

DEKALB COUNTY SCHOOL SYSTEM PRESENTS

PROJECT ALGEBRA

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Who is the DeKalb County School System?

98,308 Students

9% Disabilities

21 High Schools

77% Black

19 Middle Schools

11% White

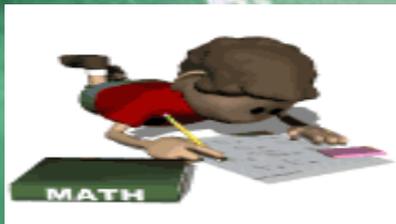
61% Economically Disadvantaged

7% Hispanic

4% Asian

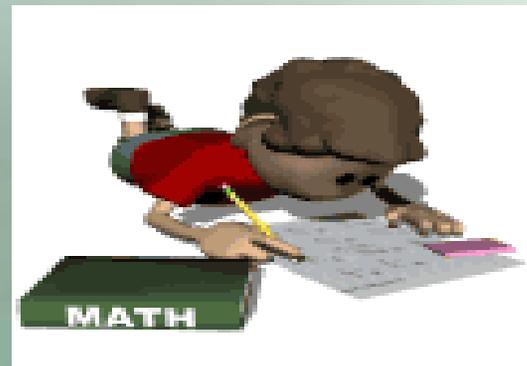
12% Limited English Proficiency

1% Other



How did Project Algebra begin?

?

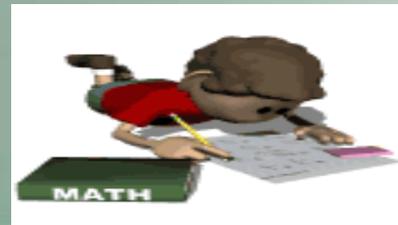


Administrative Policy IDA-R(2) Approved by the Board of Education in March 2003

IDA-R(2)

Requires Algebra I to be
taken by all 8th graders
for Carnegie unit credit

**Effective 2004-2005
School Year**

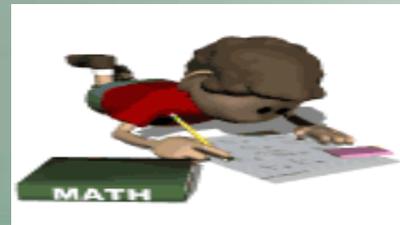


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Raising the Bar

A High-Quality PreK-12
Mathematics Instructional
Program

**Effective 2004-2005
School Year**



Goal: To Improve the Mathematics Curriculum for all Students by Providing

DeKalb County PreK -12 students a mathematics program that is:

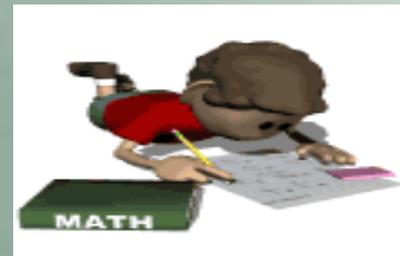
Standards-Based

Algebra-Rich

Hands-On

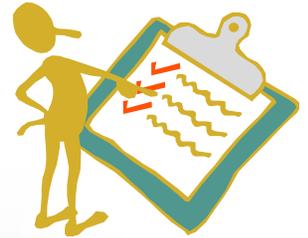
Questions asked...

- Are our students ready?
- Are our teachers ready?
- Is our community ready?



Step 1

Analysis of Gaps



- Inconsistent Pacing/Delivery of the Curriculum
- Textbook was not inclusive of all of the Pre-Algebra Objectives
- Supplemental Resources were needed (i.e. Algebra Tiles, Graphing Calculators, etc) at some schools
- Professional Development

Step 2

Design Framework to Systematically Enhance our Mathematics Instruction

- Yearlong Curriculum
Alignment Maps K – 12
(Written, taught, tested aligned)
- Content Grouped in Six
Week Segments
- Pre/Post Assessments
Each Six Weeks
- Professional Development
- Monitoring
- Purchase Resources



What Has Been Done To Achieve The Board's Goal?

**Spring & Summer
2003**

Pre-Algebra Training
for Sixth Grade
Mathematics Teachers



What Has Been Done To Achieve The Board's Goal?

