Semi-Annual Report

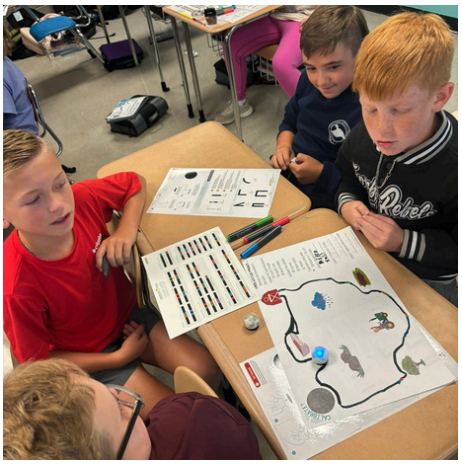
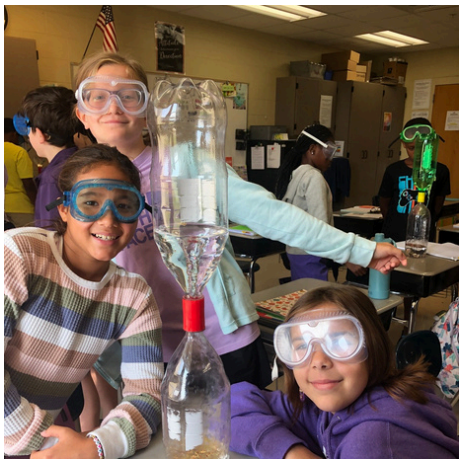
ALABAMA STATE DEPARTMENT OF EDUCATION

2024/2025 ERIC G. MACKEY, Ed. D. STATE SUPERINTENDENT

Alabama Math, Science, and Technology Initiative (AMSTI)

Prepared for:
Chairs of Senate F&TE and House WM&E
Permanent Joint Legislative Committee on Finances & Budgets
Deputy Director of Legislative Services Agency-Fiscal Division

Statistics in this report are from August 1, 2024 - December 31, 2024 unless otherwise noted.


BUC

Aa Bb Cc Dd Ee Ff Gg Hh

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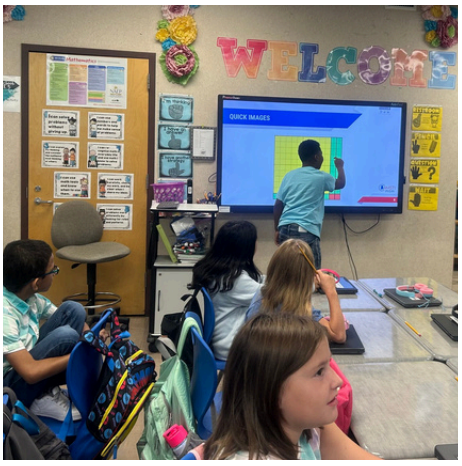
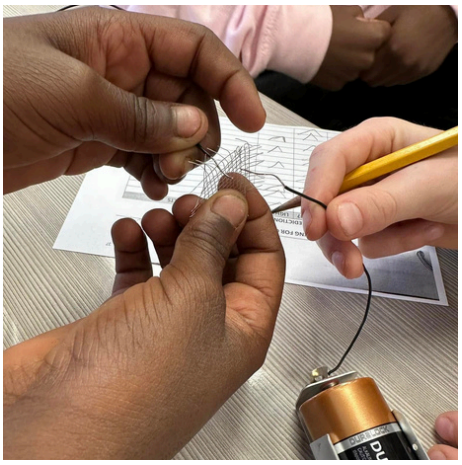

WELCOME

START
STOP




Learning by Doing
AMSTI
www.amsti.org
AMSTI for All

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Accomplishments

- Mentored an increased number of Building-Based Math Coaches funded by the Office of Mathematics Improvement (OMI)
    - Number increased from 364 in 2023-2024 to 442 in 2024-2025
    - Expansion increased the overall impact of AMSTI regional K-5 math specialists, it also increased their workload
- Increased support of K-5 mathematics to include ***58 regional K-5 math mentoring specialists*** **funded by AMSTI** and ***32 regional K-5 math mentoring specialists funded by OMI*** for the 2024-2025 academic year
    - Continued to support both AMSTI and OMI schools without any additional funding earmarked specifically for AMSTI

- Created and offered more than **83** professional learning opportunities (PLOs) that qualify as TEAMS professional development in Math, Science, and DLCS to help TEAMS teachers meet contract requirements
    - Planned for continued development of new and innovative PLOs to meet need for TEAMS professional learning
    - Developed an approval pipeline to review and process TEAMS credit to streamline TEAMS offerings and reporting for the ALSDE and LEAs

TEAMS

Accomplishments (continued)

- Collaborated with the Alabama Reading Initiative and an Alabama-based media company to create a collection of 15 high-quality videos highlighting best practices in K-5 math
    - Audience: families, teachers, and math coaches
    - Current View Count: 2,596
    - Location AMSTI YouTube channel

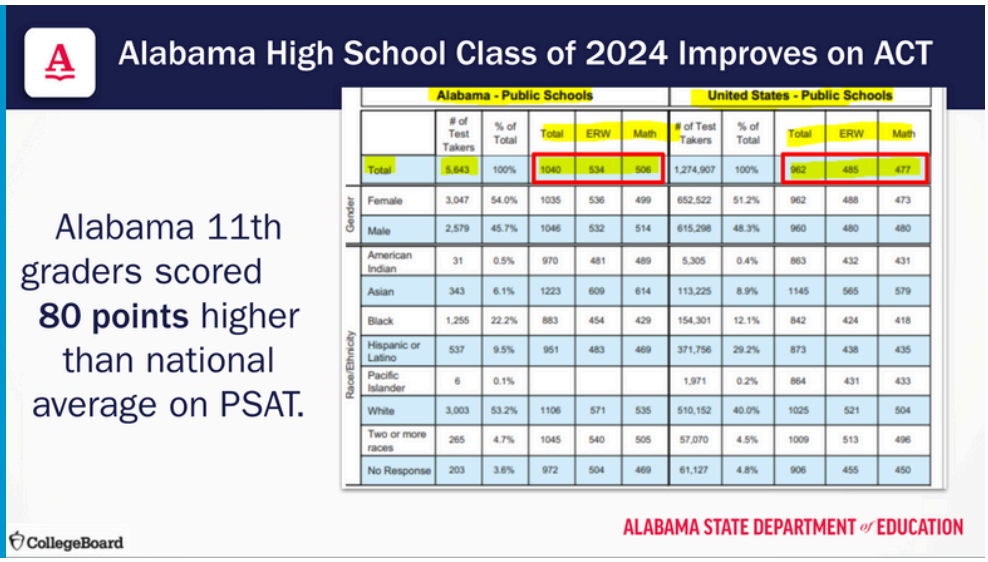
2,596 views

- Partnered with Alabama Learning Exchange (ALEX) to unpack content standards for the *2023 Alabama Course of Study: Science*
- Evaluated and selected materials for science kits and created professional learning modules to support the *2023 Alabama Course of Study: Science*

ALABAMA LEARNING EXCHANGE
Create. Collaborate. Cultivate.

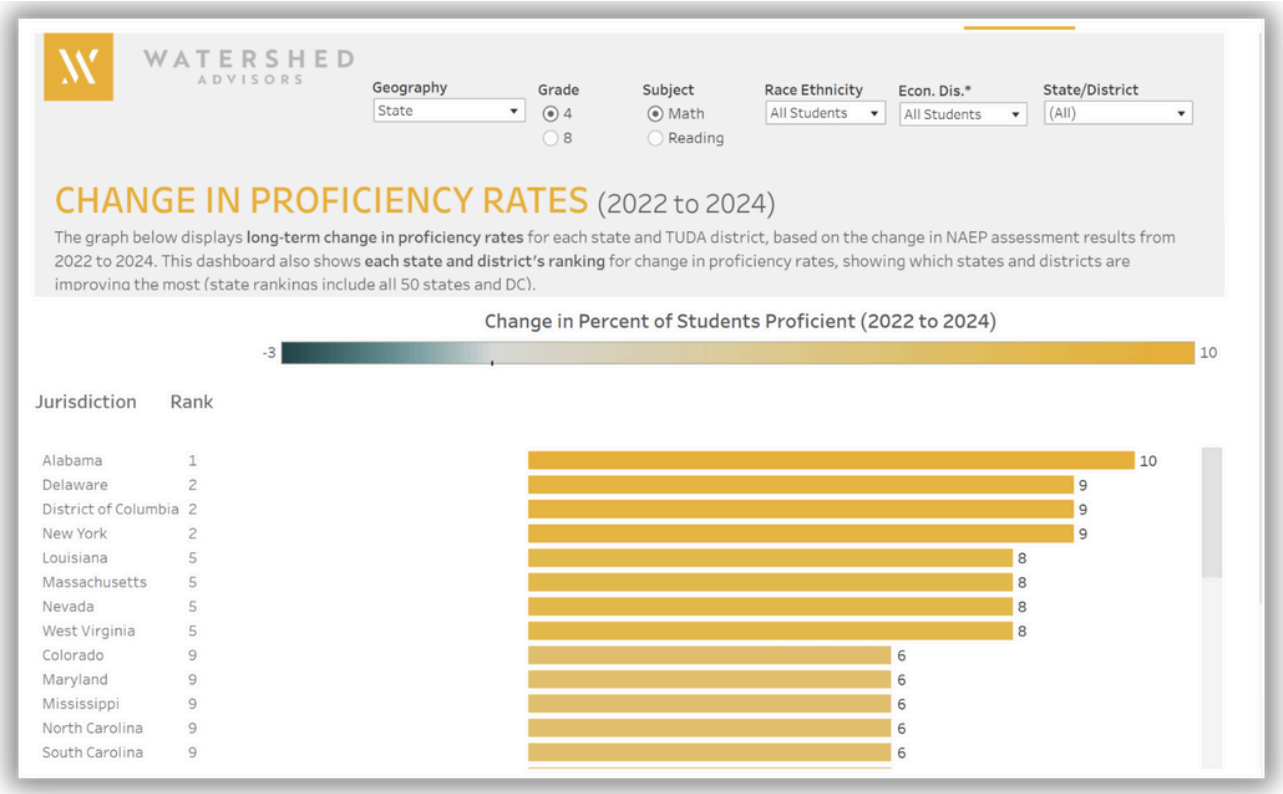
Accomplishments (continued)

- Strengthened K-12 mathematics instruction through comprehensive training, high-quality resources, and on-site support, leading to measurable improvements in state and national assessment data



