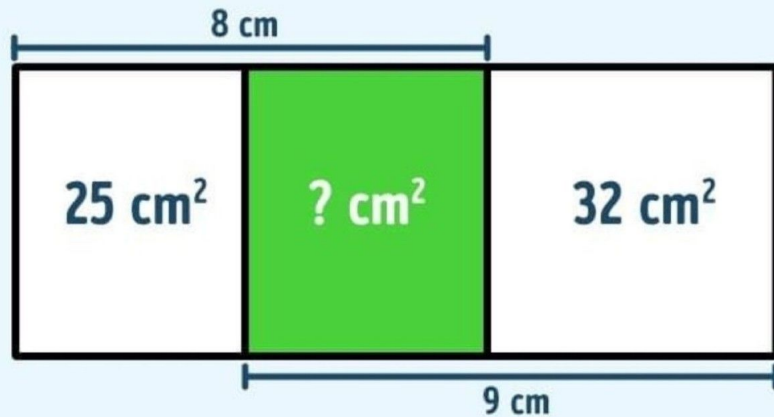


Welcome!

Engage your brain by working through one or both of these problems while we wait for all members to arrive!

Find the area
of the green figure

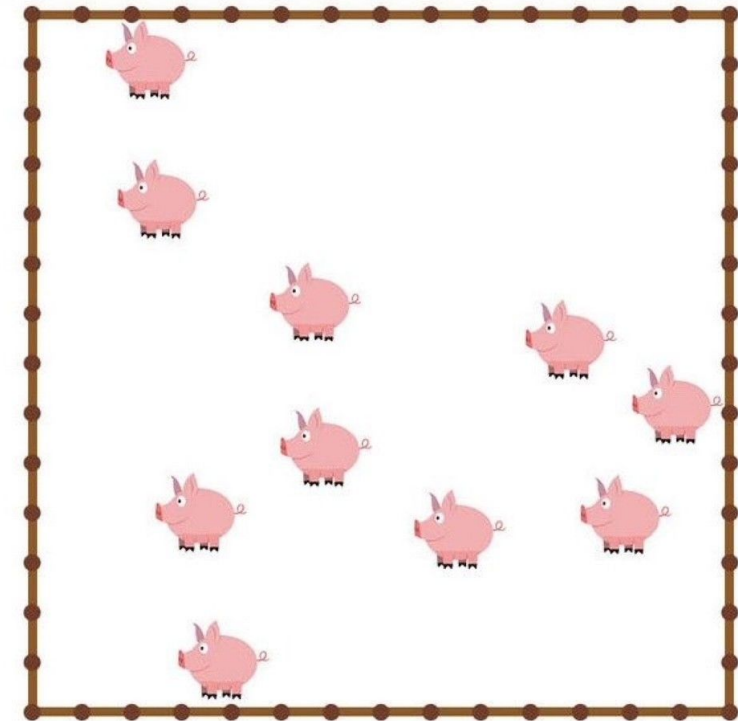


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Farmer Brown's Brain Bender #7

Use four straight lines to separate each of the pigs into their own area.



Math Curriculum Adoption K-5, 6-8, High School 2024-2026 Committee Meeting

April 10, 2025
Coronado High School

Call to Order



Roll Call

The Committee

K-5

Julie Ballard- principal
Andrew Banister- teacher
Christine Bonow- Director of Community Education
Laura Batko- teacher
Melissa Caramucci- teacher
Carrie Chapman- teacher
Sierra Connell- teacher
Edie Dolan- parent
Colleen Felix- gifted coach
Nicole Hamilton- teacher
Laura Henry- ELD coach
Amber Lindsey- teacher
Carrie Miller- teacher
Dana Moore- teacher
Karen Pescatore- teacher
Danica Pohl- special education coach
Alyson Sawkiw- teacher
Stephanie Shamy- teacher
Raquel Thomas- teacher
Kim Vallejo- teacher
Nichole Viderman- teacher
Megan Zweig- parent

6-8

Jessica Angelo- special ed mentor teacher
Adrienne Bass- teacher
Abby Brown- parent
Jesus Curie Ledesma- teacher
Sarah Dorn- parent
Nicole Fagan- gifted coach
Tamara Jagodzinski- principal
Michelle Miller- teacher
Fred Rabach- teacher
Sara Ruggeri- teacher
William Williams- teacher
Audie Wyatt- teacher

High School

Ted Anderson- teacher
Casey Boerner- teacher
Sarah Boustilla- teacher
Jacquelyn Buckley- teacher
Stephanie Carver- teacher
Kellen Castillo- teacher
Trey Checkett- community member
Jason Foster- teacher
Kelsey Maslowski- teacher
Christina Murray- teacher
Tim Reckell- community member
Gladis Roa- teacher
Mike Topczewski- teacher
Shannon Yoesle- teacher

Committee Support

Dr. Kim Dodds Keran - Director of Teaching and Learning

- Committee Co-Chair

Donna Dempsey- Math Academic Coach

- Committee Co-Chair

Carline Fried - Math Academic Coach

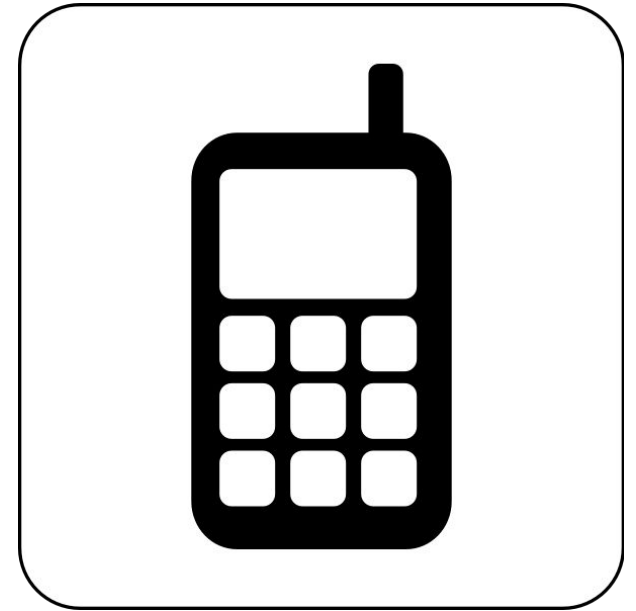
- Committee Co-Chair

Dede Johnston - Instructional Materials Coordinator

Sign In Sheets

Please record arrival time on the sign-in sheet as you arrive. Record departure time if you are leaving before the meeting officially adjourns.