Used 2003-2004 as the preparation year by:

Conducting Train the Trainer sessions each six weeks to introduce and discuss pacing, lesson plans, best teaching practices, and the curriculum

Utilizing Math Teacher Trainers (MTTs) to redeliver information at the local schools

Local school administration and central office monitoring of curriculum pacing and delivery

Progress report submitted to the Board of Education at the end of each semester

What Has Been Done To Achieve The Board's Goal?

**School Year 2004-2005
Implementation Year**

Algebra-Rich Curriculum for All
Grade Levels

Consistent Pacing throughout
the Grade/ Subject Areas

Cover the Entire Curriculum,
not the Textbook

Formal Pre-Algebra for 7th
Grade

Algebra I for Eighth Grade

What Has Been Done To Achieve The Board's Goal?

**School Year 2004-2005
Implementation Year**

A mathematics program, enhanced by a reading improvement strategy, in the PreK – 6th grade mathematics curriculum

Require four credits of mathematics instruction for all high school students

Focus on increasing number of higher level and Advanced Placement (AP) courses

What The Data Shows

2003-2005 CRCT Test System Results

Year	Level 1	Level 2	Level 3
Spring 2003 Grade 6	38	43	19
2004 Grade 7	31	56	13
2005 Grade 8	44	44	12

Indicators of Progress

“Re-evaluation of Plan”

- Disaggregated Data to Target Areas of Improvement
- Scheduled Students in Support Classes (Extended Learning & Math Tools Classes) to Group Students by Areas of Improvement and “Double-Dose”
- Ongoing Content and Best Practice Training for All Teachers (including Special Education Teachers)
- Third of Middle Schools Increased Test Scores

Where Are We Now And Where Do We Go From Here?

Policy Amendment

Administrative Policy IDA-R(3)

Requires Algebra I to be taken by all 8th graders for Equivalency credit

**Retroactive from the
2004-2005 School Year**

Where Are We Now And Where Do We Go From Here?

School Year 2005-2006

- All 8th Graders will still take Algebra I
- All 8th Graders will take the Algebra I End of Course Exam
- All 8th Graders who successfully complete a full year of Algebra I will take Geometry in the 9th Grade
- All 8th Graders who do not successfully complete a full year of Algebra I will repeat the course in the 9th Grade
- All student in Grades 9 – 12 will take four (4) years of Mathematics

Where Are We Now And Where Do We Go From Here?

Summer 2005

Mandatory Algebra
Training for 8th Grade
Mathematics Teachers

Focus: Content, Best
Practices, and Technology
Integration

Presenters:

**System Math Coordinators
AIMS and Georgia Tech**

Where Are We Now And Where Do We Go From Here?

Summer 2005

**Partnership with College Board:
SpringBoard Training**

All Teachers in Title I Schools will
Attend Professional
Development Training for SpringBoard

