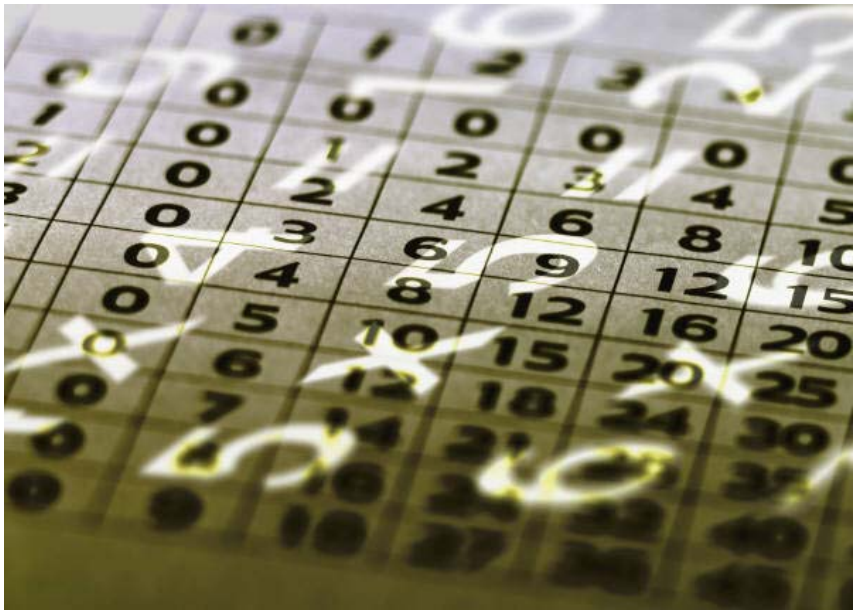
ACCELERATED MATHEMATICS INSTRUCTION (AMI)

PROGRAM GUIDELINES FOR PRINCIPALS

2005-2006



Houston Independent School District
Curriculum Department, Mathematics

Revised December 2005

Dear Administrator,

For school year 2005-2006, the Student Success Initiative authorizes intervention instruction for students who are struggling with mathematics in **Grades K- 6**. The inclusion of Grade 6 recognizes that these students must pass Grade 8 TAKS in 2007-2008.

The following guide outlines important information about the use and reporting of Accelerated Mathematics Instruction (**AMI**) funds and the elements of successful mathematics intervention programs.

The HISD Curriculum website highlights “Principal Updates” for the most up-to date information, required forms and communication capabilities.

If you have any questions about Accelerated Mathematics Instruction please contact the Mathematics Department at (713) 892-6165.

Sincerely,

Anne Hoskin
HISD, Mathematics Manager

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Introduction

- The 79th Texas Legislature appropriated funding for schools to provide accelerated mathematics intervention for struggling students in Grades K-6 during the 2005-2006 school year.

- Funding for Accelerated Mathematics Instruction (**AMI**) is based on each **Grade 5 student** failing to meet the standard on the first administration of the 2005 TAKS English or Spanish Mathematics assessment. Funds should also be used to provide **required accelerated instruction (AI)** for students who fail one or more of the state-mandated Grade 3 Math, Grade 5 Math and mathematics assessments administered in the spring of 2006.

- All monies must be spent to provide accelerated mathematics instruction to identified students in Grades K-6 on every campus as of June 30, 2006.

- Schools must indicate the number of students identified as at-risk for mathematics and the number of those being provided immediate intervention.

Funding Guidelines

Basis of Funding Allocation

- Accelerated Mathematics Instruction funds may be expended until **June 30, 2006** to meet the needs of students in Grades K-6 identified during 2005-2006 as at-risk for mathematics difficulties.

- AMI funds will be used to pay only for activities occurring from **September 1, 2005 – June 30, 2006**.

Funding Accountability

- Schools must account for all expenditures of **AMI** funds and show that the expenditure of these funds increases student achievement. A direct, auditable correlation between **AMI** fund expenditures and the impact on the achievement of identified mathematics students must exist.

- Schools should use the full amount of 2005-2006 **AMI** funding to direct efforts to meet the needs of all identified students in Grades K-6 with emphasis on Grades 3-6.

- All payments and all goods/services receipts must be posted by **June 30, 2006**.

Distribution of Funding

- **AMI** funds must be used to meet the needs of identified Grade K-6 students. Attention is needed to ensure Adequate Yearly Progress is made in meeting the TAKS passing standard.