Housekeeping



Agenda

Agenda for April 10, 2025

1. Call to Order
2. Welcome

Information/Discussion and Possible Action

3. Approval of Agenda - **Action Item**
4. Approval of Meeting Minutes - **Action Item**
5. Committee Norms
6. Brain Teaser Share-Out
7. A Focus on Content Standards
8. Data Dive
9. Arizona State Standards
10. The ADEs Balanced Approach to Learning
11. Our Current Resources and the Balanced Approach
12. Refining Our Criteria
13. Future Meetings

Action Item

Discussion and Approval of Meeting Agenda for April 10, 2025

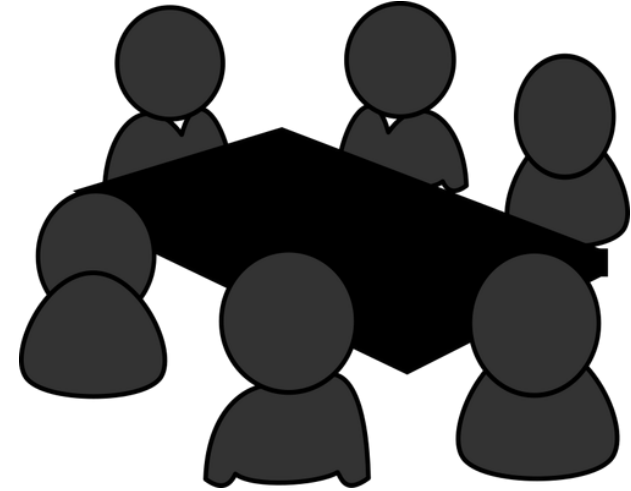
Meeting Minutes

Action Item

Discussion and Approval of Meeting Minutes for April 3, 2025

Committee Norms

Committee Norms



Establishing norms:

- **Encourages behaviors that allow groups to work together successfully.**
- **Allows groups to dialogue, engage productively in conflict, discuss and decide, invent and problem solve.**
- **Make it safe to examine one's practice and talk about difficult to discuss topics.**

Key Question:

How must we conduct ourselves to allow us to work together most successfully to accomplish our goals?

Norms

Listen to
understand
and ask
questions for
clarification.

Be open to
new ideas.

Invite and
welcome the
contributions of
every member.

Support the
group's
recommendation
after consensus
is reached.

Be mindful of
how often and
how long you
speak.

Questions and
challenges are
welcomed.
Question and
challenge the
idea, not the
person.

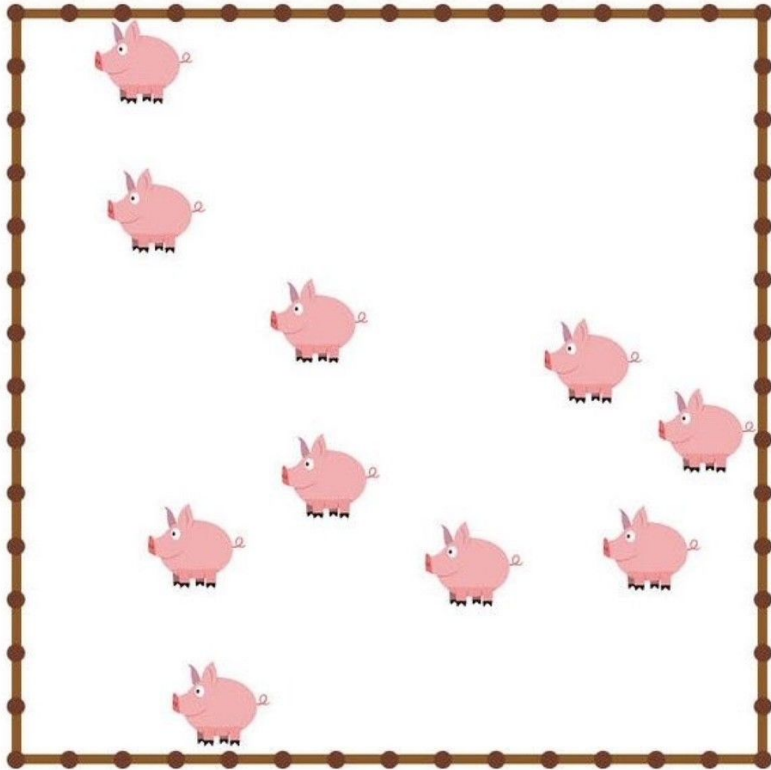
Be fully
present.

