

2024 March Conference Leadership for Policy & Planning

**EARLY BIRD
WORKSHOP**



AlabamaSchoolBoards.org/MarchConference

Piedmont City School District

Reimagining Mathematics Instruction Through a Shared District Vision and a Focus on Student Learning Data





Piedmont City School District

Mike Hayes Superintendent

Piedmont City School District
Piedmont, Alabama

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Piedmont City School District

- **Founded 1901**
- **1100+/- Student Enrollment**
- **70% Free/Reduced Lunch**
- **Three Schools (K-5, 6-8, 9-12)**

Piedmont City School District

- **94 Report Card Score
(5th Ranked District in State)**
- **One of Twelve Districts with all Schools
Receiving an A**
- **1ST in the Nation in Math Growth Between
2019-2022**
- **3rd in the Nation in Math Growth for 2023**

Core Beliefs

- **Acknowledging that Every Student can Learn**
- **High Standards and High Expectations Lead to High Achievement**
- **Stakeholders Accountability**
- **Intentional with Data**
- **Safe, Caring, Learning Communities are Vital for Continuous Improvement**

Piedmont City School District

District Level Initiatives

- **5 Inservice Days**
- **7 Imbedded PD Data Days**
- **9 Scheduled Leadership Team Meetings**
- **Digital Student Data Tracker**
- **Extended Math/ELA Instructional Time**

District Level Initiatives

- **Snapshot Google Form**
- **Snapshot Classroom Visits**
- **Provide Free Internet-Verizon Hotspots**
- **TEAM TIME (PMS/PHS)**
- **Vetting and Selection of Digital Programs**

District Level Initiatives

- **Math/ELA Notebooks Required for all Schools - Graded**
- **Require Eight AMSTI/ASIM Science Labs per Semester**
- **Mandatory Tutoring for Students One or More Grade Levels Behind**
- **Summer School Offered at all Schools**
- **PLA Extended Learning Opportunities (K-8)**

Brigett Stewart, NBCT

National Distinguished Principal

Piedmont Elementary School
Piedmont, Alabama

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Piedmont Elementary School

- **Title I School**
- **PK-5th Grades 514 Students**
- **73% Free and Reduced Lunch**
- **1:1 with iPads**
- **State Report Card Score = 94/A (82/B)**
- **National Blue Ribbon School**
- **National Distinguished Title I School**

Piedmont Elementary School

Math Curriculum:

Savvas enVision Mathematics- Grades K-5

- **Digital ILPs**
 - eSpark K-3
 - iReady 4-5
- **Digital Assessment and Progress Monitoring**
 - STAR Math - Grades K-5
 - iReady - Grades 4-5

Math Class Model

- **Extended Time (District Wide)**
- **3 Tiers of Instruction**
 - **Whole Group**
 - **Targeted Small Group**
 - **Intervention**
- **Individual Learning Path (ILP)**

Piedmont Elementary School

- **Certified Tutors for All Grades**
 - **Pull Out and Push In**
 - **Targeted small group instruction**
 - **Collaborate with classroom teacher**
 - **Identified students based on data from Digital Tracking Log**
 - **Teachers identified times for students to be pulled without disrupting core instruction**

Piedmont Elementary School

- **Piedmont Learning Academy**
 - **After school program Grades K-3**
 - **Targeted for students with SRIPs (Student Reading Improvement Plans)**

Piedmont Elementary School

- **Balanced Model of technology vs pencil and paper**
- **All grades required to use a math journal daily**
- **All grades required to spiral back**
 - **Daily mixed review**
 - **Front load new concepts**

Piedmont Elementary School

Summer Math Camp

- **4 Weeks - Month of June**
- **Recruit teachers**
 - **Provide flexible schedule**
- **Parent Notification and Accountability Letter**

Piedmont Elementary School

Boot Camp

- **2 weeks prior to state testing**
- **Math, ELA, and Writing**
- **Intense review of standards**
- **Culminates with State Testing Pep Rally**

Piedmont Elementary School

What Teachers Say

- **“I do data chats with my students after every iReady growth monitoring or diagnostic assessment we have. This gives students a goal to work towards after each assessment. I talk with each student about how they did, and we discuss strengths and weaknesses. We make goals for the next iReady assessment we will take. I do this to motivate students to continue to grow and learn.”**

Piedmont Elementary School

What Teachers Say

Small Groups:

“While whole group is vital, the most important teaching I do takes place at my small group table. While I am able to monitor the problems students work on during whole group, I can more easily catch misconceptions and mistakes during small group instruction. I can push my higher students beyond what 4th grade standard we are currently learning or reteach that standard to students who may be struggling. Small group allows me to give my students the attention they need no matter what level they are on.”

