they packed items like chocolate, automobiles, gowns, televisions, and jewels to sell in the black market, just to name a few.

My students had so much fun learning about Whales and the Rain Forest. My class enjoyed reading River Rising and working with the clay. In the whale section, my class extended the topic by painting five whale murals on large blue paper (about 4 1/2’ X 5’). The murals were then displayed on five window shades in the classroom. We also read a story called Whales by Seymour Simon and a poem called The Song Of The World’s Last Whale. Listening to the poem on tape really made the whale come alive. On the down side, my class had great difficulty understanding lesson 7-8, Gray Whale Migration Table. On The Move was a fun interactive workbook.

On the second half of the program, my students had a lot of fun learning how fishes protect themselves against their predators. They especially loved lesson 1 and 2. They were so pleased when their fishes were not detected by our predators. Our predators included: a principal, a security officer, a teacher, a teacher’s assistant, and a student.

Working with Winslow Homer’s painting was interesting because it was around the time we had a thunderstorm. The colors that were displayed in the art work were the same colors outside our window.

Unfortunately, we were not able to finish the last section of The Art of Survival. I know my students would have loved working with the painting Thanksgiving created by Doris Lee. It looked like so much fun.

The part of the program I was very disappointed with was scheduling a bus for the field trips. I think [deleted] did unsatisfactory job. On my first field trip to The Shedd Aquarium, the bus arrived about 11:40am it was scheduled to arrive at 9:00am. [Teacher] and myself left several messages on her answering machine a week prior to the scheduled field trip and on the day of the field trip. We wanted a conformation number. [deleted] failed to return our messages. Our second field trip to The Art Institute the bus arrived about one hour late.

Overall, my students and myself had a lot of fun with the MAPS program. I hope my classroom will be included in the upcoming year of 2001/2002.

Sincerely,
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APPENDIX A: MAPS SCHOOLS STUDIES PROTOCOL

Introduction

The MAPS School Studies are an integral component of the research and evaluation agenda, the MAPS-II Study, of the Museums and Public Schools initiative (see Figure 3). This document provides an overview of the design of the MAPS School Studies and the protocols for conducting them. Because of the integrated nature of the MAPS-II Study (see Design Highlights, below) no individual contributor is likely to utilize all of the protocols described here. All of the design elements and protocols are described, however, so that all contributors can see how the elements are interconnected and how the protocols are both interdependent and focused on key MAPS-II Study questions.

Design Highlights

The MAPS-II Study makes use of a nested 3-level hierarchical design. The base level (MAPS) contains all 60 MAPS schools; the second (MAPS+) contains 30 schools; and the third (MAPS6) has 6 schools. The schools are equally divided among the six Chicago Public Schools regions so that MAPS is composed of ten schools from each of the six regions, five schools of which are also designated MAPS+, and with one of these five assigned also to MAPS6.

MAPS can be thought of as the questionnaire-based component of the MAPS-II Study since this is the primary form of information collected from this “sample” of all 60 schools. With its questionnaires, MAPS provides information about participants and their experiences with the MAPS professional development program and curricular materials.

Nested within MAPS, the 30-school MAPS+ is distinguished because these sites are also to be visited at least twice by a MAPS Educator. The focus of the MAPS+ visits is on matters of support for successful implementation of MAPS in schools.

And finally, teams of researchers from the Illinois Mathematics and Science Academy (IMSA) will visit the MAPS6 schools. Note that MAPS6 is nested within MAPS+ and that MAPS+ is nested within MAPS. The focus of MAPS6 is on documenting how teachers and students interact with the MAPS curricular materials and learning environment.
The hierarchical design facilitates the use of information at each level to promote understanding at all levels. Another way to think about this is that MAPS provides a course-grained but broad view of MAPS while MAPS6 provides a narrow but more detailed perspective. The MAPS+ observations and common data elements across the three levels supply a means for triangulating information from the different perspectives. This design is intended to provide ample, credible, and relevant information about the second year of the MAPS initiative.

**MAPS: All Sixty MAPS Schools**

All principals and teachers participating in the MAPS initiative are asked to complete self-report questionnaires over the course of the program year. An initial questionnaire provides demographic and baseline data. Its companion follow-up questionnaire, completed at the end of the program year, will be used to determine levels of participation and changes in participants’ perspectives. In addition, teacher-participants are asked to complete a feedback questionnaire at each Teacher Development Day. Finally, teachers are asked to complete a feedback questionnaire immediately upon finishing each of their two MAPS curriculum units.

The integration of the information gained from MAPS questionnaires with the MAPS+ and MAPS6 site visits is important. From the “MAPS to MAPS6” direction, this questionnaire information can help to characterize any particular site relative to the full body of MAPS schools. From the other perspective (“MAPS6 to MAPS”), the observations from MAPS+ and MAPS6 are expected to contribute “thick description” to the interpretation of patterns and trends in the questionnaire findings. Again, it is helpful to think of MAPS as being the broad but “low resolution” view of the entire MAPS initiative. MAPS+, on the other hand, “resolves” only half of the MAPS sites, but at a higher resolution than MAPS. Finally, MAPS6 provides the “highest resolution” but the view is narrowly limited to only 10% of all the MAPS schools.

**However, when the data from each level informs the others, a useful perspective on the entire MAPS initiative can be achieved.**

**MAPS+: The Thirty MAPS Schools Subsample**

The primary purpose of the MAPS+ site visits is to support the implementation of MAPS in schools. This is to be accomplished first of all by understanding the variation in the circumstances of MAPS schools and the kinds of support that are, in fact, useful. A step in this

---

24 Because the unit of study is the MAPS Initiative and not individual participants, aggregate results will be reported.
direction was taken by including items related to teachers’ perceptions of support-related needs on the (MAPS) questionnaire for the first Teacher Development Day. Results from these items have already been provided to the MAPS Evaluation Committee and project directors. These results are anticipated to be helpful in providing MAPS Educators with some advance insight into some support options and the preferences of MAPS teachers.

The essence of MAPS+ is the site-based support provided by MAPS Educators (see Figure 27). In the first visit, the MAPS Educator will meet with the school’s principal and MAPS teachers for the specific purpose of understanding the circumstances and needs of the school with respect to implementation of MAPS. *The first visit is to be relatively unstructured and should affirm for the principals and teachers the MAPS wish to develop effective ways to support them in the effective local utilization of MAPS.*

In the second visit, the MAPS Educator will observe a MAPS lesson being taught. The purpose of this observation is still to ascertain ways to support implementation. However, this observation will be more structured since it will be informed by the previous visit. Observations will focus more keenly on the circumstances and support needs of MAPS classrooms. *Thus, the second visit provides an opportunity for the MAPS Educator to resolve pending questions and to confirm, refine, and/or refute perceptions from the first visit.* If successful, the MAPS Educator will leave this visit with a reasonably high level of confidence in their understanding of the circumstances of the site and the most promising ways to support implementation there.

Notice especially that the observations are to be richly descriptive, *not evaluative.* Consistent with the purpose of the visit, the MAPS Educator is visiting in order to learn what the MAPS Initiative might do to support teachers.

In order for the visits to have value for informing MAPS and MAPS6, descriptive field notes must be completed as soon as possible after each visit. Guidelines for field notes are provided later in this document (see: Conducting the MAPS+ Site Support Visits, page 70).

**MAPS6: The Six MAPS Schools Subsample**

Six individual MAPS School Studies (MAPS6) are to be conducted simultaneously during the 2000-2001 academic year. Each study will focus on a single MAPS School, one from each of the

---

six Chicago Public School regions. A team of two to three IMSA researchers—one of whom is designated the team leader—is responsible for completing each study (Figure 22).

**Figure 22: MAPS School Studies Teams**

<table>
<thead>
<tr>
<th>CPS Region</th>
<th>MAPS School</th>
<th>IMSA Research Team (Leader is listed first, in bold)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Butternut Elementary School</td>
<td>Mr. Jay Thomas, Mr. Guy Todnem</td>
</tr>
<tr>
<td>2</td>
<td>Dogwood Elementary School</td>
<td>Dr. Steven Rogg, Dr. Susan Bisinger</td>
</tr>
<tr>
<td>3</td>
<td>Elm Elementary School</td>
<td>Dr. Steve Cordogan, Dr. Linda Brazdil</td>
</tr>
<tr>
<td>4</td>
<td>Locust Elementary School</td>
<td>Dr. Steve Rogg, Dr. Bob Brazzle</td>
</tr>
<tr>
<td>5</td>
<td>Maple Elementary School</td>
<td>Dr. Steve Rogg, Dr. Bob Brazzle</td>
</tr>
<tr>
<td>6</td>
<td>Oak Elementary School</td>
<td>Mr. Guy Todnem, Dr. Karen L. Meyer</td>
</tr>
</tbody>
</table>

Each team has a leader who is experienced in conducting school-based research. Team leaders typically serve on two teams in order to facilitate communication and reliability in the application of the protocol. Also, each team has at least two researchers in order to enable determination of inter-rater reliability of quantitative observations and expert-judge negotiation of qualitative observations. In some cases, teams are appointed with three researchers. This is done to promote flexibility of site visit scheduling in order to accommodate the schools.

The purpose of each MAPS School Study is to document the research team’s observations and findings related to each of the first six MAPS-II Study Focus Questions (Figure 23). Fundamentally, the MAPS School Studies are expected to provide “thick description” of the influence of the MAPS initiative as seen from within schools and within classrooms. The focus, therefore, will be on factors influencing students’ learning experience especially those involving the operational interactions of teacher, student, curriculum, and the learning environment.

Findings from the individual MAPS School Studies will be reviewed in a cross-site and cross-level analysis in order to document commonalities and variations among these six schools. School demographic and performance data, questionnaires completed by principals and teachers (MAPS), student work artifacts, and observations from site visits conducted by MAPS Educators (MAPS+) will be used to situate findings from the MAPS School Studies in context within the overall MAPS-II Study.

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26 Pseudonyms are now substituted throughout this report to preserve anonymity of schools and school personnel.
Figure 23: MAPS-II Study Focus Questions for MAPS6

Focus on observed factors influencing students’ experiences.

1. How does participation in MAPS influence teachers’ professional beliefs and practices?
2. What evidence is there that, when engaged in MAPS activities, students are learning ideas defined in the standards, and in ways congruent with the standards?
3. In what ways, and to what extent, are students experiencing museums and museum resources?
4. In what (observed) ways, and to what extent, are teachers and their students interacting with the MAPS curricular materials and with one another?
5. What action steps are teachers taking to increase the time and extent that their students engage with MAPS materials, museums, and museum resources?
6. What action steps are principals taking to promote and support implementation of MAPS in the classroom?

Preparing a Site Visit

There are three important aspects to preparing for your visits to the MAPS Site Study school. The first is to prepare yourself so that your purposes and the protocol are clear in your mind. The second is to make the logistical arrangements. And finally, the third aspect is to confirm plans with the MAPS Site Leader and your Site Study team.

Preparing Yourself

A first and very important step in preparing yourself for site visits is to read this document with care and attention to its details and intentions. The goal is a successful MAPS Initiative and MAPS-II Study, and these are highly dependent on accurate, relevant, and timely information. Even though your role may appear limited, perhaps to a single school, it is good to know how the protocols that apply to you specifically are related to the others. Also, it is important for you to know about the kind of information and assistance at your disposal in order to help you enjoy a successful site visit.

If you have any questions or concerns, contact the MAPS-II Study director: Steven Rogg at Rogg@IMSA.edu or by phone at (630) 907-5956.

A second step in preparing is to understand the nature of your role before, during, and after the visit. Some helpful guidelines are provided below in Figure 24. Again, please read the content of this chart carefully. Also, be sure that the principal and MAPS teachers are fully aware of the purposes of the visit and how you intend to conduct observations. **Most important is that our posture be to support and to understand, not to evaluate.**
### A MAPS Site Visitor Is…

#### General Guidelines: What MAPS Site Visitation Is/Is Not

<table>
<thead>
<tr>
<th>Efficacious</th>
<th>♦  MAPS site visitation is informative and supportive in nature, neither evaluative nor judgmental.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observant</td>
<td>♦  MAPS site visitation is based on first-hand observation and provides specific details and examples. It is neither based on second hand information nor does it generalize.</td>
</tr>
<tr>
<td>Task Oriented</td>
<td>♦  MAPS site visitors collect only the specific data that they have been asked to collect.</td>
</tr>
<tr>
<td>Professional</td>
<td>♦  Social dynamics set a congenial spirit and help individuals feel comfortable however, MAPS site visitation is based on professional, not social, purposes.</td>
</tr>
<tr>
<td>Focused</td>
<td>♦  The focus of a MAPS site visitation is on instruction, its consequences, and evidence thereof.</td>
</tr>
<tr>
<td>Collegial</td>
<td>♦  MAPS site visitation activities should be characterized by a stance of equality among colleagues—we're in this together—rather than a spirit of one-upmanship or superior knowledge.</td>
</tr>
<tr>
<td>Ethical</td>
<td>♦  Interactions and documents should be treated as confidential. Confidentiality is a cornerstone of trust, which is a hallmark of high quality MAPS site visitation.</td>
</tr>
<tr>
<td>Skillful</td>
<td>♦  The professional behavior of MAPS site visitors also contributes to trust, specifically (1) the observation skills of the site visitor, (2) the record-keeping skills of the site visitor, and (3) the communication skills of the visitor.</td>
</tr>
<tr>
<td>Responsible</td>
<td>♦  MAPS site visitors: keep their appointments; arrive on time; follow building/district procedures for parking, eating, and being in the school; stay as expected and where expected; have at hand the appropriate materials; are courteous to teacher and students during the observation; and return materials in a timely fashion to appropriate locations.</td>
</tr>
<tr>
<td>A Guest</td>
<td>♦  MAPS site visitors are, above all, invited guests, and should behave as such.</td>
</tr>
</tbody>
</table>

Source: How To Plan and Implement a Peer Coaching Program Pam Robbins, ASCD, 1991

### Logistics

The first step is to find the name of the school(s) that will be your site(s). Before the schools are assigned, the MAPS Evaluation Committee will identify eligible schools and CPS MAPS Director, Laura Pastor, will make initial contact with the principals and MAPS Lead Teachers. As soon as you are notified of your site(s) you will want to schedule the first visit. Note that the MAPS Lead Teacher is your on-site contact person. A sample checklist for logistics is provided below (Figure 25).

For information about your school assignment(s), contact information, and the name of the MAPS Lead Teacher, contact Laura Pastor at LPastor@csc.cps.k12.il.us or by phone at (773) 553-1933.
### Figure 25: Logistics Checklist

<table>
<thead>
<tr>
<th>4. Preliminary Information:</th>
</tr>
</thead>
<tbody>
<tr>
<td>✐ Copy of each MAPS Curriculum Unit (Grade 3, 4, 5, and 6).</td>
</tr>
<tr>
<td>✐ Name(s) of your school site(s), school address and phone number.</td>
</tr>
<tr>
<td>✐ Name of MAPS Lead Teacher and best times and means to contact them.</td>
</tr>
<tr>
<td>✐ Names of MAPS teachers and each teacher’s grade level and room assignments.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. Preparation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>✐ Contact the MAPS Lead Teacher to discuss the visit and schedule a date and time. The MAPS Lead Teachers will need to notify the MAPS Teachers, confirm that they are willing to participate in the site visit, and make certain that they understand the purpose and approach.</td>
</tr>
<tr>
<td>✐ Make travel plans. Be certain you know the location and allow plenty of time for travel. Know where to park and how to enter the school building - register at the main office.</td>
</tr>
<tr>
<td>✐ Consider materials that you need for the participants and for conducting the study. Especially important is a journal for recording notes and at least two good pens. It is also a good idea to bring some of your business cards.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Confirmation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>✐ Review your plans with your team leader (if applicable)</td>
</tr>
<tr>
<td>✐ Place a confirmation call to the Lead Teacher a day or two prior to the visit. Confirm that the principal and MAPS teachers are ready for the visit and willing to participate.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. Follow-up:</th>
</tr>
</thead>
<tbody>
<tr>
<td>✐ For Level B support visits, be sure to follow through with requests for direct assistance.</td>
</tr>
<tr>
<td>✐ Consider sending a note to participants to thank them for their time and assistance.</td>
</tr>
</tbody>
</table>

---

**Conducting the MAPS+ Site Support Visits**

Here we provide some guidelines and tools for seeking and recording evidence for understanding the support needs of schools and school personnel. Keep in mind that the primary purpose of the visits is to support successful implementation of MAPS in schools. Remember also that your observations can be informed by – and can inform – the MAPS and MAPS6 levels of the MAPS-II Study. As a result of the site visits it is anticipated that you will learn something valuable about the needs of schools and school personnel. Moreover, MAPS, as an organization (with you as its “ambassador”), must also “learn” about how it can most effectively promote successful implementation in all MAPS sites.

**What to Record**

A journal or composition book is ideal for keeping notes during your visit. Be sure that your name and contact information are on the front cover so that the journal might be returned to you in the case that it is lost. If possible, in advance of the visit record background information

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27 An easy way to do this is to glue one of your business cards to the inside front cover.
for journal entries), i.e., the school’s name and date of visit. For each site visit, record the information listed in Figure 26

Since eye-contact is very important, you will want to record very brief notes with key words and phrases rather than lengthy narrative. Record enough that you can reliably fill in the gaps immediately after the visit during post processing. If you want an exact quote, it is reasonable to pause the interview by asking for a moment to make a note of “that important point”, for example. Do not use a tape recorder since this may be intimidating or mechanically unreliable.

Figure 26: Information to record at the site visits.

- School name
- Date and time of the visit
- Observations of the school/classroom as a learning environment
- Notes from the principal interview:
  - principal’s name
  - location of interview (i.e., principal’s office)
  - start and end times of the interview
- Notes from each teacher interview:
  - teacher’s name
  - location of interview (i.e., teachers’ break room)
  - start and end times of the interview
- Reflections on the process (caveats, what worked, what didn’t)
- Other relevant impressions of the site and site visit experience.

First Site Visit

The first visit is an opportunity to make it clear for the principal and teachers that MAPS wants to know how best to support them. To accomplish this, you will need to be attentive to what you can learn from three key elements: the principal, the MAPS teachers, and the learning environment. Practically speaking, you will accomplish this by meeting with the principal, by meeting with each MAPS teacher, and by noting what you see and hear as you are on-site. An overview of the first visit is provided in Figure 27.
Figure 27: MAPS+ Site-Based Support Model: First Visit

- MAPS Educator meets with the Principal and all four (4) MAPS Teachers
- Focus on developing lines of communication between the school and MAPS.
- Survey information will be discussed with the principals and teachers.
- Teachers will be encouraged to share problems, concerns, and compliments regarding the unit of instruction.
- MAPS Educator will take an inventory of all materials that have and have not been received by the classroom teachers. This information will be forwarded to Johnnie Winn, MAPS Curriculum Manager, for follow-up and material dissemination.
- A timeline for Site-Based Visit #2 will be developed and shared with involved parties. Special attention will be given to these timelines to ensure that visits will not interfere with testing programs.
- Site-based session will last approximately 40 minutes.


Here are some guidelines for the first meeting. Note that it is probable that the principal has already participated in an orientation meeting, so this some of this is to reinforce information they should already know.

- Introduce yourself and briefly acknowledge your roles as a MAPS Educator: design and development of curriculum, teacher development, and implementation support.
- Describe how the purpose of your visit is to learn how MAPS might best support schools and school personnel in the successful implementation of the program.
- Explain that there will be two visits this year. In the first visit, you are meeting with the principal and each MAPS teacher to hear “how it’s going” for each individual. The second visit is to follow-up on the first, and also to observe MAPS begin taught. This observation is NOT an evaluation - neither of the school nor of the teachers. Rather, it is to deeply understand the perspectives and needs of MAPS participants and to provide direct assistance as requested and as able.
- Explain that confidentiality will be strictly honored. Public reports (external to MAPS) will NOT contain names or ID numbers identifying individual schools or school personnel. Our interest is in the understanding of the requirements of successful implementation of MAPS in the aggregate. The MAPS organization has no interest in publicly reporting the performance of individuals or individual schools. Neither the Chicago Public Schools nor the Museums in the Park (MIP) nor its member institutions will collect or retain records with identification information. Original notes and records containing names of schools or school personnel will be sent promptly and exclusively to the MAPS-II Study office at the Illinois Mathematics and Science Academy. Questions or concerns about confidentiality or the conduct of the site visits should be directed to MAPS Study Director, Dr. Steven Rogg (Rogg@IMSA.edu or 630.907.5956).
- Invite the principal or teacher to share their perspectives. Eye contact and a simple prompt such as “Tell me about how MAPS is going for you?” should be sufficient to start the conversation.
♦ Another way to prompt to principal or teacher to share their perspectives is to show them a display of terms and invite them to speak to any that strike them as being important to them. An example list that you might want to use is given below as Figure 28. These are categories, sorted alphabetically, that emerged from the initial survey of teachers' support needs.