Brain Teaser Share Out

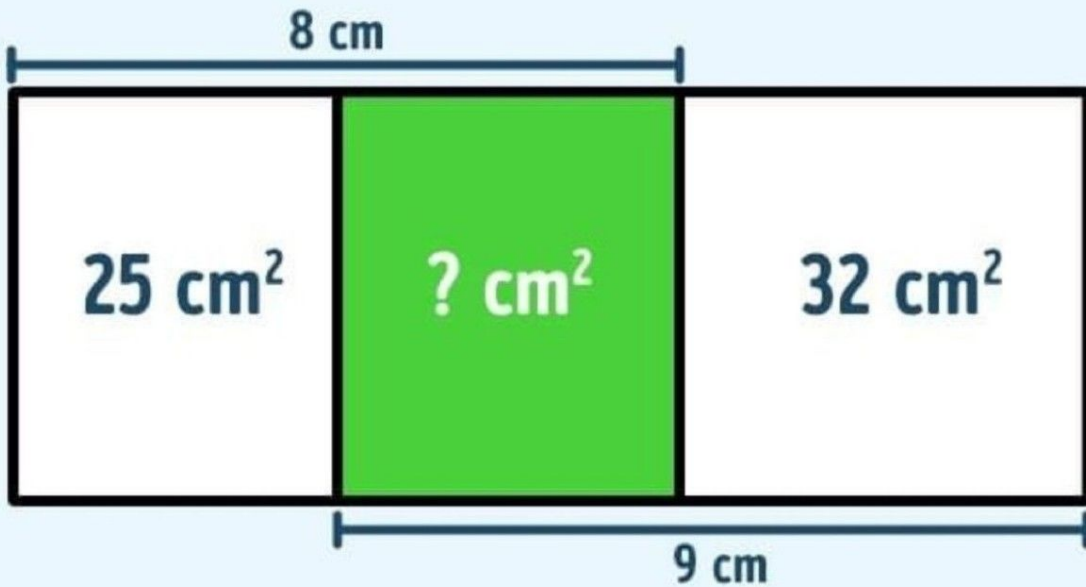


Farmer Brown's Brain Bender #7

Use four straight lines to separate each of the pigs into their own area.



Find the area
of the green figure



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Data Dive

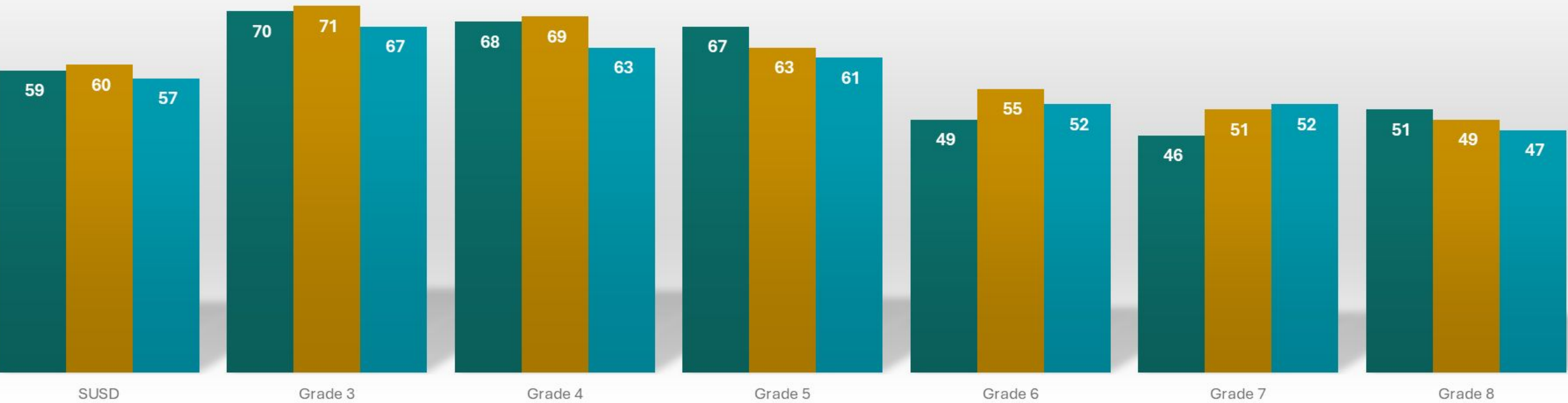
SUSD WIGs and KPIs – 2024-25

Mathematics	Attendance	Enrollment
By May 2025, SUSD students across each cohort (grades 4-8) will demonstrate growth across achievement bands with an increase of 3% as measured by proficiency in AASA mathematics.	By May of 2025, SUSD will increase the average daily attendance of all students from 92.69% to 93.0	From May 23, 2024 to the 100th day in fiscal year 2024-2025, enrollment in grades 1-12 will increase a minimum of 1% (not including early graduates)

Key Performance Indicators (KPIs) are the critical (key) indicators of progress toward an intended result. KPIs provide a focus for strategic and operational improvement, creating an analytical basis for decision making and focusing attention on what matters most.

- Can be nationally normed/benchmarked * Few exceptions

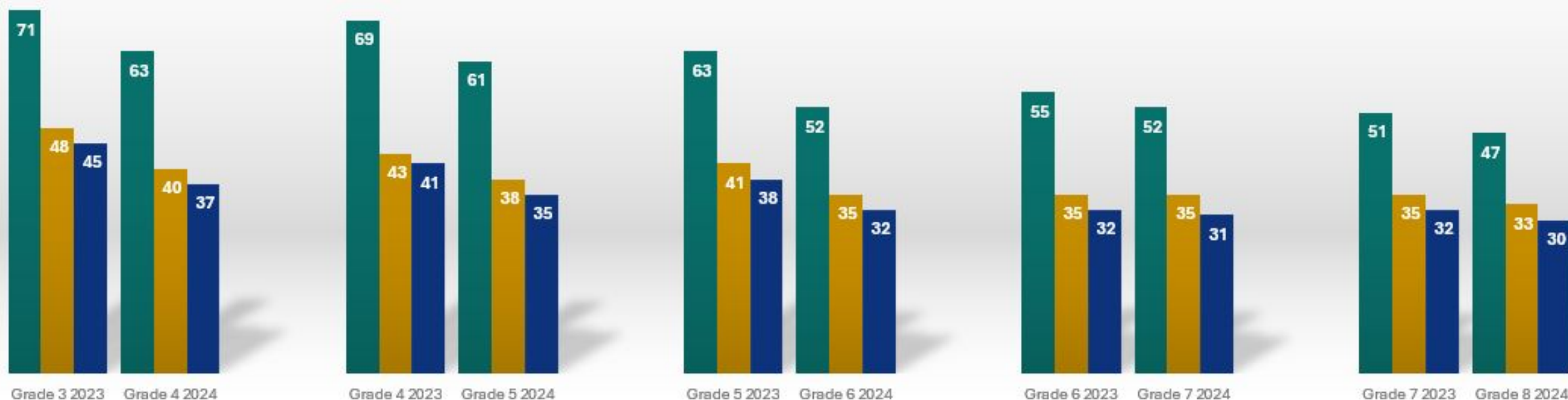
2022-2024 AASA Math
Passing Percentage by Grade