Piedmont Middle School

Chris Hanson
Certified Instructional Leader
Principal

Piedmont Middle School
Piedmont, Alabama
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Piedmont Middle School

- **Grades 6-8**
- **Student Enrollment 240**
- **69% Free and Reduced Lunch**
- **Title I School**

Piedmont Middle School

- **1:1 iPads**
- **CLAS School of Distinction 2022**
- **Apple Certification 100%**
- **Report Card 93 (71)**
- **Academic Growth 100% since COVID**

Scheduling

- **9 Periods - Math & ELA Classes are Blocked for 2 Periods**
 - **Math - 80 Minutes Per Day**
 - **ELA - 80 Minutes Per Day**
- **4 Core Classes (6 classes)**
- **1 PE Class**
- **2 Electives (My Time, Art, Band, Intervention Reading, Intervention Math, Access Courses)**

Math Classes

- **80 Minutes**
- **Math Core Curriculum is Saavas**
- **Mastery Learning (Mastery Connect)**
- **Embedding ACAP problems into bellringers, quizzes, and homework**
- **Boot Camp (ACAP Review Time)**

Piedmont Middle School

My Time - Elective Class

- **Students May Have Up to 2 My Time Classes**
- **Students Work on Regular Classwork on Mondays, Wednesdays, and Fridays.**
- **Students Work on ILPs in Classworks Generated From iReady Diagnostic on Tuesdays and Thursdays.**
- **Students Must Complete 25 ILP Units in Both Math and Reading Per Semester.**

Piedmont Middle School

Team Time

- **Students are Placed on a Team led by a Teacher/Staff Member Upon Entering the 6th Grade**
- **Students Stay in the Same Team Time Class for all Three Years at the Middle School**
- **Foundation of Team Time: Team Building, Character Ed, and Goal Setting (academic and personal)**
- **Meet Once a Week for 30 Minutes**
- **Math/ELA Data Chats with Students Every Four Weeks**

Piedmont High School



Adam B. Clemons, Ed.D.
Principal

Piedmont High School
Piedmont, Alabama

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Piedmont High School

- **Grades 9-12**
- **Student Enrollment 340**
- **63% Free and Reduced Lunch**
- **Apple Distinguished School, 2012-present**
- **Blue Ribbon School, 2012**
- **CLAS Banner School, 2012, 2022**
- **State Report Card 92/A (83/B)**

Piedmont High School

Scheduling

- **Eight Periods - 9th and 10th grade Math & ELA classes are blocked for two periods (Period 47 min / Block 94 min)**
- **Three diploma tracks - Honors, Advanced, and Standard**
- **Required ACT first period for all Juniors**
- **Required Piedmont Promise Project (3P) for all Seniors**
- **Career Tech Classes in construction, welding, horticulture, and health science**
- **Piedmont Fire Academy**
- **Focus away from Advance Placement courses to Dual Enrollment**

Piedmont High School

- **Focused on creating an #ACTCulture**
 - All juniors taking first period ACT class all year long using MasteryPrep
 - Teachers become ACT Certified Educators
 - Embedding ACT problems into bellringers, quizzes, and homework
 - Using elementary pedagogical practices (e.g., small groups, anchor charts, tutors, notebooks, etc)
- **Data Days** focused on looking at math data, making adjustments to curriculum plans, collaborating with fellow math teachers, and discussing Snapshot data
- **Vertical alignment of vocabulary** for all subject areas, including math, and guaranteeing those forty words at the end of the year.