♦ Note: As a general rule, interviews will be most successful if you are doing the talking no more than 10% of the time. Your role is to listen and observe attentively. Say only enough to prompt the principal to talk “on topic”, to ask clarifying questions, and to guide the conversation back “on track” as required. Avoid making declarative statements (other than the introductory points, above) or stating your own opinions (Refer to: “What to Record” on page 70).

**Second Site Visit**

The second visit will proceed in much the same way as the first except for two distinct features. First, this visit should build on what you learned in the first and this may include any appropriate response to participants’ requests for support services or questions. A second feature is that this visit will include direct observation of MAPS instruction. With respect to the latter, it is extremely important to not interfere with the teacher’s instruction of MAPS. **Your role at this visit is to observe and learn - not to demonstrate or teach.** A summary of this visit is provided as Figure 29, below.

**Figure 28: Support Category Interview Prompts**

<table>
<thead>
<tr>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessments</td>
</tr>
<tr>
<td>Availability of MAPS Educators</td>
</tr>
<tr>
<td>Classroom Aids/Adult Assistance</td>
</tr>
<tr>
<td>Colleagues/Peer Assistance</td>
</tr>
<tr>
<td>Communication</td>
</tr>
<tr>
<td>Content/Subject Knowledge</td>
</tr>
<tr>
<td>Curriculum (Extensions of the MAPS Units)</td>
</tr>
<tr>
<td>Demonstrate/Demonstrations</td>
</tr>
<tr>
<td>E-Mail (lists, access to Museum Educators)</td>
</tr>
<tr>
<td>Mail (notices by mail)</td>
</tr>
<tr>
<td>Materials and Resources</td>
</tr>
<tr>
<td>On-Site Support</td>
</tr>
<tr>
<td>Procedures in support of implementation</td>
</tr>
<tr>
<td>Schedule/Help with scheduling</td>
</tr>
<tr>
<td>Telephone Access (&quot;just in time&quot; access)</td>
</tr>
<tr>
<td>Workshops/Inservice/Seminars</td>
</tr>
<tr>
<td>WWW Site</td>
</tr>
</tbody>
</table>
MAPS Educator meets with the principal and visits the classrooms of all four (4) MAPS teachers.
Visit will focus on actual classroom instruction.
MAPS Educators will observe a lesson presentation
THIS WILL NOT BE A VISIT TO EVALUATE THE CLASSROOM TEACHER
Classroom visitations will last approximately 40 minutes per session.
MAPS Educators share observations with each teacher at the conclusion of the visit.


Reporting Observations

♦ MAPS Educators are required to submit an electronic copy of their field notes within three working days of each visit to Dr. Steven Rogg, director of the MAPS-II Study, at Rogg@IMSA.edu.

♦ In order to comply with the confidentiality policy, immediately after submitting field notes for the second site visit (electronically) MAPS Educators are required to send the original field notes journal to: Dr. Steven Rogg, The Center@IMSA, 1500 West Sullivan Road, Aurora, Illinois 60506-1000.
**APPENDIX B: DETAILED MAPS-II STUDY TIMELINE**

This detailed activity timeline is updated from the original Plan of Work in order to reflect actual dates of activities and events. In the “Charge” column of the timeline…

- **EC** indicates that the activity was the charge of the Maps Evaluation Committee,
- **IMSA** means that the research team of the Illinois Mathematics and Science Academy was primarily responsible,
- **CC** stands for MAPS Curriculum Committee,
- **MAPS** represents the MAPS directors’ office, and
- **ALL** indicates participation of the entire MAPS community.

<table>
<thead>
<tr>
<th>Date</th>
<th>Charge</th>
<th>MAPS-II Study Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>08/24/00</td>
<td>EC</td>
<td>Review findings of the initial MAPS Study</td>
</tr>
<tr>
<td></td>
<td>IMSA</td>
<td>Final revision and production of MAPS Study Final Report</td>
</tr>
<tr>
<td>09/13/00</td>
<td>EC</td>
<td>Develop strategic approach for the MAPS-II Study</td>
</tr>
<tr>
<td></td>
<td>IMSA</td>
<td>Prepare concept draft design for the MAPS-II Study</td>
</tr>
<tr>
<td></td>
<td>IMSA</td>
<td>Prepare draft Teacher Questionnaire for the Kick Off Event</td>
</tr>
<tr>
<td>09/21/00</td>
<td>EC</td>
<td>Develop the design for the MAPS-II Study. Decide priority activities.</td>
</tr>
<tr>
<td>09/21/00</td>
<td>EC</td>
<td>Review/revise the Teacher Questionnaire</td>
</tr>
<tr>
<td></td>
<td>IMSA</td>
<td>Produce the Kick Off Event Teacher Questionnaire</td>
</tr>
<tr>
<td></td>
<td>IMSA</td>
<td>Create and produce the Kick Off Event Principal Questionnaire</td>
</tr>
<tr>
<td>09/28/00</td>
<td>ALL</td>
<td>MAPS Kick Off Event</td>
</tr>
<tr>
<td></td>
<td>IMSA</td>
<td>Process Teacher Questionnaires. Initial analysis of findings.</td>
</tr>
<tr>
<td></td>
<td>IMSA</td>
<td>Process Principal Questionnaires. Initial analysis of findings.</td>
</tr>
<tr>
<td>10/11/00</td>
<td>CC</td>
<td>Orientation on School Visit Model (Site Support Inventory)</td>
</tr>
<tr>
<td>10/11/00</td>
<td>CC</td>
<td>Orientation on student assessment (Embedded Assessment Activities)</td>
</tr>
<tr>
<td></td>
<td>IMSA</td>
<td>Prepare interim report for MAPS EC.</td>
</tr>
<tr>
<td></td>
<td>IMSA</td>
<td>Revise MAPS-II Study Design document &amp; draft budget</td>
</tr>
<tr>
<td></td>
<td>IMSA</td>
<td>Draft Teacher Questionnaire for Teacher Development Day (TDD-I).</td>
</tr>
<tr>
<td>10/19/00</td>
<td>CC</td>
<td>Draft Embedded Assessment Activities</td>
</tr>
<tr>
<td>10/19/00</td>
<td>CC</td>
<td>Draft Initial Site Inventory Elements</td>
</tr>
<tr>
<td>10/19/00</td>
<td>EC</td>
<td>Review interim report.</td>
</tr>
<tr>
<td>10/19/00</td>
<td>EC</td>
<td>Authorize MAPS-II Study design.</td>
</tr>
<tr>
<td>10/19/00</td>
<td>EC</td>
<td>Review draft Teacher Questionnaire for TDD-I.</td>
</tr>
<tr>
<td></td>
<td>IMSA</td>
<td>Produce the Teacher Questionnaire for TDD-I.</td>
</tr>
<tr>
<td></td>
<td>IMSA</td>
<td>Prepare Site Support Inventory Protocol.</td>
</tr>
<tr>
<td>10/27/00</td>
<td>ALL</td>
<td>Teacher Development Day-I (TDD-I)</td>
</tr>
<tr>
<td></td>
<td>IMSA</td>
<td>Process TDD-I questionnaires</td>
</tr>
<tr>
<td></td>
<td>IMSA</td>
<td>Prepare interim report for MAPS EC.</td>
</tr>
<tr>
<td>11/21/00</td>
<td>EC</td>
<td>Review interim report. Etc.</td>
</tr>
<tr>
<td>Date</td>
<td>Charge</td>
<td>MAPS-II Study Activity</td>
</tr>
<tr>
<td>--------------</td>
<td>--------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>~</td>
<td>IMSA</td>
<td>Prepare Group C protocol.</td>
</tr>
<tr>
<td>~</td>
<td>IMSA</td>
<td>Prepare interim report for MAPS EC.</td>
</tr>
<tr>
<td>12/21/00</td>
<td>EC</td>
<td>Review interim report. Etc.</td>
</tr>
<tr>
<td>~</td>
<td>IMSA</td>
<td>Produce TDD-II questionnaires</td>
</tr>
<tr>
<td>~</td>
<td>IMSA</td>
<td>Prepare interim report for MAPS EC.</td>
</tr>
<tr>
<td>01/18/01</td>
<td>EC</td>
<td>Review interim report. Etc.</td>
</tr>
<tr>
<td>01/19/01</td>
<td>ALL</td>
<td><strong>Teacher Development Day-II (TDD-II)</strong></td>
</tr>
<tr>
<td>~</td>
<td>IMSA</td>
<td>Process TDD-II questionnaires</td>
</tr>
<tr>
<td>~</td>
<td>IMSA</td>
<td>Prepare interim report for MAPS EC.</td>
</tr>
<tr>
<td>02/15/01</td>
<td>EC</td>
<td>Review interim report. Etc.</td>
</tr>
<tr>
<td>03/15/01</td>
<td>EC</td>
<td>Begin discussion of Student Work Study &amp; TDD-III</td>
</tr>
<tr>
<td>04/04/01</td>
<td>CC</td>
<td>Initiate development of Student Work Artifact (SWA) Documentation</td>
</tr>
<tr>
<td>04/24/01</td>
<td>CC</td>
<td>SWA Documentation (drafts) due (deliver to IMSA)</td>
</tr>
<tr>
<td>04/12/01</td>
<td>EC</td>
<td>Continue design of TDD-III and Student Work Study</td>
</tr>
<tr>
<td>~</td>
<td>IMSA</td>
<td>Analysis of results from MAPS+ Site Support Study</td>
</tr>
<tr>
<td>04/30/01</td>
<td>IMSA</td>
<td>Complete final editing of SWA activity forms (deliver to MAPS CPS)</td>
</tr>
<tr>
<td>04/30/01</td>
<td>IMSA</td>
<td>MAPS+ Site Visits End -- MAPS6 Site Visits Underway</td>
</tr>
<tr>
<td>05/07/01</td>
<td>MAPS</td>
<td>Produce &amp; Distribute Student Work Artifact Activity Forms</td>
</tr>
<tr>
<td>05/09/01</td>
<td>CC</td>
<td>Review and advise preparations for TDD-III</td>
</tr>
<tr>
<td>05/10/01</td>
<td>EC</td>
<td>Continue preparations for TDD-III, instruments, SWA rubrics.</td>
</tr>
<tr>
<td>~</td>
<td>IMSA</td>
<td>Produce Student Work Artifact scoring and summary rubrics</td>
</tr>
<tr>
<td>~</td>
<td>IMSA</td>
<td>Produce TDD-III questionnaires</td>
</tr>
<tr>
<td>06/01/01</td>
<td>MAPS</td>
<td>Student Work Artifacts due to MAPS CPS Office (deliver to IMSA)</td>
</tr>
<tr>
<td>06/07/01</td>
<td>EC</td>
<td>Review final plans and instruments for TDD-III. Etc.</td>
</tr>
<tr>
<td>~</td>
<td>IMSA</td>
<td>Final revisions TDD-III</td>
</tr>
<tr>
<td>06/13/01</td>
<td>ALL</td>
<td><strong>Teacher Development Day-III (TDD-III)</strong></td>
</tr>
<tr>
<td>~</td>
<td>IMSA</td>
<td>Analysis of student assessment activities.</td>
</tr>
<tr>
<td>~</td>
<td>IMSA</td>
<td>Process TDD-III questionnaires</td>
</tr>
<tr>
<td>~</td>
<td>IMSA</td>
<td>Analysis &amp; Report Preparation</td>
</tr>
<tr>
<td>08/16/01</td>
<td>EC</td>
<td>Review interim report. Etc.</td>
</tr>
<tr>
<td>~</td>
<td>EC</td>
<td>Review Draft Final Report</td>
</tr>
<tr>
<td>~</td>
<td>EC</td>
<td>Presentation of MAPS Findings</td>
</tr>
</tbody>
</table>
APPENDIX C: SURVEY INSTRUMENTS

MAPS Kick-Off Event - Initial Teacher Questionnaire

MAPS Teacher
Museums and Public Schools (MAPS) Kick Off Event
September 28, 2000

1. We ask for your name and school name in order to know how to contact you about MAPS.
First Name __________________________ Last Name __________________________
School Name ____________________________
E-mail Address (e.g., myname@misp.edu) ____________________________

2. We ask for demographic information in order to determine how well groups are represented. How do
you describe yourself?
☐ Male ☐ Female
☐ Black or African American ☐ Hispanic or Latino
☐ American Indian or Alaska Native ☐ White (not Hispanic or Latino)
☐ Native Hawaiian or Other Pacific Islander ☐ Asian

3. How many years have you been teaching for Chicago Public Schools (include this year)? ______
4. How many years have you been teaching in total (include this year)? ______

5. What grade(s) do you currently teach? ☐ P ☐ K ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12
6. For which grade(s) are you certified? ☐ P ☐ K ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12

7. What are your areas of study and degrees earned? (e.g., social studies, education, mathematics, etc.)
Bachelor’s Degree Major __________________________
Bachelor’s Degree Minor __________________________
Master’s Degree Major __________________________
Master’s Degree Minor __________________________
Doctorate __________________________

8. How many times have you been to a museum in the past 12 months (including today)?
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ >10

Strongly Agree
Agree
Disagree
Strongly Disagree
9. Participation in MAPS is important to me as a professional teacher.
10. Aligning my curriculum to the Learning Standards is good for my students.
11. I see how this MAPS experience will benefit my students.
12. I use museum resources in my classroom.
13. I am looking forward to using the MAPS Units in my classroom.
14. The day was well organized.
15. This experience was worth my time and effort.
16. The presenters provided useful information.
17. Overall, this experience favorably met or exceeded my expectations.

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Don’t forget the other side!
Reflecting on Teaching and Student Learning

Indicate how important you think each item is for effective classroom instruction in general.

1. I use open-ended questions.
2. I encourage questions from my students.
3. I provide time for my students to discuss subject-specific ideas among themselves.
4. In my class, students draw on information and resources from other subject areas.
5. My students perform laboratory experiments or use manipulatives.
6. My students use data to justify responses to questions.
7. My students consult one another as sources for learning.
8. My students keep written accounts about what they are thinking and learning.

Indicate how often these events occur in your classroom.

Never
Seldom
Sometimes
Often
Almost Always

Indicate how much you agree that these occur in your classroom.

Strongly Disagree
Disagree
Agree
Strongly Agree

9. I encourage students to use perspectives from different subject areas.
10. I require students to supply evidence to support their claims.
11. I encourage my students to consider the implications of their conclusions.
12. I assess my students’ abilities to apply what they learn to new situations.
13. I design learning experiences around real-world problems.
14. I plan learning experiences that connect subject areas.
15. I am well versed in the state and/or national standards for the area I teach.
16. I focus my teaching on meeting the state learning standards.
17. My students investigate relevant applications of mathematics or science.
18. My students repeat experiments to confirm results.
19. My students develop their own ways to solve challenging problems.
20. My students evaluate the validity of information found in various sources.

Thank you!

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MAPS Principal
Museums and Public Schools (MAPS) Kick Off Event
September 28, 2000

1. We ask for your name and school name in order to know how to contact you about MAPS.
   First Name              Last Name
   ______________________  ______________________
   School Name
   ______________________
   E-mail Address (e.g., myname@myisp.edu)
   ______________________

2. We ask for demographic information in order to determine how well groups are represented. How do you describe yourself?

   □ Male       □ Hispanic or Latino
   □ Female     □ American Indian or Alaska Native
   □ White (not Hispanic or Latino)
   □ Native Hawaiian or Other Pacific Islander
   □ Asian

3. How many years have you been a principal for Chicago Public Schools (include this year)?  
   [ ]

4. How many years have you been a principal in total (include this year)?  
   [ ]

5. What are your areas of study and degrees earned? (e.g., social studies, education, mathematics, etc.)

   Bachelor's Degree Major  Bachelor's Degree Minor
   ______________________  ______________________
   Master's Degree Major  Master's Degree Minor
   ______________________  ______________________
   Doctorate Degree Area (i.e., Educational Leadership)
   ______________________

6. How many times have you been to a museum in the past 12 months (including today)?
   [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 [ ] 6 [ ] 7 [ ] 8 [ ] 9 [ ] 10 [ ] >10

**Please indicate your degree of agreement with each statement...**

   [ ] 7. Participation in MAPS is important to me as a school principal.
   [ ] 8. Aligning my school's curriculum to the Learning Standards is good for my students.
   [ ] 9. I see how this MAPS experience will benefit my students.
   [ ] 10. My teachers use museum resources in their classrooms.
   [ ] 11. My teachers are looking forward to using the MAPS Units in their classrooms.
   [ ] 12. The day was well organized.
   [ ] 13. This experience was worth my time and effort.
   [ ] 14. The presenters provided useful information.
   [ ] 15. Overall, this experience favorably met or exceeded my expectations.

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## Reflecting on Teaching and Student Learning

Indicate how important you think each item is for effective classroom instruction in general.

<table>
<thead>
<tr>
<th>Important</th>
<th>Somewhat Important</th>
<th>Somewhat Unimportant</th>
<th>Unimportant</th>
</tr>
</thead>
</table>

1. Teachers use open-ended questions.
2. Teachers encourage questions from students.
3. Teachers provide time for students to discuss subject-specific ideas among.
4. In class, students draw on information and resources from other subject areas.
5. Students perform laboratory experiments or use manipulatives.
6. Students use data to justify responses to questions.
7. Students consult one another as sources for learning.
8. Students keep written accounts about what they are thinking and learning.

Indicate how often these events occur in your school's classrooms.

<table>
<thead>
<tr>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
</table>

Indicate how much you agree that these occur in your classrooms.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

9. Encourage students to use perspectives from different subject areas.
10. Require students to supply evidence to support their claims.
11. Encourage students to consider the implications of their conclusions.
12. Assess students' abilities to apply what they learn to new situations.
14. Plan learning experiences that connect subject areas.
15. Teachers are well versed in the state and/or national standards.
16. Teachers focus their teaching on meeting the state learning standards.
17. Students investigate relevant applications of mathematics or science.
18. Students repeat experiments to confirm results.
19. Students develop their own ways to solve challenging problems.
20. Students evaluate the validity of information found in various sources.

**Thank you!**

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Teacher Development Day-I - Feedback and Initial Support Survey

Professional Development Day Feedback Questionnaire
October 27, 2000
Reflecting on this Professional Learning Opportunity

1. What is the location of this workshop?
   ○ Chicago Historical Society (grade 3)
   ○ Art Institute of Chicago (grade 4)
   ○ Chicago Academy of Sciences (grade 5)
   ○ Field Museum (grade 6)

2. How many times have you been to a museum in the past 12 months (including today)?
   1  2  3  4  5  6  7  8  9  10  >10

Please indicate your degree of agreement with each statement...

3. Participation in MAPS is important to me as a professional teacher.
4. Aligning my curriculum to the Learning Standards is good for my students.
5. I see how this MAPS experience will benefit my students.
6. I use museum resources in my classroom.
7. I am looking forward to using the MAPS Units in my classroom.
8. This workshop...
9. favorably met or exceeded my expectations.
10. stimulated my thinking.
11. increased my desire to learn.
12. will benefit my teaching.
13. contributes to the improvement of my school’s curriculum.
14. was worth my time and effort.
15. was well organized.

16. What is your assessment of the value of this day for your work?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

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Notice: All forms, completed or not, are to be returned in a sealed envelope directly to the address below. Please notify us at this address if the forms are handled in any other way.

The Center@IMEA
Illinois Mathematics and Science Academy
1500 West Sullivan Road
Aurora, Illinois 60506

How might MAPS support you?

Please tell us how MAPS might best help you to succeed in your classroom.

1. We ask for your name and school name in order to know how to contact you about MAPS support.

   First Name ____________________________  Last Name ____________________________

   School Name ____________________________

   E-mail Address (e.g., myname@myisp.edu) ____________________________

2. Which of the following support alternatives would be useful to you? Please indicate the relative importance of each idea (fill the bubble) and then rank order them (write the number in the square).

