Austin Independent School District
Department of Program Evaluation

September 2010

# AISD Special Education Best Practices Survey Results August 2010

Results summarized in this report represent all survey/interview respondents data available as of September 14, 2010. This is a summary derived from work with ARRA IDEA Eliminating the Gap project, and it highlights successful schools' best practices in supporting special education students' passing TAKS reading/ELA and math in 2009-10.

## Who participated in the survey and interviews?

In August 2010, AISD schools from all areas of Austin were invited to participate in a special education best practices survey or interview based on their special education students' TAKS 2009-10 performance in **reading/ELA** and/or **math** based on one or both of the following criteria:

- High number of test takers and percentages passing TAKS - reading/ELA 70% or higher; math 60% or higher
- Greater than 50% of special education students successfully passing TAKS or TAKS-A reading/ELA or math 2009-10 who had switched from TAKS-M in 2008-09

## Our Respondents

Staff who participated in the survey and interviews included principals, special education department chairs, general education teachers, and special education teachers.

| Campus Level | Total Sample (n) | Survey Responses (n) | Response Rate (%) |
|---|---|---|---|
| Elementary | 42 | 37 | 88% |
| Middle | 14 | 12 | 86% |
| High | 8 | 5 | 62% |
| All | 64 | 54 | 84% |

## Schools That Participated in the Surveys and Interviews

**Elementaries**
Allison
Andrews
Barrington
Blazier
Boone
Brentwood
Bryker Woods
Casey
Cook
Cowan
Dawson
Doss

**Elementaries**
Govalle
Highland Park
Hill
Houston
Joslin
Kiker
Lee
McBee
Menchaca
Mills
Oak Hill
Odom
Overton

**Elementaries**
Palm
Patton
Pecan Springs
Pickle
Pillow
Sims
Summitt
Sunset Valley
Travis Heights
Williams
Widen
Zilker

**Secondaries**
Bailey
Bedichek
Bowie
Covington
Dobie
Fulmore
Garza
Gorzycki
Lamar
McCallum
Mendez
Murchison
O. Henry
Paredes
Reagan
Small
Travis



Martha Doolittle, Ph.D.
Administrative Supervisor

# Common Findings Among Schools

## Most Effective Practices of Your Campus' Interventions

- Consistent, frequent interventions – support during and beyond the school day
- Systematic, explicit, focused instruction
- High expectations among teachers and students
- "Team effort" by all staff to support student success; good coordination, frequent communication
- High interest materials on grade level to encourage student motivation
- Use of appropriate materials, manipulatives, accommodations, technology
- Every secondary student (as appropriate) has access to a graphing calculator
- Regular progress monitoring and communication among all teachers; teachers plan together
- Start interventions early and offer through the school year
- Inclusion in general ed. classroom and on-grade level instruction supported by resource/pull-out
- Address individual needs of student; use data to ensure student gets most appropriate intervention and assessment; use small group instruction when possible
- Raise rigor in resource classrooms by focusing on TAKS terminology used for each objective
- Special ed. teachers attend all professional development offered to general ed. teachers

## Progress Monitoring – How Did You Use Data? Some examples…..

- Staff met regularly to review multiple sources of student data (e.g., past TAKS performance, TAKS release test, DIBELS, DRA, benchmarks, fluency, comprehension, data by objective, attendance, discipline, teacher input on student's class performance and motivation)
- Decisions about appropriate intervention and tutoring made using student data – based on student needs
- Reevaluated students regularly
- Administrator and teachers involved
- Met to determine what was and wasn't working in intervention
- Looked at students individually if they were moving from TAKS-M to TAKS/A – looked at several types of data to determine if student was ready
- Progress monitoring used frequently for identification, re-teach, assessment of mastery
- Differentiated instruction based on student data
- Data reviews helped celebrate student mastery of concepts and skills

## Strategies to Encourage Attendance at Tutoring

- Snacks, food
- Rewards, prizes, computer time
- Games, centers, engaging activities
- Small group, individual attention
- Expectations and praise communicated to students
- Reminders to students
- Communications to parents (phone call, note home, reminders)

# Reading/ELA Survey Results

The following tables summarize results from survey items about reading/ELA classroom practices, determinants for interventions, frequency of tutoring, staff who planned or provided tutoring, and resources used for tutoring and intervention.