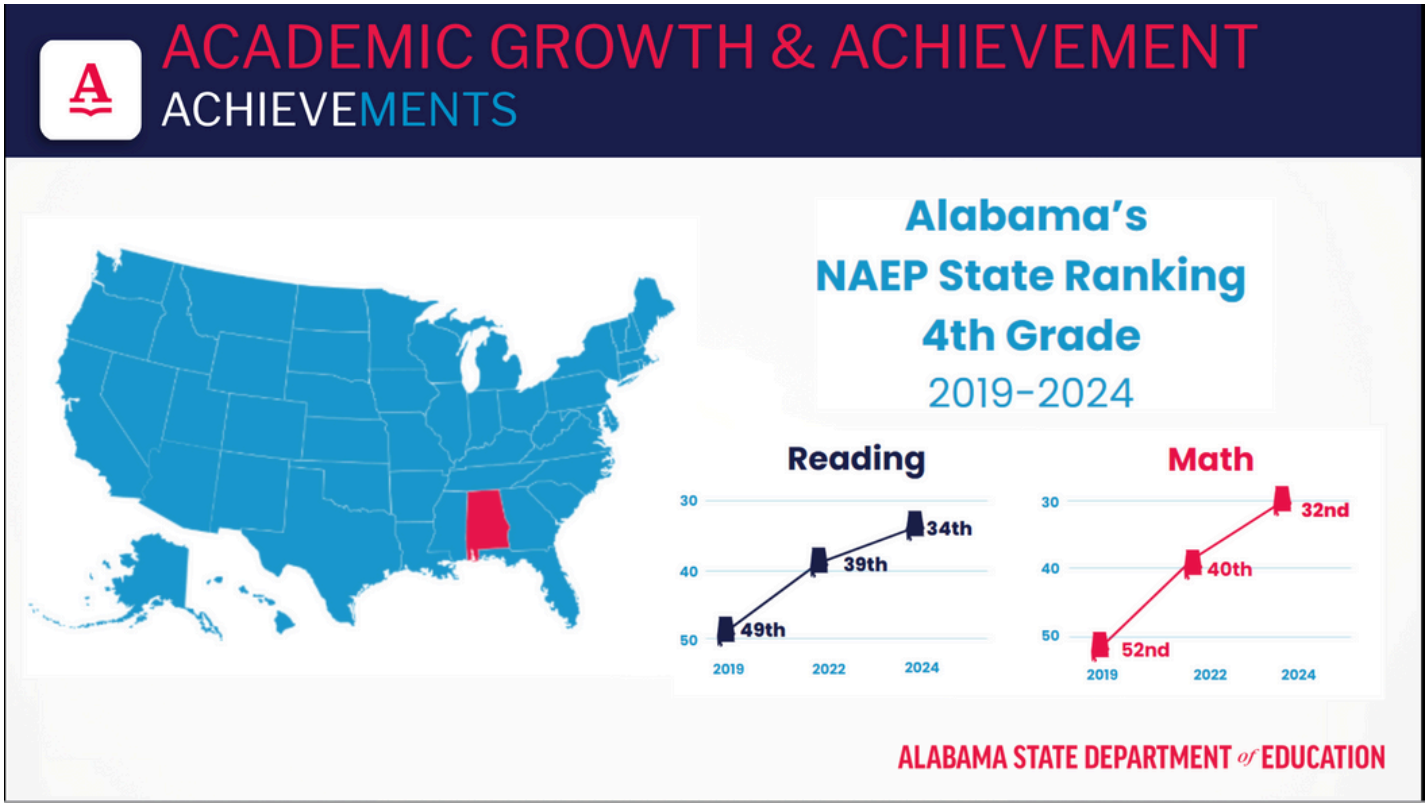
		Alabama - Public Schools					United States - Public Schools				
		# of Test Takers	% of Total	Total	ERW	Math	# of Test Takers	% of Total	Total	ERW	Math
	Total	5,643	100%	1040	534	506	1,274,907	100%	962	485	477
Gender	Female	3,047	54.0%	1035	536	499	652,522	51.2%	962	488	473
	Male	2,579	45.7%	1046	532	514	615,298	48.3%	960	480	480
Race/Ethnicity	American Indian	31	0.5%	970	481	489	5,305	0.4%	863	432	431
	Asian	343	6.1%	1223	609	614	113,225	8.9%	1145	565	579
	Black	1,255	22.2%	883	454	429	154,301	12.1%	842	424	418
	Hispanic or Latino	537	9.5%	951	483	469	371,756	29.2%	873	438	435
	Pacific Islander	6	0.1%				1,971	0.2%	864	431	433
	White	3,003	53.2%	1106	571	535	510,152	40.0%	1025	521	504
	Two or more races	265	4.7%	1045	540	505	57,070	4.5%	1009	513	496
	No Response	203	3.6%	972	504	469	61,127	4.8%	906	455	450

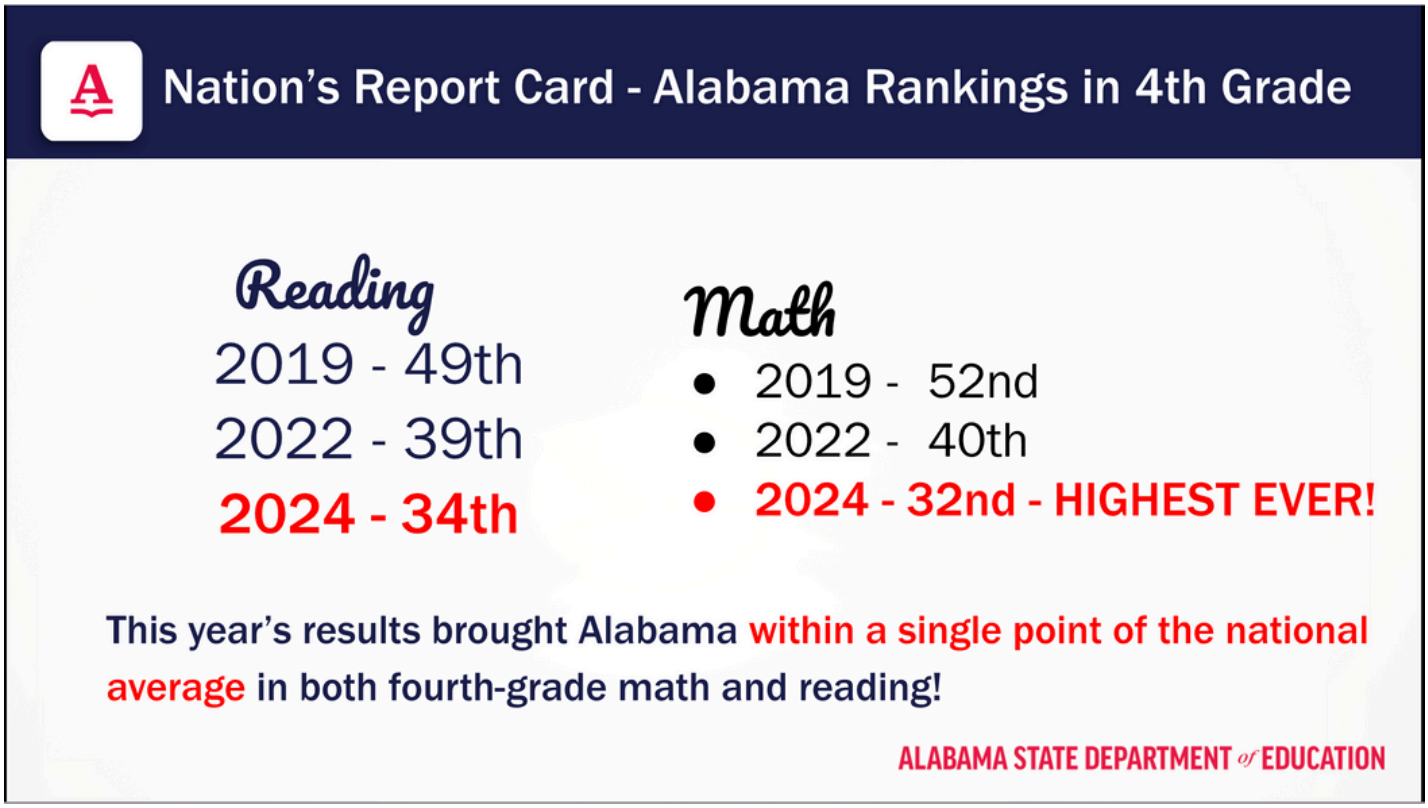
- Empowered teachers through professional learning, in-school support, and high-quality classroom materials, helping Alabama to become the only state in the nation to surpass pre-pandemic levels of mathematics achievement



Accomplishments (continued)

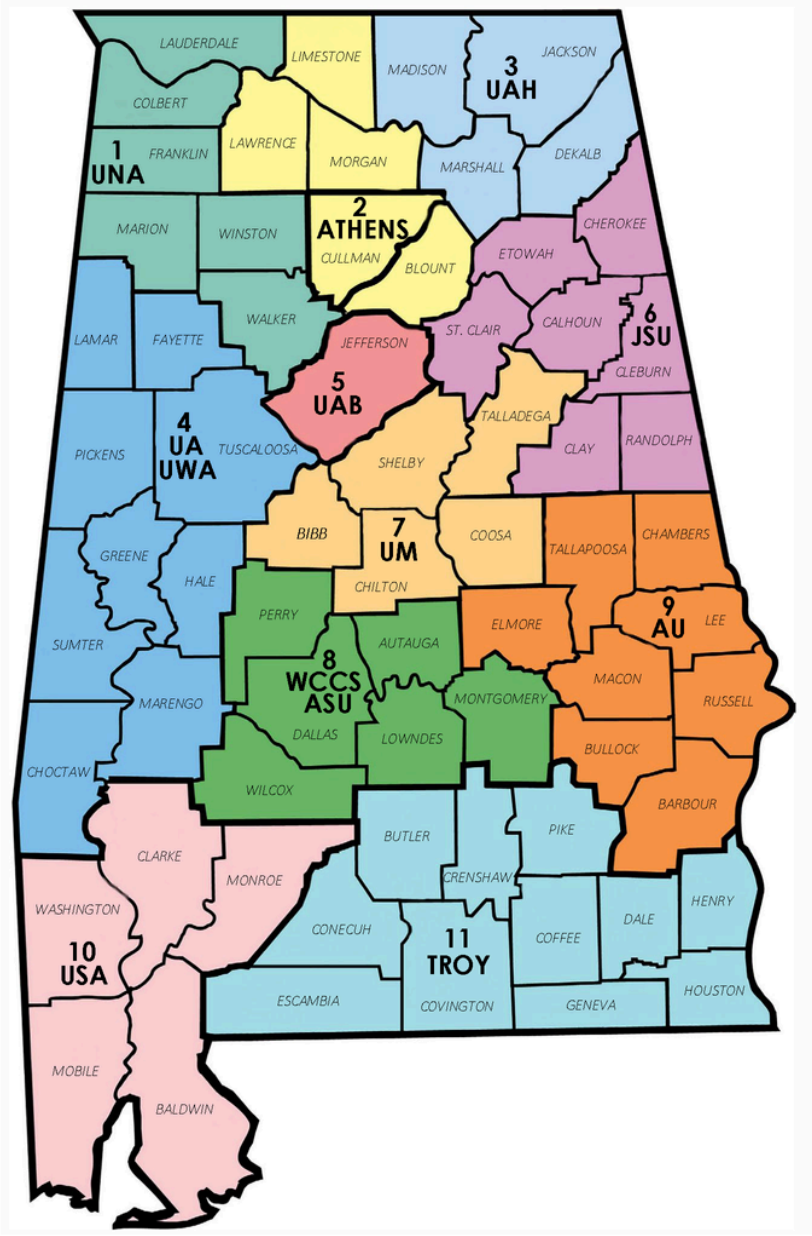
- Earned national recognition for sustained student growth in academic achievement, reflecting two decades of dedicated investment in professional learning, instructional support, and high-quality classroom materials





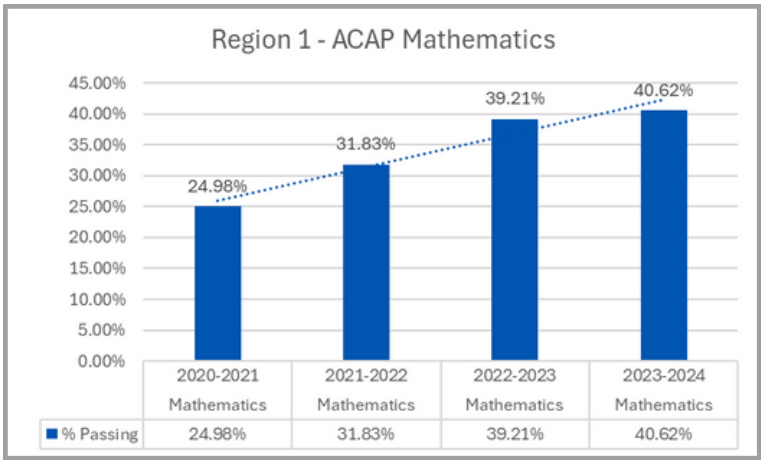
Data by Regional Inservice Center (RIC)

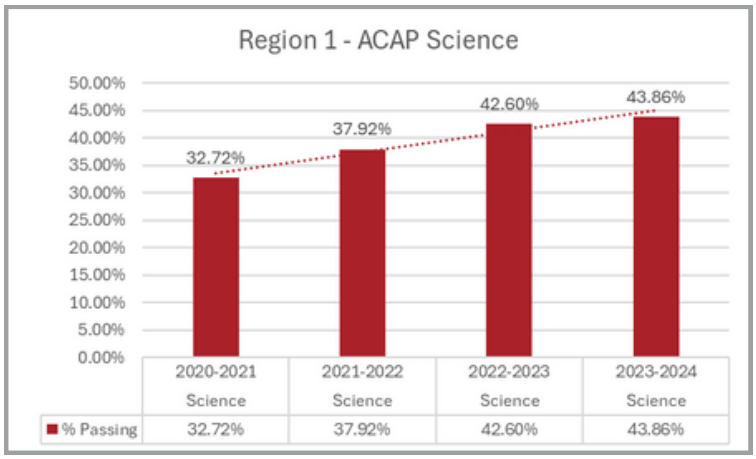
The graphs on pages 5-8 illustrate trends in math and science performance on the ACAP Summative, showing the percentage of students on or above grade level from 2020-2021 through 2023-2024. Pages 9-12 display the average scores for the ACT Math and ACT Science tests. Each graph represents all tested students across all grade levels tested within each inservice center region, followed by statewide combined data for each subject.