   RANK  (Order by "1" = MOST IMPORTANT, "7" = LEAST IMPORTANT)

   Very Important □
   Important □
   Unimportant □
   Very Unimportant □

   a. Professional Development Days
   b. Telephone access to MAPS Educators (CPS Lead Teachers/Museum Educators)
   c. E-mail access to MAPS Educators
   d. The websites of the nine Museums in the Park member museums
   e. A MAPS website with the units, links to resources, etc.
   f. On-site classroom visits by MAPS Educators

3. How can MAPS Educators assist you in a successful implementation of the program in your school/classroom? Please be specific.

   __________________________________________________________________________

   __________________________________________________________________________

   __________________________________________________________________________

   __________________________________________________________________________

   __________________________________________________________________________

   532262653
Teacher Development Day-II – Feedback Questionnaire

[Image of MAPS logo]

Professional Development Day Feedback Questionnaire
January 19, 2001
Reflecting on this Professional Learning Opportunity

First Name ___________________________ Last Name ___________________________

School Name ___________________________

E-mail Address (e.g., myname@isp.edu)

1. What is the location of this workshop?
   - [ ] Museum of Science and Industry (grade 3)
   - [ ] John G. Shedd Aquarium (grade 4)
   - [ ] DuSable Museum of African American History (grade 5)
   - [ ] Adler Planetarium and Astronomy Museum (grade 6)

2. How many times have you been to a museum in the past 12 months (including today)?
   1 2 3 4 5 6 7 8 9 10 >10

Please indicate your degree of agreement with each statement...

[Scale: Strongly Agree, Agree, Disagree, Strongly Disagree]

3. Participation in MAPS is important to me as a professional teacher.
4. Aligning my curriculum to the Learning Standards is good for my students.
5. I see how this MAPS experience will benefit my students.
6. I use museum resources in my classroom.
7. I am looking forward to using the MAPS Units in my classroom.

This workshop...
8. favorably met or exceeded my expectations.
9. stimulated my thinking.
10. increased my desire to learn.
11. provided useful information.
12. will benefit my teaching.
13. contributes to the improvement of my school's curriculum.
14. was worth my time and effort.
15. was well organized.

[Handwritten note: Don't forget the other side!]

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16. What is your assessment of the value that this day has for your work?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

17. Other comments, ideas, or concerns?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Notice: All forms, completed or not, are to be returned in a sealed envelope directly to the address below. Please notify us at this address if the forms are handled in any other way.

The Center@IMSA
Illinois Mathematics and Science Academy
1500 West Sullivan Road
Aurora, Illinois 60506

7446489417
MAPS Principal
Museums and Public Schools (MAPS) Principal's Meeting
February 7, 2001

Please indicate your degree of agreement with each statement...

Strongly Agree
Agree
Disagree
Strongly Disagree

1. Participation in MAPS is important to me as a school principal.
2. Aligning my school's curriculum to the Learning Standards is good for my students.
3. I see how this MAPS experience will benefit my students.
4. My teachers use museum resources in their classrooms.
5. My teachers are looking forward to using the MAPS Units in their classrooms.
6. The day was well organized.
7. This experience was worth my time and effort.
8. The presenters provided useful information.
9. Overall, this experience favorably met or exceeded my expectations.

10. What specific actions have you taken to support your school's MAPS teachers this year?

We ask this in order to identify the key ways in which MAPS teachers have been supported, the range of possibilities, and "good ideas" to build into the MAPS program.

---

Please continue to the other side!
MAPS Principal (continued)

11. What resources do you, your school, and/or your teachers need to successfully implement MAPS?
We hope to identify those resources, both intangible and material, that substantially promote effective teaching and learning in MAPS-supported schools.

12. What is happening in the MAPS classrooms?
Please tell us what you see going on in the classrooms of your school's MAPS teachers. We hope to understand the extent to which MAPS is being implemented, any observed changes in teacher practices, impressions of the instructional environment, and how students respond.

13. In what specific ways can MAPS be improved?
As a school leader, you have a vitally important perspective on how MAPS might more effectively promote exemplary teaching and learning.

Thank you!

©2001, The Illinois Mathematics and Science Academy (IMS)
Thank you!

EXHIBITION: MAPS-II
June 13, 2001
Field Journal

You are asked to respond carefully, thoughtfully, and completely to the items in this document in order to inform the ongoing development of MAPS. Your perspective is very important.

1. How many times have you been to a museum in the past 12 months (including today)?

   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________

   *Strongly Agree*
   *Agree*
   *Disagree*
   *Strongly Disagree*

2. MAPS is important to me as a professional teacher.
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________

3. The museums provide resources to the Learning Standards.
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________

4. I see how MAPS experiences will benefit my students.
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________

5. I am looking forward to using the MAPS units in my classroom next year.
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________

   *This workshop...*
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________

   *Stimulated my thinking.*
   *Increased my desire to learn.*
   *Provided useful information.*
   *Will benefit my teaching.*
   *Contributes to the improvement of my school’s curriculum.*
   *Was worth my time and effort.*
   *Was well organized.*

6. How can MAPS be improved?

   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________

   Other comments, ideas, or concerns?

   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________
   - __________

Page 2

Page 7
### Reflecting on Teaching and Student Learning

<table>
<thead>
<tr>
<th>Event Description</th>
<th>Indicate how often these events occur in your classroom.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use open-ended questions.</td>
<td></td>
</tr>
<tr>
<td>I encourage questions from my students.</td>
<td></td>
</tr>
<tr>
<td>I provide time for my students to discuss subject-specific ideas among themselves.</td>
<td></td>
</tr>
<tr>
<td>My class students draw on information and resources from other subject areas.</td>
<td></td>
</tr>
<tr>
<td>My students perform laboratory experiments or use manipulatives.</td>
<td></td>
</tr>
<tr>
<td>My students use text to justify responses to questions.</td>
<td></td>
</tr>
<tr>
<td>My students consult one another as sources for learning.</td>
<td></td>
</tr>
<tr>
<td>My students keep written accounts about what they are thinking and learning.</td>
<td></td>
</tr>
<tr>
<td>I encourage students to use information and insights from different subject areas.</td>
<td></td>
</tr>
<tr>
<td>I require students to supply evidence to support their claims.</td>
<td></td>
</tr>
<tr>
<td>I encourage my students to consider the implications of their conclusions.</td>
<td></td>
</tr>
<tr>
<td>I assess my students' abilities to apply what they learn to new situations.</td>
<td></td>
</tr>
<tr>
<td>I design learning experiences around real-world problems.</td>
<td></td>
</tr>
<tr>
<td>I plan learning experiences that connect subject areas.</td>
<td></td>
</tr>
<tr>
<td>I design learning experiences aligned with Learning Standards.</td>
<td></td>
</tr>
<tr>
<td>I design classroom assessments aligned with Learning Standards.</td>
<td></td>
</tr>
<tr>
<td>My students evaluate the validity of information found in various sources.</td>
<td></td>
</tr>
<tr>
<td>My students develop their own ways to solve challenging problems.</td>
<td></td>
</tr>
<tr>
<td>My students repeat experiments to confirm results.</td>
<td></td>
</tr>
<tr>
<td>My students investigate relevant applications of subject areas.</td>
<td></td>
</tr>
</tbody>
</table>

---

**What is your assessment of the design of the MAPS lessons and their role in your curriculum?**

---

**What is your perspective on the role of assessment activities in MAPS? What do they reveal about student learning? What do they reveal about the MAPS activities program?**

---

**What is your assessment of the value that this day has for your professional work?**
Curriculum Unit Feedback Survey

Today’s Date
[ ] / [ ] / 0 1

Please print with care. Thank you!

First Name

Last Name

School Name

Unit Title (Print the title of this MAPS Curriculum Unit)

1. What date did you start teaching this unit?

2. What date did you stop teaching this unit?

3. How many school days did you use this unit with students for 30 minutes or more?

4. How many total HOURS, including time in museums, did your class spend on this unit?

5. How many hours did you spend preparing to teach, on average, for each day (activity)?

6. How many hours did your students spend in museums during this unit?

7. How much did you modify the unit to fit your class (1 = None, 2 = Very Little, ..., 5=Very Much)?

8. What are your impressions of this unit?

Don’t forget the other side!

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Curriculum Unit Feedback Survey

(continued)

Indicate the level of your agreement with each statement.

1. This unit addresses the topic soundly.
2. The materials contain no errors in the information provided.
3. The students showed a high level of interest in the unit.
4. The unit contains the right kind of information for this topic.
5. The unit was too difficult for some students.
6. The students were motivated to learn.
7. The materials accommodate different learning styles.
8. There is too much information in the unit.
9. There is a good balance between skill development, concepts, and factual information.
10. Students who usually perform at higher levels in class were challenged to learn in this unit.
11. The unit is sensitive to perspectives of diverse cultures and societies.
12. Students learned language arts as described in the learning standards for this grade level.
13. Students learned mathematics as described in the learning standards for this grade level.
14. Students learned science as described in the learning standards for this grade level.
15. Students learned social studies as described in the learning standards for this grade level.
16. This unit caused students to examine relationships among the content areas.
17. I intend to use this unit again next year.
18. This unit demonstrates exemplary use of museum resources for student learning.
19. It was difficult to teach this unit because the directions were not clear.
20. The students completed activities within the time periods allocated in the unit design.
21. Students who tend to have difficulty in class were successful in this unit.
22. It is not difficult for the teacher to use this unit successfully.
23. Sufficient resource materials are provided with the unit.

Thank you!
Curriculum Unit Correction and Revision Survey

Dear MAPS Teacher: The MAPS Units are being revised. Changes are being sent to the publisher in just a few weeks! Please respond carefully and promptly so that your professional recommendations can contribute to the new MAPS curriculum.

Curriculum Unit Correction and Revision

Today's Date: __/__/01

First Name: ___________________________ Last Name: ___________________________

School Name: ___________________________

Use this side to comment on the first MAPS unit. Mark the appropriate title. (See other side for Unit-II)

☐ Grade 3: From Swamps to Skyscrapers  ☐ Grade 4: On the Move
☐ Grade 5: Chicago Waterways  ☐ Grade 6: Eyes on the Skys

The following statements provide opportunities for your input in making corrections and modifications in the MAPS unit. Your perspective is greatly appreciated!

1. The materials contain no errors in the information provided.
   Please identify any errors by book title, page number and exact quote so that the error(s) can be located and corrected.

   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

2. Lessons are aligned with the Chicago Academic Standards and Curriculum Framework Statements.
   Please identify activities that you feel are not aligned. Provide lesson number and the correlation (CAS/CFS#) that you find lacking.

   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

3. The following resources would enhance the teaching of this unit:
   Please provide sufficient detail so that the resource can be located!

   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________
   _______________________________________________________

Continue to the other side...
Curriculum Unit Correction and Revision
(continued)

MAPS Unit-II

Use this side to comment on the second MAPS unit. Mark the appropriate title. (See other side for Unit-I)

- Grade 3: Modes of Transportation
- Grade 4: The Art of Survival
- Grade 5: Driving Forces Shaping Chicago
- Grade 6: Tools for Change

The following statements provide opportunities for your input in making corrections and modifications in the MAPS unit. Your perspective is greatly appreciated:

1. The materials contain no errors in the information provided. Please identify any errors by book title, page number and exact quote so that the error(s) can be located and corrected.

2. Lessons are aligned with the Chicago Academic Standards and Curriculum Framework Statements. Please identify activities that you feel are not aligned. Provide lesson number and the correlation (CAS/CF#) that you find lacking.

3. The following resources would enhance the teaching of this unit: Please provide sufficient detail so that the resource can be located!

Thank you!

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APPENDIX D: MAPS EDUCATORS’ PERSPECTIVES


What impressed you the most? What did you learn from the day?

• (Principals' Orientation) We were impressed, as we always are, by the power of the project concept. Principals seemed engaged, interested and enthusiastic. That’s all quite wonderful. We were also impressed by the size of the turn out for both sessions.

• (Teacher PD Day) Most of the teachers on Oct. 27th were eager and willing to participate and to receive the materials. Their group presentations reflected a thorough understanding of the individual lesson. (Each randomly formed group was assigned one lesson to study and report back using a transparency they created. Thus all lessons were shared and teachers had a grasp of all that the unit encompassed. They then had an opportunity to visit the two sites they would see with the students on one part of one of the field trips planned for the unit.

• (Principals' Orientation) There were a lot of principals there! It was great to have these leaders all in one place and relatively attentive to what we had to say. I learned that principals do seem to care what goes on in their schools and want to know more.

• (Teacher PD Day) It impressed me that so many teachers came! We had almost all sixty there!

• (Principals' Orientation and Teacher PD Day) I was impressed by the numbers of teachers and principals that attended both in-service days. Also, by everyone's ability to pull off unit writing, teacher in-services and a principal orientation in a few week time period. I learned while it is possible to pull this all off working together. It was a time and space crunch getting everything ready for the in-service. It was great to have a high numbers of teachers and the many supplies for the unit but it takes time to organize and a space to do it. We were under the wire packing supplies for the in-service using the 7 presenters for 3 hours to get the job done. It is very labor intensive. It was not a problem, but could have been. The box of books for Nature Museum came to the museum were labeled for the Art Institute and caused a bit of confusion at the loading dock.
What concerns do you have? What might we do better?

- (Principals’ Orientation) We’re concerned that the Principals’ orientation gave us our first glimpse at the other units. We all ought to feel we are working on parts of the same project. We worry about a lack of pedagogical continuity and integrity across curricula. Making them all adhere to the same format doesn’t do it. We ought to build opportunities for on-going sharing of the work. Although the goal for the principals’ orientation was to excite interest in the many possibilities presented by integrating museum resources into schoolwork (MAPS), we did nothing to integrate the museum into the day. They went straight to a basement classroom. There was a lot more we could have done to get them up and about. We had a lot of kids there that day and a Critter Fest was in process. I think it would have been powerful for the principals’ to see them. And Sue. Lastly, we think that wherever we have our meetings in the future, the hosting venue should get a chance to welcome the group to their “home.” It’s standard and courteous, I think.

- (Teacher PD Day) The hosting venue really needs support in setting up the event. We can all handle the internal stuff with ease—we did have trouble with the delivery of some 150 boxes, the sorting of all the stuff, and preparing it for distribution to teachers. Very time-consuming and labor-intensive for two people, in addition to the general prep for the day—and designing the agenda. That work should be shared, as well as such things as the making of nametags, sign in sheet, etc, that could be handled elsewhere. Also, no advance thought had gone into what to do with all the left-over materials and the materials for teachers who didn’t show up. Live and learn.

- (Teacher PD Day) It was discovered that at least 9 schools are on the early track and dismiss at 1:30. This means they would be unable to take the field trip unless special accommodations could be made. Many more than I thought had departmental 6th grade at their school and thus it would take a special kind of sharing to have the other components of the lessons, (e.g., language arts, math, social sciences, etc.) taught. It might also fragment the lessons. Did the principals know about this when they volunteered their teachers? I think this should have been considered before hand and perhaps have those schools send a 6th grade team.

- (Teacher PD Day) The organization for that day was lacking. I only learned that each grade was “presenting” something haphazardly. Mark asked me what I was presenting about and it was news to me that I was even presenting. This is due to the fact that our third grade representative to the subcommittee meeting where this was discussed chose not to share that information with me.

Also, what we were to present was left so open that I had no idea where to begin. What were the goals of the principal day? Was it to make them excited about MAPS? If so, then we should have had time for them to do something in-depth enough so as to appreciate it. Was it to help them understand the spirit in which the units were created? Well, we should have focused on how the units fit with the guiding principles of MAPS that the curriculum subcommittee established. I am concerned that the goal for the day was not well-articulated and was not defined in advance sufficiently to allow all of us to prepare meaningful presentations.
Another concern was primarily with the tone of the day. It seemed that the principals were feeling “lectured at” much of the time. I know that I was feeling that way. We could have made it more fun and engaging by getting them out in the Museum to watch children experiencing the exhibits, etc.

- (Teacher PD Day) Some concerns that I had about the day include questions. Why did many (10-15) of the sixty teachers that we had on our list not show up and others who were not on the list showed up and signed their names in below? Are MAPS teachers still being chosen by principals? I thought that was all arranged. Why is it still changing? Why was the tone set from the very beginning to be that of directives and orders by going through this MAPS field guide page by page? It put teachers right on the defensive - not a good way to start the day. Why was the MAPS field guide put together the week of the professional development day and not sooner - when we could have had some input? And, some of the information was still incorrect. We might do better by deciding early on how much time is needed for evaluations, logistical issues/questions/concerns so that we can get to the "good stuff" in the museum sooner. It was suggested by some that these professional development days be standardized in some way. I disagree. Some standard information needs to be communicated, but the activities and other sessions should still remain the decision of the grade teams. We also need to set the tone from the very beginning. We need to communicate to teachers early on that this will be a positive and fun experience and not “just another inservice.

- (Both) Continue to plan ahead. Time is needed to organize these events.

- (Teacher PD Day) As far as preparing and planning for the day, we were ready to put in the hours needed to sort and stuff materials. However, materials came in slowly and were incorrect in some cases. This made a big job much tougher and time consuming. Perhaps in the future there could be a more efficient system devised to order and ship materials.

Although we turned in Agendas previous to the program, we never received any feedback. We ran behind schedule because we were not told in advance to set aside time for IMSA evaluation and administrative information. We gladly would have included those components in our agenda if we had known ahead of time. We did not know who was coming from CPS to give the welcoming remarks, registration forms and who was running the table was also confusing. This is really a communication issue. Because this was the first in-service there were more questions and administrative details to go over. Between trying to cover that and the content, we really could have used more time. The second in-service will probably not need extra time, because the teachers will be experienced with MAPS already.

- (Principals' Orientation) Since this was on the schedule prior to the teacher professional development day, it would have been nice to organize shipping the Teacher Resource Guides and Student Activity Books to the Field Museum prior to the orientation. That way the principals could have referred to them during presentations and they would have left with the materials. Right now the 3rd grade books are still at CHS, so we know they have not made it into principals’ hands yet. It looked disorganized that one grade level brought and handed out their books, but the others did not. In order to plan this presentation, we needed more information than date and location. Some planning guidelines would have helped us prepare and would
have encouraged overall consistency between grade levels. At both programs (teacher in-service and principal orientation), the first thing covered was rules, regulations and administrative details. This is not very welcoming or engaging. It is important to convey that information, but it is better suited to be presented later in the program, once we have them hooked!

- (Teacher PD Day) One challenge for both days was how to really engage such a large group at once. Because of limits on space, we really couldn’t break the group up into smaller numbers as much as I would have liked. When we did try to have the participants doing the activities, it was hard for everyone to follow along with what was happening. It would have been nice to even have 30 minutes more to really model the activities.

My concerns are more about consistency among the presentations by different grades, continued support and communication with teachers/principals, follow-up on what we learn from the implementation this year, and quality control between the different grades than what happened on October 27 or November 3. I would like to find out what the evaluators thought of the day, and if you could send out the results in time for planning the next meeting, we could incorporate their input.

I think we are still having trouble on a number of levels: A clearly defined long-term and short-term plan. Communication between the teams, especially between steering and curriculum teams. (This disconnect makes me very nervous, because I do not know how well the people making decisions are aware of what is really happening.) Communication between CPS and MIP - we are both making assumptions based on what we know, and surprising the other group. Infighting among the writing teams. Not having any method for quality control beyond the people that wrote it. That I keep getting hints of taking this out on a larger scale and getting national attention without really having figured out what we are doing yet. The lack of procedures for things like committee and financial reports.

- (Both) Support for the teachers in delivery of the lessons is most important. Continuous contact is crucial to the program. Follow-up and contact with principals is also very important.
How did the teachers respond?

- (Teacher PD Day) We worked them hard that day, making them give presentations, do activities in the galleries, and discuss logistics. They were tired, but really **upbeat and enthusiastic about the project by the end of the day.**

- (Teacher PD Day) As stated above, they were responsive in a positive fashion to all that was presented. There were a few as is typical that were unhappy and claimed they did not know what the level of involvement would be. Some of the few dissenters were the departmental teachers.

- (Teacher PD Day) I think that the principals were interested. It seemed as if the presentations didn’t entirely “match,” meaning that each grade did something very different than the previous grade. This made the day seem a bit disjointed, and perhaps a bit confusing.

- (Teacher PD Day) Some of the teachers that I talked with were positive and some were negative. One teacher in particular that I noticed took care to linger in the exhibits, not stay with the group, and not pay attention. She clearly did not want to be there and resented that she "had to" be there. After noticing this, I asked a few other teachers if they had a choice about participating and if they were pleased to be a part of this project. They said that they did not have a choice and that they didn't have any clue what this was all about. Hopefully, by the end of the morning, they had more of a clue. It makes me wonder whether principals should be telling teachers who is to participate and who isn't or if teachers should choose to be in MAPS because they want to be. Others were grateful for all of the “stuff” and appreciated that they would get to come to the museums twice in this year.

