

**G E M D A S**<sup>®</sup>

*Algebra Success*<sup>®</sup> **Training**

**Go EXPECT MUCH DAILY ALGEBRA SUCCESS!**<sup>®</sup>



# Current Challenges Facing School Districts

- Students lacking proficiency in foundational skills for Algebra
- Low standardized test scores in Algebra
  - STAR / CST
- Increasing pressure from NCLB
- High frustration levels among teachers
- High frustration levels among students
- Difficulty motivating students to do homework
- Difficulty getting parent involved
- Societal influences beyond districts' control
  - Poverty
  - Gangs
  - Absentee parents
  - Drugs and alcohol



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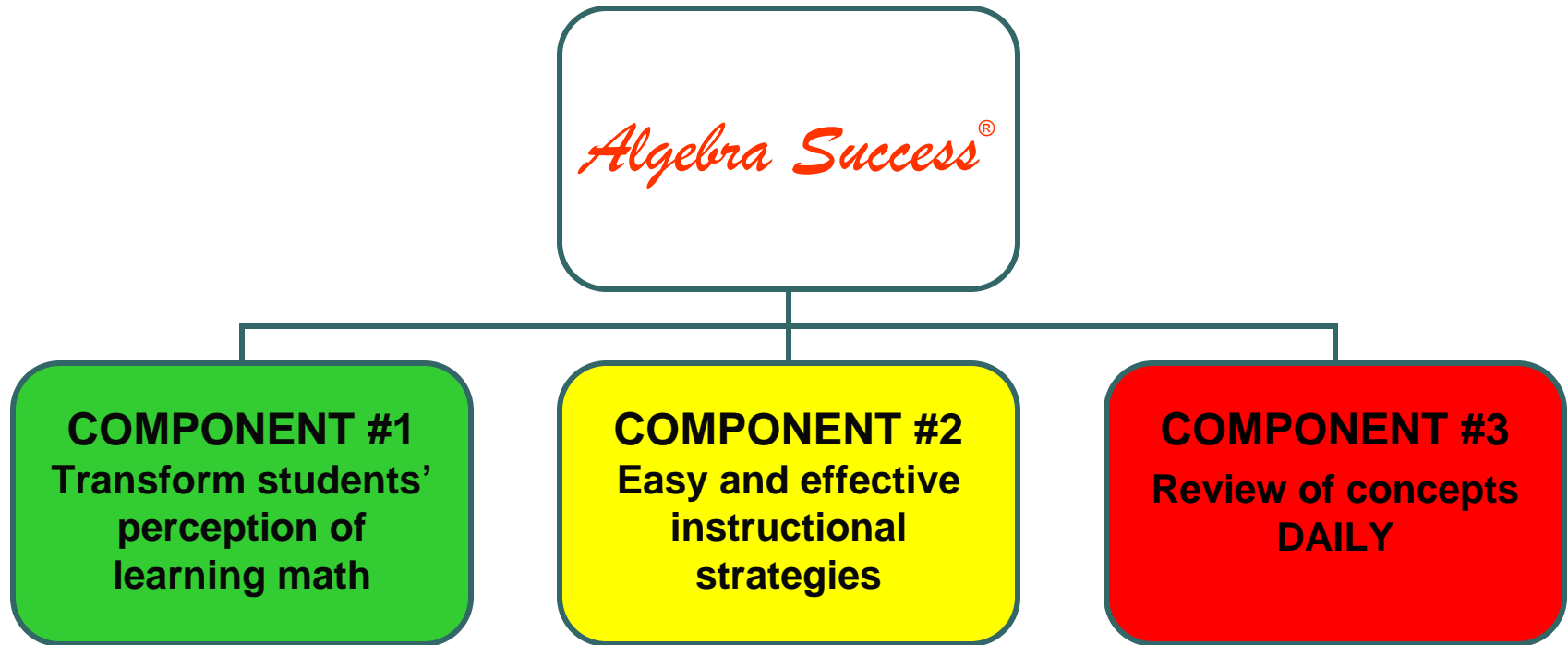
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# Three Components of **GEMDAS**<sup>®</sup>

## *Algebra Success*<sup>®</sup>



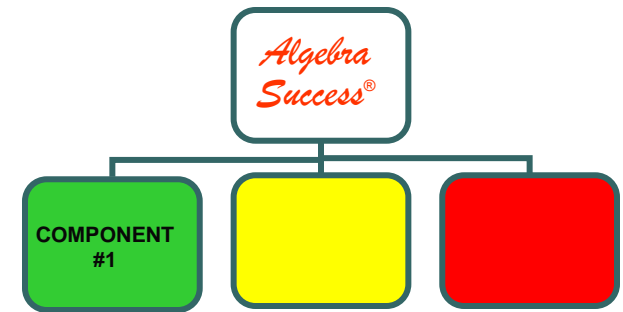
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# Component #1



Transform Students' Perception of Learning Math...