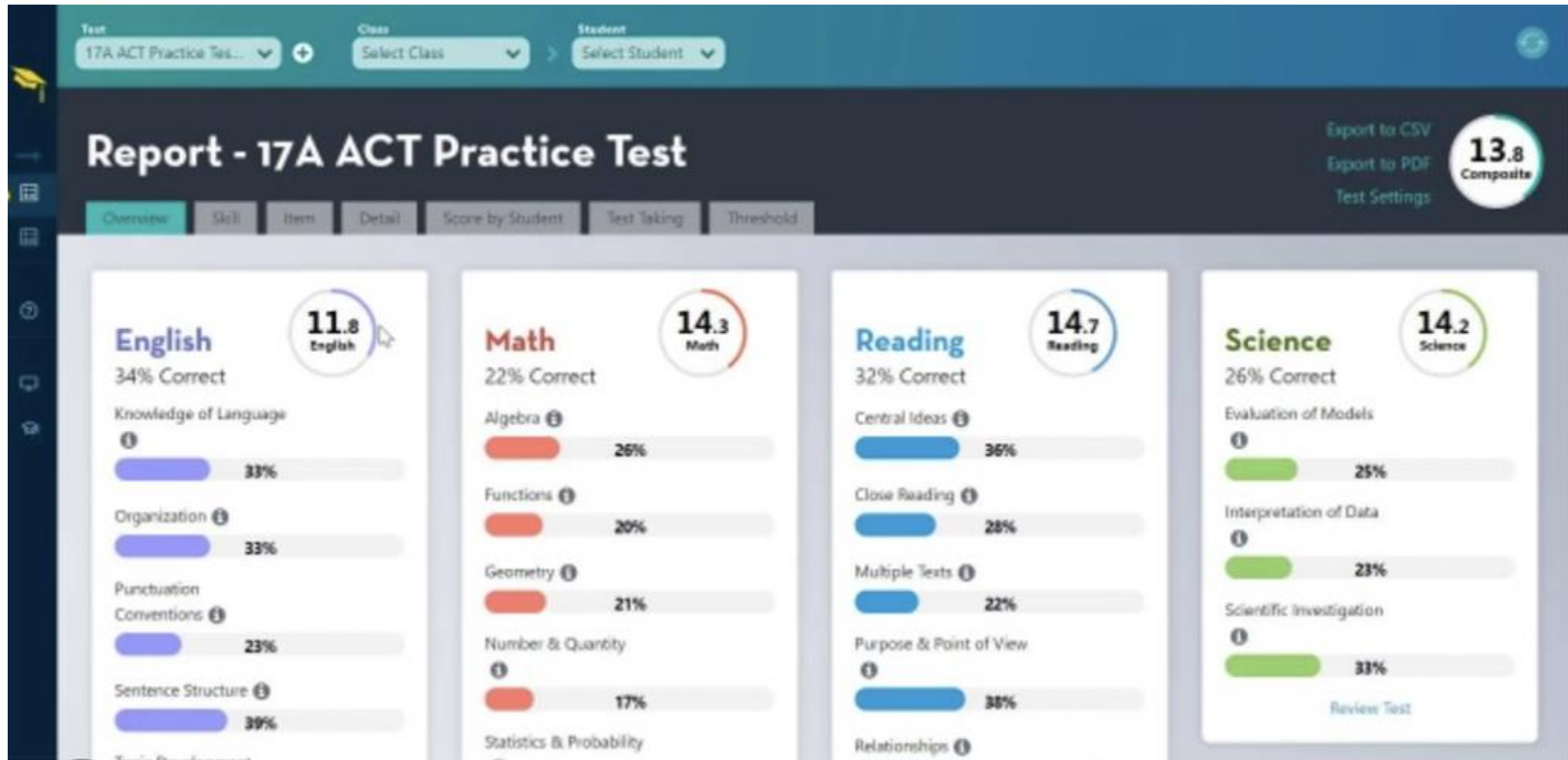
Piedmont High School

- **Use MasteryPrep to assess students three times a year - 3x9th, 3x10th, 2x11th, and 1x8th**
- **Prior to CCR Grant, we identified 9th, 10th, and 11th grade students who had done well on the MasteryPrep assessment and not taken the ACT, and paid for them to take the ACT.**
- **We received \$150,000 from the ALSDE College and Career Grant.**
 - **Paid for all 9th, 10th, and 11th graders to take the Oct. 31st ACT on the PHS campus.**
 - **Paid for teachers to come to the Southeastern ACT Conference.**
 - **Paid for teachers to become ACT Certified Teachers.**
 - **Paid for AP training.**