- (Teacher PD Day) They loved it! They were excited to use the materials they wanted to shared with their teachers back at their schools.

- (Principals' Orientation) The principals too seemed most happy to be at their orientation. They were, on the whole, on time and ready to listen. This is a great idea. Everyone realizes how wonderful the museum resources are and combining them with 'schooling’ is terrific. This is not a field trip where you walk your class around the building, let the students stop at an exhibit, look and maybe read the information about it, maybe not, and then have lunch and go back to the school.(Teacher PD Day) Teachers are Chicagoans and they love the idea of going to Chicago Museums and perhaps meeting in a room they normally would not see. They love being invited in to the museums as more than a visitor but more as a guest. There is a demystifying, sort of inclusion quality for the participating teachers. I am not surprised that the teachers responded so well to the Art Institute day.
In what ways, from your perspective, did the experience benefit the teachers?

• (Teacher PD Day) They got a chance to work with the curricula and also solidify their understanding of what the project is about. They raised many questions about logistics and concepts, and, to the best of our knowledge, got all their questions answered. They got excited about the possibilities offered by this project. We were pleased by the way both days went.

• (Teacher PD Day) I think they felt comfortable with what they would be asked to do. I think this was a very positive way for them to receive the materials rather than have them delivered to the schools with no one to answer their questions. I think the field guide helped them overcome some TIME obstacles involved with planning the field trips.

I think most of these comments could be said of the principals. Just like the students, their interest was increased when they were involved in the games, artifacts, reasoning involved. This brings home the "way" as well as the "what" the students will be learning. I think they can now be more responsive to their teachers' needs. I think they will be better prepared to supervise, encourage, etc. the teachers as they follow this pilot program. It was a definite plus to the implementation of MAPS. I think we can all be proud of our parts in these presentations.

• (Principals' Orientation) I think that the principals could tell that the MAPS partners were excited about the curriculum and the initiative in general. This perhaps caused them to realize the importance of this initiative and we can hope that they will share that with the teachers in their schools as well as other colleagues. (Teacher PD Day) Our teachers got to see a little bit of all of the lessons. Because we tried to “cover” all of the lessons, they never did see any pedagogy in action. We ended up having to do a lot of telling and no modeling of how this lesson should really be done with children. There wasn’t enough time. Also, maybe we should have placed less emphasis on “covering” the lessons and more on focusing on one or two in depth. It felt like we were just giving them another activity book and a bunch of stuff to use with it. We did not give them a true glimpse of how the lessons are meant to be taught. They have a new unit and a bunch of materials, but have no clue how they should be taught unless they’re good teachers to begin with. It will be very interesting to see how these site visits go. As of right now, MAPS seems to be mostly about the curriculum with a culminating museum visit thrown in. We have a long way to go to get to any significant change in the way teaching happens in the schools.

• (Teacher PD Day) Getting to see the lessons in action, so they can feel comfortable in their classroom. Getting out into the museum with museum educators for a closer look at the exhibits. Meeting other teachers who are doing the MAPS program.

After last year’s low attendance, we were very happy to see that only three teachers did not make it to the program. Not all the teachers who attended had made the kickoff, so some people did not know what MAPS was. By the end of the day they were very enthusiastic about the program. Many teachers commented on how much they appreciated being treated as professionals. It was great to see so many principals came
and they had a lot of interest in the program. We got a lot of questions after our presentation. This day provided them with a good snapshot of each grade level and it seemed like they left satisfied.

We were very excited that the teachers were comfortable with each other and freely shared their ideas. Seeing the teachers leave CHS happy and excited to use the materials was a great way to wrap up this first program!

• (Teacher PD Day) I thought a number of things went very well for in-service for the teachers. First of all, we had a really good turn out. We really didn’t expect an almost packed house, and it was nice to see that the communication to them and their principals seemed to work, at least to get them there. The teachers were very receptive to how well they were “treated” at the Art Institute. I was a little surprised to see their surprise at how well it went, the materials they received, and perhaps even just keeping to a schedule. They were an attentive group for the most part, and I think many of them are interested in incorporating the materials into their programs. Having the teachers who helped write the materials present them was invaluable.

• I think this program has the potential to be great for both the museums and the public schools. The museums are exhibiting good will, they are sharing their resources and knowledgeable staff with the schools and at the same time embedding a familiarity within the students to the museum buildings and what they have in them and at the same time creating a new base of fans who will go home and suggest that the family go to the museum this Sunday.... Public school children will be given the opportunity to learn about museum resources on a much deeper level. Their experiences will be broadened and so too their knowledge... seems like a perfect fit to me! Beneficial on all sides. Everyone loved being involved in the water cycle. Thank you one and all for all the hard work related to MAPS.
APPENDIX E: MAPS SCHOOL PRINCIPALS’ PERSPECTIVES

What specific actions have you taken to support your school's MAPS teachers this year?

- Supported field trip visits. Provided teachers with opportunities to participate in staff development.
- 1. I've met with them to discuss curriculum and to get their feedback regarding program's strengths and weaknesses. 2. My teachers have met to discuss program implementation. 3. We're lucky because we have a 5th grade writer in our staff and she's provided her time and talent in helping the success of our program.
- 1. I encourage and require teachers to attend the workshops. 2. We organized a parent workshop so that the MAPS teachers could present an overview of the MAPS program. A lesson from the 6th grade unit was used with the parents to illustrate an aspect of the program. 3. We hope to take the parents who attended the workshop on a day trip to one of the MAPS museums.
- Strongly and enthusiastically encouraged their attendance at MAPS meetings. This is my 1st Principal meeting so therefore my awareness of the full scope and richness of the program, up to this point, was limited. However, after today I can do a better job of supporting the program and teachers.
- In-service both teachers and students on the many kinds of museums in Chicago.
- I've provided an opportunity for them to attend staff development sessions and have encouraged them to implement the program.
- Encourage the teachers to incorporate program. Provide additional ???? for other classes in same grade. Give time to share.
- 1. Awareness of curriculum. 2. Support of professional development day. 3. Support of field trips.
- I force them to extend the experiments to the entire grade.
- Provided time for collaboration. Send them to the Professional Staff Sessions.
- Even though the MAPS teachers have their field trips already paid for, I've used school funds to send other teachers at the same grade level on field trips with them.
- - Met with teachers to support facilitation of program. - Express my commitment for the program to teachers. - Allow other teachers to participate ????
- Teachers are attending workshops and implementing program.
- Teachers have been given time to meet together. Teachers not in MAPS sit in grade levels and go over and share the material. Field trips are encouraged throughout the school at all grade levels. Preparation before field trips is very important.
- - Encourage field trips. - Encourage collaboration among peers. - Check for needs and/or resources teachers may need.
- Subs were obtained to give teachers some of the time they missed (on Staff Development Day) to take care of their records.
- Program has been publicized throughout the school and status of program is enhanced. Teachers of MAPS program feel special.
• I help coordinate the schedule for the field trips and discuss the institutional strategies the teachers are using with them. I encourage teachers to schedule an observation while they are using the MAPS curriculum.

• Grade-level weekly meetings will help teachers share their ideas.
• Made resources available as requested. Allowed them to participate in professional development sessions.
• Provided teachers time to meet with each other.
• Asked them to meet to discuss the program on a regular basis.
• I encourage them to implement the program and free them for inservices. I periodically monitor their presentations.
• Allowed time for collaboration. Provided funds for materials. Provided funds to enable all classes at the MAPS grade levels to attend field trips.
• Time to go to MAPS inservices. Facilitate the bus procedures. Providing time for teachers to arrange field trips. Providing resources to MAPS teachers to duplicate any needed materials.
• Provided chaperone for field trips (20% of population comes from attendance area). Provided some free time for teachers to prepare.
• Given time and resources when requested. Relayed the importance to keep teacher focused.
• Spoke on it at staff meetings. Sent teachers for professional development. Will incorporate it in my SIP.
• I think that once teachers realize that the MAPS program is not an add-on, they realize the benefits. Both children and teachers benefit so much more from field trip experiences than they ever did before.

What resources do you, your school, and/or your teachers need to successfully implement MAPS?

• Samples of materials from each museum when possible.
• 1. Field trips - we need to book early and I believe guided tour dates should be reserved for MAPS teachers. 2. Opportunity to meet with teachers from other schools.
• Money for substitute so teachers can go to Staff Dev. on other days. More books for other pupils.
• Teachers are excited and satisfied with the program. Their eagerness has been transferred to other teachers.
• Additional materials would be helpful. I am willing to pay.
• Closer alignment of MAPS units with the grade specific learning standards teachers are required to cover.
• Materials for other teachers so my grades can continue to align curriculum across grade levels. Provide field trip opportunities to more teachers.
• Have materials, good motivation - need time to implement program.
• Resources are adequate.
• Professional Development materials for each grade level to integrate lesson plans.
• None

• I would like to have additional classes involved.

• Materials for all teachers at the MAPS grade levels. Assistance with bus/transportation problems.

• Increased field trips to museums.

• More articulation and sharing time.

• More units. More teacher involvement.

• More time is needed for curriculum coordination.

What is happening in the MAPS classrooms?

• 1. I'm seeing excitement - I have other teachers asking to be MAPS trendy. 2. My MAPS teachers are sharing with grade levels - 6th grade is taking a trip together. We have 2275 students, so improved communication among teachers is of great benefit.

• Students are using hands on approach to all MAPS activities - they are displayed in the classroom.

• More integration of curriculum. Exposure to more museums and good follow-up.

• Teachers appreciate the lesson plans. They have little time to prepare for meaningful field trips and this is done for them. Teachers are reflective about what they are doing in the classroom. Students are engaged in the lessons and take responsibility for their learning.

• This is a great program. I am encouraging the teachers to implement the MAPS curriculum in harmony with CPS curriculum.

• Excitement of the teacher and the students. The curriculum is great.

• The teachers involved in the MAPS program are doing more interactive hands-on teaching with their students.

• More engaged learning.

• Teachers are implementing MAPS activities and planning and attending field trips.

• The children are very excited about the material that they are being taught. They are researching on their own looking for more information - reading the novels on their own - and taking their parents on field trips.

• Integrated units. - Collaboration among peers. - Excitement for learning - teachers and students.

• I see positive anticipation for museum visits.

• Teachers integrate activities in their grade-level lessons.

• Teachers using the materials and curriculum provided by the MAPS program.

• Teachers are engaging students in more hands-on activities.

• Teachers are utilizing the curriculum as a hands-on experience to bridge new and novel ideas within their methods.

• I feel our students are grasping a better understanding of the curriculum. The resources of the MAPS program help them develop a deeper comprehension of the material being presented.

• Teachers love the MAPS materials. All are in use. Teachers integrating subject areas.

• Curriculum being aligned at grade level with MAPS.
• Grade five - expanded upon (?) curriculum and was funded by an Appenheimer
grant to cross peer tutor. Kindergarten children in their unit on butterflies'
metamorphosis.
• Students and teachers enjoying what they are doing. Enjoying the varied field trip
experience.
• Teachers are utilizing unit materials and taking field trips.

In what specific ways can MAPS be improved?

1. Involve more teachers.
2. More books for students from larger schools. We have up to 40 children in a
classroom and my teachers had to contact other teachers to get enough books for
students.
3. Scheduling of MAPS professional development days.
4. Off to a good start.
5. Could you have the CPS curriculum writers submit their plans to a group of MAPS
teachers to be evaluated before the curriculum is presented to the larger group?
6. Continued dialogue with teachers and principals is important. Adequate supplies of
materials.
7. Expand the program to more classrooms and teachers.
8. Involve more teachers in the same grade level to encourage more collaboration
among teachers.
9. Include more teachers.
10. School support and participation.
11. Logistics - planning time for staff development. It is a great program. I want to go
back to the classroom and teach these lessons! Give us more!
12. Shared - more teachers/extend to grade two. Thank you!
13. Professional development on a separate day from city-wide days would be helpful.
14. More grade levels being involved. More field trip opportunities since my grade level
teams collaborate and share activities.
15. MAPS should continue until the entire school is able to participate.
16. Expand the program.
17. Change staff development day schedule - as mentioned at the meeting.
18. Expand to other teachers at same grade level. Expand to second and first grade.
Added field trips.
19. Change teacher training dates and provide substitute bucket #.
20. 1. Expansion to teams of grade level teachers in school. 2. Time for planning on
non-institute days.
22. Materials to arrive sooner (by June)!
APPENDIX F: MAPS TEACHERS’ PERSPECTIVES

How can MAPS Educators assist you in a successful implementation of the program in your school/classroom?

- Ask for volunteers only. Not make this a requirement for teachers.
- Providing connections with people at museums to assist when we visit the museum. Guides are so much better than parent volunteers in small groups.
- Providing a MAPS tour guide at our field trip would be helpful and beneficial.
- By providing good docents to lead us through the different galleries - mailing information on specific events at the museums geared toward 3rd grade.
- Bring the materials to me! I do not drive and Medill is not in a safe area to access by public transportation easily.
- MAPS educators can assist me in successful implementation of the program in my school/classroom by being available for any pertinent questions and by visiting the school (classroom) to observe/share any pertinent and applicable hands-on activities to enhance the student's learning.
- Provide additional information and expertise in subject area.
- I am not sure that the curriculum offered was completely thought out. The curriculum does not comply with the goals we are required to teach to.
- I would like to have the units in Spanish for those students in the Spanish Dual Language Program.
- Include materials that the students can do with their families.
- Having someone model the lessons.
- I think it could be neat for someone to visit the classroom and discuss career opportunities at museums.
- Present a lesson to the class.
- Call or e-mail and ask us how we are doing. Making sure we are implementing the program. Just in case we have questions. Communicate with us.
- Please return calls!
- Please assist with scheduling.
- Decent assistance and Pawnee village - make us priority over non-MAPS schools.
- I suggest that the field trip reservation process be simplified.
- Help ensure my administrators know more about the program and my field trips are easily coordinated with my planning.
- Give me class time in which to implement the program. The ability to do the program with more than one class per school.
- The observation is unnecessary. Feedback at the next meeting should be enough. This observation is just another pressure added to our daily work schedule.
- One thing that could help me better implement this program would be to have this material in August. This way, I could have time to look it over and plan for the year!
- SMALLER GROUPS - Teach us in smaller groups -- couldn't hear or understand a thing!
- 1. Electronic bulletin board for us to post and answer each others' questions.
- 2. Expand coverage (at least curriculum materials) to more than two museums.
- I had a very positive experience! I learned a lot and enjoyed it.
- Too early to know!
- Seems like all I need - I have.
- I think things are in place for a successful program. Can't think of anything now! : )
No sure, not having used it yet.

Come to all meetings!

I haven't had a chance to digest all of the information presented. I need time to think about what I need. I will not know until I begin to implement the lessons.

- We are a 7:30 school that needs special accommodations. - We also team with another class and we promised the kids we would do the same thing with each class!

I came in knowing nothing about the program. I am not a 6th grade teacher, but a LD/BD self-contained teacher (grades 1 - 6) so I would like a MAPS program for Special Ed students in a multi-level program.

Prepare for field trip. There is a time constraint. Our school has a 1:30 p.m. dismissal.

The students in my classroom will benefit from the cultural connection that this program offers.

I think you're very organized. Lots of good, solid work has been encompassed in our information.

Not sure yet.

I don't know yet, once I get started with the program and materials I will have a better feel for the program.

Need adults to do water cycle.

Classroom activities would be most effective with additional adult/teacher supervision to assist the teams as they work.

Be accessible.

Please be available when I'm stuck with providing experiments or have questions on implementation of the lessons. I'm almost asking for instant access - giving me steps to find information on my own if necessary.

Answer questions as they arise.

Availability when needed.

They can assist me by being available which they have so indicate to clarify and supplement my presentations.

Be available for answering any questions or concerns.

Have a MAPS Educator available for any questions or concerns I might have about the program.

MAPS educators can assist me by being available for questions and discussing solutions to any problems that arise.

Be accessible.

Accessibility for information and/or working out any problems that may occur in teaching unit or time structure.

Not sure yet; hopefully as a resource.

MAPS educators would be valuable to me by just being available when problems come up.

Be available for support as questions arise.

Be available when needed.

Just be available as questions arise.

By being a resource person when needed.

At this time, I would like to have my questions answered by MAPS when involved in class activities.

By answering questions that I have.

Be available for questions while doing lessons.

As a consultant during the implementation of it.

Being available for any questions.

Be there to answer questions and assist. Do a lesson with kids when there.

The materials I have received are great. I suppose the greatest assistance would just be knowing who to contact for future questions or challenges.
• Be available, at any time, for questions, materials and possible needed additional information.
• Just being able to answer questions when needed -- They should be easy to contact or return calls quickly.
• I would like to see comments from other teachers to see their ideas to jump start program.
• Share experiences at other schools that may be further along in the program than we are.
• Maintaining communication with enough time to make arrangements.
• Being able to communicate if necessary for a successful implementation of this wonderful program.
• Clear expectations and instructions to make contacts and activities run as smoothly as possible would be wonderful. This is being done as far as I can see.
• Provide ongoing information to keep us updated on any new information MAPS provides.
• Be available for questions.
• Provide feedback/concerns of all 6th grade teachers.
• Continued dialogue about MAPS process for tours and resources.
• Set up the lessons in a clear manner with materials clearly listed to aid in preparation.
• Activities, assessments
• Continue to model the experiments to the real world.
• Be setting examples of activities.
• Come and give a demonstration.
• MAPS educators can demonstrate specific lessons in the classroom, in order for the classroom teacher to further understand.
• It would be great to stay in contact regularly by e-mail.
• By providing the resources, which you are doing, to assist with preparation of lesson plans and actually teaching the units.
• The only think I can think of is to have the resources available for educators to conduct the experiments. We have no money!!!
• Just as they did today, provide us with resources.
• They have provided me with the resources I need to learn about this program. I will have to wait and see as my lessons progress to determine if I need additional help.
• Resources, materials, supplies.
• There are two fifth grade classrooms that usually have the same curriculum. Need to find a way to share.
• Provide additional resources for curriculum development.
• Keep up the good work! (The more resource materials the better.)
• Thank you for supplying the materials for the lessons. It was nice to leave with a booklet outlining things to do, and sample lessons. I am looking forward to working closely with MAPS.
• More materials so that the other two classes can do this to. I know that it is too much for this year, but maybe next.
• Keep providing materials like those distributed today.
• All of the supplies are helpful. I can't think of anything else.
• I haven't checked yet. However, I hope that addresses fax #s and trip info and bussing is there for me.
• ***I really need help in obtaining supplies - things for experiments. Is there a way in receiving free classroom supplies for science and math? I have 32 students.
• Continue with excellent curriculums, supplies and visits at our schools to advice us in any areas that we may need help with.
• I think the on-site visits would be helpful.
• Give tips on making it work successfully. Participate when they come. Trouble shoot to avoid problems.
During visits with students, do Lesson #3.

Demonstrations of lessons as done today. People available to come out to the schools and demonstrate/facilitate.

By returning calls when I need them. :)

Be accessible when questions arise; return phone calls and give advice.

They can assist by being available when we call with questions or comments, etc.

Available by phone to answer questions about lessons.

Be available, either by phone, e-mail, etc. The curriculum seems to be super.

Coordinating the visits so they are as painless as possible.

We end at 1:30pm!! We need to make arrangements for earlier field trips!!

To plan out a lesson plan/schedule unique to my classroom.

The workshop today was helpful; it has given me practical and useful ways to implement this program in my class. I am excited about starting!

So far everything has been great. Maybe a midway meeting would help to see how everything is going.

Initial presentation was of great support.

Continue to have professional seminars. I find them very helpful.

Workshops like this one!

I think the Professional Development Days are very useful. They give us an opportunity to gather with both MAPS educators and other 5th grade teachers to discuss the program and generate ideas.

To accommodate MAPS teachers with seminars on days other than when non-MAPS participants are present.

The inservice days are very important. Also the resources are amazing. You have provided the tools needed to implement this program.

At this moment, since I haven't started, I really don't know. Maybe by having the MAPS website we can update our questions or thoughts.

I would like to be able to access a MAPS website complete with ideas for implementation of lessons and other resources.

What is your assessment of the value that this day (Final Teacher Development Day) has for your professional work?