- **AMI** funding may not be used to supplant another source of funds. Funds currently used for a given purpose may not be diverted for another purpose because of the availability of **AMI** funds.

- **AMI** funds cannot be used to pay for any programs, activities, or services already required by law, rule, or local policy.

- Funds must be expended only for items that are necessary and reasonable for carrying out the objectives of the program.

- HISD accounts that are being opened for each elementary campus and middle school campus with Grades K-6 for use with the **AMI** program are:
    - SR1-11-6399-XXX-10-WP7 Mathematics Instructional/Assessment Materials
    - WP7-11-6118-XXX-10-WP7 Instructional Extra Duty Pay –Teachers and Other Professionals
    - WP7-11-6128-XXX-10-WP7 Extra Duty Pay – Support Personnel
    - WP7-11-6112-XXX-10-WP7 Substitutes to manage classrooms while teachers administer AMC student interviews

Remember: If you plan to mail letters home to parents, please budget for postage costs at your campus.

Identification of Struggling Students for the AMI Program

- To participate in AMI funding, school districts must select assessment instruments to identify struggling mathematics students Kindergarten through Grade 6.
- HISD has selected *Assessing Math Concepts* as the assessment instrument for identifying struggling mathematics students for Kindergarten to Grade 2. These assessments are also required for students in Grade 3 who have not mastered the concepts from the previous year.
- HISD has selected TAKS data and the district Snapshots to identify struggling mathematics students for Grades 3 through 6.
- Additional assessment throughout the program should be used to measure progress and inform instruction.
- **All** identified students in Grades K-6, on each campus, should receive needed instructional mathematics intervention. Immediate early intervention in mathematics is imperative.

Grade Level	Required Assessments
Kindergarten – 3rd	*Assessing Math Concepts* by Kathy Richardson
3rd – 6th	TAKS District Snapshots For Grade 3, *AMC* student interviews may still be required depending on the student performance from Grade 2.

** See Appendix for Assessing Math Concepts Administration Procedures

Analyzing Data

- Results of *Assessing Math Concepts*, district snapshots, and/or TAKS data will be used for student placement in an early mathematics intervention program; however, additional considerations may include teacher observations, student performance on classroom tasks, Grades K–6 Stanford/Apprenda, etc.

- Multiple administrations of the diagnostic instruments are important. At a minimum, the test should be administered in accordance with the administration guidelines as prescribed for the assessment instrument. Other instruments may also be used for progress monitoring.

- Thirty to forty-five **additional** minutes of **targeted mathematics instruction** during the school day with flexible grouping of up to four children with one adult is **recommended**.

Why are these results important?

- Teachers will be able to provide more effective instruction and ensure maximum learning for each of their students when they are aware of the essential steps that children move through when developing and understanding foundational mathematical ideas.
- The data that is gathered and organized using appropriate assessment tools provides teachers with the information that is needed to determine precisely what children need to learn.
- Students progress competently when teachers are able to provide appropriately challenging learning experiences for individuals and classroom groups.

How are results used?

- **Initial Indicators:** A quick way to rule out students who are highly likely to have no-risk characteristics for math difficulty. Conversely, it allows teachers to quickly gather information about students who are still developing important math concepts in certain areas and who would benefit from additional daily math instruction.
- **Planning for intervention**: Gives teachers an opportunity to learn more about individual students and help match math instruction with specific student needs. This information can assist teachers and administrators to assemble educational resources and plan the most effective instruction possible for students.

Parent Notification

- It is recommended that districts notify the parent/guardian of any student in Grades K-6 identified as at-risk for math difficulties and are in need of intervention.

- It is required that districts must notify the parent/ guardian if the student's needs are to be addressed through an Accelerated Math Instruction Program for SSI.

- According to TAC § 101.2007 and § 101.2009 districts must notify parents/guardians of the grade advancement requirements, including the notification requirement of the grade placement committee.

- All parent notification letters can be accessed through the HISD Portal.

    - Click on Departments
    - Click on Curriculum
        - Principal Updates
        - Math Initiatives
        - Scroll to locate Parent Notification Letters

Intervention

- AMI instructional time is 30 – 45 minutes in **ADDITION** to the recommended 90 minute Math block for elementary schools**.** Middle Schools will need to provide 30 - 45 minutes of **ADDITIONAL** AMI instructional time outside of the regularly scheduled 45, 60, or 90 minute math class.