In Searching for Valid Data = MasteryPrep

- We set up three times a year for ACT assessments (fall, winter, and spring for 9-11 graders)
- We test and read the instructions like the real ACT with an expectation that teachers will monitor it as the same.
- Allows teachers to get immediate data for their classroom to see which students are deficient in which skills.
 - Teachers can then set up small groups for instructional practices.
- Creates an ILP for students to dive deeper into their weaknesses.
- They have workbooks and a set curriculum that we can use in our ACT class for instruction.

Piedmont High School



Celebrating Success

- Fall and Spring Celebrations with parents and refreshments.
- Medals for each club that students wear at graduation.
- Social media posts and electronic marquee.
- Certificates and gift cards at the celebration.
- Trip to Big Time Entertainment (bowling, laser tag, putt putt, go-karts, games, etc)



Piedmont High School

'23 Juniors ACT PHS vs State

Spring '23	PHS	State	Difference
Composite	20.0	17.5	+2.5
Math	20.0	17.1	+2.9
Science	19.7	17.8	+1.9
English	19.4	16.6	+2.8
Reading	20.2	17.8	+2.4

Piedmont City School District

QUESTIONS?

Superintendent Mike Hayes
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PES Principal Brigett Stewart

PMS Principal Chris Hanson

PHS Principal Adam Clemons

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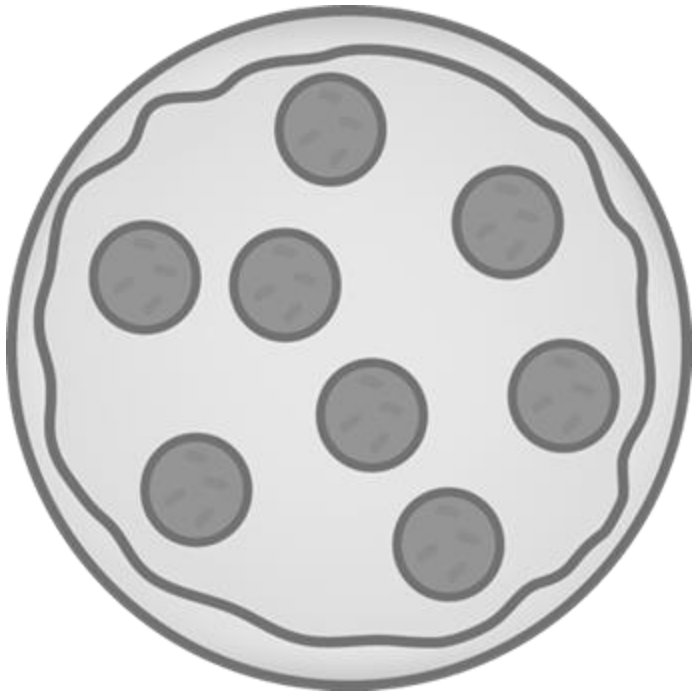
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AlabamaSchoolBoards.org/MarchConference

Would you rather have $\frac{1}{4}$ of a pizza with broccoli
or $\frac{1}{3}$ of a pizza with pickles?





Alabama Association of School Boards
Spring Conference
March 1, 2024



ALABAMA DEPARTMENT *of* EDUCATION



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Outcomes

- Beliefs about math
- Numeracy Act overview
- Your role – can we count on YOU?



**What comes to mind when
you think of mathematics?**



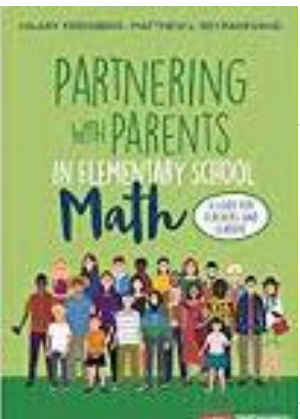
What do YOU believe?