*From Math-Phobic to Math-Friendly!*

*HOW???*

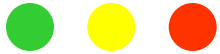
- Built-in motivational messages
- Positive mnemonic sayings
- Daily rhymes that affirm learning “*Algebra is EASY!*”
- Highly effective instructional visual aids:
  - Colorful
  - User-friendly
  - FUN
  - Helps with retention
- Recognize and build on SUCCESS!



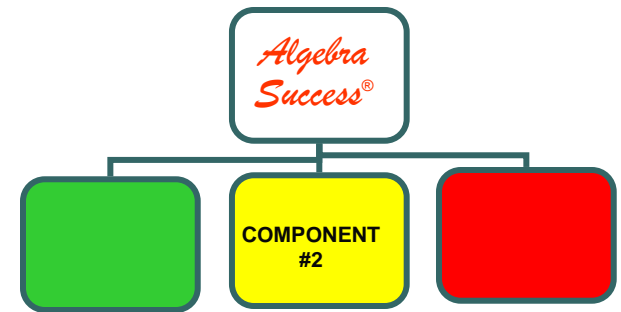
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# Component #2



## Easy and Effective Instructional Strategies... *For ALL Learning Modalities*

- Mnemonic devices
- Color coding
- Songs / chants / rhymes
- Kinesthetic movements
- Clear and concise visuals
- Metacognitive strategies
- Cross-curricular



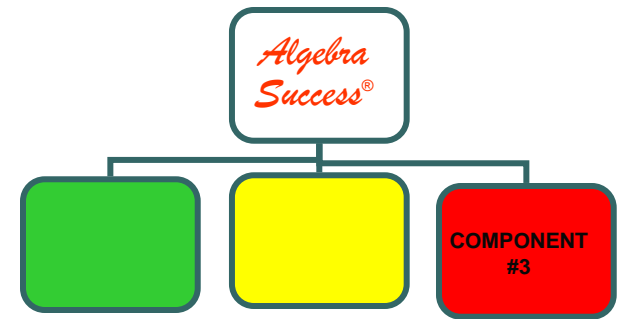
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# Component #3



## Review of Concepts DAILY...

### *To Ensure Retention of Concepts*

- Daily Review:
  - Targeted to eliminate common mistakes
  - Beneficial for Test Prep
- Check for Understanding:
  - Immediate feedback
  - Variety of uses
- Effective Homework Strategies:
  - Increase quality and completion rate
  - Create responsible learners
- Review Game: Peer Teaching / Cooperative Learning