- Recommended instruction of small groups of 4 students during the school day**.**

- Instruction can be offered before-school, after school and/or on Saturday.

- Funds may be used to pay teachers who provide before-school, after-school or Saturday tutoring.

Structuring of AMI Intervention Program

Provision of **AMI** program may reflect several program formats: during the school day, before/after school. Intervention provided during the regular school day is strongly recommended because of its timeliness and effectiveness. It is **recommended** that other funds be utilized for summer school. However, if a campus must rely on **AMI** funding for summer programs, the funds must be set aside now, there will be no further distributions for the 2005-2006 school year.

Prioritization of **AMI** fund expenditures should focus on intervention for the students who need the most assistance first; then, provide additional assistance/funding to other students. Prompt provision of Math intervention program with frequent monitoring of an individual student's progress is **strongly recommended**.

- Small group (during the school day)
- Before school
- After school

Best Practice Intervention Program Components

The Curriculum Division Statewide Initiatives has identified a number of components that typically comprise an effective Math intervention program. These include:

- A placement process that effectively identifies students at-risk for Math difficulties promptly triggers student placement in an intervention program.
- A program instructional format that is consistently informed by Math assessment data and classroom data, and that provides repeated opportunities for students to engage in intensive, targeted learning.
- A program pedagogical foundation that is based on convergent scientific Math intervention research.
- A program structure that provides for continuous monitoring of student achievement to adjust the program content and/or instructional approach to meet the instructional Math needs of **each** student.
- A program communications element that frequently reports individual student progress to the classroom teacher (if instructional intervention is provided by someone other than the classroom teacher) and to the parent/guardian of the student.

All students performing below a scale score of 2200 on Math TAKS are considered to be at-risk of having math difficulties.

These students must be identified and placed in a tiered intervention program structured to meet their needs. It is recommended that students be grouped by level of performance by specific TAKS objectives and placed in small group tutorials, individualized instruction, or other prescriptive setting to meet their needs.

How to incorporate AMI Instructional time:

- Intervention may occur during other content area time frames
  - Small Groups
  - Trained Assistants/Tutors
  - Workstations
  - Homeroom period
  - Study Skills period

- Intervention may occur during tutorials (before/after school)
  - Small groups
  - Must target specific needs of student

Best Practice Intervention Resources

Recommended intervention resources are posted on the Math Initiatives Website for Curriculum Department. Refer to the *Principals Update* section for further information.

Additional resource materials available for download in the **Products Section** of the Texas Math Initiative Website at *http://www.tea.state.tx.us/math/.*

Progress Monitoring HISD

One of the primary purposes of assessment is to provide teachers with feedback regarding student progress towards specific instructional objectives and/or skills.

Continuous progress monitoring for every student identified with data analysis is strongly recommended. The following is a list of progress monitoring tools utilized in HISD:

- *Assessing Math Concepts* Student Interviews K-2
- Snapshots 3-6, required
- PASS Data
- Teacher-Made Diagnostics
- Progress Reports
- Report Cards
- TAKS Data

Documentation HISD

Teachers should have individual folders for each student in order to document the student's progress.

Teachers should keep parent informed of progress.

Documentation should include: structure/format of intervention delivery, intervention materials used, frequency of treatment, pre- and- post testing information, and status of progress.

Sample Prescriptive Action Plans

Student Name: _____ **Teacher:_____**

Intervention	Person Responsible	Resources	Dates	Comments/Progress
2-digit addition	Teacher Tutor	Developing Number Concepts, Book 3	September 20	Student completed independent practice with 80% mastery after small group instruction
Estimate length using reasonable units of measure	Classroom Teacher	Larson's Software	October 1 - 6	Computer aided post test 65% mastery Student will post test after individualized instruction

Teacher: _____
Student: _____

Date Frequency	Intervention Prescription	Resources	Comments/Progress
Sept. 6-10 30 min. daily	2-digit addition	Developing Number Concepts, Book 3	Student completed independent practice with 80% mastery after small group instruction
Sept.27-Oct. 1 40 min. daily	Estimate length using reasonable units of measure	Larson's Software	Computer aided post test 65% mastery Student will post test after individualized instruction