- You must know basic facts before you can learn to solve problems.
- Teachers tell us how to do math.
- Math is only done in math class.
- Some people are good in math and some are not.



Top Three Facts Parents Need to Know About Today's Math

- Math instruction evolves like everything else.
- Mathematics is NOT a gene.
- We prepare students for the future, not today.



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Early competence with numbers has proven to be a predictor of future success in school mathematics into the high school years.

Denton & West 2002



ALABAMA DEPARTMENT *of* EDUCATION

**Kids don't hate math.
They hate feeling confused, embarrassed, and
humiliated by math.**

Larry Martinek

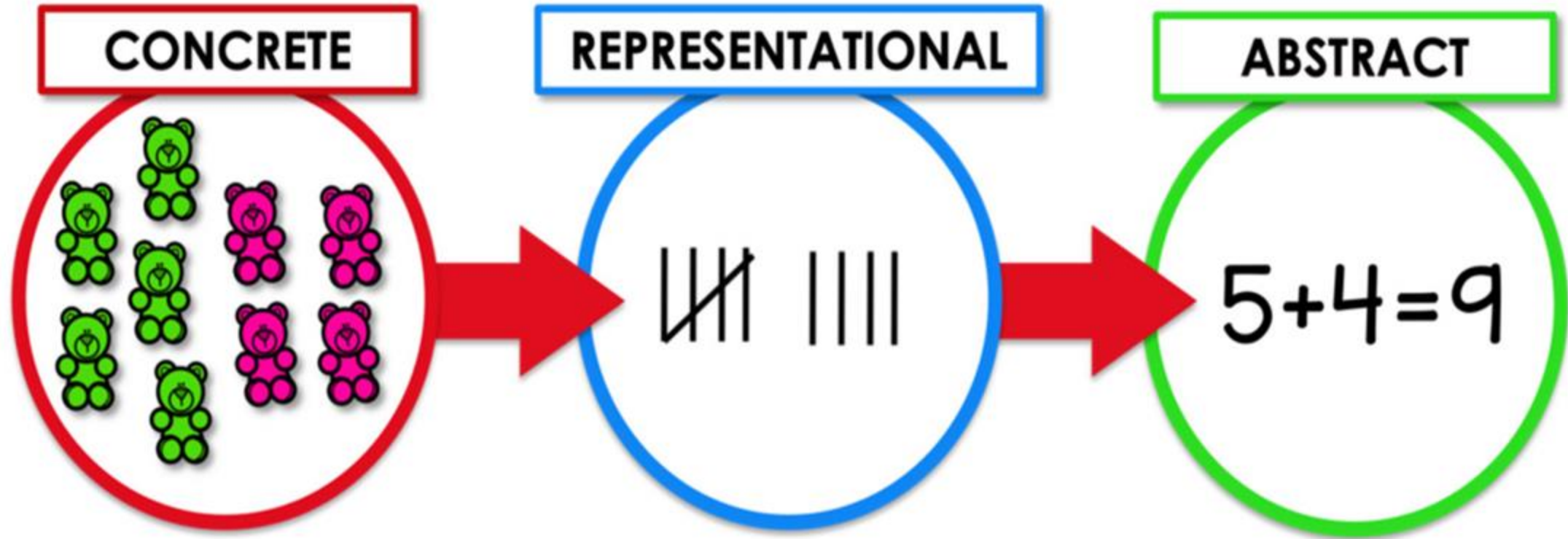


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INSTEAD OF...	TRY THINKING...
I'm not good at this!	What am I missing?
I give up!	I'll use a different strategy.
<i>It's good enough.</i>	<i>Is this my best work?</i>
This is too hard.	This may take some time.
<i>I made a mistake.</i>	<i>Mistakes help me learn!</i>
I just can't do this.	I'm going to train my brain!
I'll never be that smart.	I will learn how to do this!

Activity

- Choose a number from 1-20
- Represent the number with a **picture** on an index card
- Place the numbers in order



Get CONCRETE with Manipulatives



Numeracy Act Overview



The Alabama Numeracy Act was established to implement steps to improve mathematics proficiency of public schools K-5 grade students and ensure that those students are proficient in mathematics at or above grade level by the end of the fifth grade by monitoring the progression of each student from one grade to the other.