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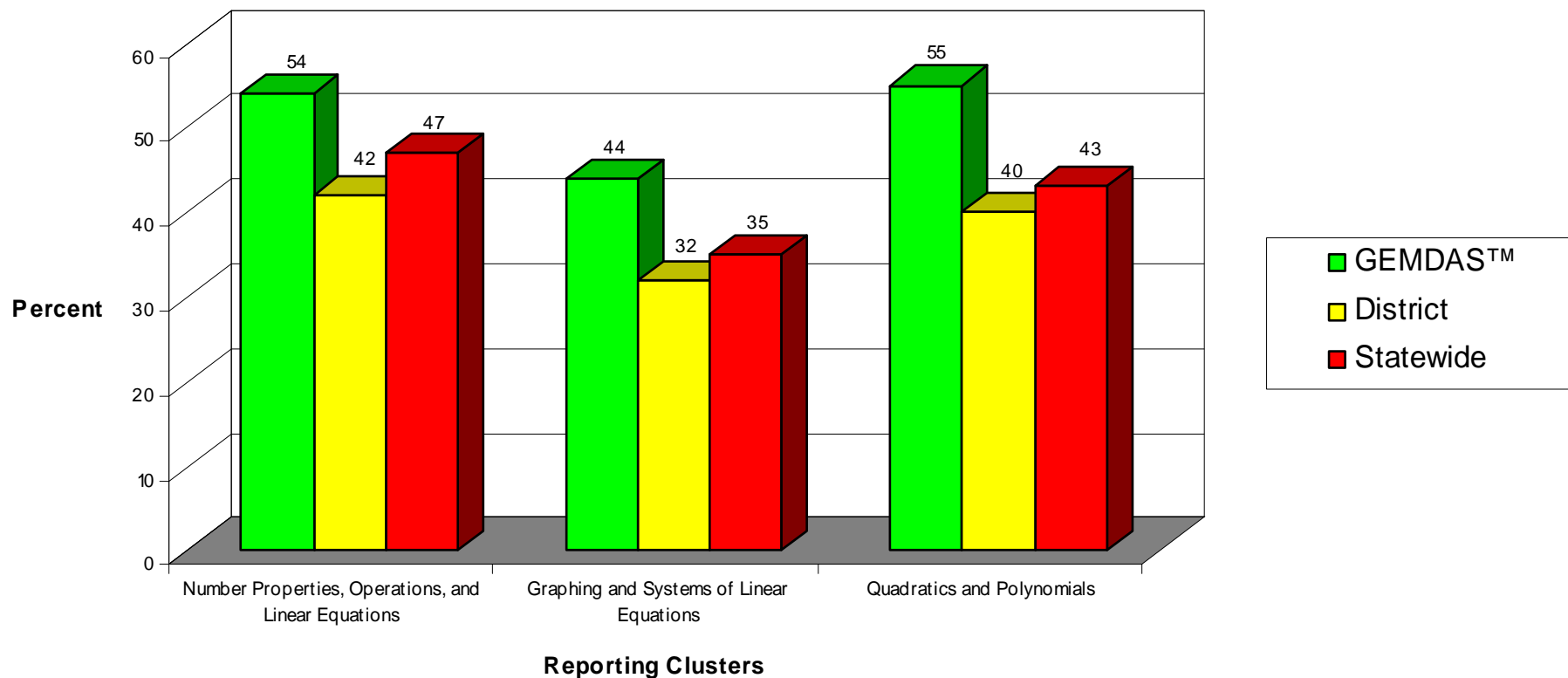
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# Comparative Test Results

## 2004 Algebra 1 CST Results



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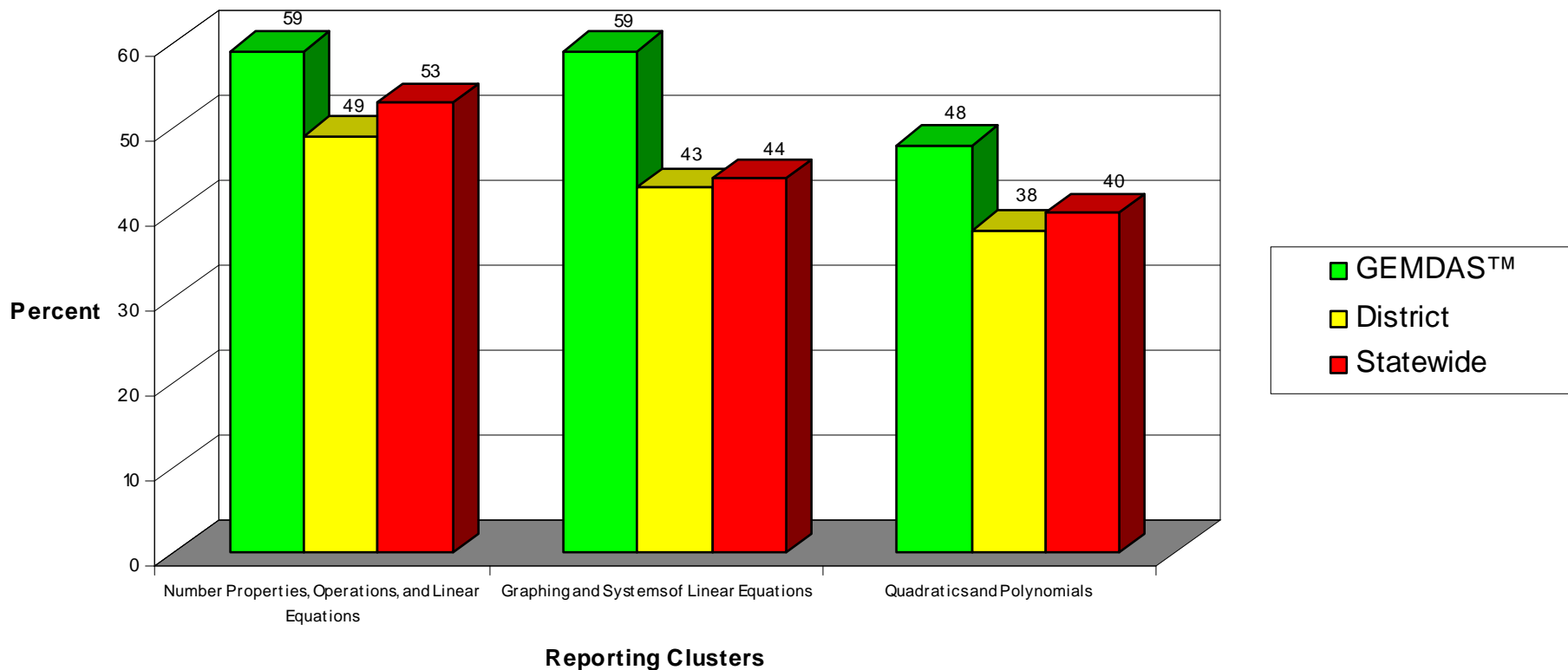
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# Comparative Test Results