Intervention Folder – recommended components

- Prescriptive Action Plan
- TAKS Data
- Stanford 10/Aprenda Data
- Assessing Math Concepts Student Interview Forms (Grades K-3)
- Snapshot Data (Grades 3-6)
- Student work samples
    - Possible Work Samples
        - Class work by TAKS Objective
        - Performance reports from software programs
        - Student work on specific skill(s)
        - Other Assessments
- Progress reports should reflect student's performance
    - Sent out the 4th week of each 9 week reporting period
    - Teachers can send notes of progress at any given time
    - Teachers can conference with parents to discuss progress

Appendix A

Required Program Evaluation Report Data Elements
Accelerated Math Instruction Program Evaluation (AMI)
School Year 2005-2006

School: _____ Region: _____

Number of students identified for AMI intervention by grade level:

Grade	K	1st	2nd	3rd	4th	5th	6th
Total Students							

Number of students identified for AMI, but receiving Math Intervention from other sources:

Grade	K	1st	2nd	3rd	4th	5th	6th
Total Students							

Alternative fund source used for students not served by AMI funds:
Title I, Migrant, bilingual, Special Education, Local Funds (please list all that apply by grade level)

Grade	K	1st	2nd	3rd	4th	5th	6th
Total Students							

Part II – Data Regarding Concept Attainment
Number of AMI students at grade level by end of school year:

Grade	K	1st	2nd	3rd	4th	5th	6th
Total Students							

Number of AMI students who passed the 2006 Math section of TAKS

Grade	K	1st	2nd	3rd	4th	5th	6th
Total Students							

Please fax to the Curriculum/Math Department by Friday, August 18, 2006.

	Instructional Grouping Strategy Rate each category using 1 to 5 scale listed below			Time of Instruction Rate each category using 1 to 5 scale listed below			
Budgeted Items for 2005-2006	**One-to-one**	**Small Group**	**Whole Group**	**Before School**	**During the Regular School Day**	**After School**	**Summer School Program**
Teacher Pay – Extra Duty							
Substitute Teachers							
Other							
Intervention Supplies							

Part III – Instructional Strategies/Time by Budget Category
Use the following rating scale to reflect the degree (percent, not by amount of funds) to which various "instructional grouping strategies" and "time of instruction" strategies were used in your school for each fund object.
0 = No funds in the budget category were spent on the strategy (0%)
1 = Minimal funds in the budget category were spent on the strategy (1% - 24%)
2 = Moderate amount of the funds in the budget category were spent on the strategy (25% - 49%)
3 = Most of the funds in budget category were spent on the strategy (50% - 74%)
4 = Majority of the funds in the budget category were spent on the strategy (75% - 99%)
5 = All funds in the budget category were spent on the strategy (100%)

Please fax to the Curriculum/Math Department by Friday, August 18, 2006.

APPENDIX B

Assessing Math Concepts
Administration Guidelines for Grades K-2

- *Assessing Math Concepts*, a series of nine assessments, is administered throughout the school year in grades K-2 and at the opening of school in grades 3 to determine those students needing intervention. These assessments alert primary teachers to problems their students might be having in developing an understanding of number concepts.

- Schedule for assessments is aligned to the PK-2 Multi-Disciplinary Instructional Planning Guide and Second Grade Model Lessons. It is not an absolute schedule like TPRI – i.e., if Assessment 3 is listed for October administration it does not mean that the assessment must be given in October. It is suggested for October because students should be ready for Assessment 3 by October according to the Planning Guide. Assessments should not be given until the students have completed the learning experiences necessary for each assessment. An assessment may be given any time prior to or after the suggested testing month as long it is administered after students have been involved in the appropriate learning experiences on the concepts being tested.

- Before beginning the one-on-one student interviews (assessment format) teachers should be trained in administering the scheduled assessment, should have reviewed the video provided by the Mathematics Department for the assessment and should have read the Assessment Booklet provided for each assessment. Assessments must be administered by the teacher, not an aide, parent or another educator. An aide, parent or substitute may work with the class while the teacher is testing individual students. Teachers need to hear and record the students' responses so they can determine student needs and plan appropriate instruction/intervention.

- In preparation for administering each assessment listed for a grade level, teachers should become familiar with the assessment before beginning instruction. Reviewing the assessment booklets and opening of school or prior assessment which will provide the teacher with the information needed to plan instruction so students have the experiences necessary to develop concept understanding. Lessons must be structured so students move from concrete materials to abstract reasoning; justifying their answers to begin to see relationships in numbers.