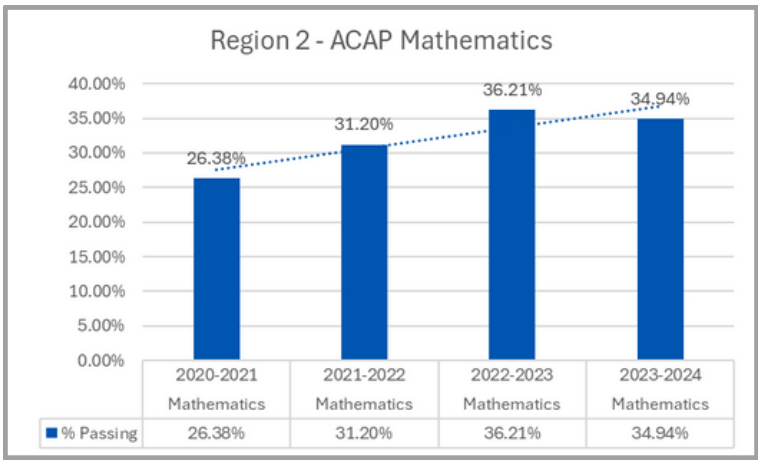


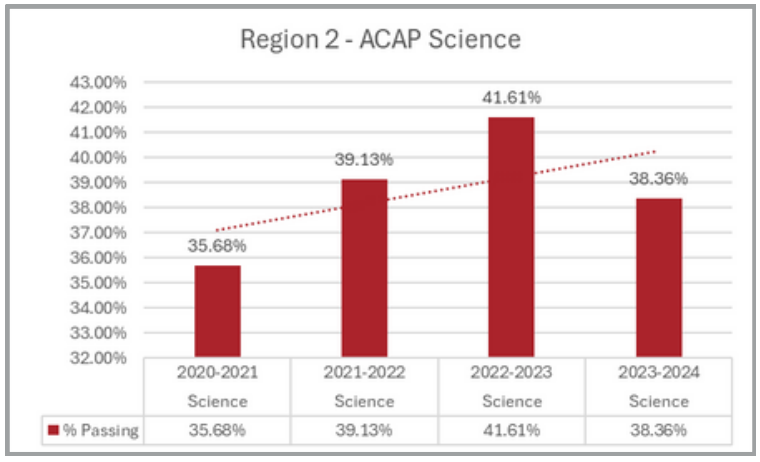
https://bitly.amsti.org/RIC

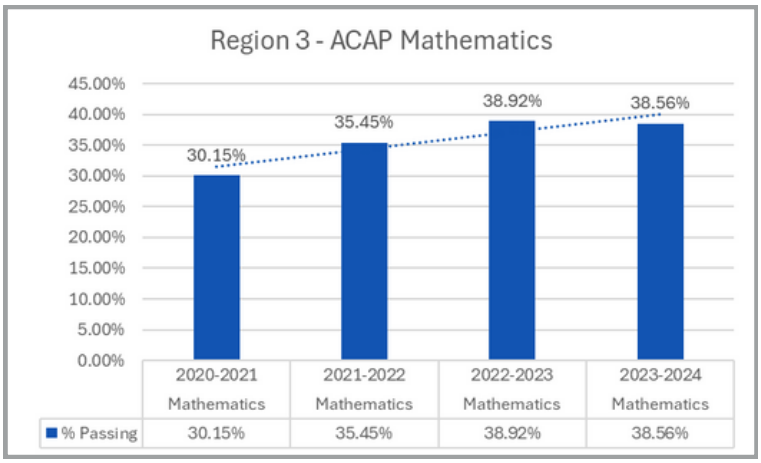
ACAP Data by RIC

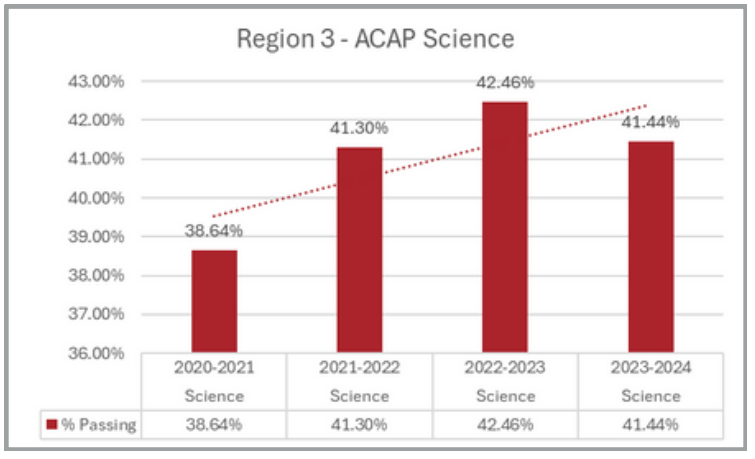












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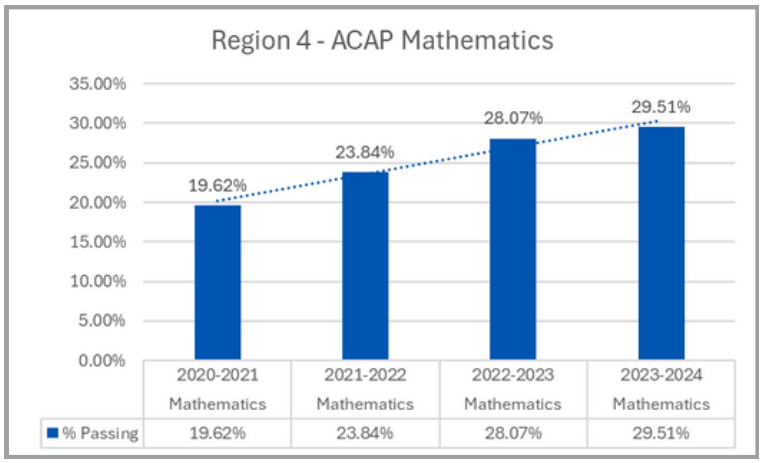

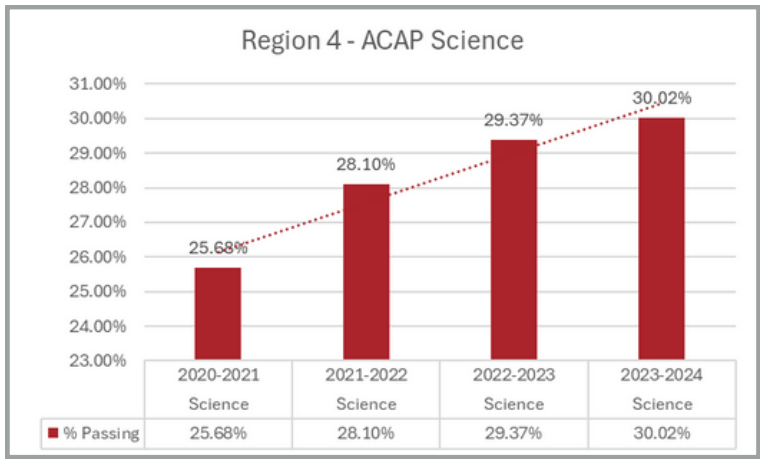

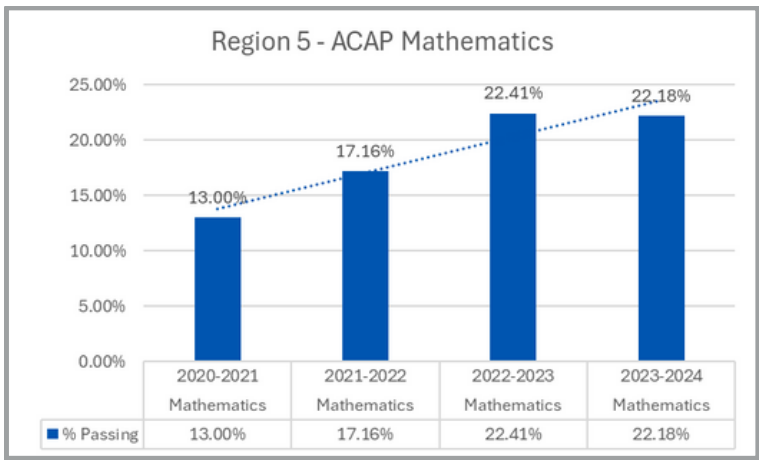

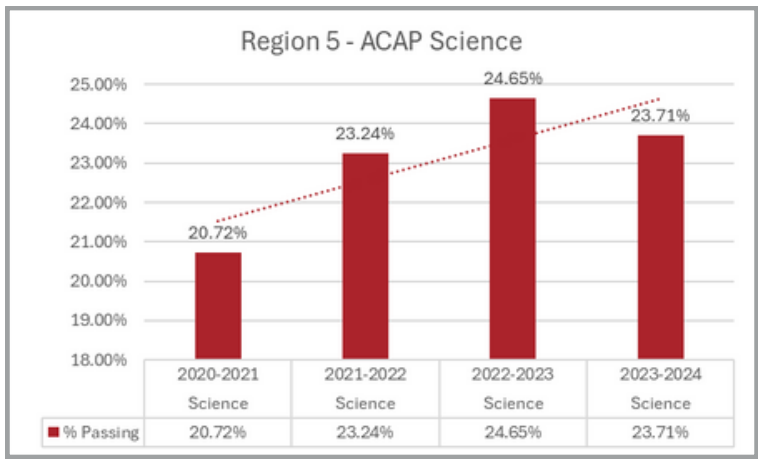

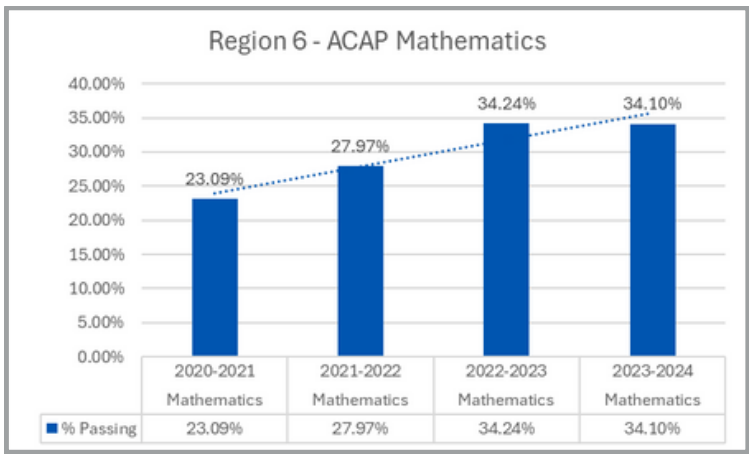

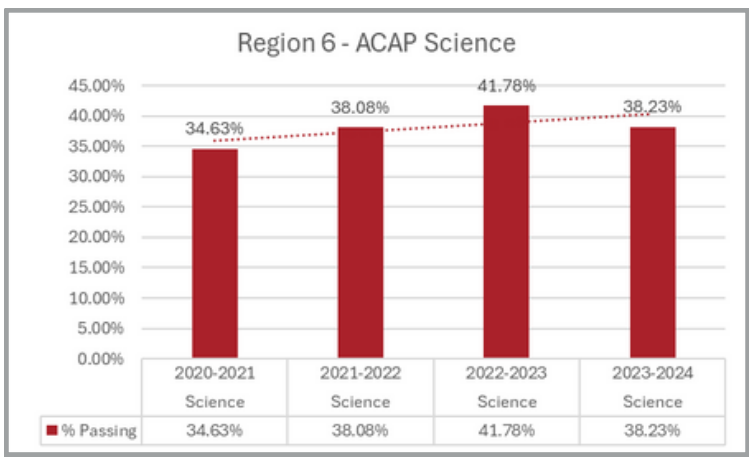

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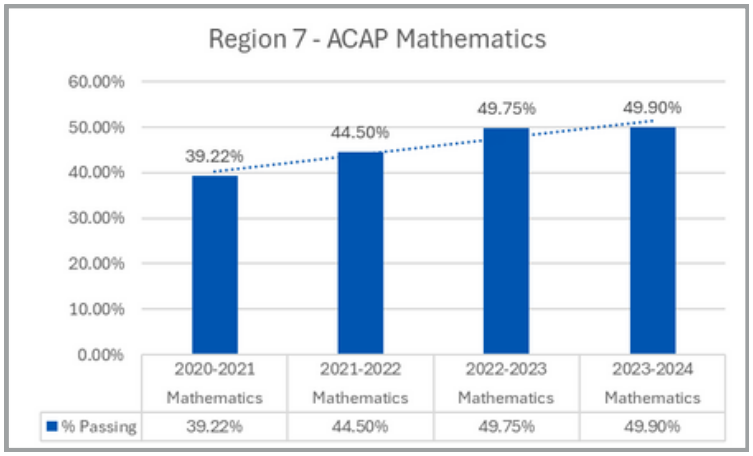