## 2005 Algebra 1 CST Results



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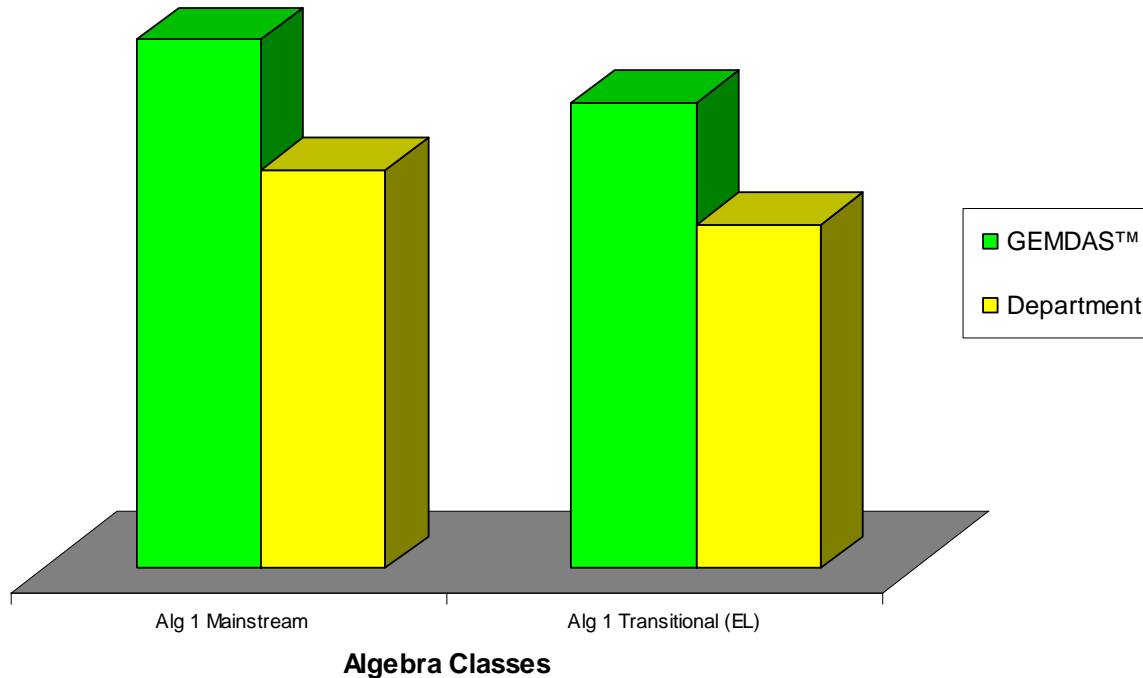
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# Comparative Data