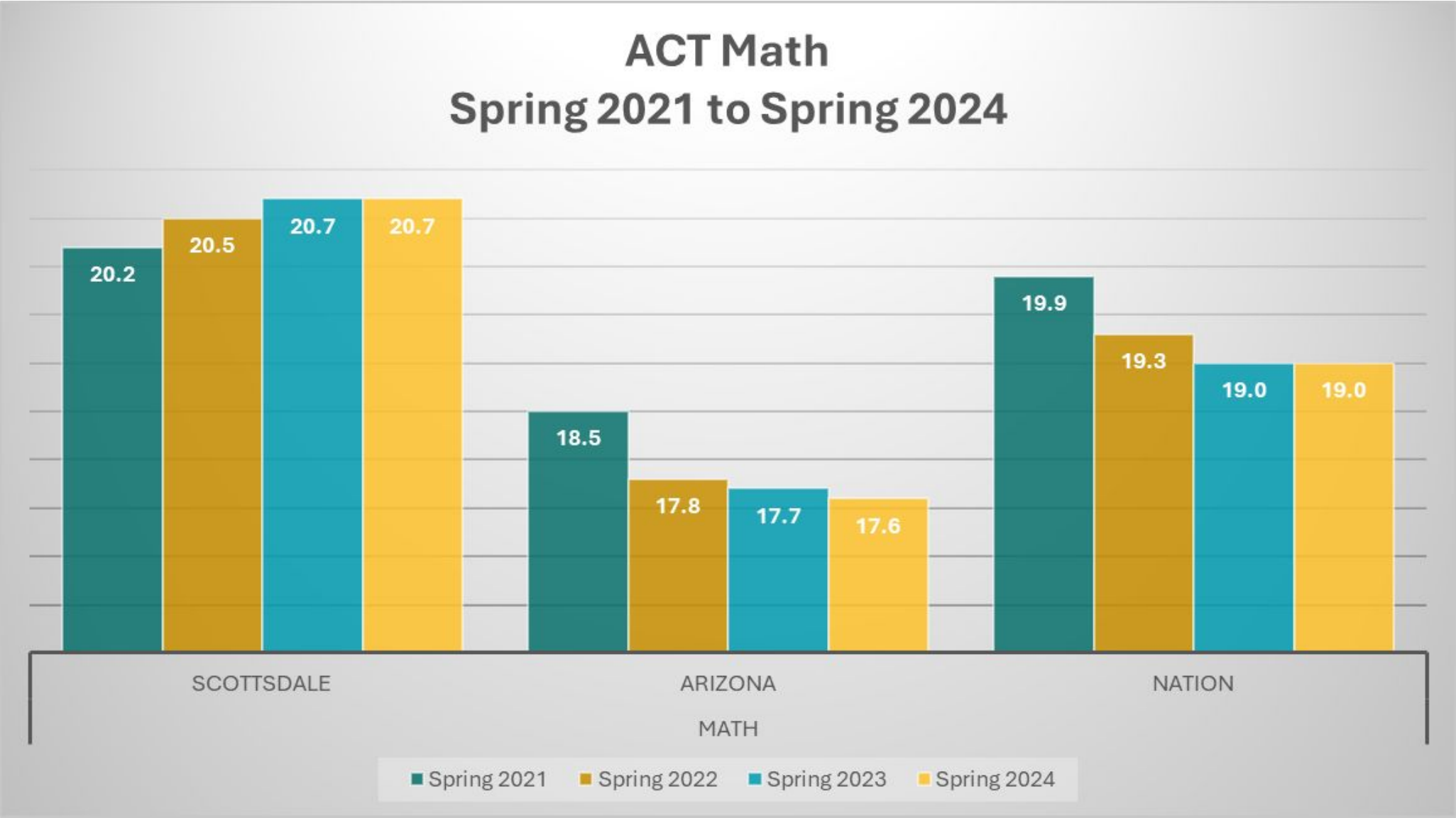


Spring 2023 and 2024 AASA Math Cohort

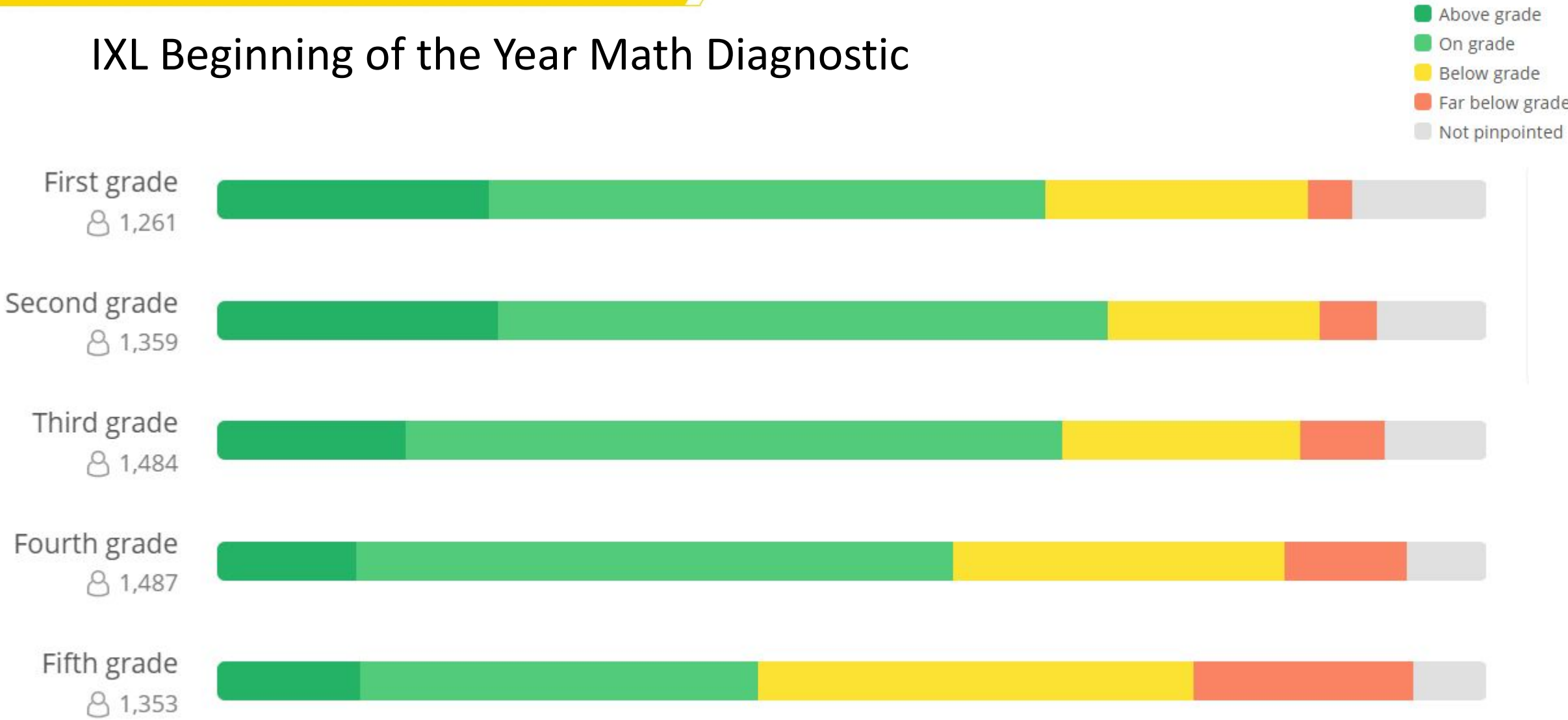


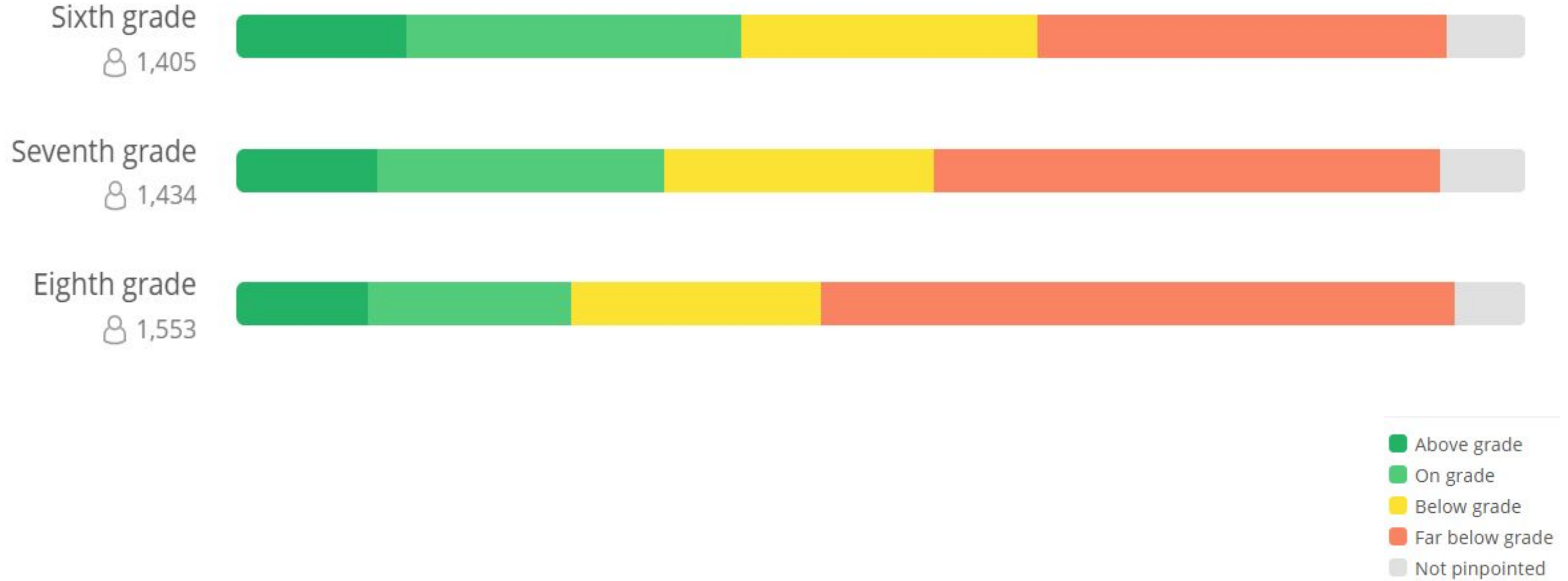
AASA Math Cohort Scores
Arizona

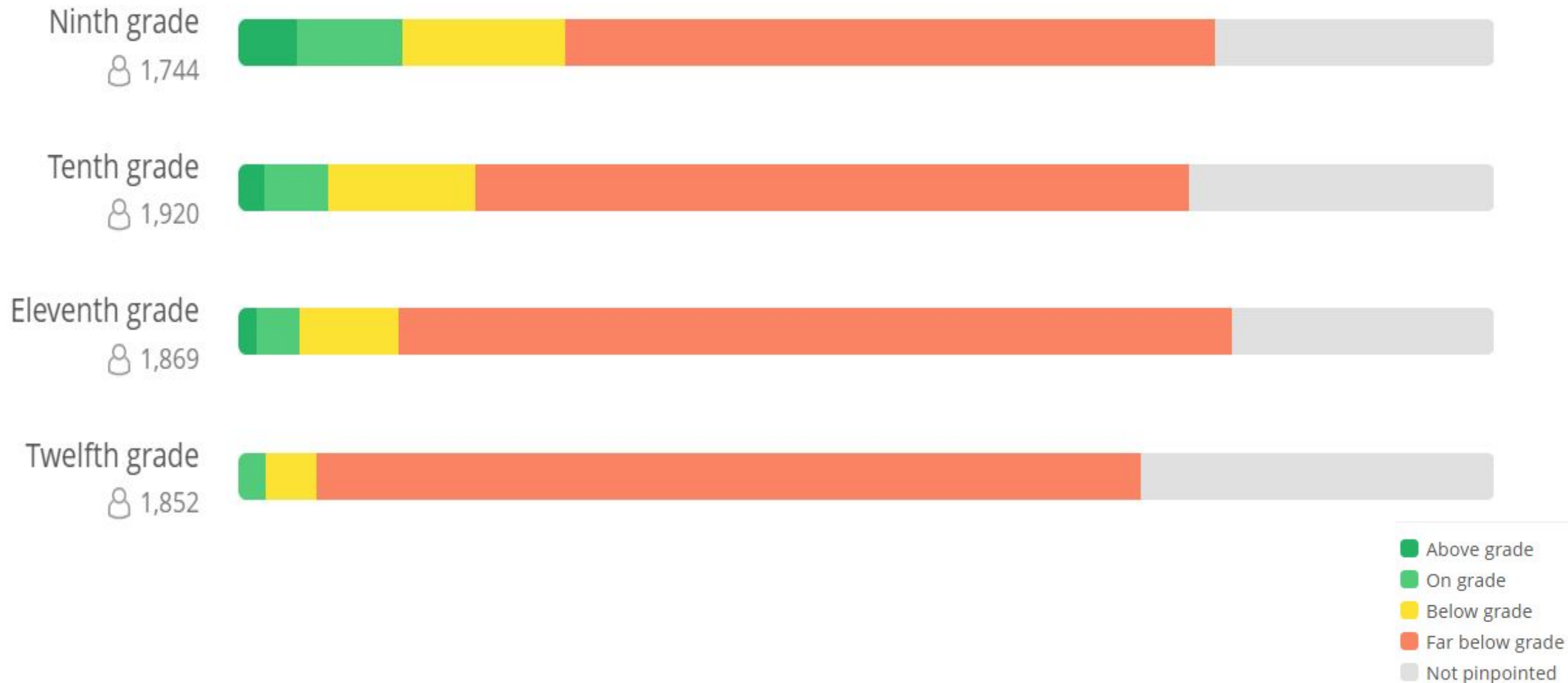




IXL Beginning of the Year Math Diagnostic







A Focus on Content Standards

Arizona State Standards

What the Arizona Mathematics Standards Are NOT

The standards are not the curriculum.

While the Arizona Mathematics Standards may be used as the basis for curriculum, the Arizona Mathematics Standards are not a curriculum. Therefore, identifying the sequence of instruction at each grade – what will be taught and for how long – requires concerted effort and attention at the district and school levels. The standards do not dictate any particular curriculum. Curricular tools, including textbooks, are selected by the district/school and adopted through the local governing board. The Arizona Department of Education defines standards, curriculum, and instruction as:

Standards – **What** a student needs to know, understand, and be able to do by the end of each grade/course. Standards build across grade levels in a progression of increasing understanding and through a range of cognitive-demand levels.

Curriculum – The resources used for teaching and learning the standards. Curricula are adopted at the local level by districts and schools. Curriculum refers to the **how** in teaching and learning the standards.

Instruction – The methods used by teachers to teach their students. Instructional techniques are employed by individual teachers in response to the needs of all the students in their classes to help them progress through the curriculum in order to master the standards. Instruction refers to the **how** in teaching and learning the standards.

The standards are not instructional practices.

While the Arizona Mathematics Standards define the knowledge, understanding, and skills that need to be effectively taught and learned for *each and every* student to be college and workplace ready, the standards are not instructional practices. The educators and subject matter experts who worked on the Mathematics Standards Subcommittee and Workgroups ensured that the Arizona Mathematics Standards are free from embedded pedagogy and instructional practices. The Arizona Mathematics Standards do not define how teachers should teach and must be complimented by well-developed, aligned, and appropriate curriculum materials, as well as effective instructional practices.

The standards do not necessarily address students who are far below or far above the grade level.

No set of grade-specific standards can fully reflect the great variety in abilities, needs, learning rates, and achievement levels of students in any given classroom. The Arizona Mathematics Standards do not define the intervention methods or materials necessary to support students who are well below or well above grade level expectations. It is up to the teacher, school, and district to determine the most effective instructional methods and curricular resources and materials to meet all students' needs.