I have to align my lesson plans with the academic standards, therefore I feel competent in the area. I also feel that the MAPS curriculum was aligned with the appropriate standards. Honestly, I didn't feel the need to assess student work on the last day of school using the standards. My expectation was to spend the day exploring MAPS curriculum related exhibits. I thought that we would possibly do some hands-on experiments & explorations.

Information relating to future development of the MAPS program. Gave me an opportunity to reflect Identify what the students learning & how much they apprehended Writing styles & expression

Reaffirms that all students, regardless of ability levels, are included.

Today’s workshop was my first experience with the MAPS program. Based on what I saw today, I am really looking forward to being an active participant in the 01-02 year. I think this program is very beneficial for creating more interesting social studies/science lessons.

It allowed me to see clearly the importance of assessing and making that connection.

Student artifacts would be fun to see-much variety. Sixth grade did not submit projects.

This workshop unit created a leveling importance in the way that I teach my students. The creation of different activities that incorporated Art in the different curriculum activities.

This was very valuable experience today. It was interesting to see the children's creativity at work and their knowledge of the subject area.
I was able to discuss with other teachers how they used Part II of the MAPS. I discovered teachers had some of the same problems I did.

Collaborated and shared ideas about each unit.

I feel that it is extremely important to reflect and learn from each other. As a professional teacher I know that the best ideas are learned through sharing and that is what we did today. It is also important to see if we are assessing our students based upon these standards.

The MAPS program has a lot of positive, enlightening information. This meeting time has given me the opportunity to hear other teacher's perspectives.

Very good debriefing and beginning for next year.

Excellent. We had teacher's appreciation day celebration today in our school but I preferred to come here. I wanted to listen to my colleagues opinion on this pilot program.

Helpful to look at student work from other schools. Reflection is always critical. Was also a reminder to me to pause before teaching to be sure I teach what I want to assess & to assess what I teach.

It was nice & insightful to hear what the other teachers thought & experienced.

I will not be a MAPS teacher next year. It was nice to reflect upon the year.

This was a very informative session. It was valuable to me to hear what other teachers thought. It was also great to share with other teachers and pull from them what their experiences were.

This day had great value. It is very helpful to hear how other teachers implemented the program and dealt with the problems.

This day was very valuable for me since I was able to discuss the year and how valuable the units were with other teachers and educators.

A good overall assessment of the MAPS program. What was good and bad about it.

It was important day because it gave us a chance to reflect about the MAPS program. Our classroom really enjoyed our involvement in the MAPS program. We ended up taking II field experiences. When I asked my students what they enjoyed most about 6th grade, they all agreed that the field experiences were great. We were lucky enough to visit museums that we probably would not have gone to. Yet, they were all terrific. They all enjoyed the Mexican Cultural Center, Planetarium & Field Museum.

It was nice to see other children's work but to see if all standards were met did not fit with the objective for today since the one assignment was only one activity out of a series of activities. Also, since all tables did not have the same "artifacts" and to make generalizations with the work in front of us did not make sense to me especially since there are different levels of students ( I had 2nd & 3rd grade students).

My students enjoyed the hands-on activities and field trips. It was an excited addition to science/social studies units. This day helps us to set ourselves up for next year. Last year we were unprepared to set up this program & we will be able to set up next year The expedition of the artifacts were informative. View of students work & sharing is important. MAPS expanded the students horizons. This day did present a hands-on activities for us. However, it would have been beneficial to do appropriate grade level.

We worked on evaluations of Student activities related to Durable Museum MAPS Project. It was helpful to see other schools work. I feel that teachers could be better served by using the museums to observe and learn about exhibits in the museum. When we bring our students to a museum ( outside of our assigned MAPS museum) we would have learned about additional programs at other museums which could also be utilized on our other field trip experiences.

It's worthwhile to meet with colleagues and discuss interpretations and the ideas. I'm glad I was a part of expedition: MAPS II I heard some ideas that I used in my classroom.

Attending Expedition: MAPS II gave me the opportunity to learn new ideas from teachers throughout the city. I enjoyed learning about student's work and it also gave me the opportunity to work with others to see what our children are learning from MAPS.

I really enjoy coming to MAPS sessions. I actually wish that we could meet more in order to share information and get immediate feedback. In our small grade level groups we were able to share and comment on what went well for us in doing MAPS. Some people had great ideas that they shared. I do believe that much more of that is needed. It really makes me want to go back (year round) and dive right into one of the ideas I learned today. I'm glad that I came.
I like discussing the experience of teaching the units with other teachers. It give me an idea of how my students are doing in terms of their thinking process and what I may need to do to spark different thought processes. I enjoyed discussing how my students learned and sharing my observations of their learning styles. The fourth grade units will be a welcome change to the standard curriculum next year.

I think we need to see more artifacts from the students as well as projects worked on. The teachers have to do more sharing—maybe seeing someone else in your grad level teaching a lesson. What worked for them, what didn't? How can we use the materials to the fullest degree? Any time constraints for others? Does everything fit into your 3rd grade curriculum? I would love to visit other schools to see what people are doing. I'm glad I was involved with MAPS this year and I am looking forward to next year!

The design format presented today is very useful. The #1 advantage is meeting & talking with other teachers who are in the same program. It's a great idea to discuss successes, share ideas, and give suggestions for improvement.

The work presented in the workshop helped me focus on how I present lessons. I also was able to reflect on how my student responses would compare with those presented.

It has given me an idea to how well my students did compared to other classes. It also provided me with teacher topics or problems with MAPS and student curriculum. Students have such a wide variety of skills & development on this level. This program could have been condensed into 2 hours instead of almost 4!

Reviewing the students works gave me an insight as to how well my students compared with other 4th graders. I found a wide range of skills at the 4th grade level. Many students had the same difficulty following the directions in the lessons. I found the student work similar to what I might find in my own classroom.

It let one know how other classroom teachers incorporated the MAPS curriculum in their individual classrooms. I feel we were able to obtain great ideas. I was happy to know we will receive our two units this summer at home, that was very considerate of you to get us our materials this summer. I am also very pleased that we will be able to obtain information on your website this summer. I would like you to continue to share student work next year as it is wonderful to see how the curriculum reaches student of all abilities, including different cultures and languages. I fee the MAPS 6th grad curriculum reaches our students in all phases of curriculum, reading, writing, speaking, mathematics, social studies, history and last but not least science. Thank you MAPS!

Reflecting on student work in relation to the standards was insightful. It will make me continue to evaluate next years student MAPS activities in the same way.

The workshop was valuable & interesting. Unfortunately, the timing of the workshop was difficult & gave us less time to close out our school year.

It was good to see the artifacts of students work at different schools.

Let me see how other teachers present the program and how they differented in this involvement of the projects.

I like the closure

Talking to my colleagues made me see that what I previously believed a failure on my part. Was that they experienced similar problems and triumphs.

I enjoyed talking to the other teachers about the benefits and challenges involved in the MAPS programs. Most of us had trouble getting a bus and speaking to {name omitted} as oppose to the voice mail. Very little response was heard from {name omitted} so without confirmation, we were unable to go to our second field trip. We are geared to get both units at the beginning of the year so we can do the units as the pertain to our school plan.

Not as much as I would have hoped.

The value of this day has increased my enthusiasm for the MAPS program. It has provided ideas to think about during the summer to increase my ability to complete the curriculum next year.

This day has a great deal of value for my professional work. It talks about curriculum in an authentic learning environment. This is modeling on the part of MAPS that is a state goal objective for our
students. We as teachers will model this kind of authentic learning environment as we participate in the
Museums and Public school program.

- Enjoyed the day.
- Enjoying. Able to share pluses and minuses of the program.
- I feel that this day was very beneficial. I do enjoy the MAPS activity. I was able to see how the
activities worked for every teacher. There was a lot of information given to us in terms of paper work.
- Extremely useful to work with other teachers, but this date is a absolutely necessary for in-school end
of year closing chores. Please try to have our last MAPS day scheduled at another time.
- It helped me to see how other teachers had used the program and hear their feedback. It was good to
learn that the program will continue next year so that I can begin thinking about when I will begin the
units.
- It was a nice chance to reflect on the work we did this year. I think the assessment and evaluation
portion could have been more effective. It is nice to hear about other teachers experiences.
- Today provided me with great value for my teaching. It was helpful to see and evaluate students work.
I also enjoyed talking with other teachers and sharing experiences.
- This day will and has helped me to know that each inservice is of value. Teacher's meeting and
showing ideas to take back to our classroom will be helpful for the incoming year.
- This experience is most valuable for me as a professional because I have been given the opportunity to
evaluate the program based on student's responses from other schools as well as my own. I've gotten the
option of voicing my opinions and giving my idea to help improve the units... I appreciate the
opportunity because I am one of the people actually implementing the program in my classroom.
- My professional work as a teacher is always broadened when I meet and exchange ideas with fellow
educators. The museums of Chicago offer a wonderful setting for learning. As an educator, the hands-on
activities allow me to fully participate in the educational experiences with my students.
- This was an excellent workshop. Looking at sample work and making evaluations was a most
interesting experience. I was able to improve same work presented to us with the work of my students.
They were in the same range. This was good!
- I really enjoyed the day and it will help me professionally next year
- This day's assessment helped to identify and see other students work. It also gave me an idea what to
look for going into the new year.
- I've had a chance to share with other teachers who have taught teachers who have taught the same
units. It was an interesting change of information. I learned new ideas etc. Well worth the time.
- I think it will help-I am more open minded about the standards that apply to our third grade lessons.
- Most of it was good, however, a few teachers dominated in classroom A. The leader of the discussion
had trouble controlling the conversation. I could have learned more if the teachers had let other speak!

What is your assessment of the design of the MAPS lessons and their role in your curriculum?

- Gave students a real opportunity to learn subject timely Extra learning opportunity for students Give
students an opportunity to express themselves and be in a group and exchange what they learned with
other groups Students evaluate art and draw conclusion bases upon their observations and experiences
Student activities prior knowledge and build upon real life expression
- The design of the MAPS curriculum is wonderful. Unfortunately, standardized test preparation takes
precedence over any extra curriculum ideas. If it weren't for this, I would use MAPS on a regular basis.
Many of the lessons were laid out in a concise, easy to teach format.
- The DuSable exercise did not link to his times explicitly! Nor was the impact of business on
community well integrated into the exercise.
- I'm sorry, I came today as an observer. This was my 1st workshop of MAPS that I did attend this year.
Overall, they were good. I fell way behind because of other demands. The lessons seem well though out.

The children enjoyed the common thread of the civilizations with "Eyes in the Skies". Field trips were great! Instructors must gather many supplies and other information to keep the interest of the students. Assessment (standards) should be given up front.

The design of the MAPS lessons in the Chicago-Swamp to ? unit was excellent. It was the only unit used to teach Chicago history. The second - transportation - ended up being an alternative unit. It was too involved & long when done in addition to a 90 min reading program.

The MAPS lessons are very good in general. I would like to see a glossary about the ? that the students will encounter during their activities. Also, was very good for one to have the goal description of the different units. (Difficult to read her last sentence).

I feel that the lessons were thought through effectively. The lessons were not geared toward special needs students, although there was enough lead way to extend lessons and alter lessons. All materials were not available but the material that was received was of good quality.

I really do not think workbooks are necessary-directions for assignments/assessments could be given in T.E. and the teacher could use/adjust/not use according to classes abilities. Teaching Thanksgiving second ? in WUTZ-I am moving unit to Nov and Chicago 1919 till January/February and Aquarium Field Trip . Data interpretation and graphing work is very basic-my students need lots of data interpretation since this is something they do not do well on in ITBS. More questions and more graphing & data interpretation.

I feel that these lessons were designed to teach to various learning styles. I feel that they are interesting and creative. I also feel that they touch on subjects and expose our children to things they would otherwise have no knowledge of. Specifically, I feel that the integration of the Art Institute does this. I found our two trips to be very meaningful because the material had been taught in the classroom.

Met the learning standards Provided hands-on activities Increased students writing abilities

I think the MAPS program is wonderful! The lessons are aligned to the standards which keeps me from thinking about that and more on the students and the activities involved. It reinforces information that they experience throughout the year.

MAPS lessons were designed to meet various standards. Some lessons had to be adapted to meet the needs of various students. The students really enjoyed using the manipulatives. The manipulatives helped the students understand the lessons a little more thoroughly

Great resources, child centered & high interest activities. Chicago unit was well connected to CPS & Illinois standards. The unit on transportation was not as well connected. I'm excited to use the Chicago unit, but would be helpful to have resources for entire 3rd grade team. We plan collaboratively at my school, so I share as much as I can. We are all supposed to be teaching the same units at the same time, so having resources & training for all team members is critical to implementation.

There were to many lessons and the curriculum was already planned, so it was difficult to fit them all on. The teacher booklet should have all the activities and he/she can make copies for the students if he/she has or wants to use them. The activities were fine and they helped with the curriculum. The standards had a more clear experience and meaning in the role of the museums in learning. It's not just a place to visit like a park.

I really liked the design of the MAPS lessons. The lessons were pretty clear and engaging for my students. The only draw back was the reading material. I would have loved to have a novel for each student or at least one for very two students (especially if the same units are being used each year-maybe a onetime investment per school could be spent).

The MAPS lesson is aligned with the state standards which allows students to reach the goals in a creative way. In observing the artifacts, we found that 6 out of 10 students understood & met the goals of the curriculum.

The lessons were good. I felt very good about the program due to the fact that I had been in-serviced on how to be successful in the program.

They were excellent. However, there are time constraints, particularly with Iowa ISAT tests.
The MAPS lessons fit in well with the curriculum. The creation myths at least gave students the
topportunity to realize other people think differently from them.
I felt the design of the MAPS was aligned to our curriculum and engaged my students in higher level
thinking.
The design fit into the curriculum, but it required your to go into cross curricular mode-this takes more
planning when you are departmentalized.
The MAPS lessons were enjoyable for my students. It had creative lessons for the students to think and
participate. The lessons were a good way of deviating from the normal lessons.
The lessons were excellent in the MAPS units and enhanced our curriculum. The hands-on activities
were great. The field experience were valuable assets to our curriculum.
The MAPS lessons were exciting and added great hands-on activities. The lessons for the museum
were valuable assets for trips. The follow up activities were good assessment activities.
The units were designed to address the curriculum. Some of the activities were time consuming and
with a split 2nd & 3rd, it was a little more work on my part to lower the level for the understanding.
However, the students loved learning about Chicago history and enjoyed the hands-on activities. Also,
the field trip experience to the CHS (?) was helpful to see and touch.
There were some lessons in the waterways unit (grade 5) that were difficult to do in a classroom with
many students and no help. These were: 1)Bringing in the pail of dirty water and having the filtering it.
2)Toast or ? to water (students didn't take this lesson seriously). The field experience was wonderful.
They aligned well eight our learning standards. Many of the activities that already took place in our class
integrated well with the activities from MAPS.
According to the artifacts that we examined today, 60% of the students met the goal and about 40% did
not. The design of the lessons are good and I've managed to give them a prominent place in my
curriculum. I think this is mostly possible because I'm a self contained classroom.
I began teaching late January and at first it took me a while to get adjusted. The previous teacher
unfortunately never mentioned MAPS to me, but my 6th grade colleague did. I was able to teach Chicago
Waterways and it was very enjoyable both to myself and my students. I was able to apply the materials to
my students everyday life. By coming here I realized that there are many activities/lessons that can be
very beneficial to my students.
The design of the MAPS lessons are very on point. They are very relevant and show a great correlation
to the in-class lesson and field trip lesson at the actual sites. The role that they play in my curriculum is
that for one, it makes my job a lot easier because I know that the materials and resources are available.
Secondly, they work well with the standards and objectives. And lastly, they are fun and easy to read
which makes the students want to do and share.
I think the lessons are effective but it can be expensive for me to purchase some of the materials
needed to do the lessons effectively.
The Chicago history (fine, expositions) was excellent! The field trips provided hands on activities and
real experiences for the children. The feedback I received was very positive. The children enjoyed having
a specific purpose at the museum. We also used many of the websites for further exploration. We read
Stuart Little and compared and contrasted the movie to the book. I also incorporated different forms of
transportation (past & present)in Chicago. They enjoyed the trip to the Museum of Science & Industry.
These lessons really fit into the third grade curriculum on Chicago. Unfortunately, there was so much
material , I couldn't cover everything given.
The lessons are excellent. I think they actively engage the students and spark the interest level of the
students. I incorporate the units to what I need to cover for the year and also to provide a change from the
everyday norm.
Although the lessons addressed the standards, many days were needed to cover these few standards. I
enjoyed both units as did my students. Lessons were easy to understand & complete. Cooperative
activities were enjoyable.
The design of the MAPS lessons was very useful. They were direct, easy to follow, and in-depth. Their
role in my curriculum was as my lesson plans for science/social studies. I would like to see the St.
activity design sheets included in the teacher's guide.
Many of these lessons only addressed a few of the standards and took up a lot of time. The actual design of the MAPS lessons were easy to follow & made lesson planning easy. Many lessons could be related to older subject areas & this was very much appreciated.

The design of most lessons was beneficial to the students. The lessons that students worked in groups helped them meet the standards. Reading of the novels took a lot of time and explanation to the students because they were unfamiliar with the events. The design of the lessons were easy to follow & made lesson planning easier.

MAPS lesson time lines were way off. Lessons that were suggested for 2-3 days really took twice as long. Most lessons were like that in taking longer than suggested. Using MAPS didn't leave time to use social studies or science texts as required at our school. Not all grade level standards were addressed & it was hard to find time to do those standards during the year.

The MAPS design and lessons have been well written and in line with the curriculum. The lessons have been playing and will continue to play a most valuable role in my classroom integrating my curriculum in my classroom.

While I think the concept for MAPS is wonderful & valuable, I found the lessons (5th grade) disappointing. The notebook lessons were pretty good, but I had so many missing pieces(things referred to in the lesson plans)that I found the lessons difficult to execute. The DuSable unit was a waste of time. It is astounding to me that so much $ was put into that program. The lessons were mundane & old news! I think that I could have written a more exciting curriculum myself. And pieces were missing (books referred to not given to us) which made it hard to execute. I found it a waste of time. The training was worthless. Why didn't we get a background in DuSable?

After reviewing the 5th grade materials (in 6th grade) and comparing it to the standards, we were given-60% of the students showed understanding of the standards. The standard was-compared how segments of the economy interact. We used the desired results to help us assess the students work. With experience & fine tuning of the curriculum by the teachers in the classroom & the curriculum designers-I expect the percentage to rise. ** Rubrics would also help this! It doesn't seem that everyone (maybe even including teachers) didn't seem 100% clear of what was expected.

Most of the lessons were enjoyed by the students. The design of some activities could have give more specific directions. I do think they helped students understand the curriculum and enjoyed learning it. I going over these forms with other teachers-it was evident that all teachers had different expectations for their students as to how specific the answers should be.

I am not convinced that MAPS addresses all the standards for science. I am a new teacher so I may have overlooked this. I seemed to have trouble being certain the students were exposed to all the standards through the MAPS units for my grade level. I am much more inclined to implement the program if I have clarity it address everything, specifically ITBS and ISAT type questions. If I could have administrative help with lesson planning to insure I'm doing my job right, that would be more helpful.

MAPS is an excellent program. I believe it is excellent for enrichment. I teach in a departmental situation which made the program difficult to implement.

The lessons did not match our curriculum. The lessons were a small part of our curriculum and were more of an extension to our topics. The lessons took longer than the allowed time so I modified many of the lessons in the second unit. I did feel that the activities were creative and the children did enjoy doing the activities.

There were useful activities that fit into my curriculum but not all MAPS lessons would make sense in my classroom.

The MAPS curriculum is well thought out. It is obvious that the curriculum designer have knowledge and experience in the area of education.
Excellent design! The lessons were all aligned with the CFS and State standards. The curriculum was precise, hands-on and innovative. Probably the best unit I’ve taught in 23 years of teaching.

I like that the lessons pull from many subject areas. I also liked the hands on experimentation of the lessons. The students had a chance to explore & discover on their own.

I really enjoyed the MAPS activity. I do, however, feel that there was not enough time to finish all the lesson. Next year I will be moving down to the 5th grade. I hope to use that (the lessons) in my class at the beginning and not at the end. In the 6th grade lessons, I feel that the Native American should not have been the center of lessons as it felt it was.

Excellent lessons that stimulate growth, thinking and interest in subject matter. Although I was unable to complete both units, I found them accepted and liked by students.

I believe that the MAPS lessons were excellent. I used them in the class and at the site. I was able to take your curriculum and combine it with other subject areas-writing, social studies, art, computer, etc.