Mathematics Coaches Hired

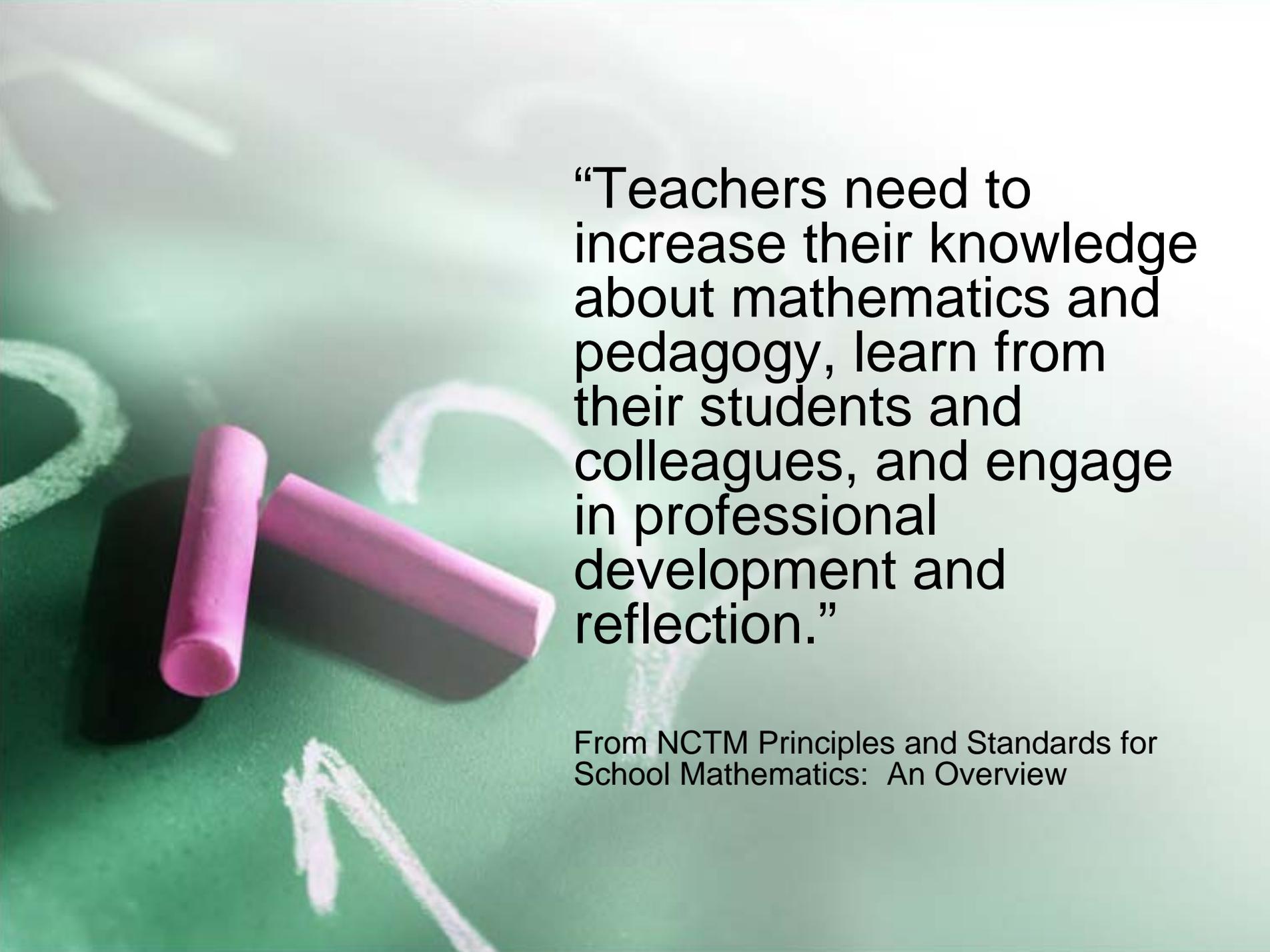
Four (4) Middle Grades Math Coaches
(Title I Schools)

What Will Be Done in 2005-2006 To Achieve The Board's Goal?

All Eighth Grade Teachers will Attend
Professional Development Training
seven (7) days during the school year

Partnership with College Board:
SpringBoard Initiative Implemented in
All Title I Schools