2004 - 2005 Algebra District Benchmark Data

Results for Mainstream Students  
Compared to Transitional (EL) Students



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# Content Standards

- Content Standards Addressed by **GEMDAS<sup>®</sup> Algebra Success<sup>®</sup> Training**
  - Grades 4<sup>th</sup> through 7<sup>th</sup>:
    - Number Sense (Grades 4<sup>th</sup> – 7<sup>th</sup>)
    - Algebra and Functions (Grades 4<sup>th</sup> – 7<sup>th</sup>)
    - Measurement & Geometry (Grades 4<sup>th</sup> & 5<sup>th</sup>)
    - Statistics, Data Analysis & Probability (Grades 4<sup>th</sup> & 5<sup>th</sup>)
  - Algebra 1
    - Essential Standards



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# Why **GEMDAS**<sup>®</sup> *Algebra Success*<sup>®</sup> Works!

- Standards-based
  - Focused on Essential Standards
  - Build strong foundation for success in future math classes
- User-friendly strategies teachers can use immediately
- Emphasis on POSITIVITY! 😊
- Emphasis on vocabulary development
- Proven results with ELD / ESL students
- Proven results with Special Ed students
- **Motivates students and raises test scores**
- Increased parental involvement with the **GEMDAS**<sup>®</sup> *Algebra Success*<sup>®</sup> Training for Parents



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# Why **GEMDAS**<sup>®</sup> *Algebra Success*<sup>®</sup>

## Works (continued)

- Creates CONSISTENCY among teachers
- Student engagement and ACTIVE participation
  - **Has positive effect on student behavior**
- Increases student:
  - Comprehension
  - Mastery
  - Retention of concepts
- Cross-curricular strategies
- Motivates students to do quality homework
- Incorporates ALL of the Top 5 Instructional Strategies that affect student achievement...



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# Research-based

## Top 5 Instructional Strategies That Affect Student Achievement

1. Identifying Similarities and Differences
2. Summarizing and Note Taking
3. Reinforcing Effort and Providing Recognition
4. Homework and Practice
5. Nonlinguistic Representations

Marzano, R., Pickering, D., & Pollock, J. (2001). *Classroom Instruction that Works: Research-Based Strategies for Increasing Student Achievement*. Association for Supervision and Curriculum Development.



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# Philosophy of **GEMDAS**<sup>®</sup>

## *Algebra Success*<sup>®</sup> Training

Importance of...

- Positivity / Motivation
- Using effective visual aids during instruction
- Consistent repetition
- Vocabulary development
- Teaching concepts with strategies that work every time
- Building a strong foundation of fundamental concepts
- Student participation and engagement



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# Philosophy of **GEMDAS**<sup>®</sup>

## *Algebra Success*<sup>®</sup> Training (cont.)

Importance of...

- Teaching to ALL learning modalities (Howard Gardner's multiple-intelligences theory):
  - **Visual / Spatial** (pictures, charts, graphs, posters)
  - **Bodily / Kinesthetic** (movement, physical activity)
  - **Musical** (songs, chants, rhymes, lyrics)
  - **Linguistic** (encouraging to say & see words)
  - **Logical / Mathematical** (explore patterns & relationships)
  - **Interpersonal** (learn through interaction)
  - **Intrapersonal** (most independent learners)



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# What Administrators Are Saying

*“Your trainings change teacher practice...It’s not a gimmick, so kids are learning in a way that makes sense and is **supported by research....**”*

— Nina Drammissi, Middle School Vice Principal  
Lakeside Union School District, California



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# What Administrators Are Saying

*“...Immediately upon entering the classroom of a GEMDAS<sup>®</sup> trained teacher it is apparent that the **students are meaningfully engaged in acquiring a deeper understanding of the math concepts being taught...**”*

— Monica Daley, Middle School Vice Principal  
Long Beach USD, California



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# What Teachers Are Saying

*“This is the **best math training** I have gone to in my entire teaching career!”*

— Annette Martinez, 8<sup>th</sup> Grade Algebra Teacher  
Mission CISD, Texas

*“Excellent visual aids. I love this workshop.  
**The best workshop in 32 years!**”*

— Jose Martinez, High School Algebra Teacher  
Mission CISD, Texas



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# What Teachers Are Saying

*“Our grades on tests/quizzes have **increased significantly!**”*

— Olga Galaviz, 7<sup>th</sup> Grade ELD Math Teacher  
Long Beach USD, California

*“**Gave me hope** that even my students who are at a 3<sup>rd</sup> / 4<sup>th</sup> grade level can achieve success at Algebra!”*

— Cindy Hilliker, 6<sup>th</sup> – 8<sup>th</sup> Grade (SDC) Special Ed Teacher  
Lakeside Union School District, California



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# What Students Are Saying

***“I finally understand math for the first time.”***

— Johnny C.