## Students' Classroom Setting

| Classroom Setting | Elementary High Passing Reading % | Elementary TAKS-M to TAKS/A Reading % | Secondary High Passing Reading % | Secondary TAKS-M to TAKS/A Reading % |
|---|---|---|---|---|
| General education (inclusion) | 15 | 15 | 23 | 46 |
| Special education (resource) | 8 | 8 | 0 | 0 |
| Both gen ed. and special ed. | 54 | 31 | 18 | 18 |

## Criteria Used When Deciding to Move Students From TAKS-M to TAKS/TAKS-A

| Criteria | Elementary % | Secondary % |
|---|---|---|
| Scored Commended on 2008-09 TAKS M | 58 | 69 |
| Class performance (grades) high | 31 | 54 |
| School attendance high | 4 | 23 |
| Attended reading tutoring | 35 | 31 |
| Teacher recommendation | 42 | 61 |
| ARD committee decision | 61 | 61 |
| Parent recommendation | 8 | 15 |

## Determinants of Intervention and Tutoring Groups

| Determinants | Elementary High Passing Reading % | Elementary TAKS-M to TAKS/A Reading % | Secondary High Passing Reading % | Secondary TAKS-M to TAKS/A Reading % |
|---|---|---|---|---|
| Group size | 50 | 42 | 15 | 23 |
| Grade level | 50 | 42 | 8 | 46 |
| TAKS version (M, A, etc.) | 38 | 42 | 0 | 38 |
| Prior TAKS performance | 42 | 35 | 15 | 38 |

## Frequency of Reading/ELA Interventions and Tutoring

- **Average intervention or tutoring session was 45-50 minutes**
- **Interventions offered most often during and after school**

| Frequency of Intervention or Tutoring | Elementary High Passing Reading % | Elementary TAKS-M to TAKS/A Reading % | Secondary High Passing Reading % | Secondary TAKS-M to TAKS/A Reading % |
|---|---|---|---|---|
| Before school | 8 | 4 | 0 | 23 |
| During school | 50 | 31 | 23 | 46 |
| After school | 65 | 46 | 31 | 69 |
| Weekends | 11 | 8 | 8 | 23 |
| Once per month | 0 | 0 | 0 | 8 |
| Twice per month | 0 | 0 | 0 | 8 |
| Once a week | 19 | 8 | 0 | 15 |
| Twice a week | 38 | 27 | 15 | 15 |
| Three or more per week | 23 | 27 | 31 | 46 |

## Staff who Planned Reading/ELA Interventions or Tutoring

| Staff planned interventions | Elementary High Passing Reading % | Elementary TAKS-M to TAKS/A Reading % | Secondary High Passing Reading % | Secondary TAKS-M to TAKS/A Reading % |
|---|---|---|---|---|
| General education (inclusion) | 54 | 23 | 46 | 69 |
| Special education (resource) | 65 | 50 | 46 | 69 |
| Curriculum specialist | 31 | 19 | 0 | 15 |
| Teaching assistant | 46 | 27 | 8 | 23 |
| Administrator | 38 | 31 | 15 | 46 |

## Staff who Provided Reading/ELA Interventions or Tutoring

| Staff for interventions | Elementary High Passing Reading % | Elementary TAKS-M to TAKS/A Reading % | Secondary High Passing Reading % | Secondary TAKS-M to TAKS/A Reading % |
|---|---|---|---|---|
| General education (inclusion) | 50 | 31 | 31 | 46 |
| Special education (resource) | 69 | 58 | 38 | 69 |
| Curriculum specialist | 27 | 8 | 0 | 0 |
| Teaching assistant | 50 | 35 | 0 | 23 |
| Other (administrator, student teacher, volunteer) | 23 | 23 | 8 | 31 |

## Reading Resources Used for Interventions and Tutoring

| Resources | Elementary High Passing Reading % | Elementary TAKS-M to TAKS/A Reading % | Secondary High Passing Reading % | Secondary TAKS-M to TAKS/A Reading % |
|---|---|---|---|---|
| Books | 38 | 42 | 23 | 46 |
| Instructional materials | 61 | 50 | 38 | 61 |
| Hardware or software | 42 | 31 | 15 | 61 |
| Manipulatives | 19 | 23 | 8 | 31 |
| Student consumable materials | 35 | 23 | 15 | 31 |
| Accommodations | 58 | 54 | 15 | 54 |
| Performance level descriptors | 8 | 15 | 0 | 15 |
| Teacher planning or training | 54 | 50 | 31 | 61 |