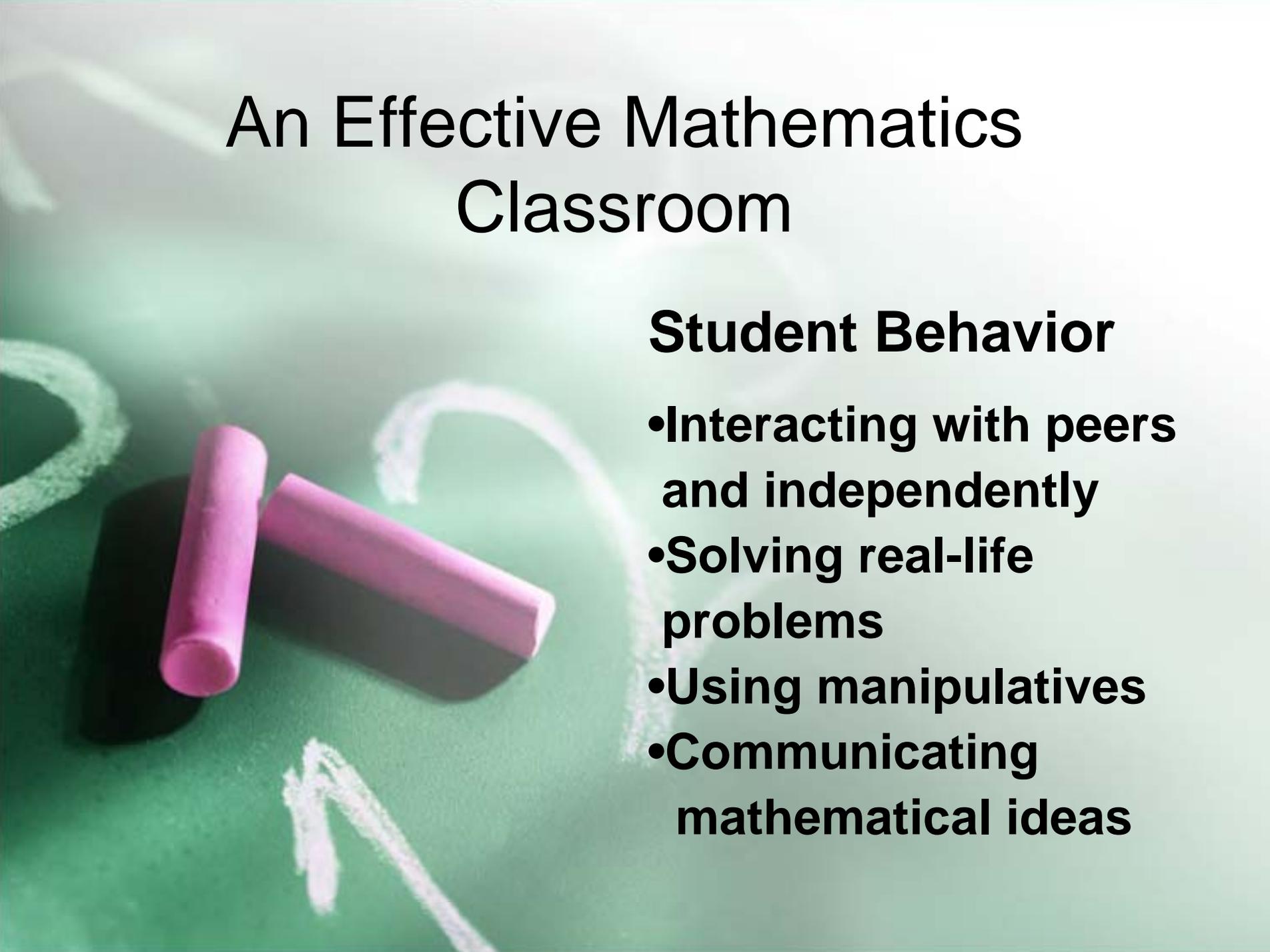
Mathematics Coaches
Four (4) Middle Grades Math Coaches
Assigned to Title I Schools

The background of the slide is a green chalkboard. Two pink chalk sticks are lying on the board, one standing upright and one lying horizontally. There are faint white chalk markings on the board, including a circle on the left and some lines and shapes on the right. The text is overlaid on the right side of the board.

“Teachers need to increase their knowledge about mathematics and pedagogy, learn from their students and colleagues, and engage in professional development and reflection.”

From NCTM Principles and Standards for School Mathematics: An Overview

An Effective Mathematics Classroom

The background of the slide is a photograph of a green chalkboard. Two pieces of pink chalk are lying on the board, one standing upright and one lying horizontally. There are several white chalk markings on the board, including a large 'C' shape, a curved line, and a jagged line.

Student Behavior

- **Interacting with peers and independently**
- **Solving real-life problems**
- **Using manipulatives**
- **Communicating mathematical ideas**

An Effective Mathematics Classroom

Teacher Practices

- Serving as facilitator
- Moving around the room
- Guiding students to make appropriate use of manipulatives and technology
- Promoting student use of inquiry and creativity



Administrators are the key.....