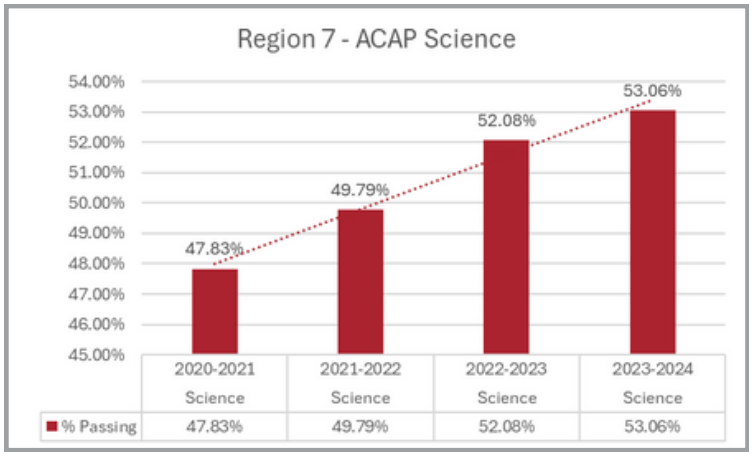

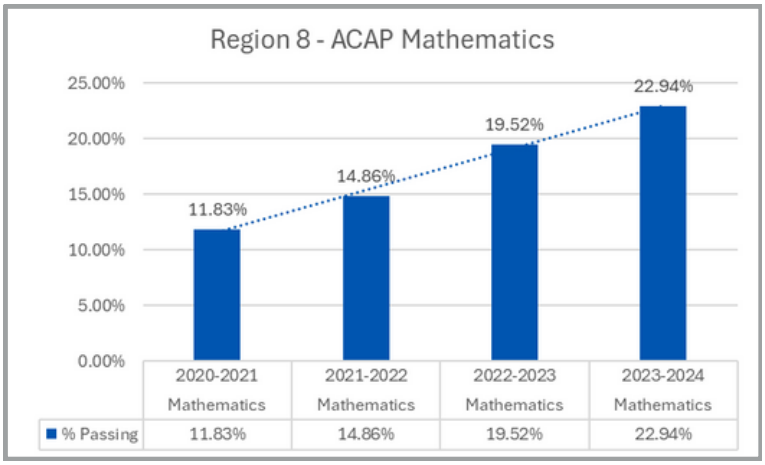

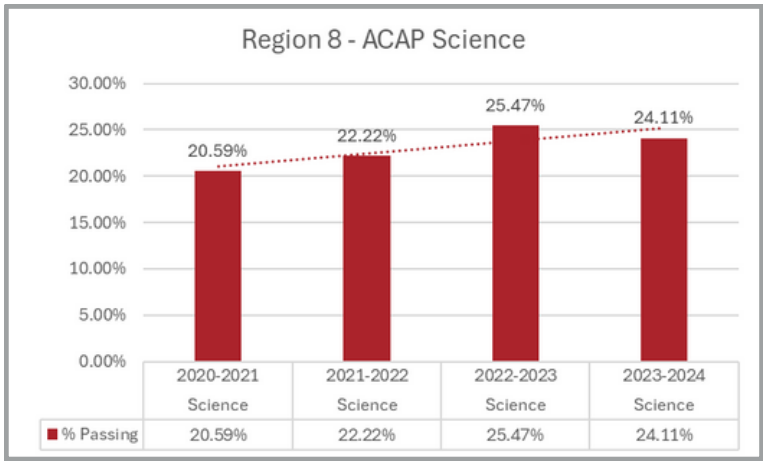

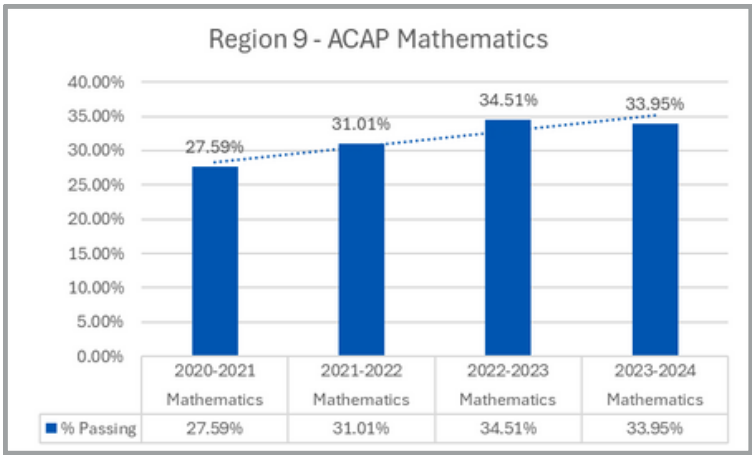

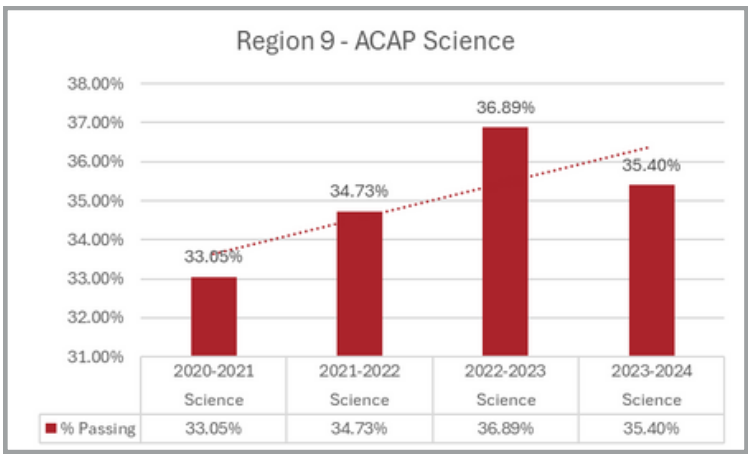

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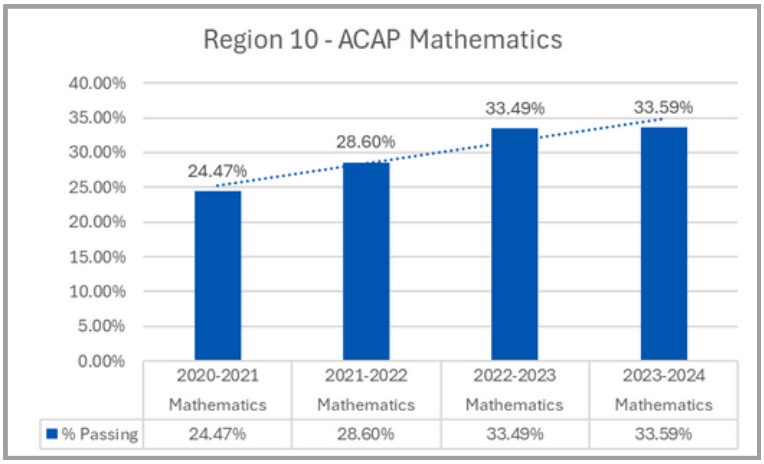
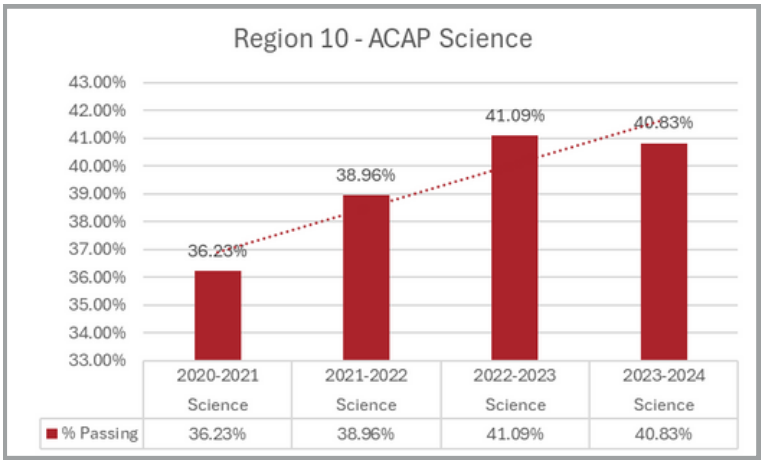
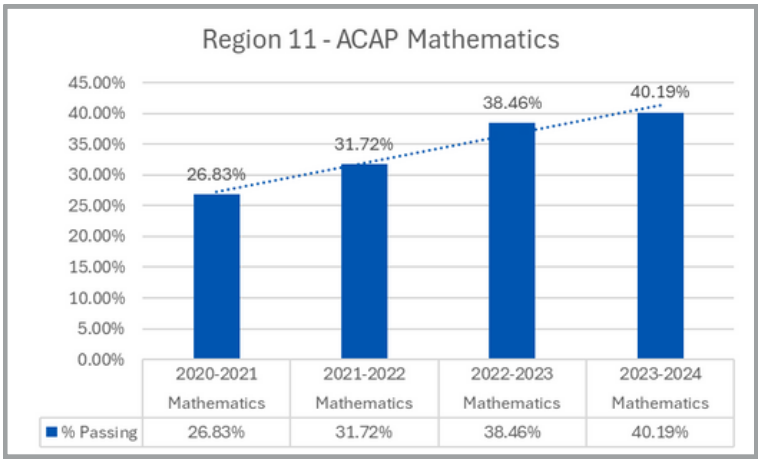
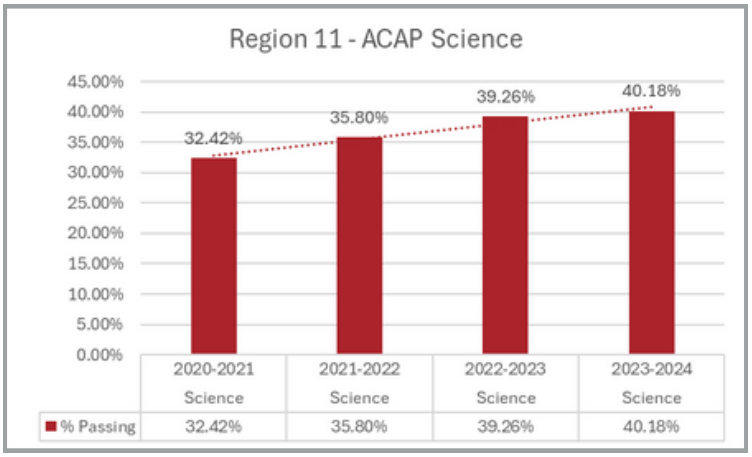
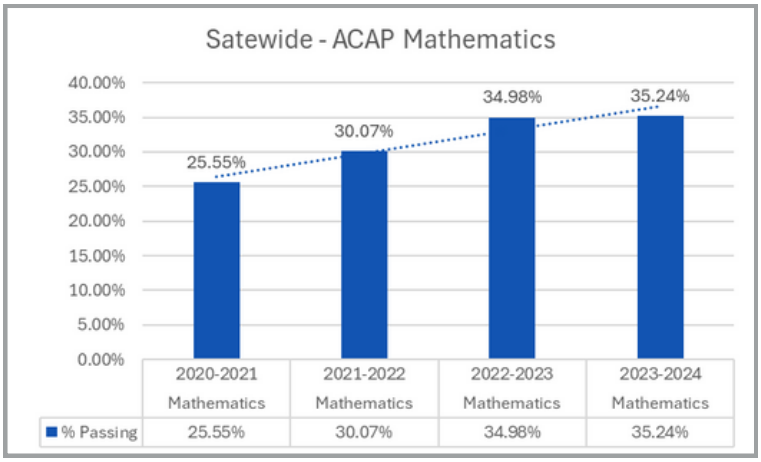
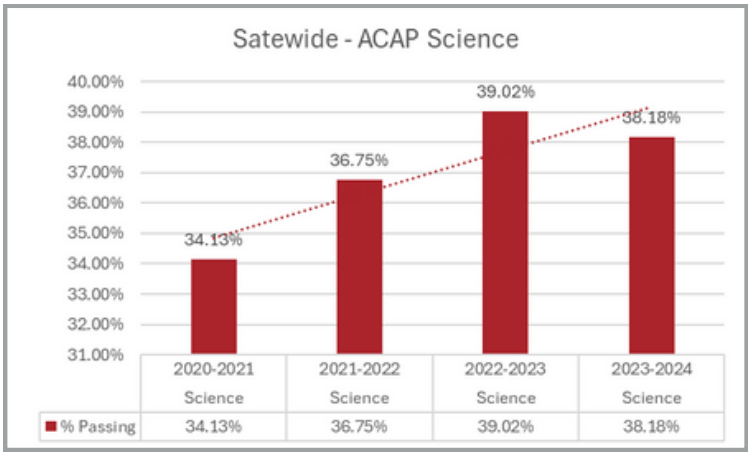