Standards Progression K-Alg 2

Grade Level or High School Course												
K	1	2	3	4	5	6	7	8	Algebra 1	Geometry	Algebra 2	
Standards for Mathematical Practice												
Counting & Cardinality						Ratios & Proportional Relationships	Functions	Functions			Functions	
Operations & Algebraic Thinking					Expressions & Equations			Algebra			Algebra	
Number & Operations in Base Ten					The Number System			Number & Quantity			Number & Quantity	Number & Quantity
			Fractions									
Geometry					Geometry				Geometry			
Measurement & Data					Statistics & Probability			Statistics & Probability			Statistics & Probability	
Domains									Conceptual Categories			

State Standard Resources

[Introduction to the Arizona Mathematics Standards](#)

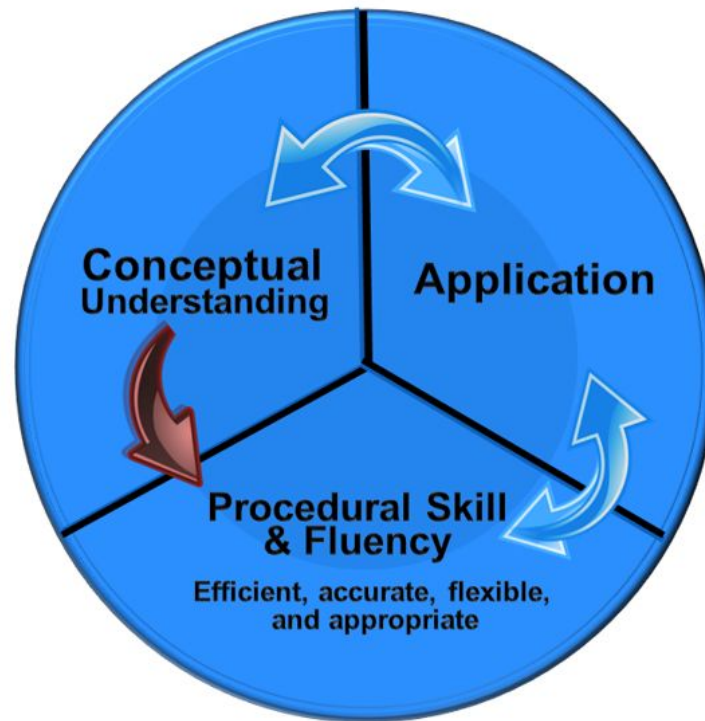
<u>Kindergarten Standards</u>	<u>Sixth Grade Standards</u>
<u>First Grade Standards</u>	<u>Seventh Grade Standards</u>
<u>Second Grade Standards</u>	<u>Eighth Grade Standards</u>
<u>Third Grade Standards</u>	<u>Algebra 1 Standards</u>
<u>Fourth Grade Standards</u>	<u>Geometry Standards</u>
<u>Fifth Grade Standards</u>	<u>Algebra II</u>

[SUSD Curriculum Maps](#)

The ADE's Balanced Approach to Learning

Balanced Approach

Balanced approach to rigor found in the Arizona Mathematics Standards



INTRODUCTION

Fluency

Fluency in Mathematics

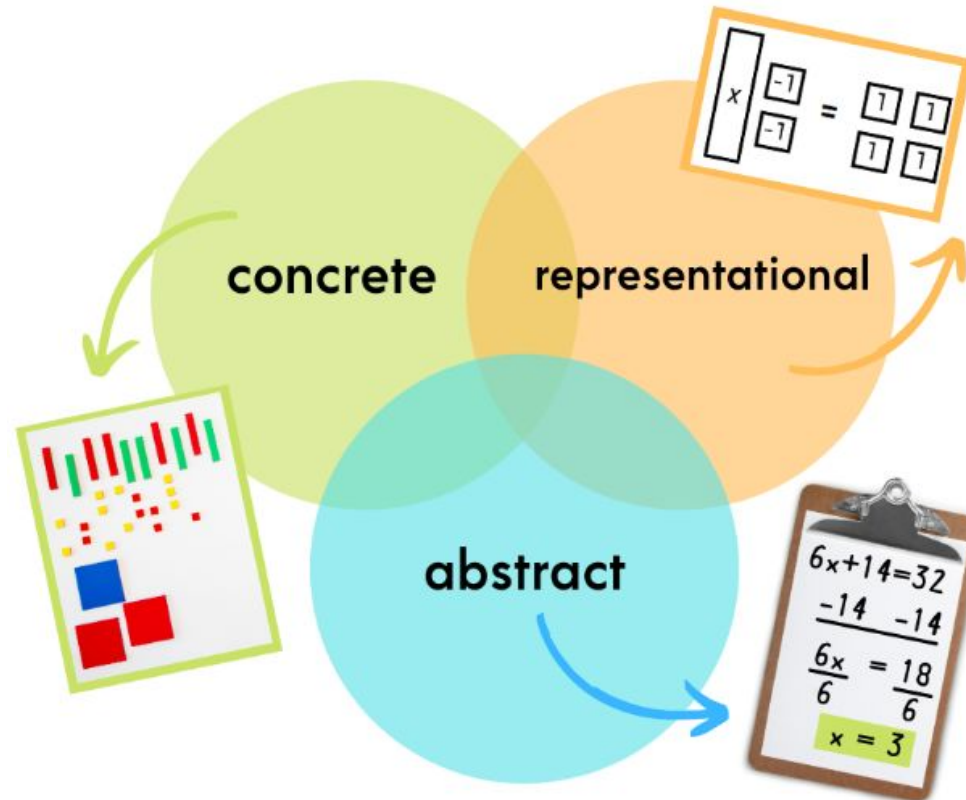
Wherever the word *fluently* appears in a content standard, the word includes *efficiently, accurately, flexibly, and appropriately*. Being fluent means that students are able to choose flexibly among methods and strategies to solve contextual and mathematical problems, they understand and are able to explain their approaches, and they are able to produce accurate answers efficiently.^[1]

- **Efficiency**—carries out easily, keeps track of sub-problems, and makes use of intermediate results to solve the problem.
- **Accuracy**—reliably produces the correct answer.
- **Flexibility**—knows more than one approach, chooses a viable strategy, and uses one method to solve and another method to double-check.
- **Appropriately**—knows when to apply a particular procedure.

Table 3. Fluency Expectations Across All Grade Levels.