## Examples of Reading Resources Used

| Reading Resources | Elementary High Passing Reading % | Elementary TAKS-M to TAKS/A Reading % | Secondary High Passing Reading % | Secondary TAKS-M to TAKS/A Reading % |
|---|---|---|---|---|
| **Books** | * Inclusive practice<br>* I Station<br>*Read Naturally<br>* Scott Foresman books (decodable readers, level 1, 2, 3)<br>* Chapter books<br>*Start to Finish books<br>* Orbit Double Takes *Time for Kids<br>* Van de Walle activities<br>* Leveled readers<br>*Novels<br>*Primary phonics<br>*Take Flight<br>* Nonfiction (autobiographies, hurricanes), and Fiction books (fables)<br>* Mini Mysteries | * Accelerated Reading books<br>* 2-tiered comprehension books<br>* I Station books<br>* Steck-Vaughn and Harcourt leveled readers<br>*Start to Finish books<br>*Time for Kids<br>*Novels<br>*Scott Foresman books (decodable readers, level 1, 2, 3)<br>*Take Flight<br>* Short chapter books<br>* Mini Mysteries | * Hot Zone<br>* Call of the Wild<br>* Last Book in the Universe<br>* Children of Willesden Lane<br>* Classroom curriculum | * Hot Zone<br>* Call of the Wild<br>* Last Book in the Universe<br>* Children of Willesden Lane<br>* Classroom curriculum<br>* Books on tape<br>* Age-appropriate reading material |
| **Instructional materials** | * Great Leaps<br>* Rewards<br>* DIPS<br>* Read Naturally<br>* I Station materials<br>* Project READ<br>* 10 minute readings<br>* TAKS Master<br>* Word warm-ups<br>* PCI reading comp. practices<br>* TAKS prep books<br>* Van de Walle activities<br>* 5 W's chart (Who, What, When, Where, Why)<br>* Decodable readers<br>* Mentoring Minds<br>* Reader's theater<br>* TAKS release test<br>* Explode the Code<br>* Reading A to Z fluency stories<br>* TestSMART<br>* Educational Insights Lesson Cards | * Accelerated Reading<br>* Explode the Code<br>* Megawords<br>* Scott Foresman<br>* Read Naturally<br>* DIPS<br>* Great Leaps<br>* Passageways anthologies<br>* Released TAKS tests<br>* SIPPS<br>* I Station lessons<br>* Word warm-ups<br>* PCI reading comprehension practice<br>* TAKS Masters<br>* Mentoring Minds<br>* Reader's theater<br>* Reading A to Z stories<br>* TestSMART<br>* Educational Insights Lesson Cards | * SIPPS | * SIPPS<br>* Flash cards<br>* General ed. materials<br>* Read 180<br>* Released TAKS tests<br>* Focus on comprehension skills, vocabulary building, drills and skills in reading<br>* Voyager reading<br>* Corrective reading<br>* Word Wisdom |

| Reading Resources | Elementary High Passing Reading % | Elementary TAKS-M to TAKS/A Reading % | Secondary High Passing Reading % | Secondary TAKS-M to TAKS/A Reading % |
|---|---|---|---|---|
| **Hardware or software** | * I Station<br>* Lexia<br>* Razz Kids<br>* Read Naturally<br>* Starfall Learning to Read<br>*Start to Finish books<br>*Educationcity.com<br>*Reading A to Z website<br>*Tumble books | * I Station<br>*FCRR.org<br>*Razz Kids<br>* Read Naturally<br>*Starfall Learning to Read<br>*Start to Finish books<br>*Educationcity.com<br>*Reading A to Z website<br>* Tumble books | * Blogging<br>* Glogster software<br>* Lexia<br>* Dibels<br>*My Reading Coach<br>*Study Island<br>*Wise Soft | * Powerpoint<br>* Glogster software<br>* Lexia<br>*Online reading fluency<br>*My Reading Coach<br>*Study Island<br>*Wise Soft<br>*Aleks |
| **Manipulatives** | *Foam or magnetic letters<br>* Flash cards (sight words, phonics)<br>* Individual word banks<br>* I Station materials<br>* Sentence strips<br>* White boards<br>* Read aloud, acting out passages, improvisation, reader's theater<br>* Graphic organizers, word-web graphic<br>* Place markers, post-its | * Board games (Scrabble, Bingo)<br>* Card games<br>* Flip charts<br>* Word tiles<br>*I Station materials<br>*Sentence strips<br>*White boards<br>*Read aloud, acting out passages, improvisation, reader's theater<br>*Graphic organizers<br>*Chart of reading strategies (7 steps to reading)<br>*Place markers, post-its | | * Sentence strips<br>* Matching vocabulary words to definitions |
| **Student consumable materials** | * Motivational reading book series, leveled by grade<br>* Read Naturally<br>* Reading Milestones<br>* Mentoring Minds<br>* Released TAKS<br>* Teacher-made materials<br>* Worksheets, take home books (SRA Open Court)<br>* TAKS-like stories for homework | * Accelerated Reading<br>* Explode the Code<br>* Megawords<br>*Scott Foresman materials<br>*Motivation reading book series, leveled by grade<br>* Mentoring Minds<br>* Teacher-made materials<br>* TAKS-like stories for homework | * Education Rally<br>* Released TAKS<br>* Interactive readers | * Education Rally<br>* Released TAKS<br>* Interactive readers<br>* Kamiko developmental series of tutorials<br>* Measuring Up reading<br>* TAKS Coach |