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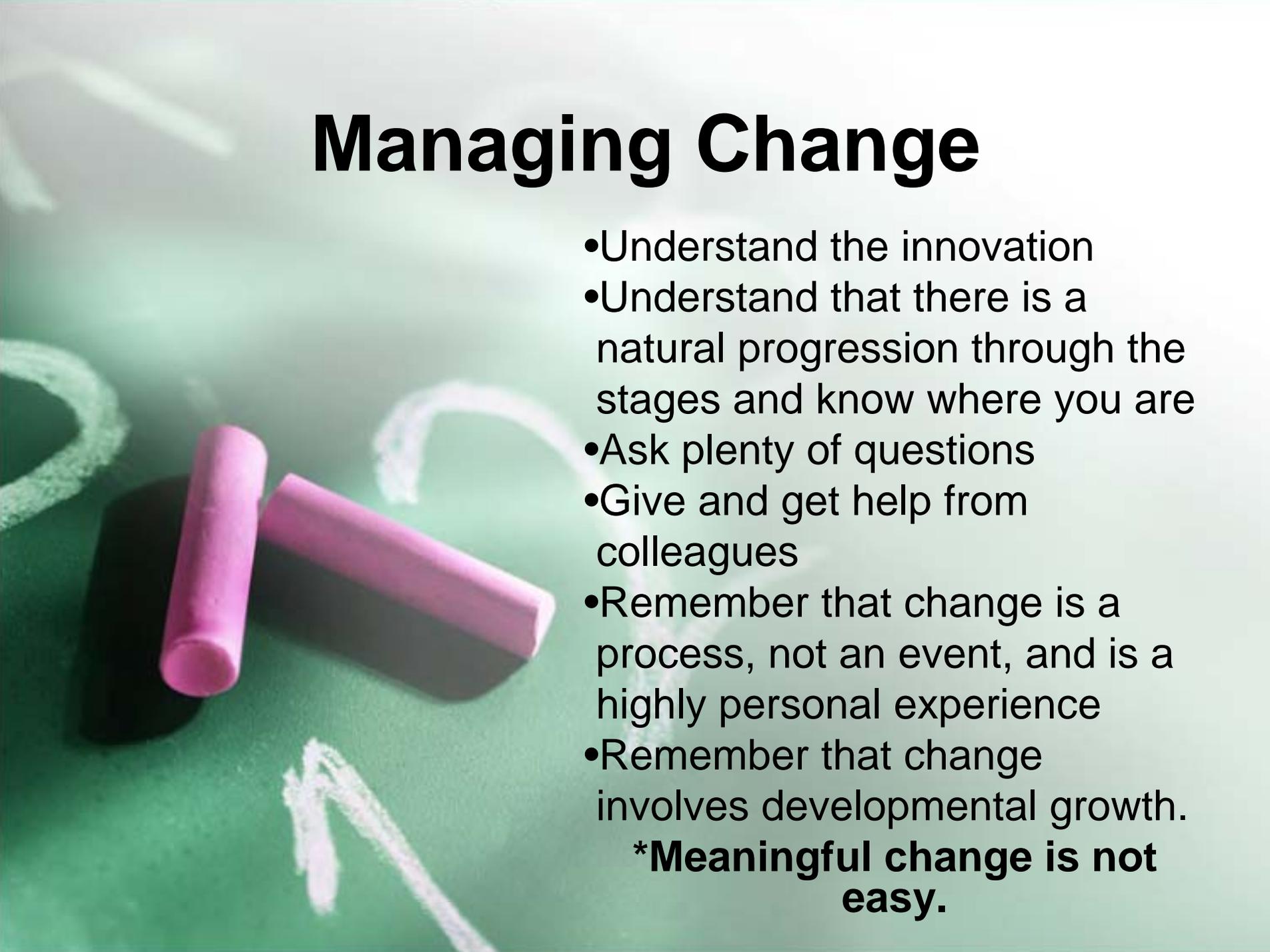
While professional development may result in improved mathematics instruction in classrooms, long-lasting, schoolwide change calls for substantive, ongoing, schoolwide support. For this to happen, **the leadership of the building is essential.**

Change

The background of the slide is a green chalkboard. In the lower-left quadrant, two pieces of pink chalk are lying on the surface. One piece is standing upright, while the other is lying horizontally. There are several faint, white chalk-like markings on the board, including a large 'C' shape on the left, a curved line in the center, and some scribbles at the bottom.

- **Change is a process, not an event**
- **Change is accomplished by individuals**
- **Change is a highly personal experience**
- **Change involves developmental growth**
 - *Meaningful change is not easy**

Managing Change

The background of the slide is a green chalkboard. In the lower-left quadrant, two pieces of pink chalk are lying on the surface. One piece is standing upright, and the other is lying horizontally next to it. There are some faint, white chalk-like markings on the board, including a curved line and some scribbles.

- Understand the innovation
 - Understand that there is a natural progression through the stages and know where you are
 - Ask plenty of questions
 - Give and get help from colleagues
 - Remember that change is a process, not an event, and is a highly personal experience
 - Remember that change involves developmental growth.
- *Meaningful change is not easy.**

When it comes to education of our children... failure is not an option.
President George W. Bush

"We believe education is a national priority and a local responsibility..."

- President George W. Bush