Overall, very good! They will need to do some retraining. Rubrics and other assessment devices would be a big help. Curriculum fits well. I would like more Chicago stuff.

The lessons fit very well in my curriculum-especially DuSable. There was a lot of information- sometimes a bit overwhelming.

The lessons were excellent and did fit into my curriculum. They meet my needs in planning lessons in they were designed to meet specific goals and standards, held the students interest, were age appropriate and motivating. My students especially enjoyed the field trips and seeing first hand things we learned in class. I felt the program gave "hope" to students in that they could think about things they could do for their future(possibly careers)and ways we all depend on nature and creative thinking.

Each lesson helped students to maintain their level of learning. The study of Chicago & visiting the CHS was very helpful. It did help each child to know and learn about the old and new Chicago.

I thought the MAPS lessons were well designed and well thought-out. It will fit in well in my curriculum when I teach them in reverse order next year. I want to teach the Art of Survival first next time-then Migration. I loved "Color Me Dark" and so did my students. Nelle Lec's story had a huge impact on my students.

Overall, it was well written. I think that some of the material written in the teachers guide was vague. It was not always clear what you were aiming at. I think that for the most part, the Teachers guide could be pared down some. I hope for the next school year we get started earlier because time is always of the essence. I found the lessons fit my curriculum. The children enjoyed doing them.

My assessment of this program is rated very high. The program is focused on very important topics and elaborates as much as possible with resources given. With MAPS, I can always teach in a cross curriculum which is the only way in my opinion, to teach. Also, I can involve parents and other community members in my curriculum.

Excellent.

I liked the materials and the high interest level to the students. I think the time level of the lessons was difficult to follow and not on target with our time limit for teaching social studies. It took me from after Christmas to the end of the school year to complete two units. I realize that we can pick and choose activities, but I felt to do it "right" and not half-way. I went through both whale units, it was interesting and the students participated and enjoyed the lessons. It was just too much! I didn't get to other units in social studies that I normally do. Maybe receiving both units in the beginning of the year will help. However, I have the materials and want to continue to use them.

I think it was very difficult for me to tie in as much as needed into the curriculum as needed.

The design of the MAPS lesson is very good. It is formatted in a user-friendly way and it holds to students interest.

Lesson design's were good and did fit the curriculum. Students looked forward to lessons especially when there were hands-on activities. Many of my students had never been to the Art Institute before and they had a chance to look at real art in a way that would be beneficial to them in the long run.
I enjoyed the MAPS lessons. I watched my student enjoy learning. Many of my students enjoyed the Art Institute. They had never visited the museum. Many students discussed the art work by D. Lee., The Thanksgiving with great excitement.

It works! The first unit seemed to meet up with our goals more than the second unit but the students were enthusiastic about all the lessons.

The MAPS lessons (6th grade) were basically good. The Mexican Fine Arts Center Museum material and trip didn't seem to fit into any niche that 6th graders needed. We never even say anything about the "corn" (I can't exactly remember the name) at the Museum even though it was all over the literature! The Museum never even mentioned it! Otherwise... the Adler trip was great, both the Sky show and the Space exhibits trips. We spent a good amount of time on the material and I believe the students gained from the MAPS experience. Thanks- [name omitted].

The standards (green & purple) sheets given to us on June 13th is most beneficial to the Teachers. Should be given to all teachers at first meeting. This explains what the program is all about. For 6th grade-The Egyptian culture should be stressed because this is in the 6th grade social studies unit. Tour in the Egyptian section should also be given on First Field trips-then 1 trip to Adler not 2. Teachers should also be told what bus company is picking them up so we could all if there is a problem before hand.

What is your perspective on the role of assessment activities in MAPS?

What do they reveal about student learning? What do they reveal about the MAPS activities/program?

1) Student explain answers in detail 2) They use dialogue to explain through 3) Students were able to write answers in detail and understand their topics 4) Students showed a great amount of interest and materials provided ? long experience 5) MAPS activities helped and helped student to follow and learn in a different ways and environment

The assessment activities worked well with my class. She assessments revealed that the students were attentive and highly interested in the materials taught.

Somewhat elemental The projects were fun Loved the Obleck and Dr. Suess's story. I was unfamiliar with it.

The assessment activities were helpful, because it's a guide or a "checklist" to follow. The students become enthusiastic because all of a sudden they are seeing what we learned in the classroom.

The assessment part was direct, clear and open to creativity. I could see the different levels if understanding in my students. Also, I could identify those students that were more visual. the activities helped the students to be a critical thinker. The activities were aligned to the objectives.

The assessment reflects the goals of the program. The students were involved in engaged learning and that was reflected in the assessments.

Assessment is good and gives some evaluation o whether lessons are being effective. Therefore proving or not proving that MAPS is melting the needs of the students and standards.

The students are willing as the teachers are learning?

I really like the assessment activities especially the one that provide students the opportunity to create not just complete workshop projects. Many times assessment activities reveal the weakness of a lesson when the assessment cannot be completed to the teacher's specification because lesson was not well done.

I believe that the assessment activities are sometimes difficult to score. Many are based on children's prior knowledge and when a child is from a family that has not been exposed to a variety of things, their prior knowledge varies and thus the completeness of their assignment may vary. In turn, I view this program as supplemental to my classroom activities and find it difficult to apply a grade to the students work.

Students were actively engaged in activities Increased students writing abilities Provided well deserved hands-on activities

Assessment activities keep students focused on their objectives and stabilizes what the students have learned so their less likely to forget it. Students learn better in a creative interesting environment.
Most activities were engaging and enlightening. They revealed in most cases that students learn best by doing. Various learning styles were used and considered when the activities were planned out. Hands-on works!

Assessment activities are essential & were appropriate.

They meet the goal, some are quite helpful in assessing standards than others. They are higher order thinking activities and they show standards. Need more information to have better results. They are excellent!

Rubrics and a final exam could help students increase their desire to learn more by putting more effort into their projects.

Students learn very well working with hands-on activities and in groups. The activities also greatly motivated the students. They were very excited to do the projects. This shows that the MAPS activities were well planned for each grade/age students. MAPS assessment activities were sufficient.

The role of assessment is important because students learn to adapt to new skills. Assessment's let them know how well they learned new skills.

These are activities in which all students can succeed. As long as the problem is already identified, any project could be acceptable.

These are activities in which all students can succeed. As long as the problem is clearly identified, any project could be acceptable.

Assessments involved a variety of skill areas as well as the specific standards being addressed. The assessments engaged the students. They were enthusiastic about the program.

I felt the assessment activities were excellent. They revealed to me whether or not the students met the concepts. I felt the program engaged the students and developed their higher level thinking.

The activities were nice but some standards and activities did not go together. The students were eager to change from the regular classroom instructions. Group activities would be better for some activities.

The assessment activities were beneficial. They assessed the student activities and lessons.

The assessment activities were good. Some of the activities were "do able" and easy for them. However, there were some that were a little more challenging. They were a good indicator of students understanding of the units/activities.

The open ended investigative approach was so valuable-the cross curricular aspect of MAPS revealed different learning styles for students. -hands on learning -verbal observation -lean work -written expression/LA -science/social studies -art -multi level learning when spec. Ed can be included

The role of assessment activities in MAPS is very important to student learning. It would also be very valuable to "Brain Storm" with other teachers from different assessment techniques. Our school completed the tools for change artifact assessment, but we changed the requirements to include a prototype which was very valuable when we went to the Mexican museum we had students design frendas (?). All these assessments reflected understanding and enhanced our program.

The activities reveal that students are: creative able to apply new knowledge to real life situations able to create an advertisement to promote a particular assignment.

From my experience I am able to say that my students had the opportunity to work together and apply through activities/discussions what they had learned. The students also had the opportunity to do critical thinking before actually doing hands on activities.

The assessment activities are also right on point. They are at grade level and challenging. Yet, talk in a way that is understandable. They reveal that children want to learn, want to invent, want to make a statement. They also reveal that the MAPS activities/program is well on it's way to becoming part of the CPS all the way around for all grade levels.

Assessment is performance based. You could actually see what the students are learning. They are constantly engaged with each other and the materials given. The artifacts produced gave the teacher an indication of comprehension. The group discussions were great. The students were enthusiastic, interested and compassionate (esp. in Justin's letter) for the struggles of people in their city. MAPS activities were useful and interesting and fun for the students. Developed creativity and higher order thinking skills.
The children enjoyed the independent and cooperative activities from their work book which also enabled me to note their comprehension of the information presented.

The students mostly met the standards, but did not meet all. It shows where we need to work on different activities to help them meet the standards.

Student learning was easily assessed using unit activities. This indicates that learning was taking place. Cross-curricular learning was also evident.

I feel the assessment activities tell me whether the students acquired the knowledge & skills of each lesson & could apply them further. If the students enjoyed the day's particular activity-they did well, if they didn't enjoy it, they did poorly. Most activities were enjoyable on the whole, students did not enjoy the reflection pack where they had to write about the lesson.

The assessments tell me if students have acquired the knowledge & skills presented in each lesson. The assessment in MAPS program correlated with the lessons taught. However, some assessments were not clear & aligned with 4th grade standards.

Assessment activities were not always geared to giving a better grade. For those of us who have to keep a grade book to substantiate our grades, the activities were not helpful.

Notebook assessment were relevant & worthwhile. They reflected the state & city goals. DuSable-I can't comment. I gave up on the unit!

The assessment activities in MAPS lets me understand what my students have learned in the curriculum. They let me reach my goals teaching in the curriculum as well as covering subjects that are not covered but written in between the line. For example, cross cultured experiences that will enable my students to understand other cultures and value their own cultures as well as other cultures.

Let me know what the students have learned. Let students realize how much they have learned. Students really enjoyed ? and discovering pictures & the hands-on activities-what's in a structure. They were very ? in analyzing what others chose to take.

Rubrics need to be included for projects and activities. This will help students to improve their quality of work and to have a clear understanding of what is expected from them. It will also help teachers to grade them fairly and accurately. Written assessment should also be included in the unit. Project or authentic assessment is important however, written assessment is also important.

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 Didn't get a chance to benefit.

I created my own assessment activities.

They (the activities) really promote critical and analytical thinking. The activities are project based, therefore students of all intelligence can succeed.

The assessment activities were on target. They are some of the same strategies I use daily in assessing my students.

Today’s assessment is something we (teachers) do in the classroom everyday. I didn't learn anything knew. I noticed, however, that students for the most part seemed to be on target.

Assessment activities allow students an opportunity to expand on the material and knowledge gained from the MAPS program. Students learn in a variety of ways and the activities allow each student to demonstrate their personalized interpretation of the curriculum. The activities show that MAPS was created by teachers who understand students interest level and varied learning styles.

Assessments in the MAPS activities were very helpful. They were good because of the variety of assessments-Rubrics, short answers, etc.

I don't think it was a very good reflection of what was really done in the classroom. Real artifacts, as students, students did the work, need to be collected. Clearer definition of the goals of MAPS activities.

It was helpful to assess work today. It gave a broad perspective as to what is going on in different classrooms. It gave a clear picture as to what should be changed/improved in the future.
The students enjoyed the assessment activities and didn't feel they were taking a test. Assessment activities helped students to express what they had learned and knew. They helped me (the teacher) to evaluate my teaching. Most all of the students meet the learning standards. I felt the MAPS units have helped my students to develop higher order thinking skills. I felt the assessment offered an authentic tool demonstrating learning and understanding.

I thought that some of the assessment activities did not seem to assess the standards as they were given in the Teachers guide.

Students have been able to answer questions, explain and show or tell how each event helped in their learning experiment.

The assessment activities were fine. They gave me an excellent insight into the students understanding of the concepts and all activities kept them involved and engaged. The assessments were closely related to the other activities in the unit. I spent a lot of class time on "MAPS" and I need to ? out for myself how to translate those MAPS activity assessments into grades for my Science/Social Studies grades.

Assessment is an uncompromising tool for an educator. The assessment activities in MAPS is great because it is in a great book. This books represents the complexity of the focus area and allows students to take subject area more serious.

- Assessment was satisfactory
- Students paid attention
- Excellent

I found it difficult to assess learning in the so called "normal way" especially in the second unit. There wasn't any concrete way to assess learning, which is ok. However, we do need to grade our students. It was evident that students learned and met the standards for each lesson through the activities, but it was hard to give a letter grade which we are required to do. I myself assessed students and didn't really have a problem with it. However, it just seemed difficult at times

I thought the assessment activities could have been stronger and more clear-cut. The inventions were a great closing activity. Some of the others I didn't even use because the didn't seem as worthwhile.

In most cases the assessments showed that the students gained knowledge and were able to internalize the information and relate to their own lines.

The assessment presented that many students gained new knowledge while having fun.

How can MAPS be improved?

- How activities reinforcement through film, CD's or videos. Project displays & model to explain standards and objectives.
- No improvements needed
- 1. As a foreign language teacher, I would of liked to see the materials in Spanish. 2. The materials need to be in time in the school to be used with the different activities. 3. A ? will benefit the students to understand some of the instructions. 4. I would of liked to have the opportunity to visit other museums, the two that the MAPS provides.
- Field trips were important, the time at the Chicago Historical Society was too short. Students were rushed, they could have spent one trip on each area at the museum.
- Integrates Parents.
- Lessons could be less complicated. Difficult to gather much information to expand the lessons.
- Time limits in activities should be less restricted as higher level thinking skills would apply to current times. We need help with buses and approval of trips. There has to be a better system with trips helpful to the teacher and not an added burden.
- Maybe text books? Special needs considerations Credits for New certificates
- The teachers Manuel can be more teacher friendly. The language art books can be changed
- Scheduling of buses for both trips was a nightmare. For my trips, I made repeated phone calls to {name omitted} & her office. I rarely would get a return call or fax. Both our school clerk and my principal made phone calls to your office & I still had a hard time getting a bus. Buses were on time, drivers were pretty polite but, once again, getting a bus was a nightmare! I hope this will improve next year.
Include materials, especially books for each child. Change workshop days Personal availability
Receiving the lessons in September will definitely help. I also feel that receiving all materials at once
makes it easier to plan the unit. The busing problems I'm sure will be worked out for the next year but it
was a huge problem.
Include 7th grade since that the grade I'll be moving to. Help us have a smoother transition with the
buses. For log cabins, have enough equipment for the entire class. Add an "hands-on a make and take"
activity for the students to complete at the museum to culminate their lessons.
It would be nice if the MAPS program would allow participants to attend more than two museums.
Also, would it be possible for the other students or the same grade to be able to attend the trips as well.
1-Include it in the curriculum, Science, Social Studies, American Heritage month 2-Limit the
activities, be selective 3-Give options to students who could illustrate 4-Emphasize writing more 5-Let
teachers do the booking of field trips, buses that will speed up the ? papers Allow teachers to borrow
either videos or picture books about the museum to stimulate interest.
Suggestion-give MAPS teachers priority in field trip dates/times. Involve all teachers at a specific
grade level in training to improve implementation of the MAPS curriculum.
Already provided feedback
MAPS is a very good program, but can be improved by making communications between the schools
clearer (easier).
By providing the materials at the beginning of the year.
Have guides for the Art Institute
I like how both curriculum will be handed out at once so teachers can jump around.
Bus reservations process needs to improve. I was told my bus was confirmed, but then the bud didn't
show on the day of the scheduled field trip. The students were extremely disappointed.
Use a time line before writing the letter to the mayor. Change the date on the tool list for the future to
2100.
1. For the final assessment students should be required to produce a prototype of their technical design.
We had our students produce this & they were excellent. 2. Need a rubric to help assess students
achievements.
None
We didn't do the two museums 6th grade activity -Better communication with MAPS & bus times -
We have two 6th grade classes & need to teach both -Field trips can be problematic since one field trip
class is free & the other costs.
We need to have better availability to the person who is in charge of the buses. Instead of leaving a
message, we need to be able to speak to a person directly. I believe teacher input is needed to determine
other museums/programs that might be used as a MAPS Museum at a give grade level. This might be
helpful if the program continues. The program could be expanded so that each grade level could have
options of trips to choose as opposed to having two or three assigned trips per grade level with no other
options.
Include a rubric with the "Student Work Artifact" or better yet, include a note that a rubric would be
instrumented in assessing the artifact.
-By having more workshops or inservices throughout the year not only 2 or 3 times. -By constant
feedback. Visits to teachers setting up times and ways to interact and collaborate for input. -Easier
process for field trips and bus ordering payments.
I mentioned earlier, I am not very familiar with the MAPS. I would like to learn more about MAPS
through workshops. I believe that hands on is more beneficial than reading a booklet. I am not aware
how this program was introduced to new teachers, but I would like to know more about it.
I think it is important that we don't schedule two field trips on the same day it make the trips less
beneficial, it's like a "race through time".
I think the students enjoyed being at the museums. They liked the engaged learning. Is there a way to
incorporate more Museums times?
The materials were good, but a bit overwhelming for the teacher. Maybe focusing on one or two ideas in depth would help. I kept feeling that I wasn't covering everything I should adequately. Next year, I will be focusing on a few ideas more thoroughly. Also, not having meeting's on Prof. Development days.

Can you possibly ask Region offices to pre-approve MAPS trips even without a bus company on application. By the time we get a bus company from MAPS-we still don't have enough time for region approval.

Make field trips easier to schedule

Provide transparencies needed Answer keys for all lessons Provide all materials in a timely manner

MAPS teachers could be provided with a guided tour at museums-some to the paintings moved locations & were difficult to find Respond to phone call quickly

The students need more books on activities of the museums for reinforcement. Provide transparencies when needed. Provide all materials in a timely manner! I signed up for the actor playing DuSable (at our inservice)to call me for a visit to my school to introduce the unit and give the students more visual images & role play. I never heard from the resource regarding this. I think if he could make all the schools involved in the MAPS program (even if just for 10-15 minutes), the students would really enjoy it & help the get more geared up the unit. Grade level teachers need to have time to meet & discuss what involved, what didn't difficult strategies, etc... Please build this into our professional development schedules.

Curriculum can always be improved upon through our ever-changing and evolving society and technology. It can be improved by letting the public know that we not only cover the curriculum but we go beyond it and hit upon pic's that are valuable to our standards today and in our society, in general.

Give a more realistic time line for activities. Supply more assessment's that can be graded to show student learning. Let us know what artifacts were to be used before hand. Most teachers I talked to didn't have time at the end of the year to redo lessons for you.

Training sessions should spend less time on going through the lessons & more time on giving us a background in our content area. **Change your curriculum writers.**

Help teachers to teach this better, more effectively, when they are not self contained. At my school, even in the younger grades(3,4,5 & 6th) they switch classes for different subjects. They don't stay with one teacher most of the day. This was hard for all of us & not just my school. Include rubrics & written assessments!

Help teachers to teach this better, more effectively, when they are not self-contained. At my school, even in the younger grades (3,4,5 & 6th) they switch classes for different subjects. They don't stay with one teacher most of the day. This was hard for all of us & not just my school! Include Rubrics & written assessments!

Gaining access to the museums needs improvement. It was very difficult getting dates for the field trips. I was very disappointed in the bus situation. The bus driver refused to transport my students because we didn't leave at 10:00am. We wanted to leave at 10:30am because the museum wouldn't let the class in until 11:00am. Museums should give special assistance for MAPS teachers.

Have things make sense.

More materials for hands on materials.

Bette bus arrangements!

I think the improvement of this could be not to be so rushed. Also, as I have said before the Native American should not have been centered. Also, for 6th grade, be understanding to the fact that not all sixth grade students are self-contained.

The meeting times are not well planned. One day filled directly. The day before report card pick up, while our peers were finishing their report cards & classroom, we were out the building. Let us know in advance what lesson you want us to save for evaluation. By the time I found out what lessons you wanted, I had already sent them home.

Do not limit student activities to time period (DuSable trading post product ads). Allow students to make connects to themselves and modern time.

Help the 6th grade curriculum because the departmental resources are needed for all teachers.
It would be great to have a hands-on activity at the museum related to each unit.

4th grade-“Thanksgiving” assessment activity could be a future time of 2100 instead of 2010. 4th grade-Letter to mayor could include a time line to help organize the student thinking.

Buses! I know you’ve heard it already and it must be difficult but something must be done. We ended up paying for the buses ourselves.

Bus-the bus situation needs to be fixed it was very frustrating to get my confirmation. Once I did get the bus confirmation (after several phone calls and faxes) the bus was timely and reliable. Please make sure to be more prompt when responding to teachers bus requests.

Continue to have these inservice and passing out the helpful materials that are passed out to each individual grades

Having materials in a timely manner that I can tie the units into the other unit I already do. I'm thrilled that they'll have both units at the beginning of the year.

