

## Timeline/Sequence of Activities

Following are sample sequences of activities to be carried out during the three years of implementation of the Comprehensive Mathematics and Science Plan, subject to the level and timing of School Board-approved funding.

### ***Year 1 (2000-2001) Implementation***

- Advertise, interview and select feeder pattern educational specialists for feeder pattern support teams.
- Review nationally-recognized and exemplary curriculum programs for mathematics and science for grades K-12. Select the most appropriate standards-based curricula for middle school level and senior high school level. Review nationally-recognized software programs for mathematics and science, and select those that provide maximum support for secondary curriculum objectives and provide effective use of technology in classrooms.
- Provide intersession inservice for secondary teachers in Algebra I and Geometry utilizing Teachers Teaching with Technology (T<sup>3</sup>), Earth Space Science and INSTAR.
- Establish the Superintendent's Summer Mathematics Academy for eighth grade students to participate in the Superintendent's Summer Mathematics Academy for Algebra I preparation.
- Collaborate with the Assessment Department in the Office of Educational Planning, to write mathematics items for test item banks, grades 3, 4, 6, 7, 9.
- Review preliminary data from TIMSS-R of student performance, teacher surveys, and student surveys. Assign a review team to examine curriculum implications with Michigan State University TIMSS Student Center.
- Establish the Summer Leadership Institute for educational specialists to participate in training provided by national research leaders in professional development and leadership. These leaders will facilitate the creation of a model for uniform delivery of support services and the formulation of instructional priorities.
- Launch the Principal's Institute – Region Directors, principals, assistant principals and team leaders for school-site mathematics and science curriculum will participate in a three-day institute for orientation to *Mathematics and Science Literacy – Bridges to Careers* goals, strategies and intended outcomes.
- Meet with Region Directors for Instructional Support to describe the development of feeder pattern support teams.

- Provide an opportunity for feeder pattern educational specialists to meet with supervisors and Region Directors for Instructional Support for feeder pattern assignments.
- Conduct monthly update meetings with the steering committee of Region Directors and district staff to monitor delivery of services.
- Administer the pretest in mathematics at school sites.
- Form school-site instructional improvement teams with feeder pattern educational specialists. The teams will meet, twice a month, to analyze school improvement plans, identify instructional priorities, and determine professional development needs.
- Provide on-going support to all district schools. Educational specialists provide on-going support to all district schools by assisting with the delivery of high-quality mathematics and science instruction and improved assessment practices.
- Begin analysis of TIMSS-R data and formulate plans in conjunction with Michigan State University team to prepare curriculum implications report.
- Prepare report on curriculum implications/instruction implications of TIMSS-R. District plans for curriculum revisions and professional development are coordinated with public release of TIMSS-R benchmarking report. (February, 2001)
- Begin to revise curriculum content and sequence with respect to science and mathematics courses, with special attention given to the Applied Algebra II course.
- Administer posttest in mathematics at school sites.
- Provide eight to ten Saturday inservice days are available for each school, as needed.

### ***Year 2 (2001-2002) Implementation***

- Advertise, interview and select feeder pattern educational specialists for replacement or attrition – year one.
- Review district report on curriculum implications of TIMSS-R and district design of curriculum improvements with all educational specialists and feeder pattern support teams.
- Provide five days of intersession inservice for secondary teachers in Algebra I, Geometry, Teachers Teaching with Technology (T<sup>3</sup>), Earth Space Science, Chemistry, and INSTAR.
- Expand participation in the Superintendent's Summer Mathematics Academy. Seventh, and eighth grade students will participate in the Superintendent's Summer Mathematics Academy in order to bridge the mathematics gap for Algebra I preparation.
- Conduct an annual review of program effectiveness year one, with Region Directors, lead principals, district staff. Include review of FCAT 2001 data.
- Continue the writing of mathematics items for test item banks, grades 3, 4, 6, 7, 9. Begin a similar project for science.
- Continue participation in the Summer Leadership Institute for professional development with feeder pattern educational specialists. These leaders will continue to facilitate the implementation of the model for uniform delivery of support services and the formulation of instructional priorities.
- Provide school-site instructional improvement teams an opportunity to join feeder pattern educational specialists in the last week of the three-week inservice, to engage in collaborative planning for scaling-up at school sites and within feeder patterns.
- Resume the Principal's Institute Year 2 – Region Directors, principals, assistant principals and team leaders for school-site mathematics and science curriculum will participate in a three-day institute on TIMSS-R implications, curriculum revisions and leadership for program improvement.
- Provide educational specialists an opportunity to meet monthly with supervisors and directors for program review and assignments.
- Expand school-site instructional improvement teams and have feeder pattern educational specialists meet twice a month with teams for the purpose of

implementing the curriculum revisions and program improvements supported in the district report for program effectiveness.

- Administer the pretest in mathematics and science at school sites.
- Continue to provide collaboration between school-site instructional improvement teams and feeder pattern educational specialists in order to implement changes in mathematics and science curriculum.
- Update school-site changes and implementation procedures. Feeder pattern educational specialists meet with district office staff twice a month for staff meetings with supervisors and directors.
- Administer posttests in mathematics and science at school sites.
- Provide eight to ten Saturday inservice days for each school, as needed.

### ***Year 3 (2002-2003) Implementation***

- Advertise, interview and select feeder pattern educational specialists for replacement or attrition-year two.
- Analyze, with curriculum review teams, the impact of curriculum revisions, the effect of nationally-recognized curricula (as utilized in M-DCPS), and the effectiveness of software programs. A final review of Applied Algebra II curriculum is submitted to the district staff.
- Provide a five-day intersession inservice for secondary teachers in Algebra I and Geometry, Teachers Teaching with Technology (T<sup>3</sup>), Earth Space Science, and Chemistry.
- Conduct annual review of program effectiveness year two, with Region Directors, lead principals, and district staff. FCAT 2002 data are included in the review.
- Expand participation in the Superintendent's Summer Mathematics Academy for sixth and seventh grade students.
- Continue the writing of mathematics items for test item banks grades 3, 4, 6, 7, and 9. Continue with science item banks for grades 4, 7, and 9.
- Continue articulation in the Summer Leadership Institute for professional development. Feeder pattern educational specialists continue to facilitate the implementation of the model for uniform delivery of support services and the formulation of instructional priorities.
- Have school-site instructional improvement teams participate with the feeder pattern educational specialists in the last week of the three-week inservice, providing an opportunity for collaborative planning and scaling-up at school sites and within feeder patterns.
- Continue the Principal's Institute Year 3 – Region Directors, principals, assistant principals and team leaders for school-site mathematics and science curriculum participate in a three-day institute for evaluation and reflection on the comprehensive plan, analyze program impact and plan 2002-2003 priorities.
- Provide an opportunity for educational specialists to meet with supervisors and directors for assignments.
- Administer the pretest in mathematics and science at school sites.
- Expand school-site instructional improvement teams to include all mathematics and science teachers.

- Continue to provide for collaboration of school-site instructional improvement teams and feeder pattern educational specialists in order to implement changes in mathematics and science curriculum.
- Update progress of school-site improvement teams. Educational specialists meet with district office personnel for school-site progress update.
- Administer posttests in mathematics and science at school sites.
- Provide eight to ten Saturday inservice days for each school, as needed.