- Opening-of-school assessments are administered in August in first through third grades. Since students carry with them the math they understand, the opening-of-school assessments let teachers know which students are ready to start the grade level curriculum and which need reteaching in the learning on which the assessment is based. Since opening-of-school assessments were administered in the previous grade level in the spring, the previous teacher should forward spring assessments to the next grade level. This will significantly reduce the amount of assessing that needs to be done by first through third grade teachers at the opening of school. First through third grade teachers should only be administering assessments to students new to the school.

- When administering any *Assessing Math Concepts* assessment, teachers should be alert for student responses that show little or no understanding of the concept being assessed. If this occurs, stop the assessment, provide appropriate instruction, then reassess later. No assessment should take more than 5 to 7 minutes to administer. If the assessment is taking longer than that to administer, the student is not ready for the assessment and it should be readministered after appropriate instruction. Do no waste time trying to continue with an assessment that is beyond what the child can do. It is perfectly appropriate to provide part of the assessment, stop the assessment when it branches, provide instruction, then complete the assessment later.

- At the end of each *Developing Math Concepts* Assessments, student responses are reviewed and an A (Apply), P (Practice Needed), or I (Improvement) is recorded on the form. List students with I's or any combination of I's and P's on the Class Summary Sheet (in Appendix of each Assessment Booklet). Targeted intervention activities must be planned and provided to meet individual students' needs. When students exhibit mastery (teacher observation of students work, recordings of center or group work or by readministering the assessment) the date of mastery is recorded on the Class Summary Sheet in the column of each "I" or "P" listed by the student's name. Teachers must retain summary sheets for at least four weeks to give them time to provide interventions and for the students to reach mastery.

APPENDIX C

Mathematics Snapshots
Administration Guidelines for Grades 3-6

- Assessing Math Concepts student interview forms from Grade 2 will be the primary indicator for student placement in a math intervention program at the opening of school for Grade 3. The opening-of-school data informs teachers as to which students are ready to start the grade level curriculum and which need reteaching in the prior grade level curriculum.

- TAKS results from grades 3-5 are reviewed as the primary indicator for student placement in a math intervention program at the opening of school for grades 4-6 . The opening of school data informs teachers as to which students are ready to start the grade level curriculum and which need reteaching in the prior grade level curriculum.

- The HISD-developed Snapshots 1, 2, and 3 are administered throughout the school year (on-going diagnostic testing) in grades 3-6 to determine which students need on-going intervention. The Grade 3-6 Snapshots are aligned to the grade level syllabus and provide teachers with information as to whether students are at mastery level on objectives taught prior to the administration of each Snapshot..

- Grades 3-6 Snapshots, at each grade level, are aligned to HISD Model Lessons. The schedule for administering Snapshots is based on the pacing and sequence of Model Lesson units as stated in each grade-level syllabus. The schedule for administering Snapshots is not absolute. The Snapshots are not to be administered until the Model Lesson units listed for each assessment have been taught. For example, Snapshot 1 for Grade 3 covers units 1 and 2 and is posted on the website on a certain date but the instruction for unit 2 will not be completed for four more days. The Snapshot should be administered at the completion of the unit, not at the posting date. It is necessary to complete instruction on the units/TEKS the Snapshot covers and then administer the Snapshot for accurate assessment data to be gathered.

- After the Snapshots are administered and turned into PASS for scoring, class data on number of objectives mastered (3 or more items correct out of 4) and item analysis for each objective tested is posted online. After each Snapshot, teachers are to go into PASS and print out the Student by Objective Report. On this report they are to highlight the student name and each objective that he/she got 0, 1, or 2 items out of the 4 correct. These highlighted students not at mastery level on the objectives marked are to be provided intervention. Teachers are to retain the highlighted Student by Objective Report at least 4 weeks, recording on the report the date the mastery of an objective is attained.

- Determining how students reach mastery of highlighted objectives can be done in a variety of ways. Readminister a modified test composed of items for highlighted objectives. Snapshot items, released TAKS items or purchased TAKS prep materials

may be used to construct the retest or, questions aligned to targeted objectives on weekly/unit tests can be reviewed to determine if the student has reached mastery level. Mastery of objectives can also be determined by observing student's work in small group, centers, on problem-solving tasks, etc. Review of the recording of partners, small group or center activities will document the observations. Date of mastery of the highlighted objective is recorded on the Report by Objective in the column of the highlighted objective by each student name. Numbers of students identified for intervention are tallied by teacher, then the total for each grade level is tallied for the school. The HISD Mathematics Department collects this data to complete the AMI Program Evaluation report for TEA.