I thought that the unit on Chicago Waterways tried to cover too much material. I found myself feeling bogged down. It took us as long time to get through the Chicago waterway unit.

Improvement from MAPS should come in the form of more resources. The students are very interested in the subject matter, however, the materials offered as limited. The MAPS program offers a focus on major issues yet limits it's resources. This limits the teacher and students.

No further suggestions

Everything was great

If teachers are involved with MAPS, I don't think they should be excluded from field trips because of overbooking. They should have top priority because the field trip at the end of each unit is so important for the student to make the connections between class and the outside world. It does meet a lot of standards in social studies, reading, writing, etc. However, because of the length of each unit, other social studies standards are not being met.

The only thing that comes to mind is making sure that MAPS teachers visiting the museums are not denied any trips before the schools year ends.

Some of the lessons were time consuming. Did not have enough time during the day to fully implement. Didn't get much of a response from homework.

Keep up the good work!

Make scheduling field trips easier. Perhaps give vouchers to teachers for buses so they didn't need a middle man.

Try to align a little more closely with the 6th grade curriculum and straighten out the Mexican Museum and it's purpose. Why did we go there? It was neat but, I not sure why!

Other comments, ideas, or concerns?

I am new to the program.

I am pleased that the meetings will no longer be held on Teacher/Professional Development days. It was an inconvenience to have to return to my school at the conclusion and to miss out on needed work time.

Because of your commitment to us, I’m inspired to work harder.

Thank you for including me in the program. I enjoyed participating.

Thank you for the opportunity to be a MAPS teacher.

The memberships to the museums are in important piece in this program. When educators use the museums as patrons, as a resource and as a learning experience, it benefits the students.

Look at the little inside the booklet

If you want "artifacts" for the end of the 2002 school year, try to inform us earlier. Response should be improved.

This is a great program and I look forward to continuing to work with the museums.
In our 5th grade workshop, we looked at different examples of student's work. One child who created an advertisement for a "Portable Stevie" was excellent. I think it should be included in next year's books as a concrete example of what's expected and it's work done by a fifth grader! This year @ 60% of my students scored, they were a 5 and above. Thanks MAPS!

Great idea, effective implementation. Good input from teachers.

Arranging buses. My first trip went very smoothly. For my second trip the bus never showed. I was promised to be rescheduled but it never happened.

none

Thanks!

Thanks! Great Job.

Excellent Program!

For the 2001-2002 school year, I will plan to go to at least four museums with my students. I want to visit some museum my students have never heard of.

1. More preparation & concern for schools that start at 8:00. We had some problems with the scheduling of buses & programs. It all worked out alright. 2. A tape is needed for the Aztec legend, it was hard to read.

MAPS is a wonderful program. The children loved it and do did I. We are very lucky to live in a city that provides this opportunity to the Chicago Public Schools. Thank you!

Other plans to include lower grades to experience museums.

Thanks for the cooperation. It was difficult at first coordinating the trips & getting the bus for a 8:00am school. But everything worked out in the end.

Great Job! Thanks for a great year! I'm proud to be a part of such a positive influence. Looking forward to next year.

MAPS is a good program because it allows students to work together and engage in different activities.

Will I receive new info from MAPS?-5th grade

All in all I really enjoyed MAPS. The students loved the field trips, the information, the websites and the projects. This really enriched the curriculum as well as their lives. Hopefully, students will continue visiting museums.

Any way to make sure all teachers receive their passports? I did not get mine!

Student work artifacts forms should be given to the teacher before IOWA testing. The lessons are covered before April and it will be more beneficial to complete the artifacts forms while it's still fresh.

Students enjoyed color me part, but found Jasper pilgrim not interesting & very difficult to follow.

We need to know in advance (well-in advance) the cut-off date for the field trips. I wasn't quite done with my ? when I got the letter stating the date.

Bus program needs work also hard to get Museum reservations late in the year. How about a bus voucher so we can order buses on our own. We need a bus company name before we can get region approval for the field trips.

One main theme I valued was learning about other cultures and incorporating a cross curricular model. Students valued and began to respect other cultures.

Please redesign & re-evaluate your units. Make sure that there are substitutions of materials.

Include enrichment/remediation activities or ideas that can help the teacher design activities.

Need a different bus company! A & H was over 1 hour late for two groups at our school that I know of. [name omitted] is a ? Whenever you call , she is very helpful.

A wonderful program- I'm very pleased with the vertical learning approach of ideas that the MAPS has applied to the curriculum. Very pleased with the schedule staying on time.

I loved the program. The field trips were great. I really think the program needs to be expanded to meet all the classrooms at a grade level. If the $ isn't there, maybe it could come from the bus $. Students could cover the cost.

Good job-MAPS program
\begin{itemize}
\item {name omitted} needs praise & more help! 1) Bus and visit approval should be made easier. A week prior waiting period is difficult to correlate with a request for trip from the region. A timely response when bus is requested. 2) An additional activity for the museum visits as part of the student activity booklet.
\item Museum educators visiting some classrooms to lead activities themselves. It would be great to develop more of a relationship.
\item The MAPS program for 4th grade kept the students interested and motivated. There were many skills taught in the units that benefited students even on our standardized testing.
\item Keep it coming. I love MAPS!
\item My class was very disappointed because we weren't able to get a bus for our trip to DuSable. We got a late start on the unit because of testing 92 sets of tests) plus I didn't find out about the bus until two day before the trip. Only after phone calls and then emails. I never got to speak to a "real live person".
\item None at this time
\item I liked the program and the materials, and most importantly the students here benefited from it. I liked the fact that teacher input is asked for.
\item I think this is a great idea to connect the museums with the public schools. It let's the students learn more about the museums in our city and how each can type in to their learning.
\item A really great program! Kids were really involved. I'd like to continue for the coming year.
\item Our trip to the Museum of Science & Industry was extremely difficult because of the waiting time in lines. Maybe if we had a guided tour and priority entry to exhibits, things would have been a lot smoother. We wasted a lot of time running from one exhibit to another to find out the line was to long!
\item Overall, I really thought the MAPS program was worthwhile because the students were into it and putting in effort-and learning.
\item Please thank {name omitted}. {name omitted} was a great help to me during the field trips. Thanks!
\end{itemize}
## APPENDIX G: STUDENT WORK ARTIFACTS

### SWA Design Sequence

**EXPLORING MAPS STUDENT WORK ARTIFACTS**

*A Step-By-Step Guide for Getting There From Here…*

<table>
<thead>
<tr>
<th>Who?</th>
<th>When?</th>
<th>What?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Team</td>
<td>04/04/01</td>
<td>1. Examine the Correlations in the Teacher Resource Guide.</td>
</tr>
<tr>
<td>Design Team</td>
<td>04/04/01</td>
<td>2. For each grade level (3, 4, 5, and 6) and unit (Unit I and Unit II), select the one lesson that is most aligned with its stated correlations.</td>
</tr>
<tr>
<td>Design Team</td>
<td>04/04/01</td>
<td>3. Choose one activity from this lesson (above) for which the student work provides clearest evidence of what the student “knows” and “is able to” with respect to the correlations.</td>
</tr>
<tr>
<td>Lead Teacher</td>
<td>Due: 04/24/01</td>
<td>4. Create the Student Work Artifact Documentation (Microsoft Word) modeled after the <strong>Understanding by Design</strong> “one-page template”.</td>
</tr>
<tr>
<td>IMSA</td>
<td>Due: 04/30/01</td>
<td>5. Complete final editing of each of the eight Student Work Artifact Forms to production-ready copy.</td>
</tr>
<tr>
<td>MAPS/ CPS</td>
<td>Due: 05/07/01</td>
<td>6. Produce and distribute the Student Work Artifact Forms (by grade level) to MAPS Teachers.</td>
</tr>
<tr>
<td>MAPS Teachers</td>
<td>Due: 06/01/01</td>
<td>7. Return Student Work Artifacts to the MAPS office. Teachers are invited, but not required, to have student complete a SWA form. They can also choose either Theme I or II for their grade level.</td>
</tr>
<tr>
<td>IMSA</td>
<td>Review: 06/07/01</td>
<td>8. Design simple protocol for “interpreting” artifacts and summarizing results at the <strong>Exploring MAPS</strong> event.</td>
</tr>
<tr>
<td>Everyone</td>
<td>06/13/01</td>
<td>9. Examine, “interpret”, and summarize findings from artifacts at the <strong>Exploring MAPS</strong> Event.</td>
</tr>
</tbody>
</table>

### Why?

- Student work is the best evidence of what children “know” and “are able to do” with respect to the MAPS learning experiences.
- Examination of student work is a viable tool for professional development (and curriculum design!) as it promotes a focus on learning outcomes.
May 9, 2001

Dear [MAPS Teacher]:

Our MAPS Exploration Day, the final event of the school year, takes place on Wednesday, June 13 from [start] until [end] at the Field Museum. [Provide all the important details here.]

This is an especially important event for us because it is an opportunity to reflect on our experiences of the year; to share discoveries; to explore ways to use MAPS most effectively; and to look forward to new directions anticipated for next year. We fully expect that this will be a highly informative and valuable session (and, perhaps a bit entertaining, too).

A good part of the day is reserved for the exploration of student work artifacts (MAPS lingo for "samples of student work from MAPS activities"). We fully anticipate that the artifacts will be helpful for understanding the varied ways students respond to MAPS, the design features of the materials, and how to use MAPS even more effectively. Therefore, you are invited to submit student work artifacts from your students to be "interpreted" at the June 13 event.

There are only two steps: (1) compile the "artifacts" from your students as described below, and (2) send them to the MAPS office by June 1. Here are points to keep in mind:

- You are invited, but not required, to have your students complete Student Work Artifact forms (see attachments). Of course, we hope that you can, but only if it adds value to learning.
- Do not include students' names, your name, or the name of the school on the Artifacts. The Artifacts are to be interpreted on June 13 as a whole MAPS collection (by grade level). This is to guarantee respect for the anonymity of all contributors.
- The Artifact is not a "test" (harsh, but a sample of student work. Need we say more?
- There is no need to repeat the activity unless you see sufficient value in doing so.
- Master forms from both Theme I and Theme II are provided so that you can choose the one that best fits your situation. You only need to photocopy the number needed for your class.
- The form is simply a "pull-out" from the student activity book (with the space for "name" removed) and so the instructions for completing it are in the Student Activity Book and Teacher Guide.
- Alternatively, it is acceptable to photocopy each student's work from the corresponding page in the Student Activity Book and remove names. A nice idea is to invite your students to write their own corrections and/or reflective comments on the photocopy or their original "draft" work.
- To be useful for the June 13 "exploration of student work artifacts" the completed forms must be returned to the MAPS office by Friday, June 1, 2001.

The success of the MAPS Exploration Day now depends on the cooperation of teachers and students alike! So, if it is appropriate for your students, please submit Student Work Artifacts from your class. Then, come on June 13 ready to explore ("archeological dig attire" is optional!)

Sincerely,

Laura Pastor, Director
CPS Museums and Public Schools

Tabitha Russell-Kayana, Director
MIPS Museums and Public Schools

Encl. MAPS Student Work Artifact photocopy masters for Theme I and Theme II at your grade level.
Cc: MAPS Evaluation Committee, MAPS Educators
Grade 3, Theme 1, Lesson 3

Swamps to Skyscrapers
Student Activity Design

Standard(s)
- Use data from primary and secondary sources (e.g., photos, letters, artifacts, interviews) to answer questions about particular events/persons in the history of Chicago.
- Demonstrate attentive listening by retelling, paraphrasing, and explaining what has been said by the speaker.
- Provide a clear introduction, body, support and sense of closure to writing.

Desired Results

Understanding
- The personal experience of a young boy during the Great Chicago Fire demonstrates:
  - The actions of Chicago’s citizens: people warning and helping each other.
  - Families working together.
  - The decisions families made during the Great Chicago Fire which determined the sequence of events they experienced during and immediately following the catastrophe.

Essential Questions
- What were conditions during the Great Chicago Fire?
- What were the actions of people during the fire?
- What did Justin’s family do after the fire was out?

Knowledge and Skill
- Key facts about the account of a young boy who survived the Great Chicago Fire - Justin’s letter.
- Analysis of the visual image of Justin’s experience during the fire.
- The motives behind Justin and his family’s actions during the fire.
- Reading and writing a friendly letter.

Assessment Evidence
- Reading the document, Justin’s Letter and answer questions, Reading a Document: Learning from Justin’s Letter.
- Discuss historical information provided.
- While imagining they have survived the fire, the students will write a letter back to Justin including the following four criteria: (1) how they became aware of the fire, (2) where they were with, (3) a description of the escape, and (4) their situation after the fire. Letters can be accompanied with a drawing.
- The friendly letters must also include the following elements: (1) a heading, (2) a greeting, (3) a body with at least four sentences, (4) a closing, (5) a signature.

Learning Activities
- Listen to the “Fire in Boomtown” CD, Justin’s Story, track #7.
- Read the transcript of Justin’s Letter.
- Introduce worksheet questions orally before assigning independently. Students answer worksheet questions. Review answers as a group.
- Allow for cooperative discussion of the letter and drawing, focusing on the sequence of events and how the family worked together to survive the fire.
- Review guidelines for writing a friendly letter.
- Following the assignment criteria listed above, write a friendly letter to Justin.
Lesson 3

Reading a Document:
Learning from Justin’s Letter

Read Justin’s letter and look at the picture he drew; then answer the questions below:

1. Rain put out the fire on October 18. How many days after the Chicago fire was this letter written?
   - This letter was written nine days after the fire started.

2. What time of day did Justin’s family realize the fire was burning?
   - Justin’s family realized the fire was burning at 3:00 AM - 4:00 AM.

3. What did Justin and his brother do to put out the fire?
   - Justin and his brother cut the trees out, then Justin threw water on the fire.

4. What kind of animal did Justin take with him?
   - The animal was a goat.

5. What happened to Justin’s mother?
   - She caught on fire while working.

6. What substance cut his brother’s face and his father’s face “like glass”?
   - The image of a firemen cutting the brother’s face with a knife.

7. How did Justin and his family escape the fire?
   - They all got in a big inflatable boat.

Example #2: using the SWA Template

Swamps to Skyscrapers
Student Work Artifact

Read Justin’s letter and look at the picture he drew; then answer the questions below:

1. Rain put out the fire on October 18. How many days after the Chicago fire was this letter written?
   - Justin wrote the letter 9 days after the fire started.

2. Who put out the fire on Monday morning?
   - Justin and his brother put out the fire.

3. What did Justin’s family realize the fire was burning at?
   - Justin’s family realized the fire was burning at 3:00 AM.

4. What did Justin and his brother do to fight the fire?
   - Justin and his brother threw water on the fire to put it out.

5. What happened to Justin’s family?
   - Justin’s mother caught the fire, but the family escaped from the flames.

6. What substance cut his brother’s face and his father’s face “like glass”?
   - The image of Justin cutting his brother’s face with a knife.

7. How did Justin and his family escape the fire?
   - Justin and his family were picked up by a wagon.
Grade 3, Theme 2, Lesson 6

SWA Design Document

Modes of Transportation
Student Activity Design

<table>
<thead>
<tr>
<th>Standard(s)</th>
<th>Knowledge and Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Solidify meaning and understanding by asking and answering questions concerning essential textual elements.</td>
<td>• Follow the sequence of a story or event</td>
</tr>
<tr>
<td>• Construct illustrations</td>
<td>• Synthesize old and new information</td>
</tr>
<tr>
<td>• Respond to text by generating alternative endings to plots by substituting new elements.</td>
<td>• Understand the forces of a plane flight</td>
</tr>
<tr>
<td>• Create and present oral stories and reports</td>
<td>• Using guided questions to write an alternate ending</td>
</tr>
<tr>
<td>• Construct simple models that illustrate concepts.</td>
<td>• Use a chart or graphic organizer to write a story</td>
</tr>
</tbody>
</table>

Desired Results

Understandings

• The forces of a plane flight
• The events of the ending of the novel, Stuart Little, and how changing the events impacts the story’s conclusion.

Essential Questions

• What are some new ways of using transportation to help Stuart further his adventures?
• What are some alternate endings for Stuart Little?
• How will changing the ending impact the story?

Knowledge and Skill

• Follow the sequence of a story or event
• Synthesize old and new information
• Understand the forces of a plane flight
• Using guided questions to write an alternate ending
• Use a chart or graphic organizer to write a story
• Present and listen to oral reports

Assessment Evidence

• Using guided questions for writing a sequel to Chapter 25
  • What eventually happens to Stuart’s automobile?
  • How does Stuart come across this new vehicle?
  • Does Stuart meet new friends along the way?
  • Does Stuart have a travel companion?
  • Does Stuart find Mangalo?
  • Does Stuart return to the Little family in New York City?
• Writing the sequel to the novel on the provided graphic organizer

Learning Activities

• Read and discuss Chapter 25 from the novel, Stuart Little by E.B. White
• Introduce and review the forces of an airplane
• Review the forces of a plane and applying this understanding to the Stuart Super Vehicle graphic organizers.
• Review guiding question for writing sequel.
• Sharing sequels orally
Example Using the SWA Template

Modes of Transportation
Student Work Artifact

This page is for you to show your thinking about the ideas in the MAPS activity. It's OK if you've already done this in your MAPS Student Guide because that was like a first draft. This one is to be a sample, or artifact, of your best work and thinking.

Stuart Little: The Sequel (Page 28 from the Student Activity Book)

One day Stuart's car broke down and then he was so sad and realized it couldn't be fixed.

Then he pushed his car aside to the gas and threw it away. Stuart went to buy a new car, the Supper Speeder.

Stuart rode about half a mile on the bike and then found Mongalo in the street. Stuart asked her what she was doing on the streets and she said, “I was walking along to find a place to stay.”

Stuart said he'll give Mongalo a lift. First he asked her if she would like to come back with him in New York City.

But she refused because she had to find a job and a hotel to stay at. Then Stuart said, good-bye and good-luck.

Stuart headed back to New York City and they were happy.
### Grade 4, Theme 1, Lesson 8

**SWA Design Document**

#### On The Move

**Student Activity Design**

<table>
<thead>
<tr>
<th>Standard(s)</th>
<th>Desired Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>17-B-2: Interpret information from a world map or globe using scales, symbols and legends</td>
<td>- Gray whales annually travel great distances (migrate) twice a year to find both food and a safe place to give birth and raise their calves.</td>
</tr>
<tr>
<td>8-D-5: Collect data and analyze information; draw conclusions</td>
<td>- Gray whales migrate in a set pattern along the west coast of North America from the Bering Strait to Baja, California.</td>
</tr>
<tr>
<td></td>
<td>- Not all gray whales migrate at the same time.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Knowledge and Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>When and where do Gray whales migrate?</td>
<td>- Key facts about where and why whales migrate</td>
</tr>
<tr>
<td></td>
<td>- Collect &amp; analyze data and draw conclusions</td>
</tr>
<tr>
<td></td>
<td>- Ability to interpret words and phrases on a map</td>
</tr>
</tbody>
</table>

#### Assessment Evidence

- Information from clues put in the Gray Whale Migration page
- Clues interpreted on the Whale of a Map showing the direction and time of Gray whale migration
- Letter written to Mayor with the date selected for the Gray Whale Festival states they know what time of year Gray whales pass by Bubblenet City Oregon

#### Learning Activities

- Identifying locations on world map
- Processing information from clues on to Gray Whale Migration Table
- Figuring out how to put data in symbol form on the map
- Letter to Mayor saying when and why they have chosen the date for the festival
Examples Using the SWA Template

Dear Mom, Dad,

I think you should have moved to a whole different city. I think you should have moved to Mexico and be all there. I think you should have moved back to California. I think you will move back to home. I think wanting this was just wrong. I think you should move back to home. I think you should move back to home. I think you should move back to home. I think you should move back to home. I think you should move back to home.