| Reading Resources | Elementary High Passing Reading % | Elementary TAKS-M to TAKS/A Reading % | Secondary High Passing Reading % | Secondary TAKS-M to TAKS/A Reading % |
|---|---|---|---|---|
| **Accommodations** | * Dyslexia bundle<br>* Use with practice tests<br>* Follow IEP (e.g., preferred seating, modified assignment, repetition)<br>*Oral administration<br>* Small groups<br>* Frequent breaks<br>* Read questions and answer choices aloud<br>* Extended time<br>* Post-it notes, place holders<br>* Preview, pre-teach<br>* Graphic organizer, Venn diagram<br>* Rehearsal<br>* Consistent people and places in testing<br>* Teacher encouragement<br>* Teaching students how to look for information in text | * Dyslexia bundle<br>* Chunk information<br>* Follow IEP (e.g., preferred seating, modified assignment, repetition)<br>* Oral administration<br>* Small groups<br>* Frequent breaks<br>* Check for understanding<br>* Re-teach as needed<br>* Peer tutoring<br>* Post-it notes, place markers<br>* Read questions aloud<br>* Preview, pre-teach<br>* Graphic organizer, Venn diagram<br>* Extended time<br>* Consistent people and places in testing<br>* Minimal distraction<br>* Teaching students how to look for information in text | *Re-teach<br>* Modified TEKS<br>* Extended time<br>*Shorter testing<br>* Reduced assignments<br>* Small group<br>* Provide notes<br>* Student groups (remedial, inclusion) | * Re-teach<br>* Graphic organizers<br>* Inclusion setting and support<br>* Paired reading<br>* Preview<br>* Reduced or shorter assignments<br>* Scamper<br>* Reading aloud<br>* Small group<br>* One-on-one<br>* Place holders, highlighters<br>* Note taking strategies<br>* Test taking strategies<br>* Reading 30 minutes daily and summarizing |
| **Performance level descriptors** | * TAKS released test<br>* General ed. benchmarks<br>* Clear expectations, show strategies, write what you think, show where you found information | * TAKS released test<br>* General ed. benchmarks<br>* High expectations<br>* Engaged nightly with homework | | * Frequent assessment<br>* Specific objectives<br>* Reading strategies in content areas, vocabulary |

| Reading Resources | Elementary High Passing Reading % | Elementary TAKS-M to TAKS/A Reading % | Secondary High Passing Reading % | Secondary TAKS-M to TAKS/A Reading % |
|---|---|---|---|---|
| **Teacher planning or training** | * BLS training<br>* SCORES training<br>* DIPS<br>* Read Naturally<br>* Project READ<br>* Dibels<br>* Scientific Spelling<br>* Discuss students' strengths among gen ed. and sp ed. teachers<br>* Motivation reading<br>* Review common assessment data<br>* Team planning (special ed. and general ed. teachers, and TAs)<br>* Power of Us+ training<br>* General ed. teachers provide weekly lesson plans to special ed. teachers<br>* TAKS training<br>* Co-teaching, inclusion | * DIPS<br>* Read Naturally<br>* Project READ<br>* Dibels<br>* Scientific Spelling<br>* Discuss students' strengths among general ed. and special ed. teachers<br>* SIPPS<br>* Dyslexia<br>* Review common assessment data<br>* Team planning (special ed. and general ed. teachers, and TAs)<br>* General ed. teachers provide weekly lesson plans to special ed. teachers<br>* Co-teaching, inclusion<br>* Language therapy training<br>* Weekly plan & prep | * Power of Us+<br>* General ed. and special ed. teachers planned together | * General ed. and special ed. teachers planned together<br>* Read 180<br>* Reviewed student data<br>* PLC for inclusion |