Grade	Coding	Fluency Expectations
K	K.OA.A.5	Fluently add and subtract within 5.
1	1.OA.C.6	Fluently add and subtract within 10.
2	2.OA.B.2 <u>2.NBT.B.5</u>	Fluently add and subtract within 20. By the end of 2 nd grade, know from memory all sums of two one-digit numbers. Fluently add and subtract within 100.
3	3.NBT.A.2 3.OA.C.7	Fluently add and subtract within 1000. Fluently multiply and divide within 100. By the end of 3 rd grade, know from memory all multiplication products through 10 x 10 and division quotients when both the quotient and divisor are less than or equal to 10.
4	4.NBT.B.4	Fluently add and subtract multi-digit whole numbers using a standard algorithm.
5	5.NBT.B.5	Fluently multiply multi-digit whole numbers using a standard algorithm.
6	6.NS.B.2 6.NS.B.3 6.EE.A.2	Fluently divide multi-digit numbers using a standard algorithm. Fluently add, subtract, multiply, and divide multi-digit decimals using a standard algorithm for each operation. Write, read, and evaluate algebraic expressions.
7	<u>7.NS.A.1.d</u> 7.NS.A.2.c <u>7.EE.B.4.a</u>	Apply properties of operations as strategies to add and subtract rational numbers. Apply properties of operations as strategies to multiply and divide rational numbers. Fluently solve one-variable equations of the form $px + q = r$ and $p(x + q) = r$
8	8.EE.C.7	Fluently solve linear equations and inequalities in one variable.
Algebra 1	A1.F-IF.C.7 A1.A-SSE.A.2	Graph functions expressed symbolically and show key features of the graph. Use structure to identify ways to rewrite numerical and polynomial expressions.
Geometry	G.G-SRT.B.5 G.G-GPE.B.4 <u>G.SRT.C.8</u>	Use congruence and similarity criteria to prove relationships in geometric figures and solve problems utilizing a real-world context. Use coordinates to algebraically prove or disprove geometric relationships. Use trigonometric ratios (including inverse trigonometric ratios) and the Pythagorean Theorem to find unknown measurements in right triangles utilizing real-world context.
Algebra 2	A2.A-SSE.A.2 A2.F-BF.B.3 A2.A-REI.B.4	Use the structure of an expression to identify ways to rewrite it. Identify the effect on a graph when changing $f(x)$. Fluently solve quadratic equations in one variable.

Concrete-Representational-Abstract (CRA)



Content Emphasis of Arizona Mathematics Standards:

The content emphasis provides planning guidance regarding the major and supporting clusters found within the standards. The Major and Supporting Clusters align with the blueprint for AASA. Please consider the following designations when planning an instructional scope for the academic year.

Arizona considers Major Clusters ● as groups of related standards that require greater emphasis than some of the other standards due to the depth of the ideas and the time it takes to master these groups of related standards.

Arizona considers Supporting Clusters ▲ as groups of related standards that support standards within the Major Cluster in and across grade levels. Supporting Clusters also encompass pre-requisite and extension of grade level content.

Arizona is suggesting instructional time encompass a range of at least 65%-75% for Major Clusters and a range of 25%-35% for Supporting Cluster instruction. See [introduction](#), page 12 for more information.

BALANCE IN MATH LEARNING



- **Conceptual Understanding**
In math education, conceptual understanding means grasping the "why" behind mathematical ideas, not just the "how," enabling students to apply knowledge flexibly and make connections between concepts, rather than just memorizing procedures.
- **Procedural Skill and Fluency**
The ability to apply mathematical procedures efficiently, flexibly, and accurately, while also being able to transfer, build, and modify procedures as needed.
- **Application**
Applying math to real-world situations helps students connect abstract concepts to tangible problems, making learning more meaningful and easier to grasp.

Our Current Resources and the Balanced Approach

Find a standard in our current resource

Grade Level or High School Course												
K	1	2	3	4	5	6	7	8	Algebra 1	Geometry	Algebra 2	
Standards for Mathematical Practice												
Counting & Cardinality						Ratios & Proportional Relationships	Functions	Functions			Functions	
Operations & Algebraic Thinking						Expressions & Equations		Algebra			Algebra	
Number & Operations in Base Ten						The Number System		Number & Quantity		Number & Quantity	Number & Quantity	
			Fractions									
Geometry						Geometry				Geometry		
Measurement & Data						Statistics & Probability		Statistics & Probability			Statistics & Probability	
Domains									Conceptual Categories			

Points to Consider:

Does our current resource include:

- ☐ Standard Alignment
- ☐ A Learning objective
- ☐ A conceptual activity of element
- ☐ A procedural/fluency activity or element
- ☐ An application activity
- ☐ Supports for Gifted, Special Education and English Language Learners
- ☐ A plan on how to differentiate for Tier 1, Tier 2, and Tier 3 students.

Points to Consider	Positives - What works well here?	Changes - What could be improved?
☐ Standard Alignment		
☐ Learning Objectives		
☐ Conceptual		

Refining Our Criteria

Categorized List From Focused Lenses

- Consider your content standards- would you add anything to the list?
- Refine the lists by combining or rewording
- Highlight the most important parts of each category.

1. Teaching Methodology & Approaches

- Modern Classroom
- Teaching how to solve word problems
- Models
- Hands-on activities
- Mix of function problems – error analysis, draw it out
- Differentiated tasks – extension and remediation
- Progression in difficulty
- Exploration into concept
- Concept maps (unit, lesson, other views)
- Versatility
- Conceptually driven with a good balance of procedural fluency
- Variety of teaching methods

2. Student-Centered Learning

- Dual language components
- Opportunity to correct and learn from mistakes
- Learn with examples and videos
- Ease of differentiation
- Fits diverse needs of students
- Exploration and leadership opportunities
- Students' self-reflection and self-assessment
- Student engagement opportunities, resources, and ideas
- Productive struggle
- Connection to future applications or real world
- Connection to soft skills
- Entertaining tasks, involvement
- Students' workbooks

Future Meetings

Next Meeting

Thursday April 17, 2025 from 4:00 - 6:00 at Coronado High School.

Meeting adjourned!