Sincerely,
## Grade 4, Theme 2, Lesson 8

**SWA Design Document**

### The Art of Survival  
**Student Activity Design**

<table>
<thead>
<tr>
<th>Standard(s)</th>
<th>16-D-1: Create charts and other graphics of inventions and technologies and show how they have affected people and environments.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Desired Results</strong></td>
<td><strong>Understandings</strong></td>
</tr>
</tbody>
</table>
| | - Tools are developed to help people survive in their environment.  
| | - People develop new tools (inventions) over time as they adapt to their changing environment. |
| **Essential Questions** | **Knowledge and Skill** |
| - How do people adapt to their environments over time? | - Knowledge of tools depicted in Thanksgiving  
| | - Knowledge of how these tools are used  
| | - Knowledge of how these tools have changed over time |
| **Assessment Evidence** | |
| - Complete the Changes Over Time Chart on page 28. The chart requires students to:  
| | • List the tools circled on Thanksgiving.  
| | • Create drawings or descriptions of how the tools have been adapted to current times.  
| | • Make illustrations of future adaptations or replacement devices needed in the year 2100.  
| | • List the tools that were used in the Doris Lee painting and are still used today. |
| **Learning Activities** | |
| - Review the tools found in the Thanksgiving poster.  
| - Use available resource materials to research needed information to complete the Changes Over Time Chart in the Student Activity Book. |
Examples Using the SWA Template

The Art of Survival

Student Work Artifacts

- 133 -
## Grade 5, Theme 2, Lesson 3

**SWA Design Document**

### Chicago Waterways

*Student Activity Design*

<table>
<thead>
<tr>
<th>Standard(s)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Distinguish among evaporation, condensation, and precipitation phases of the water cycle.</td>
<td></td>
</tr>
<tr>
<td>Conduct experiments that require repeated trials utilizing the skills of observation, classification, prediction, and communication of results.</td>
<td></td>
</tr>
</tbody>
</table>

### Desired Results

**Understandings**

- That most of the earth’s surface is covered with water and only one percent of this water is available for use.
- This one percent of water is very important because it is always on a constant journey, rising into the atmosphere and falling to the land and oceans or rivers as rain, sleet, or snow.
- The water cycle involves several phases (evaporation, condensation, precipitation).

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Knowledge and Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the journey of water?</td>
<td>Understand the meaning of terms; condensation, evaporation, groundwater, water cycle, infiltration, precipitation, runoff, surface water, and transpiration.</td>
</tr>
<tr>
<td></td>
<td>Understand the water cycle process and what is happening during each phase.</td>
</tr>
<tr>
<td></td>
<td>The heat from the sun causes the water on the ground or oceans to evaporate and rise into the atmosphere as water vapor.</td>
</tr>
</tbody>
</table>

### Assessment Evidence

- Conduct The Water Cycle Experiment on page 17 in Student Activity Book.
- Share and discuss observations, predictions, and results of the experiment.
- Participate in the Wandering Water Passport Activity.

### Learning Activities

- Define vocabulary terms: condensation, evaporation, groundwater, and water cycle, infiltration, precipitation, surface water, runoff, and transpiration.
- Record observations, predictions, and results of the Water Cycle experiment on page 17 in Student Activity Book. Discuss and share information with the class.
- Complete, share, and discuss Water Cycle Activity on page 17 in Student Activity Book.
- Listen to the story *The Water’s Journey* and identify examples of the stages of the water cycle.
- Participate in the *Wandering Water Passport Activity*. 
Example #1: SWA Template

Name: Useful Products

NAME OF PRODUCT

Write a short description of the uniqueness and quality of the product.

Do you still have that pen you used in high school? Do you still have that watch a friend gave you in ninth grade? Well, you don't have a product that you can purchase, but you can purchase a product that is just as good.

Product can be used anywhere and it can be used for writing.

Example #2: SWA Template

Name: Novel Format

May 22, 2001
Room 203-5

Business

Steve-of-all-Trades, Inc.
presents

Portable Stevie

Steve-of-all-Trades, Inc. is a company that does it all. We clean, groom, dog/house-sit, dog walk, lawn-care, and anything else you can think of. What portable Stevie does is all the things your Steve-of-all-Trades representative does. However, there is a big difference. You don’t have to call for Portable Stevie. Just press the red button on the remote control. You don’t have to wait a long time either. He is right there when you need him. You also don’t have to pay an individual fee for every job. Just pay for portable Stevie and you have the hook-up. He comes with an extension cord and a battery pack. The cord fits into the standard electrical outlet. It is the most convenient product on the market.

Example #3: Novel Format

Only 3 monthly payments of $31.95

NEW

I-GO-STEVE

ORDER FORM

03/30/2001
Grade 6, Theme 1, Lesson 9

SWA Design Document

Eyes on the Skys
Student Activity Design

<table>
<thead>
<tr>
<th>Standard(s)</th>
<th>Desired Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Analyze and explain how social and cultural changes in various civilizations were influenced by technological developments.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Understandings</th>
<th>Knowledge and Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>- People of ancient civilization searched for answers to questions about where they came from, how they should live, and where they were going.</td>
<td></td>
</tr>
<tr>
<td>- People looked to the sky for explanations.</td>
<td></td>
</tr>
<tr>
<td>- People established religious beliefs, and seasonal patterns that influenced their daily lives.</td>
<td></td>
</tr>
<tr>
<td>- Different cultures invented instruments to help them follow the movements of the planets and stars.</td>
<td></td>
</tr>
<tr>
<td>- Instruments were developed to farm, build temples, find food, record time, and record oral traditions.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Knowledge and Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>- What do people do when they need to explain something?</td>
<td></td>
</tr>
<tr>
<td>- How do explanations differ due to cultural traditions, knowledge base, geography and climate?</td>
<td></td>
</tr>
<tr>
<td>- What are some things common to all cultural groups?</td>
<td></td>
</tr>
<tr>
<td>- Perceptions or beliefs about the gods and their influences on daily life.</td>
<td></td>
</tr>
<tr>
<td>- Beliefs about the origins of humans and their relationship/dependence on the gods.</td>
<td></td>
</tr>
<tr>
<td>- Knowledge of the seasons that affected their food sources, dress, and habits.</td>
<td></td>
</tr>
<tr>
<td>- Knowledge was passed from generation to generation through oral tradition.</td>
<td></td>
</tr>
<tr>
<td>- Knowledge was passed through written language.</td>
<td></td>
</tr>
</tbody>
</table>

Assessment Evidence

- Create a TV newscast that will respond to Pat’s letter asking how the people learn important things from the sky.
- Presentation requirements:
  - Write a script (myth) about the culture assigned to your team that will last no longer than five minutes.
  - Create at least three visuals (e.g., map, chart, drawings, artifacts, etc.).
  - Design costumes and a setting to illustrate your knowledge of that culture.
  - Present the planned newscast to the class and invited visitors.

Learning Activities

- Review Aztec, Egyptian, Pawnee Myths.
- Review the character charts created after the museum visits.
- Complete and/or review the Comparing Perspectives Chart.
- Use available resource materials to research needed information to complete the newscast script and create other needed materials.
- Review the scoring rubric and the Newscast Rating Sheet.
**Grade 6, Theme 2, Lesson 5**

**SWA Design Document**

<table>
<thead>
<tr>
<th>Standard(s)</th>
<th>Desired Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Identify a design problem and propose possible solutions.</td>
<td>• Inventions and discoveries allow people to build on or completely change their previous understanding of the world.</td>
</tr>
<tr>
<td>• Identify constraints; develop a plan and procedure to address a design problem.</td>
<td>• Technology can change over time because people’s needs change, people learn how to create something new, or people think of how to use something old in a new way.</td>
</tr>
<tr>
<td>• Successful technologies and technological improvements serve people’s needs and problems.</td>
<td>• Successful technologies and technological improvements serve people’s needs and problems.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Essential Questions</th>
<th>Knowledge and Skill</th>
</tr>
</thead>
<tbody>
<tr>
<td>How can prior knowledge, observation, and imagination help people make predictions?</td>
<td>• An understanding of people’s needs or problems that can be addressed through technologies</td>
</tr>
<tr>
<td>How does looking at the past and present help people imagine the future?</td>
<td>• Ability to critically analyze current issues/problems</td>
</tr>
<tr>
<td></td>
<td>• Ability to develop solutions to current issues/problems</td>
</tr>
<tr>
<td></td>
<td>• Understanding that solutions can be using or modifying old tools in new ways or inventing completely new tools</td>
</tr>
</tbody>
</table>

**Assessment Evidence**

- Media used to describe, sell students’ inventions
- Prototype/model of students’ inventions
- Completed Team Organizer
- Completed Technology Design Rating Sheets

**Learning Activities**

- Completing the Pencil Worksheet, Pencil Timeline, Communication Research Card, Technological Design Format, and Communication Timeline from the Student Activity Book.
- Completing the museum field trip activities
- Final development of students’ inventions and their presentation of same inventions for the public
- Review of research
- Review the Technology Design Rating Sheet so students will understand what is expected of them in the final project.
Example #1: SWA Template

Example #2: SWA Template
Example #3: SWA Template with Attachment (front)

- MAPS
- Tools For Change
- Design/Art Project

1. Ask a question: What problem are you trying to fix? For whom is this invention designed?

2. Identify a design problem: Why do you need to fix it?
   - To reduce the time spent cleaning and the mess it causes.

3. Plan and conduct a hypothesis: How will you solve the problem you are trying to solve?
   - It will come from the internet and the library.

4. Prepare a solution: Based on the above information, write your solution and how will it work? Describe and label all actions (on back of the paper):
   - Any solution is to get rid of the water each 5 sec and also generate electricity.

5. Project an invention: How will your invention improve people's lives? Will it make something possible or better?
   - The world would have better hygiene, and people who have problems with waste will have easier access to clean water.

6. Prepare the design and explain your steps: What do you need to do in order to achieve your invention?
   - All the people in the world need to change the way they think and change everything about how inventing.

Example #3: SWA Template with Attachment (back)

- The box doesn't have the air in with air pump.
  - After placing the air with about four
  - As seen it would float.
APPENDIX H: TEACHER DEVELOPMENT DAY III

TDD-III Participants’ Agenda

Expedition: MAPS-II

The Field Museum --- James Simpson Theater
June 13, 2001

08:00 Reception & Registration

08:45 Sharp Morning Briefing: MAPS-III

09:00 Welcome and Orders of the Day

09:20 Orientation: Expedition: MAPS-II

09:30 Depart for Excavation Sites:
- Grade 3 = North Balcony James Simpson Theater
- Grade 4 = South Balcony James Simpson Theater
- Grade 5 = Lecture Hall #2 (Close to the North side of the Lobby)
- Grade 6 = Classroom A (Meet your Guide in the Lobby)

09:40 Sharp Exploring MAPS Artifacts

10:45 Break — Return to the James Simpson Theater

11:00 Sharp MAPS-II Video Artifacts

11:20 Expedition: MAPS-II Discoveries

11:45 Personal Field Journal Entries

12:00 Final Word & Luncheon
Museums and Public Schools MAPS-II Study

Design and Agenda for the June 13, 2001 Event:

*Expedition: MAPS-II*

**CONTEXT:**

The MAPS program has completed its second experimental year and much has advanced since a year ago. The focus of last year’s MAPS-I “Wrap Up Event” was on the program and how participants (teachers, leaders, and MAPS Educators) perceived their experiences in the program. This dialog led to substantial revisions of program design, development, and implementation of MAPS-II. Although program-level concerns continue as a priority for MAPS, the focus of this school-year’s final event shifts from program to outcomes. While the subject of the previous dialog had more to do with delivery, this dialog will have more to do with what was “received”. And so the essential question shifts from “What have we learned about MAPS?” to:

“What can we reveal about what children learned as a result of MAPS-II?”

The design of the June 13, 2001 *Expedition: MAPS-II* event is driven by this essential question. Where do we go to reveal what was learned? The children, of course! Therefore, the necessary data for this work will be: (1) samples of student work (which we call “Student Work Artifacts”); (2) teachers’ perceptions of student learning resulting from MAPS; and (3) classroom observations from MAPS Educators and MAPS-II Study researchers. All of these will be represented and examined at the *Expedition: MAPS-II* event.

One anticipated benefit of attending to this particular essential question is that it has the potential, for all participants, of “coming full circle” in our understanding of MAPS. By engaging this question, we anticipate linking our current understandings of MAPS program and curriculum design, the professional development model, instructional practice, assessment, and student outcomes. Thus, we expect to leave the day with a more complete perspective of MAPS and its capacity to promote decidedly different and necessary learning.

Another intent for the day is to inform the progressive development of MAPS curriculum, professional development events, and support programs. This also brings us “full circle”. While last year we studied how program design might improve the learning experience, now we look at how evidence of the learning can inform program design. We are confident that the dialog will, for example, spawn insights about improving the MAPS curriculum units; implementing MAPS more effectively (with respect to student learning!); and assessing learning (ala MAPS) at the student, classroom, school and program levels. We anticipate that this will be a highly engaging and productive morning - exploring MAPS-II with a team of up to 250 “MAPS explorers”!
OBJECTIVES:

- Provide a forum for all MAPS contributors and participants to gain insight from the perspectives of the others.
- Capture authentic data around the MAPS Study Guiding Questions.
- Increase awareness of the intended student learning outcomes, including appreciation for the deliberate linkage of MAPS activities with CPS Learning Standards.
- Test the potential of student work for informing:
  - curriculum revision
  - professional development events
  - support programs
  - teaching and learning, and
  - research about MAPS itself.
- Engage the essential question:

  "What can we reveal about what children learned as a result of MAPS-II?"

FACILITIES (to be provided by the MAPS office)

- Registration and lounge area with tables for refreshments plus additional wall and floor space with 4 tables for exhibits of student work exemplars.
- Large group theater with seating for 250. Sound system with podium/microphone and two additional lavaliere microphones preferred. Projection screen. Projector table (for digital projector and laptop computer) and power cords. Versatile lighting (bright to dim controls). [Requirements for CPS film crew?]
- Four break-out rooms, each room capable of comfortably seating 60 at tables (either 3 or 5 people at each table). An additional table is needed just inside the door for materials. Good lighting. Overhead projector and projection screen in each room. Chart paper and stands (two) in each room. Lavaliere microphone.
- Location suitable for serving lunch.

PARTICIPANTS

We expect up to 240 teachers, 14 MAPS Educators, 10 Administrators, and 5 IMSA researchers ("guides").

APPROACH

Exploit an "archaeological dig" metaphor to promote clarity about the MAPS concept and its potential to both affect meaningful learning and to provide evidence of this through assessment. The exploration will be interactive and engaging. Displays will be highly visual and public. Elicit actionable information and ideas focused on rational solutions. We anticipate that the dialog will generate diverse and relevant thinking on varied matters including:

- Ideas for enhancing the impact of MAPS program elements on student learning.
- Analysis of the potential for using embedded assessment systematically.
- Strategies for advancing the quality of materials, professional development, etc.
### EXPEDITION: MAPS-II ITINERARY

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Resources</th>
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<tbody>
<tr>
<td>7:30</td>
<td>Team arrives to begin Set-Up</td>
<td>Parking Passes for West Lot</td>
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<tr>
<td>8:00</td>
<td><strong>Reception &amp; Registration</strong> <em>(with Continental Breakfast)</em>&lt;br&gt;» Sign-in, Validate Parking&lt;br&gt;» Break-Out Assignment <em>(by &quot;archeological&quot; symbol on name tag)</em>&lt;br&gt;» Four groups by grade level 3, 4, 5, &amp; 6. Each group has MAPS Teachers, MAPS educator(s), and administrator(s).</td>
<td>Agenda (electronic)*&lt;br&gt;Agenda folders (250)&lt;br&gt;Pens (250)&lt;br&gt;Coded name tags</td>
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<td>8:45</td>
<td><strong>Morning Briefing</strong>: MAPS-III <em>(Call the Learners)</em>&lt;br&gt;» MAPS Directors’ update on curriculum revisions, MAPS expansion, web site, etc.</td>
<td>MAPS logo projected*&lt;br&gt;MAPS logo projected (2)</td>
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<tr>
<td>9:00</td>
<td><strong>Welcome &amp; Orders of the Day</strong>: <em>(Prepare the Learners)</em>&lt;br&gt;» MAPS/CPS dignitaries greet participants and establish the importance of the MAPS program and this day.</td>
<td>Digital Camera*&lt;br&gt;Videography&lt;br&gt;Photography</td>
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<td>9:20</td>
<td><strong>Orientation</strong>: Expedition: MAPS-II <em>(Meet the Problem)</em>&lt;br&gt;» IMSA “guide” introduces the agenda and essential question:&lt;br&gt;» What can we reveal about what children learned as a result of MAPS-II?</td>
<td>Digital Projector*&lt;br&gt;Projection Screen&lt;br&gt;Pitfall Book*&lt;br&gt;IMSA Workshop&lt;br&gt;Survival Kit*</td>
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<td>9:30</td>
<td><strong>Depart for Excavation Sites</strong> <em>(pre-assigned break-out rooms)</em>&lt;br&gt;» Grade 3 = North Balcony: James Simpson Theater&lt;br&gt;» Grade 4 = South Balcony: James Simpson Theater&lt;br&gt;» Grade 5 = Lecture Hall #2 (Go to the North side of Lobby)&lt;br&gt;» Grade 6 = Classroom A <em>(Meet your Guide in the Lobby)</em></td>
<td>For each room...</td>
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<tr>
<td>9:40</td>
<td><strong>EXPLORING STUDENT WORK ARTIFACTS</strong>&lt;br&gt;<em>(Sharpen A)</em> <strong>Uncovering Artifacts</strong>: <em>(Gather and Share Information)</em>&lt;br&gt;Each room will feature a display of focus questions.*&lt;br&gt;» IMSA facilitators lead the teachers, MAPS educators, and administrators in the exploration of SWAs.&lt;br&gt;» Record initial impressions relevant to the question:&lt;br&gt;» What do the artifacts suggest about learning?&lt;br&gt;» What do they <em>not</em> suggest? What do we need to know <em>(i.e., we don’t know what the activities were designed for)</em>?</td>
<td>Chart Paper&lt;br&gt;Overhead projector&lt;br&gt;Pea &amp; film*&lt;br&gt;Focus Questions*</td>
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1. Tentative time “targets” are in italics. Other times are firm.
2. An “*” indicates items that the IMSA team will provide.
## EXPEDITION: MAPS-II ITINERARY

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<thead>
<tr>
<th>Time</th>
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<th>Resources</th>
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<tbody>
<tr>
<td>10:00</td>
<td><strong>EXPLORING STUDENT WORK ARTIFACTS</strong> (cont.)</td>
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<td></td>
<td><strong>B. Interpreting Artifacts:</strong> (Exploring the Data)</td>
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<td>✤ Divide into teams of 3. Examine the design documents.</td>
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<td>✤ Revisit the artifacs.</td>
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<td>✤ Look for both patterns and variation.</td>
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<td>✤ Cluster and provide descriptive labels for emergent themes.</td>
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<td>✤ Code each artifact and post for public viewing:</td>
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<td></td>
<td>✤ Is this artifact compelling evidence of the learning defined by the</td>
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<td>standard? (Yes, No, Unable to Determine)</td>
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<td>✤ All three team members must agree on code assignment.</td>
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<td>✤ Post interpretations (assertions) on newsprint.</td>
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<td>✤ MAPS Educators and EC members record a response at this time in the</td>
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<td>Focus Question(s).</td>
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<td>10:30</td>
<td><strong>C. Model Building:</strong></td>
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<td>✤ Participants review the posted interpretations applying</td>
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<td>symbol-coded stickers indicating degree of confidence.</td>
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<td>✤ Facilitated discussion of the results. (Refer to questions above.)</td>
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<td>10:45</td>
<td><strong>Break</strong> (Return to James Simpson Theater)</td>
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<td>✤ IMSA Team compiles results and prepares “Discoveries” presentation</td>
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<td>11:00</td>
<td><strong>MAPS-II Video Artifacts</strong></td>
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<td>✤ Brief (≤ 5-min. ea.) prepared comments from a MAPS teacher and a</td>
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<td>MAPS Educator.</td>
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<td>✤ Award door prizes (something ‘dug up’ from the museums?)</td>
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<td>✤ MAPS-II Video Artifacts: (fun collage prepared by MAPS)</td>
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<td>11:20</td>
<td><strong>Expedition: MAPS-II Discoveries:</strong> (IMSA Guides)</td>
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<td>✤ A synthesis of findings, inferences, and suggestions are</td>
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<td>displayed and discussed publicly.</td>
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<td>11:45</td>
<td><strong>Personal Field Journal Entries:</strong></td>
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<td>✤ In what ways is MAPS professionally important for me?</td>
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<td>✤ MAPS Teacher Survey</td>
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<td>✤ Impressions of “Expedition: MAPS-II”</td>
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<td>Note: Same conditions apply! Returning the completed survey is the</td>
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<td>“ticket” for lunch. Not redeemable before 12:00 noon (allowing time</td>
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<td>for careful completion).</td>
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<td>12:00</td>
<td><strong>Final Word &amp; Luncheon</strong></td>
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