## Resources recommended by AISD Reading/ELA Curriculum Staff

- For Tier 2 interventions, ensure struggling special education students access reading specialists
- K-8 SSIG funds for tutoring and materials – Contact Peggy Mays
- Ensure struggling special education students access and utilize grade 6 reading Tier 2 elective
- Ensure struggling special education students access and utilize Read 180 on MS and 2 HS campuses
- For Tier 3 interventions, utilize training and resources provided in 'Tier 3' reading initiative – Contact John Fuerst

## Other Resources

- Depth of Knowledge chart information - http://www.dese.mo.gov/divimprove/sia/msip/DOK_Chart.pdf
- Performance Level descriptors - http://www.tea.state.tx.us/index3.aspx?id=3222&menu_id3=793

# Math Survey Results

The following tables summarize results from survey items about math classroom practices, determinants for interventions, frequency of tutoring, staff who planned or provided tutoring, and resources used for tutoring and intervention.

## Students' Classroom Setting

| Classroom Setting | Elementary High Passing Math % | Elementary TAKS-M to TAKS/A Math % | Secondary High Passing Math % | Secondary TAKS-M to TAKS/A Math % |
|---|---|---|---|---|
| General education (inclusion) | 20 | 4 | 17 | 17 |
| Special education (resource) | 4 | 8 | 0 | 0 |
| Both gen ed. and special ed. | 56 | 24 | 33 | 33 |

## Criteria Used When Deciding to Move Students From TAKS-M to TAKS/TAKS-A

| Criteria | Elementary % | Secondary % |
|---|---|---|
| Scored Commended on 2008-09 TAKS M | 56 | 67 |
| Class performance (grades) high | 32 | 50 |
| School attendance high | 16 | 33 |
| Attended math tutoring | 28 | 33 |
| Teacher recommendation | 32 | 67 |
| ARD committee decision | 40 | 50 |
| Parent recommendation | 4 | 33 |

## Determinants of Intervention and Tutoring Groups

| Determinants | Elementary High Passing Math % | Elementary TAKS-M to TAKS/A Math % | Secondary High Passing Math % | Secondary TAKS-M to TAKS/A Math % |
|---|---|---|---|---|
| Group size | 56 | 16 | 17 | 0 |
| Grade level | 64 | 24 | 17 | 33 |
| TAKS version (M, A, etc.) | 44 | 28 | 33 | 67 |
| Prior TAKS performance | 48 | 24 | 33 | 67 |
| Other reason | 24 | 0 | 17 | 0 |

## Frequency of Math Interventions and Tutoring

- **Average time per tutoring session was 45 minutes at elementary, 70 minutes at secondary**
- **Interventions or tutoring occurred most often during or after school**

| Frequency of Intervention or Tutoring | Elementary High Passing Math % | Elementary TAKS-M to TAKS/A Math % | Secondary High Passing Math % | Secondary TAKS-M to TAKS/A Math % |
|---|---|---|---|---|
| Before school | 16 | 4 | 0 | 33 |
| During school | 52 | 24 | 50 | 50 |
| After school | 72 | 28 | 67 | 67 |
| Weekends | 8 | 8 | 33 | 17 |
| Once per month | 0 | 0 | 0 | 0 |
| Twice per month | 0 | 0 | 0 | 0 |
| Once a week | 20 | 8 | 0 | 17 |
| Twice a week | 36 | 20 | 33 | 33 |
| Three or more per week | 24 | 12 | 33 | 50 |

## Staff who Planned Math Interventions or Tutoring

| Staff planned interventions | Elementary High Passing Math % | Elementary TAKS-M to TAKS/A Math % | Secondary High Passing Math % | Secondary TAKS-M to TAKS/A Math % |
|---|---|---|---|---|
| General education (inclusion) | 52 | 24 | 67 | 50 |
| Special education (resource) | 72 | 36 | 67 | 50 |
| Curriculum specialist | 16 | 12 | 17 | 17 |
| Teaching assistant | 40 | 16 | 17 | 33 |
| Administrator | 44 | 20 | 33 | 33 |
| Other staff | 8 | 0 | 0 | 17 |