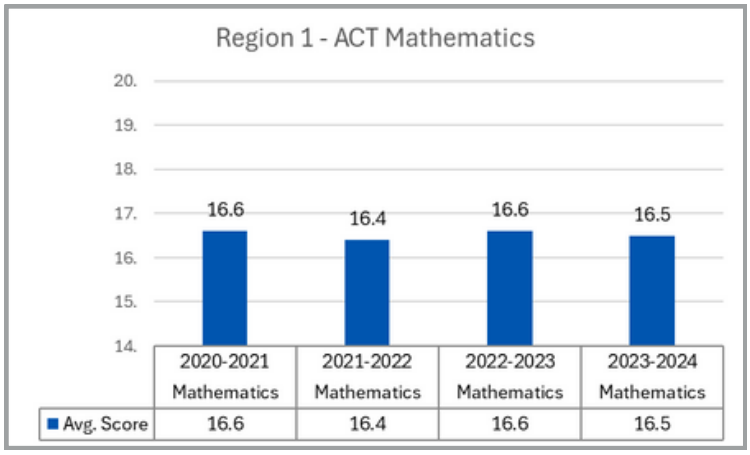


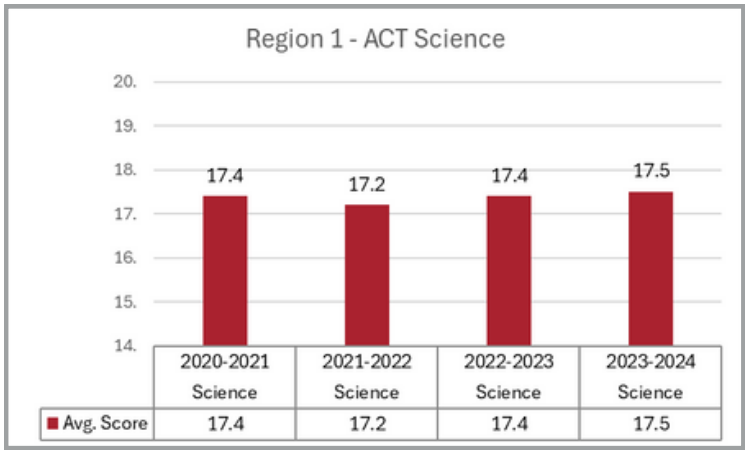


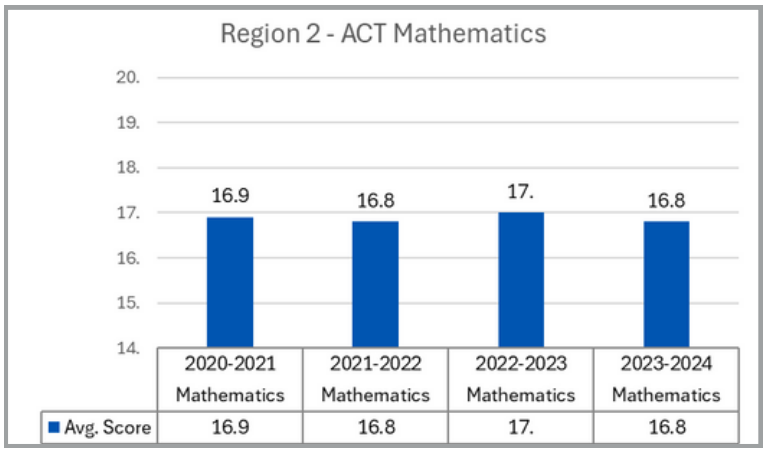


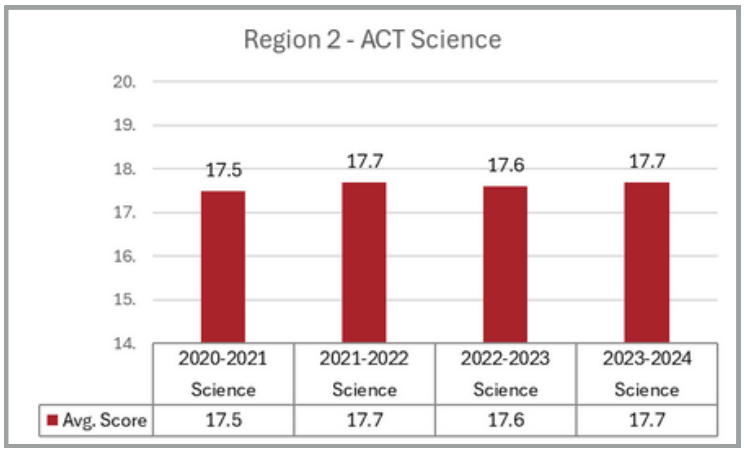


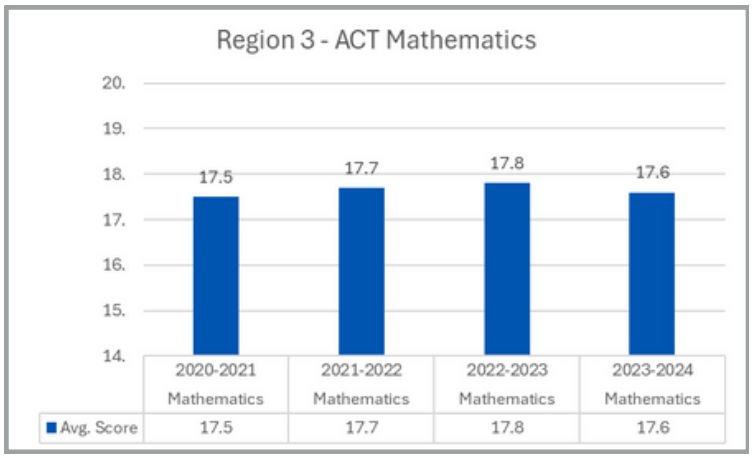
ACT Data by RIC

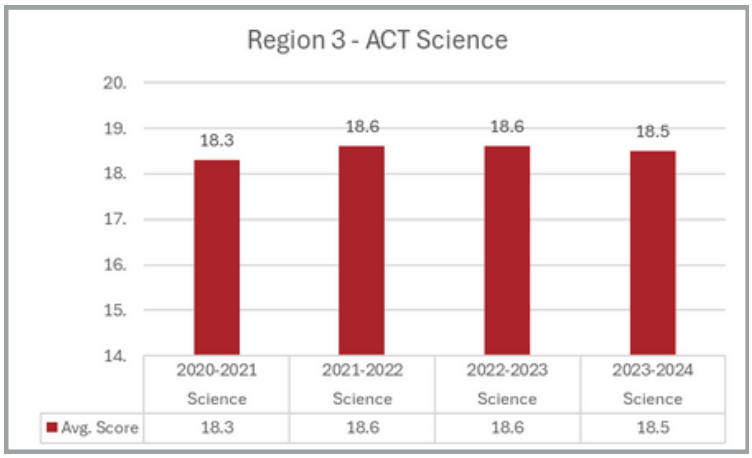












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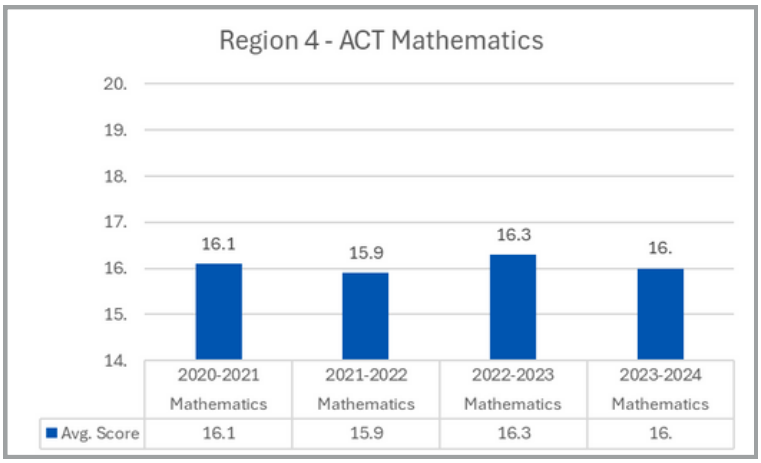