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Alabama Numeracy Act

- Establishes expectations for K-5 mathematics instruction
- Provides recommendations for quality resources
- Establishes expectations for school performance



Summer Learning (ANA p. 36)

Each LEA shall provide a summer math camp for students in grades K-5 who are identified with a mathematics deficiency.



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Summer Math Camp 2023

140

LEAs
Reported Summer
Math Data

549

Sites
Hosted a Summer
Math Program

742

Schools
Sent Students to
a Summer Math
Program

Summer Math Camp 2023

10,331

Students
Attending a
Summer Math
Program

9

Days
Each Student
Attended on
Average

90,089

Days
of Summer Math
Programs Hosted
by LEAs

Summer Math Camp 2023 Statewide Growth by Grade

Grade	K	1	2	3	4	5
%	9.38%	6.75%	4.76%	4.54%	3.32%	11.11%
n	762	934	994	1115	1908	1512

*n= number of students for whom both a pre- and post-assessment score were reported.

Carter Elementary is taking a field trip and is figuring out how many buses are needed.

Carter has a total of 387 students, teachers, and parents attending and each bus holds 60 people. How many buses are needed for the trip?





What does math class look like now?





Math Classrooms Today



01

At least 60 minutes of math every day



02

Frequent discussions about math



03

Problem solving, not just memorization

“For many people, math class was **more about doing than thinking**, yet a major focus in today’s math classroom is **the development of mathematical thinkers.**”

Sue O’Connell



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Over the course of your student's elementary school years, these are some of the concepts that are developed:

- Place value – more than “carrying” or “borrowing”
- Algebraic reasoning – using a math sentence to represent a relationship or pattern



“When students memorize procedures without understanding how they work, they are less likely to be able to use them flexibly and may have less retention of the procedure.”

O’Connell, S. (2016).

Place Value

What amount does the 7 represent in each number?
How does each amount differ?

- 4712
- 147
- 7529
- 270

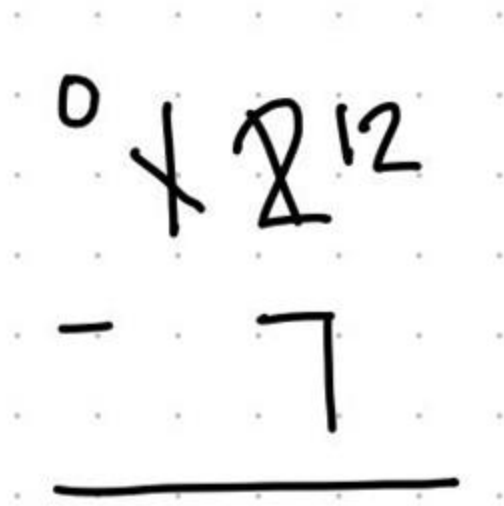


Algebraic Reasoning

- Equations communicate relationships
 - $6+2 = 5+3$
 - $17 = 7 + 10$
- Discuss the difference between 4×3 and 3×4
 - Four three-legged horses (four groups of three)
 - Three four-legged horses (three groups of four)



Algorithms



- “There is nothing wrong with shortcuts, rules, and algorithms. Many of them can be quite helpful for getting to an answer efficiently.”
- “...we also want to be certain that our students understand these shortcuts, not just using them.”
- “For that to happen:
 - We want students to be involved in **finding** the shortcuts, not just using them.
 - We want students to be able to **understand, explain, and justify why they work.**”

Strong number sense is one of the strongest indicators of a child's future success in school mathematics.

Barody & Ginsburg 1990



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With strong number sense, students can:

- Understand the concepts of more, less, smaller, and greater than.
- Develop their own strategies for solving problems relating to numbers. For example, they understand that you can take numbers apart and also put them together in different ways — $1+9$, $2+8$, $3+7$, $4+6$, $5+5$, $3+3+3+1$ are all different ways to make up ten.