APPENDIX D

Frequently Asked Questions

What is Accelerated Math Instruction (AMI) funding?
Accelerated Math Instruction (**AMI**) funding is non-competitive monies provided to each school district/charter school with students enrolled in Grades K-6. This funding is to be used to provide immediate, targeted intervention programs for those students at every campus in Grades K-6 who are at-risk for Math difficulties.

Who should be served by Accelerated Math Instruction funding?
Districts/charter schools must provide intensive Math intervention programs for all students in Grades K-6, who have been identified as at-risk for Math difficulties

How will funds be allocated during the 2005-06 school year?
Funding is based on the number of Grade 5 students who did not pass the first administration of the 2005 TAKS English or Spanish Math assessment.

How can a district or charter school spend this money?
All **AMI** funding should be directed to meeting the Math instructional needs of identified students in Grades K-6. This is not a technology grant. School personnel should carefully match the specific Math needs of each K-6 student and provide immediate intervention that can best address these needs. Frequent monitoring and adjustments demonstrate progress.

Can these funds be "rolled over"?
There is **no "roll over"** of funds. It is highly recommended that districts/charter schools utilize 100% of these funds to provide for the immediate intervention of all K-6 students in Math.

May funds be spent to hire a professional teacher, or a part-time tutor?
Yes, as long as the teacher, paraprofessional, or part-time tutor is working only with students identified as at-risk for math difficulties. Highly trained professionals should deliver instruction and provide intervention. Paraprofessionals and/or part-time tutors may monitor the class allowing the teacher time to provide direct instruction and specialized Math intervention to a small group. Paraprofessionals and/or part-time tutors may also reinforce the initial Math instruction planned and delivered by the teacher.

May funds be spent to pay for substitutes?
Yes, as long as the substitute is managing the regular classroom while the teacher is administering the *Assessing Math Concepts* Student Interviews.

May funds be spent for computer hardware and/or software?
Yes, for software that reflects a scientific research-based curriculum. Teacher supervision, monitoring and intervention are still vital when technology is used.

May the funding be used for stipends?
The purpose of the funding is to provide **direct, intensive Math** instruction to identified students. The monies may only be spent as extra duty pay for hourly tutorials.

May this money be used for buses?
If a student is offered intervention programs before or after the school day, the campus must provide transportation through other funding.

When should early Math intervention through Accelerated Math Instruction (AMI) funding begin for students in Grades K-6?
The intent of the legislation is that students begin receiving additional Math instruction in an intervention program **immediately after they have been assessed**. Intervention efforts should be as soon as possible **during the school year** and may include summer programs for students who continue to have difficulty at the end of the spring semester. At the beginning of the school year, districts/charter schools may identify kindergarten students using locally developed criteria; however, it is recommended that this criteria be closely aligned with the assessment criteria that will be used for mid-year assessment. The mid-year results may require adjustments to the identified list of kindergarten students.

When should the early Math intervention occur: before school, during the school day, after school, or during the summer?
The intent of the legislation is that students be placed in early Math intervention programs **immediately after they have been identified as at-risk** for Math difficulties. This means that intervention efforts should occur **during the school year**, plus additional intervention efforts during the summer for students continuing to function below grade level at the end of the year in Math. It is recommended that intervention occur during the regular school day because of its timeliness and effectiveness.

What time frame is recommended?
Thirty to forty-five **additional** minutes of targeted Math instruction during the school day, with flexible grouping of up to four children with one adult is recommended.

Does TEA provide a sample notification letter for Districts/charter schools to notify parents that students will be provided Accelerating Math Instruction?
Sample **AMI** letters are available in both English and Spanish and may be downloaded from *www.tea.state.tx.us/Math.* These letters are listed on the **Products** page.
Districts/charter schools should adapt these letters to meet their particular needs. Parent letters may also be downloaded from the HISD Portal under the Curriculum website.

Do mandatory attendance rules mean that each student who is identified as at-risk for Math difficulties in Grades K-6 must participate in the Accelerated Math Instruction?
Consider the way that mandatory attendance rules apply to kindergarten students. Once students are enrolled in an **AMI** program, attendance can be mandated.
However, if a parent chooses for their child not to participate in an after-school or extended-year program, attendance cannot be mandated. Therefore, provision of an intervention program during the regular school day is essential to meet the needs of all identified students.