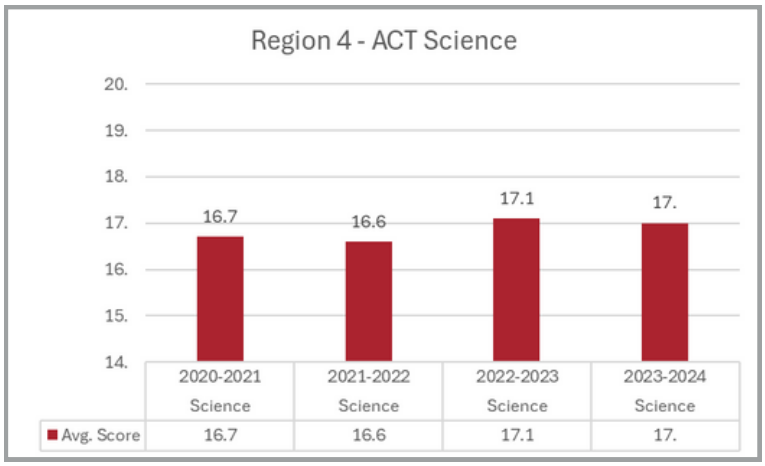

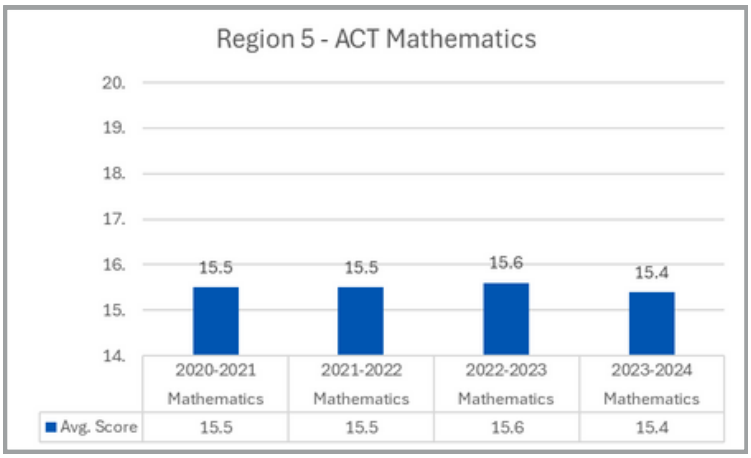

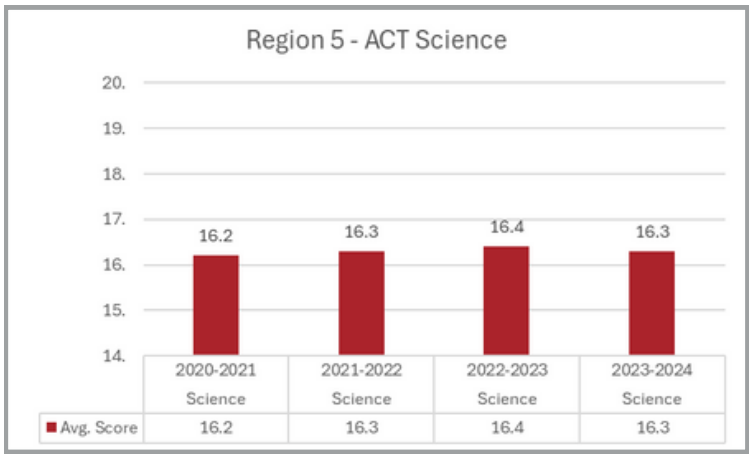

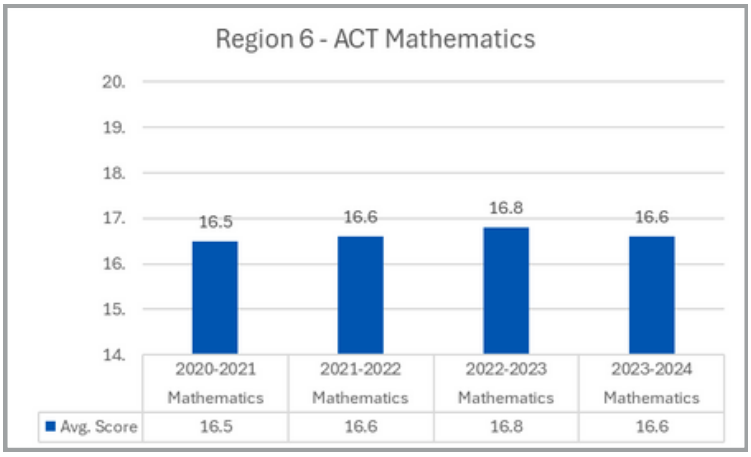

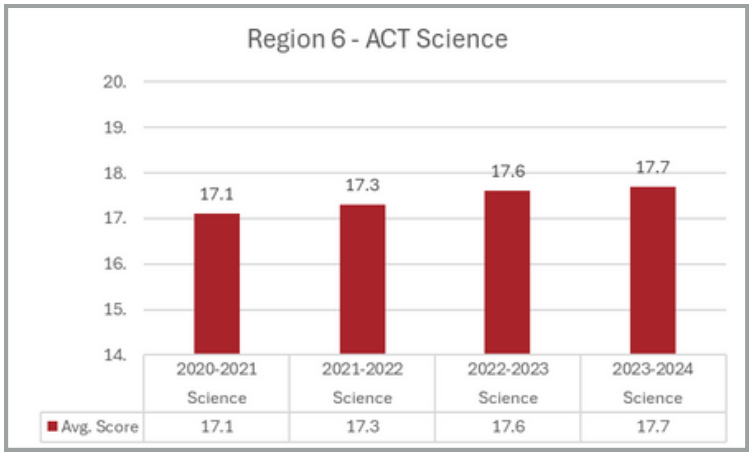

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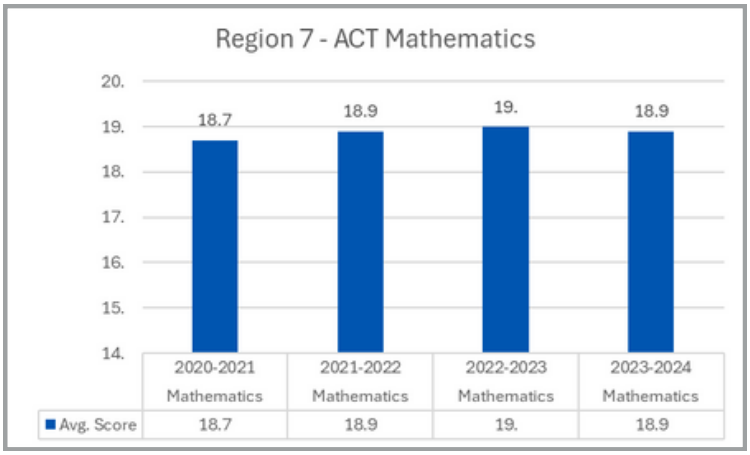
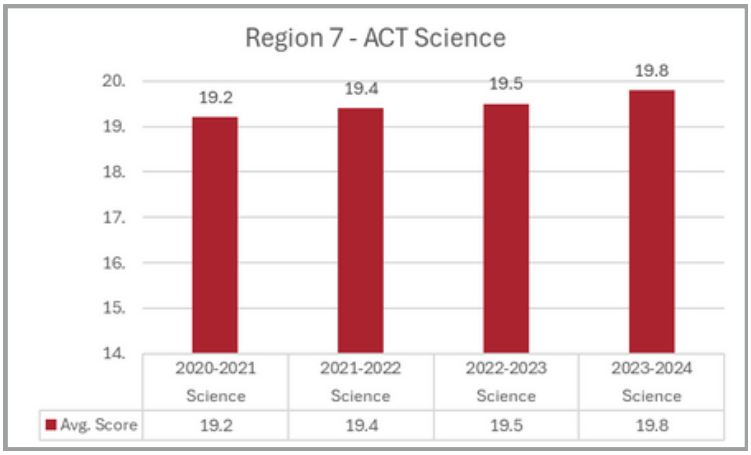
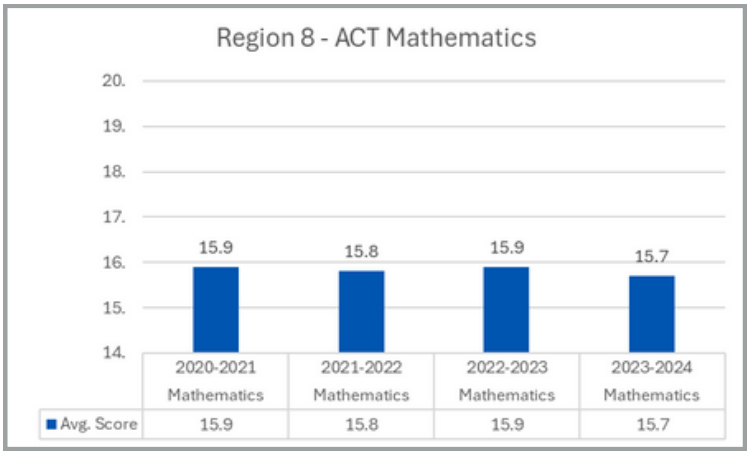
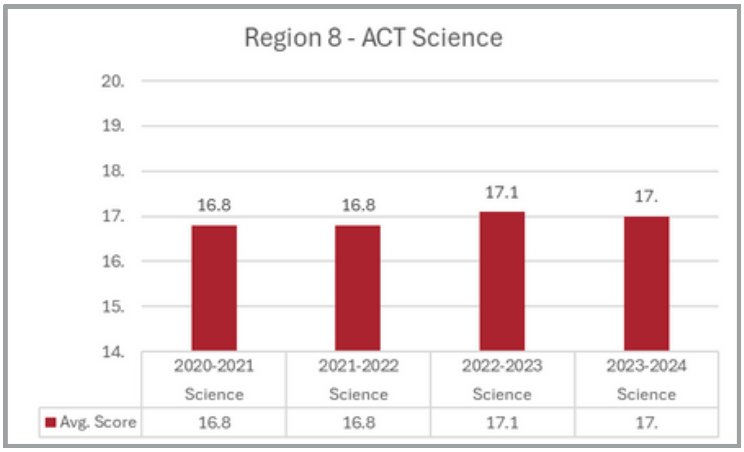
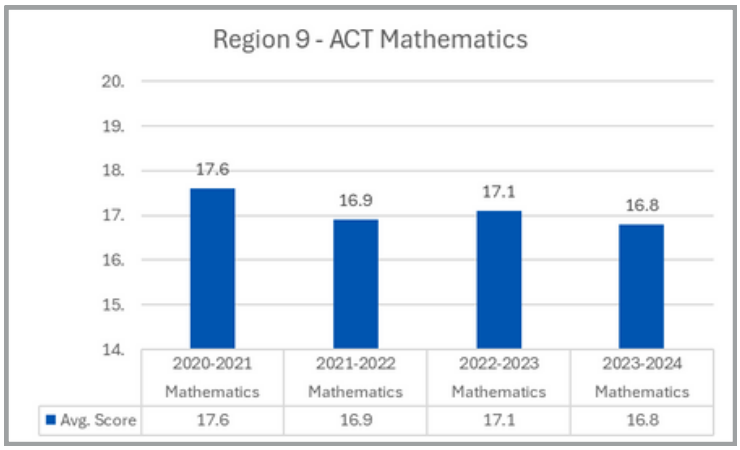
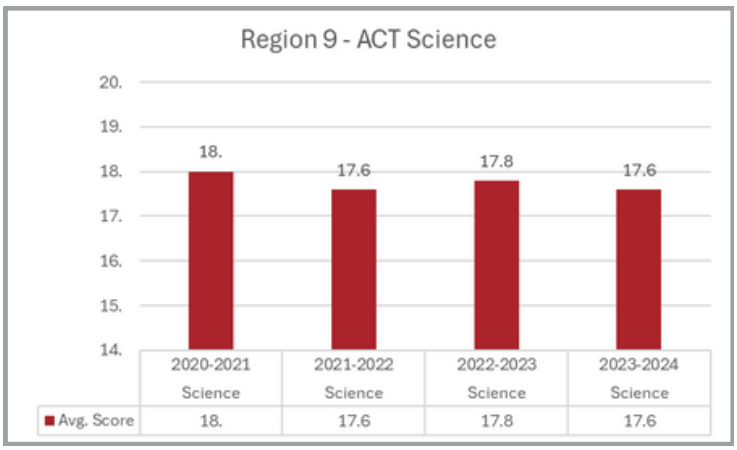