***“I always struggled with math and now it’s so easy! The posters and the Fraction Motions<sup>®</sup> really help me.”***

— Violet B.



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# What Students Are Saying

*“Since English is my second language...the songs...really helped because there are some hard words in Algebra that I didn’t really get...**but when she put them in songs, I really got them—what they meant.**”*

— Felisardo S.



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# **GEMDAS<sup>®</sup> *Algebra Success*<sup>®</sup> Foundational** **2-Day Training Includes:**

- 2-Day Training by Founder of GEMDAS<sup>®</sup> Educational Services, LLC
- Posters for Classroom Teachers (5):
  - ✓ Order of Operations
  - ✓ Solving Linear Equations
  - ✓ Fraction Motions<sup>®</sup>
  - ✓ Converting:  
Fractions  $\Leftrightarrow$  Decimals  $\Leftrightarrow$  Percents  $\Leftrightarrow$  Fractions
  - ✓ Divisibility Rules for Success
- Training Manual
- Reproducibles / Blackline masters
- Additional Materials for Each Participant



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# Foundational 2-Day Training

## Topics Covered

- The Power of Positivity
- Order of Operations (*poster included with training*)
- Performing Operations with Integers
- Multiplication Strategies for Success
- Fraction Motions® Training (*poster included with training*)
- Comparing Fractions
- Converting Fractions  $\leftrightarrow$  Decimals  $\leftrightarrow$  Percents  $\leftrightarrow$  Fractions (*poster included with training*)
- Divisibility Rules for Success (*poster included with training*)
- Absolute Value
- Coefficients
- Exponents
- Distributive Property / Combining Like Terms
- Solving Equations (*poster included with training*)
- Solving Proportions
- How to Make a *Word Wall* More Effective
- Note Taking Techniques
- Classroom Management for Materials
- *Check for Understanding* Strategies
- Motivation Techniques for Homework
- Review Game designed for Cooperative Learning / Peer Teaching
- Stress Management / Relaxation Techniques



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# **GEMDAS<sup>®</sup> Algebra Success<sup>®</sup> Expanded** **Training Day 3 (Optional)**

- Factoring Fun! *(poster included with training)*
- Graphing Linear Equations *(poster included with training)*
- Graphing Linear Inequalities
- Solving Linear Inequalities
- Daily Review Strategies
- Additional Motivation Techniques for Homework
- Overview of Strategies covered in 2-Day Training



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# Posters Included with Expanded 3-Day Training (7 Total)

- ✓ Order of Operations
- ✓ Solving Linear Equations
- ✓ Fraction Motions®
- ✓ Converting:  
    Fractions  $\Leftrightarrow$  Decimals  $\Leftrightarrow$  Percents  $\Leftrightarrow$  Fractions
- ✓ Divisibility Rules for Success
- ✓ Factoring
- ✓ Graphing



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# ***Additional Services for Parents & Students Available Upon Request:***

- **GEMDAS<sup>®</sup> *Algebra Success*<sup>®</sup> Training for Parents**

## **Topics Covered:**

- The Power of Positivity
- Homework:
  - ✓ *The importance of homework*
  - ✓ *How to motivate students to do quality homework*
  - ✓ *What quality homework looks like*
  - ✓ *How to check homework*
- Order of Operations
- Solving Linear Equations
- *Fraction Motions*<sup>®</sup> Training

NOTE: This Training can be conducted in Spanish or English.



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# ***Additional Services for Parents & Students (Continued):***

- **GEMDAS<sup>®</sup> *Algebra Success*<sup>®</sup> Motivational Lesson for Students**

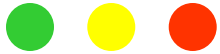
- Help students believe they can achieve in Algebra and on assessments.
- The Power of Positivity
- Hands-on creative activity to help students focus on success in math in the classroom and on standardized tests!



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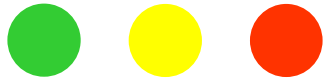
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*Thank You!*

*Dedicated to Algebra Success<sup>®</sup> for All!*

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