## Staff who Provided Math Interventions or Tutoring

| Staff for interventions | Elementary High Passing Math % | Elementary TAKS-M to TAKS/A Math % | Secondary High Passing Math % | Secondary TAKS-M to TAKS/A Math % |
|---|---|---|---|---|
| General education (inclusion) | 48 | 24 | 33 | 50 |
| Special education (resource) | 72 | 40 | 50 | 67 |
| Curriculum specialist | 16 | 8 | 17 | 0 |
| Teaching assistant | 44 | 20 | 0 | 33 |
| Other (administrator, student teacher, volunteer) | 20 | 4 | 0 | 33 |

## Math Resources Used for Interventions and Tutoring

| Resources | Elementary High Passing Math % | Elementary TAKS-M to TAKS/A Math % | Secondary High Passing Math % | Secondary TAKS-M to TAKS/A Math % |
|---|---|---|---|---|
| Books | 20 | 4 | 0 | 0 |
| Instructional materials | 52 | 24 | 33 | 33 |
| Hardware or software | 48 | 8 | 33 | 50 |
| Manipulatives | 32 | 20 | 50 | 50 |
| Student consumable materials | 36 | 8 | 17 | 0 |
| Accommodations | 56 | 32 | 50 | 50 |
| Performance level descriptors | 8 | 4 | 17 | 33 |
| Teacher planning or training | 60 | 24 | 33 | 50 |

## Examples of Math Resources Used

| Math Resources | Elementary High Passing Math % | Elementary TAKS-M to TAKS/A Math % | Secondary High Passing Math % | Secondary TAKS-M to TAKS/A Math % |
|---|---|---|---|---|
| **Books** | * Envisions<br>* Motivation Math<br>* Hands on Math<br>* Region IV materials<br>* VandeWalle's books<br>* Math Number World<br>* Math the Fun Way<br>* TAKS Masters<br>* TAKS Busters<br>* TransMath<br>* Touch Money | * Envisions<br>* Motivation Math<br>* Below-grade level texts for reteach, reinforcement, homework as needed<br>* Touch Money | * 8th Grade Sense | |
| **Instructional materials** | * TAKS workbooks<br>* Countdown to TAKS<br>* Fast Focus<br>* Daily math, worksheets<br>* Voyager<br>* Grade-level charts<br>* Problem-solve chart<br>* Investigation games<br>* Envisions<br>* Motivation Math<br>* Focus Math<br>* Math Number World<br>* Math Rehearsal<br>* 5-step problem solving activities<br>* Step up to TAKS<br>* Released TAKS<br>* Teacher-made materials<br>* Voyager Math<br>* Trans Math (Sopris) | * Envisions<br>* Motivation Math<br>* Investigation games<br>* Focus Math<br>* Resource book – Practical Ideas That Really Work for Teaching Math Problem Solving (Prufrock Press)<br>* Teacher-made materials | * Mastering Math<br>* Math computation skills and strategies<br>* Multistep math word problems<br>* Accelerated curriculum – series of lessons with TAKS-style questions<br>* Math U See | * Mastering Math<br>* Math computation skills and strategies<br>* Multistep math word problems<br>* Grade-level, special ed. specific |
| **Hardware or software** | * Aleks.com<br>* Brainpop, Brainpop Jr<br>* Envision etools<br>* Math Number World<br>* My Satori<br>* Symphony Math<br>* V-Math Live<br>* Voyager<br>* Mathbrain.com<br>* Mathfrog.CA online | * Aleks.com<br>* Brainpop | * Aleks<br>* Fast Math<br>* Easy Time to Math drills<br>* Region 13 Math drills | * Aleks<br>* Study Island<br>* Fast Math<br>* Easy Time to Math drills<br>[* Dimension M – only used for students taking TAKS-M test] |