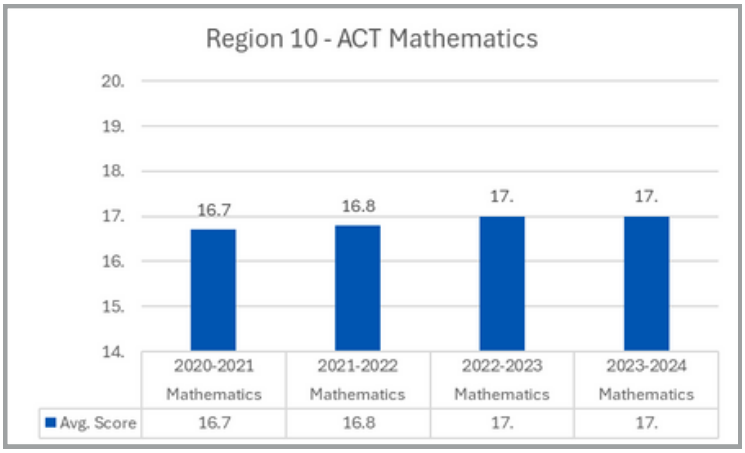


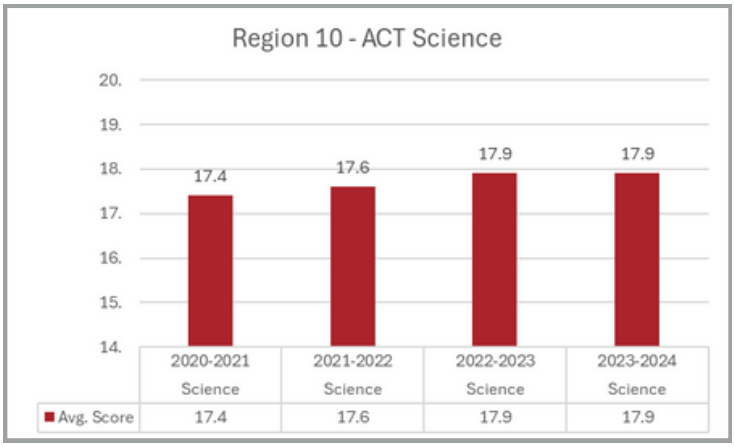


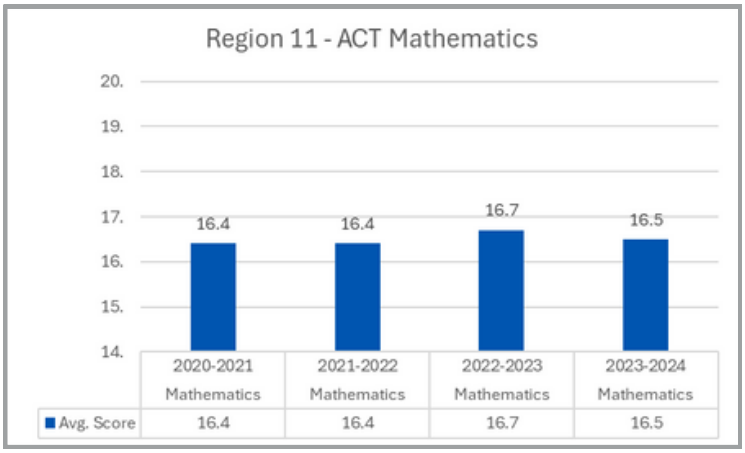


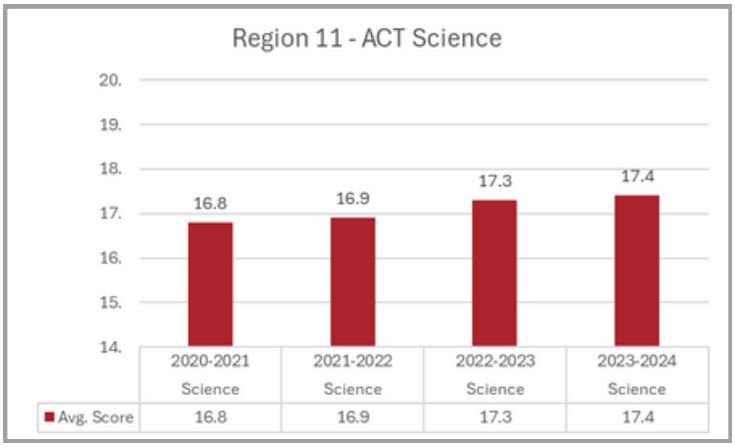


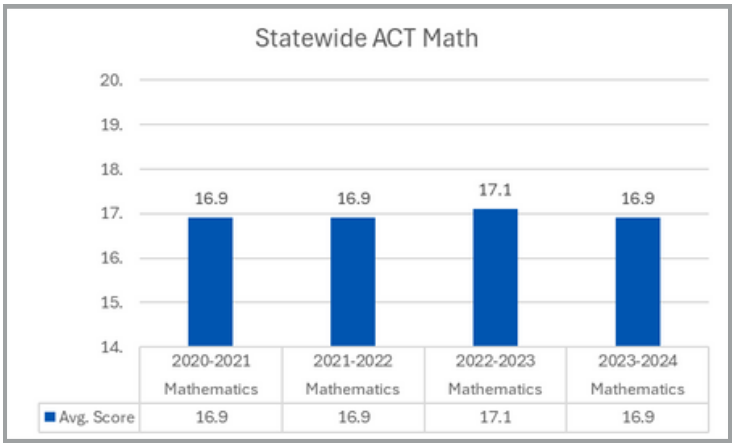
ACT Data by RIC (continued)

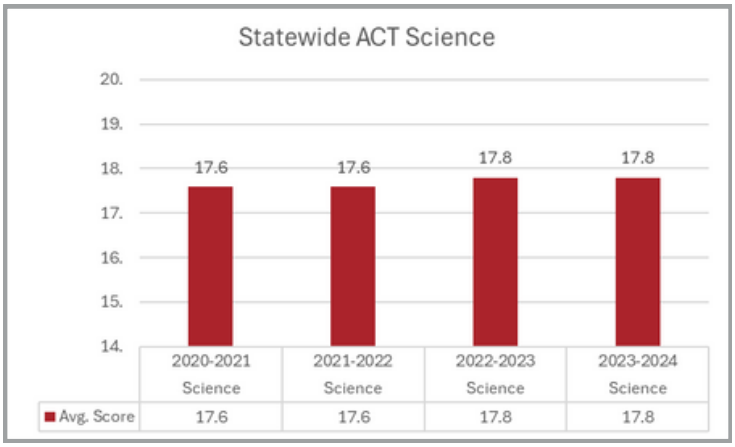










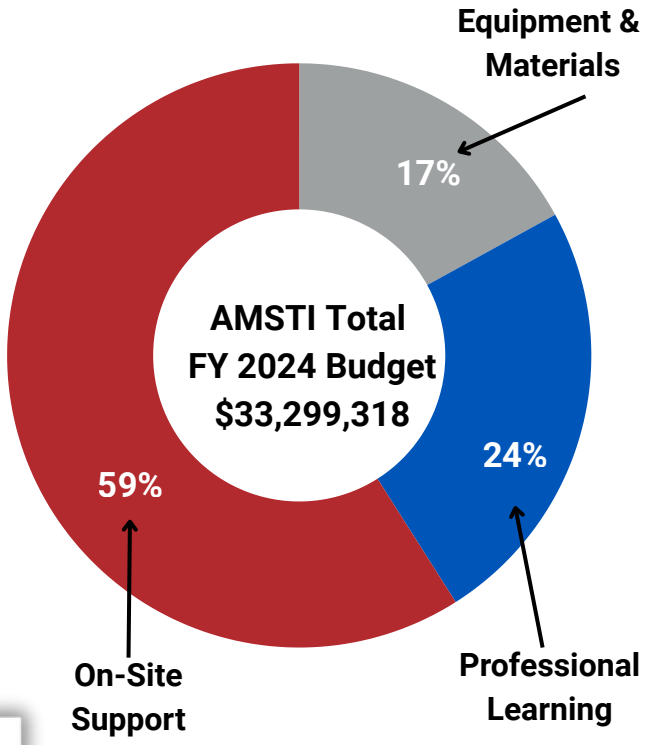


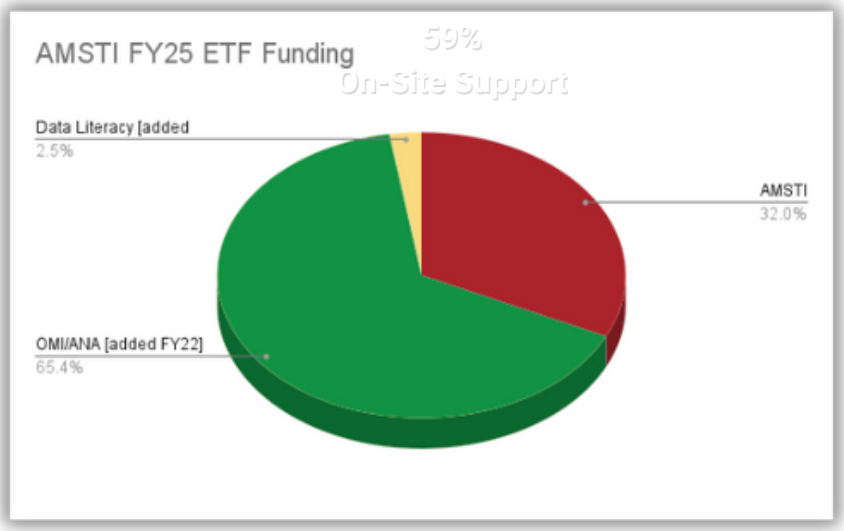
Budget and Funding

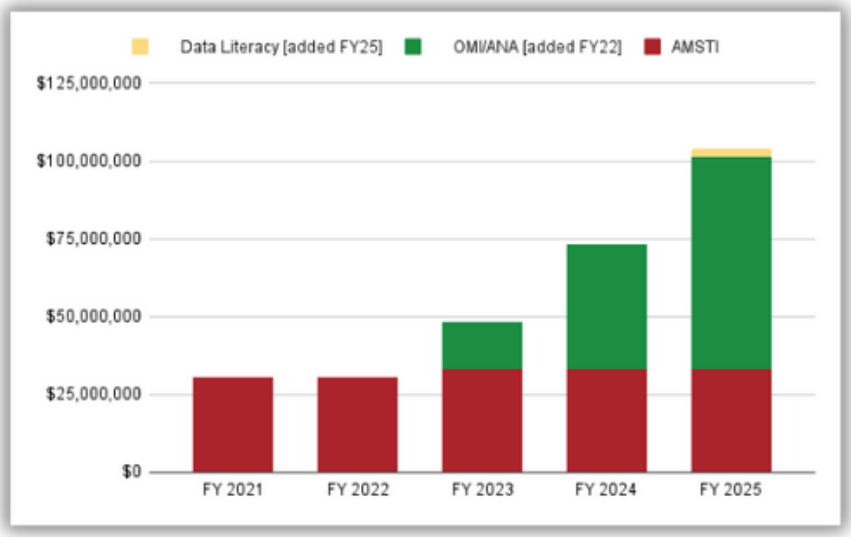
Legislative funding of AMSTI as a line item began in FY2006.

AMSTI's funding provides approximately $33 million statewide -
approximately $16.5 million for K-12 Math and $16.5 million for K-12 Science.

There are 18 SDE staff members and approximately 200 regional staff throughout the 11 sites.







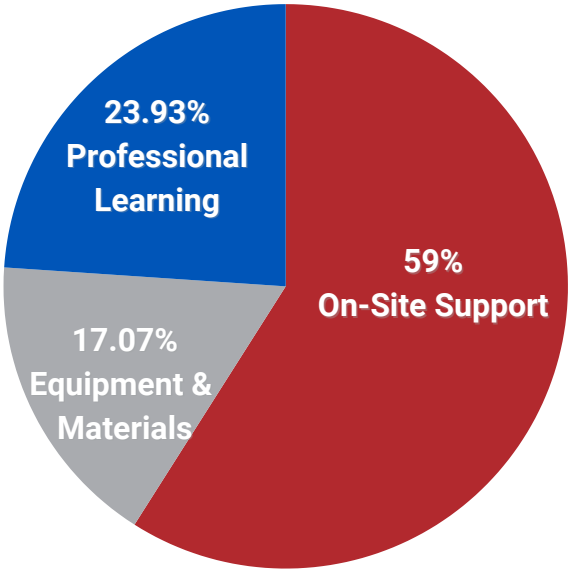
While the AMSTI line item in the ETF Budget has increased each year, funding earmarked for AMSTI use has taken a back seat to other priorities within the state.

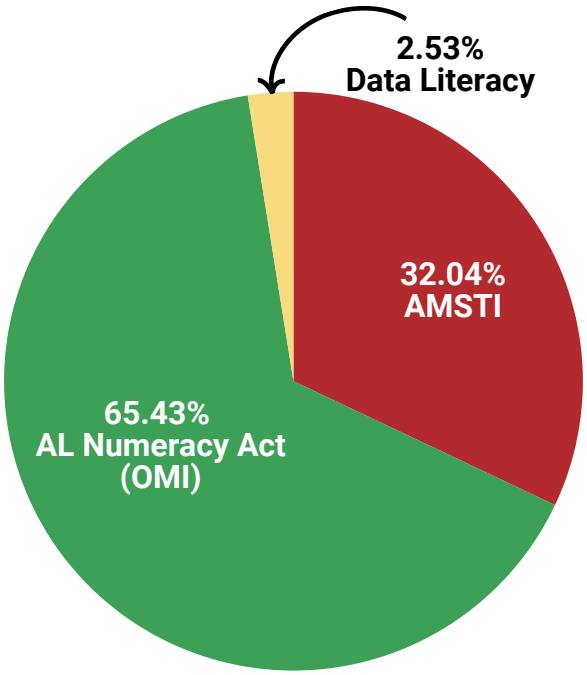
AMSTI has continued to operate and increase support to schools despite a desperate need for additional funds to provide materials, training, and support for Math and Science teachers statewide.