With strong number sense, students can:

- Think flexibly about numbers. For example, once they know that $3+3$ is 6, they can conclude that $3+4$ must be one more.
- Understand the order of numbers (e.g., 1st, 2nd, 3rd, etc.).
- Grasp number symbols and what they mean (e.g., four is the same as 4).





Can I Count On YOU?

At Home

Count with your
student
(whole numbers
and fractions)



Hundreds Chart

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Hundreds Chart

Fill in the missing numbers

1		3		5		7			10
11		13	14				18		
	22			25	26			29	
		33		35			38		40
41			44		46	47		49	
51		53		55			58		
	62			65		67		69	70
		73	74		76		78		
81		83				87		89	90
	92		94	95			98	99	

Ask your students to explain why they solved a problem in a certain way.

- Tell me what you were thinking.
- Could you solve this in a different way?
- How do you know this is true?
- Does this always work?



At Home

Discuss the math
when reading a
book with your
student





Take your students to the grocery store, and ask them to estimate the total grocery bill – will it stay within the budget?

At School

Math class
should last at
least an hour
every day!



At School

Students should
be using
manipulatives.



At School



Encourage student discourse!

INSTEAD OF...	TRY THINKING...
I'm not good at this!	What am I missing?
I give up!	I'll use a different strategy.
<i>It's good enough.</i>	<i>Is this my best work?</i>
This is too hard.	This may take some time.
<i>I made a mistake.</i>	<i>Mistakes help me learn!</i>
I just can't do this.	I'm going to train my brain!
I'll never be that smart.	I will learn how to do this!

“If You Spell Out the Number”

Important Note:

If you can see this box, then the slide show is not playing and the reveal won't work.

Here is the solution:

If you are using PowerPoint, click on Slide Show, then click on From Current Slide.

If you are using Google Slides, click on View then Present.



How many stamps are in the vase?

As the clues appear, use the information to narrow the possibilities to a smaller set. After each clue, use estimation again to determine which of the remaining answers is the most reasonable.

Write down your first estimate. After each clue, you'll see if your estimate is still a possibility. After each clue, if it is no longer possible write down a new estimate – and be prepared to explain why you chose it.



8

51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Clue #1

The answer is a multiple of 3
between 50 and 100.

Clue #2

The answer is an odd number.

Clue #3

There is a clue on the paper.
The answer does not include the digit 8.

Clue #4

Multiply each of these numbers by 3
and eliminate those products:
21, 23, and 33.

Clue #5

The orange stamp on the top has the
letter V. If you spell out the number of
the answer, it doesn't have the letter V.



After seeing the clues, you have narrowed the possibilities to a small set of numbers. Before you see the answer, select your final estimate. Write it down, and explain to someone why you chose that number.

8



The Reveal

Click on the number.

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If you are using Google Slides, click on View then Present.

Can I Count on *You*?



At Home

- Ask “why” a student solved a problem in a certain way
- Count with students
- Read a book and talk about the math
- Discuss the math when cooking, shopping

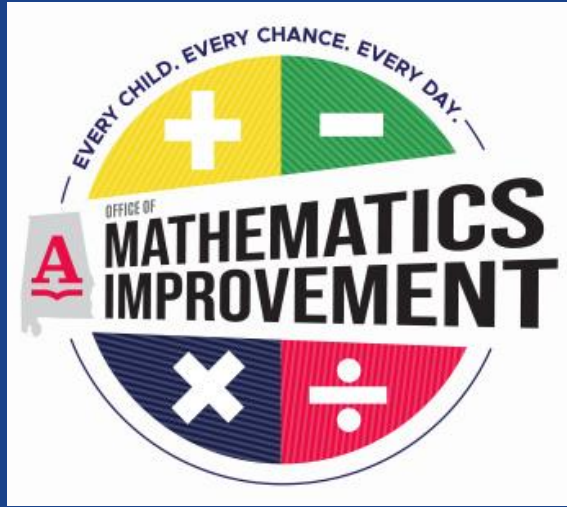
At School

- 60 minutes of math instruction daily
- Visit math camp this summer!
- Students use manipulatives
- Students talk to each other regularly





Questions?



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**Hashtags:
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#OMIgetonboard**

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