| Math Resources | Elementary High Passing Math % | Elementary TAKS-M to TAKS/A Math % | Secondary High Passing Math % | Secondary TAKS-M to TAKS/A Math % |
|---|---|---|---|---|
| **Manipulatives** | * Base 10 blocks<br>* Fraction bars<br>* Fraction flip books<br>* Ten frames (number recognition)<br>* Cubes<br>* Fraction sets<br>* Clocks<br>* 100 multiplication chart<br>* Gallon/quart jugs<br>* Dozen egg carton<br>* Math Number Word<br>* Envisions activities<br>* Thermometer<br>* Calculators<br>* Place value flip charts<br>* Online tools (e.g., Envisions, Holt textbook)<br>* Fraction bingo and dominos<br>* Math dash<br>* Money<br>* Measurement man<br>* Geo boards<br>* Geometric shapes<br>* Released TAKS items<br>* Benchmark test items<br>* Rulers<br>* Peg board<br>* Dynah Zikes' Big Book of Math | * Base 10 blocks<br>* Geometric shapes<br>* Cubes<br>* 100 multiplication chart<br>* Clocks<br>* Decimal place value<br>* Geo board<br>* Fraction bingo and dominos<br>* Math Dash<br>* Measurement man<br>* Place value chart<br>* Fraction board<br>* Money<br>* Released TAKS items<br>* Benchmark test items<br>* Dynah Zikes' Big Book of Math | * Fair Games cubes<br>* Matching<br>* Sequencing<br>* Fraction cakes<br>* Blocks, shapes<br>* Onion school paper<br>* Graphing calculator | * Models, blocks, shapes<br>* Onion school paper |
| **Student consumable materials** | * Envisions<br>* Math Number World<br>*Math in Our World<br>* Mentoring Math<br>* Motivation Math<br>* TransMath<br>* Countdown to TAKS<br>* TAKS M Math Rehearsal<br>* Teacher-made materials and worksheets<br>* TAKS homework book | * Envisions<br>* Mentoring Math<br>* Teacher-made materials and worksheets<br>* TAKS homework book | * HRW consumables | |

| Math Resources | Elementary High Passing Math % | Elementary TAKS-M to TAKS/A Math % | Secondary High Passing Math % | Secondary TAKS-M to TAKS/A Math % |
|---|---|---|---|---|
| **Accommodations** | *Follow IEP (e.g., preferred seating, modified assignments, repetition)<br>*Math Number World<br>* Multiplication chart<br>* Fraction strips, board<br>* Problem solving steps<br>* Place value chart<br>*Grid paper<br>* Calculator<br>* Clocks<br>* Charts, number line<br>* Oral administration<br>* Small groups<br>Reading assistance<br>* Base 10 blocks, cubes<br>* Supplemental aids, tool box<br>*Rounding chart, rounding hills<br>*Math glossary<br>*On-grade level instruction<br>* Pre-teach, preview<br>* TA support in class<br>* Read aloud<br>*Shorten assignments<br>*Break tasks into parts<br>*Focus on fewer skills at a time<br>* Small group pullout when needed for re-teach<br>*Mnemonic devices<br>*Consistent people & place | * Oral administration<br>* Read aloud<br>* Frequent checks for understanding<br>* Problem solving guide<br>*Access to sign language dictionary<br>* Small groups<br>*Supplemental aids, tool box<br>*On-grade level instruction<br>*Frequent breaks<br>* Fraction pieces, chart, board<br>*Base 10 cubes<br>*Mnemonic devices<br>*Consistent people and place<br>* Minimal distraction<br>* Inclusion<br>* Number line<br>* Clocks<br>* Pull out as needed for re-teach | * Calculators, graphing calculators<br>* Math and Multiplication charts<br>* Graphic organizers<br>* One-on-one help<br>* Small groups<br>* Oral administration<br>* Supplemental aids<br>* Onion skin paper | * Calculators, graphing calculators<br>*Graphic organizers<br>* One-on-one help<br>* Small groups<br>* Oral administration<br>* Supplemental aids<br>* Vocabulary development |
| **Performance level descriptors** | * Math Number World TEKS<br>* Benchmark tests<br>* TAKS released tests<br>* Questions in smaller sessions (not whole test at once) | * TEKS<br>* Benchmark tests<br>* TAKS released tests<br>* Questions in smaller sessions (not whole test at once) | * TEKS / TAKS objectives<br>* Basic math calculations<br>* Problem-solving skills<br>* Visuals<br>* Math vocabulary | * Kilgo training to identify special education needs<br>* Basic math calculations<br>* Problem-solving skills<br>* Visuals<br>* Math vocabulary |

| Math Resources | Elementary High Passing Math % | Elementary TAKS-M to TAKS/A Math % | Secondary High Passing Math % | Secondary TAKS-M to TAKS/A Math % |
|---|---|---|---|---|
| **Teacher planning or training** | * Cognitively Guided Instruction (CGI)<br>* Fifth Sense<br>* 5-Step Math Problem Solving Guide<br>* Math Number World<br>* Review data<br>* Rotations during day with general ed. and special ed. teachers<br>* Region 13 training<br>* Planning and inclusion with general ed. and special ed. teachers – identify, group, re-teach, practice, assess – goal of mastery for all students<br>* Ongoing teacher discussions<br>* Co-teaching | * Cognitively Guided Instruction (CGI)<br>* MSMath<br>* Region 13 training<br>* Team planning with both general ed. and special ed. teachers<br>* Tutoring support from math specialist | * Planned by objective<br>* General ed. and special ed. teachers planned together<br>* Planning time with tutors and inclusion teachers<br>* Shared test results with teachers | * Inclusion-based team planning<br>* Planning time with tutors and inclusion teachers<br>* Reviewed student data<br>* PLCs for inclusion<br>* Shared test results with teachers |

## Resources recommended by AISD Math Curriculum Staff

Mathematics K-12 resources to support Core, Tier 2, and Tier 3 instruction

1. Region IV
   a) Mathematics Accelerated Curriculum (Grades 5, 5 Sp, 6, 6 Sp, 7, 8, 10, EXIT) http://www.region4store.com/catalog.aspx?catid=347914
   b) Engaging Mathematics Curriculum (Grades 3, 4, 4Sp, 5. 5Sp, 6, 7, 8, Alg1, Geo, Alg2, HS ELPS) http://www.region4store.com/catalog.aspx?catid=347792
   c) Supporting TAKS Achievement (Grades K-2, K-2Sp) http://www.region4store.com/catalog.aspx?catid=347792
   d) Closing the Distance (Grades 5-11), Connections (Grades K-11, K-5Sp) and TAKS prep (Grades K-11, K-5Sp) http://www.region4store.com/catalog.aspx?catid=347943
2. Region 13: Second Sense Math, Fifth Sense Math, Eighth Sense Math http://www.esc13store.net/index.php/generaled/math.html
3. America's Choice Navigator and Rampup http://www.americaschoice.org/mathematics
4. Software
   a) Scholastic FastMath http://www.scholastic.ca/education/tom-snyder/m-fastmath.html
   b) Understanding Math http://www.neufeldmath.com/
5. Free website games
   a) Skillbuilders **http://www.arcademicskillbuilders.com/**
   b) Oswego http://resources.oswego.org/games/

continued……

6. Free Calculator support activities
   a) Elementary:
   http://education.ti.com/educationportal/sites/US/sectionHome/activitybook_section_elementarymath.html
   b) Middle School:
   http://education.ti.com/educationportal/sites/US/sectionHome/activitybook_section_middlemath.html
   c) High School: http://education.ti.com/educationportal/sites/US/sectionHome/activitybooks.html

Elementary Mathematics

1. Pearson Envision Mathematics (K-6 AISD adoption) has specific RtI mathematics resources
2. Cognitively Guided Instruction (CGI)
3. DMI

Secondary Mathematics

1. Holt Mathematics (6-10 AISD adoption) has specific RtI mathematics resources
2. Make sure Special Ed students have access to graphing calculators; Use the Region IV Graphing Calculator Tutorial to help: http://math.escweb.net/index.htm

## Other Resources

- Depth of Knowledge chart information - http://www.dese.mo.gov/divimprove/sia/msip/DOK_Chart.pdf
- Performance Level descriptors - http://www.tea.state.tx.us/index3.aspx?id=3222&menu_id3=793

# Elementary Case Example of One School's Approach

## Kiker Elementary

### Principal - Lori Schneider

- Ownership - Every grade level teacher is responsible for every student at their grade level.
- Campus culture - Students are General ed. first, and Special ed. on top of that. The campus culture is that every student belongs.
- Student peer relations - Campus culture supports student peer relationships. Older students are paired with younger students (grades 3 and Kindergarten, 4 and 1, 5 and 2), including lunch, recess, and tutoring time after school.
- Student's own toolkit - Before end of year assessments occur, each Sped student has a toolkit, developed during the year by the student and the teacher, that contains supplemental aids, "fidget" items, accommodations appropriate to the student, manipulatives for math, etc. In this way, the students are prepared with their toolkit for TAKS.
- Accommodations manual - Every teacher (General ed. and Special ed.) is expected to read, know, and apply details from the accommodations manual. Applications of accommodations are discussed in depth at staff meetings.
- Purposeful planning – Teachers use key planning documents for every class of students.
- Creative staffing - Staffing does not drive student test settings on test day. The appropriate test setting is provided to each student, small group of students, etc.