Budget and Funding

FY 2025 Alabama, Math, Science, and Technology Initiative O&M Line Item $103,928,318

- **AMSTI Allocation: $33,299,318**
- **Alabama Numeracy Act: $68,000,000**
- **Data Literacy (in collaboration with Innovate Alabama): $2,629,000**





AMSTI Only ($33,299,318)

*includes $2,500,000 to supplement ASIM

On-Site Support	Equipment & Materials	Professional Learning
$19,644,090	$5,684,801	$7,970,428
59%	17.07%	23.93%

AMSTI & Earmarked Funds ($103,928,318)

AMSTI	AL Numeracy Act (OMI)	Data Literacy
$33,299,318	$68,000,000	$2,629,000
32.04%	65.43%	2.53%

*Current funding levels for AMSTI line item are only sufficient for a portion of the specialists employed by AMSTI. In the 2024-2025 academic year, 32 K-5 Math specialists were funded from the OMI budget within the AMSTI line item. This deficit in funding for AMSTI specialists supporting the Alabama Numeracy Act strains resources for K-12 math and science, materials, and professional learning.

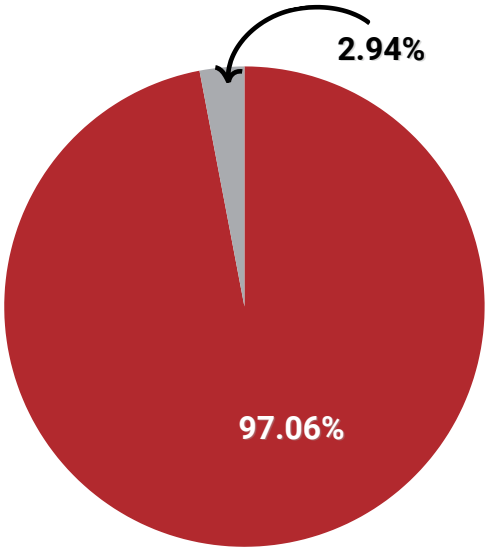
ASIM/AMSTI Budget & Funding

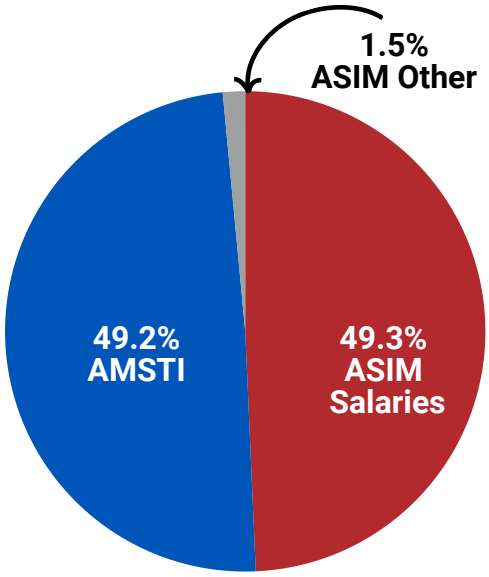
Alabama Science in Motion (ASIM)

FY 2025 ASIM Line Item $2,583,796

FY 2025 AMSTI Line Item $2,500,000

Total allocation $5,083,796





ASIM Only ($2,583,796)

On Site Support (salaries only)	Remainder of ASIM line item after salaries
$2,507,839	$75,957
97.06%	2.94%

ASIM & AMSTI Funds ($5,083,796)

ASIM Salaries	AMSTI funds	Remainder of ASIM line item after salaries
$2,507,839	$2,500,000	$75,957
49.3%	49.2%	1.5%

***Current funding levels for ASIM line item are only sufficient to provide for specialists' salaries. Specialists' benefits, support staff salaries and benefits, operating costs, equipment and materials, and professional learning for educators, must be paid from the supplemental $2,500,000 from the AMSTI line item.**

On-Site Support

- Takes place in school settings
- Includes job-embedded learning and coaching supported by regional coaches and Building-Based Math Coaches (BBMCs)
- Supports administrators and teachers
- Fosters research-based instructional practices
- Promotes conceptual knowledge, problem solving, and application of skills via a variety of lesson formats, manipulatives, and instructional resources available on the AMSTI website

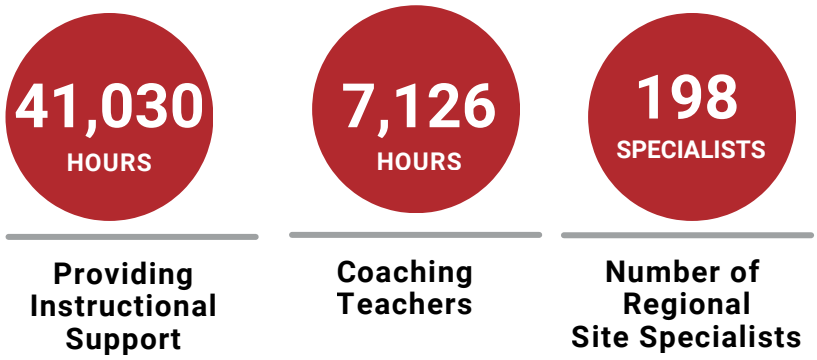
On Site Support
$19,644,090
59%

Site Specialists

Each of the 11 regional sites houses site specialists who operate in the areas of K-5, 6-8, and 9-12 Math; K-2, 3-5, and 6-8 Science, and Digital Literacy and Computer Science (DLCS); and ASIM (9-12 Science). These specialists provide support to 31,909 active AMSTI teachers in 1,408 schools.

The numbers below represent K-12 Math and Science/DLCS site specialists' work. (does not include the coaching hours listed on the following page).

K-12 Site Specialists By the Numbers



On-Site Support (continued)

K-5 Math Coaching Initiative

In 2024-2025, AMSTI provided professional learning and mentoring support for 442 OMI Building-Based Math Coaches (BBMC) across the state.

The AMSTI Math Coaching Initiative provides ongoing coaching and instructional support, professional learning through Coaching Academies and Communities, Teacher Leader Academy, and collaboration with school administrators. In partnership with the Office of Mathematics Improvement (OMI), AMSTI's coaching initiative aligns with the Alabama Coaching Framework and features AMSTI professional learning and support for four groups of math educators:

1. AMSTI Regional Math Specialists
2. School-Level Administrators
3. School-Level Math Coaches
4. Classroom Math Teachers

AMSTI Regional Math Specialists provide side-by-side mentoring support for all OMI Building Based Math Coaches to implement evidence-based coaching practices to continually improve teacher practice and student learning.

442
School-Level Math Coaches

121
Regional Math Specialists

2,757
hours spent coaching in and out of a cycle by specialists and school-level coaches during the 1st Semester of FY 25

Professional Learning

- **Professional Learning** provides administrator training and ongoing, on-demand teacher training in their subject areas.
- **Kits, materials, and resources** are available for teachers to use in their classrooms immediately upon course completion.
- **#AMSTI4ALL** is an enhanced delivery model that extends AMSTI's reach into more Alabama schools.
- **AMSTI partners** with the Office of Mathematics Improvement (OMI) to provide professional learning and support in meeting the provisions of the Alabama Numeracy Act.
- **AMSTI offers** the Coaching Academy, Teacher Leader Academy, OGAP and PLOs for OMI.
- **Preservice training** hosted 31 sessions across 23 universities.
- **AMSTI's work operating system** houses all data collected from BBMCs, OMI regional coordinators, and regional specialists.
- **AMSTI provides** 19 different courses for administrators to earn APLDS credit, helping them understand mathematics and science classroom expectations based on current research and pedagogy.
- **AMSTI offers** 50+ TEAMS courses for mathematics teachers and 33+ TEAMS courses for science teachers.

Professional Learning
$7,970,428
24%

EVERY CHILD. EVERY CHANCE. EVERY DAY.
OFFICE OF MATHEMATICS IMPROVEMENT

We Teach Alabama
ALABAMA STATE DEPARTMENT of EDUCATION

TEAMS

INNOVATIVE · VISIONARY · INSTRUCTIONAL · MANAGERIAL & OPERATIONAL · RELATIONAL
High-Quality Professional Learning
School Leadership Evaluation System
Alabama Standards for School Leadership
Principal Mentoring Program
APLDS
Alabama Principal Leadership Development System
Leadership Academy
Principal Leadership Framework

Professional Learning (continued)

Professional Learning by the Numbers 1st Semester FY25

54 Math Courses — **5,347 Teachers** engaged in **31,880 Hours** of Professional Learning

30 Science Courses — **1,341 Teachers** engaged in **13,484 Hours** of Professional Learning

4 General Courses — **1,656 Teachers** engaged in **24,937 Hours** of Professional Learning

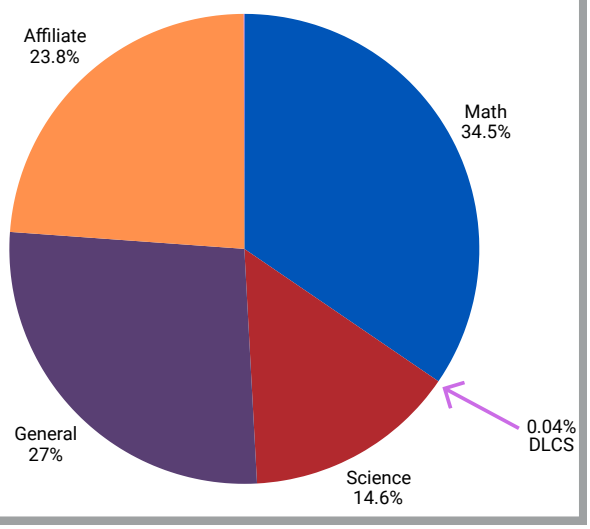
76 Affiliate Courses — **2,579 Teachers** engaged in **21,984 Hours** of Professional Learning

1 DLCS Course — **9 Teachers** engaged in **39 Hours** of Professional Learning

GRAND TOTAL

10,932 Teachers engaged in **92,324 Hours** of Professional Learning across the state from 8/1/24 - 12/31/24

Percentage of total hours of AMSTI PLOs during 1st Semester by content area

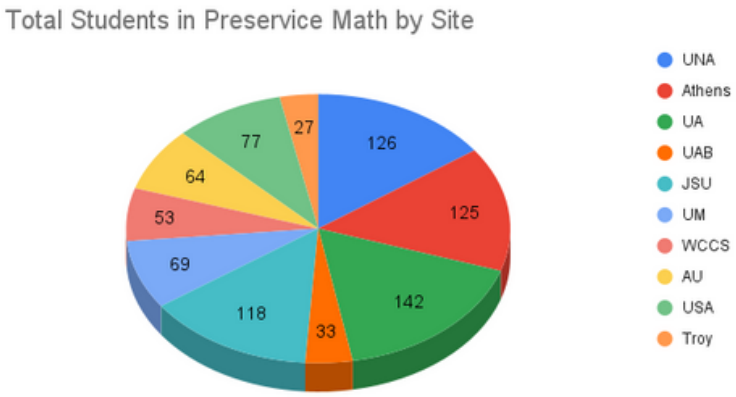


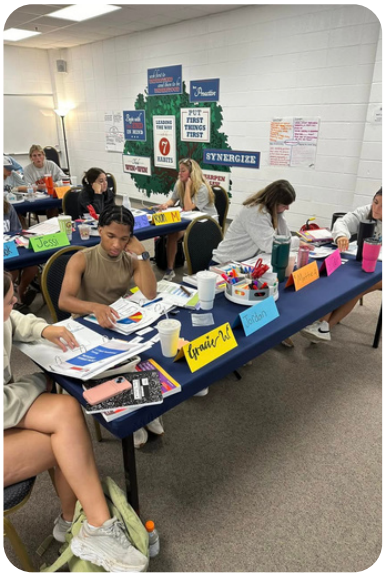
AMSTI Preservice

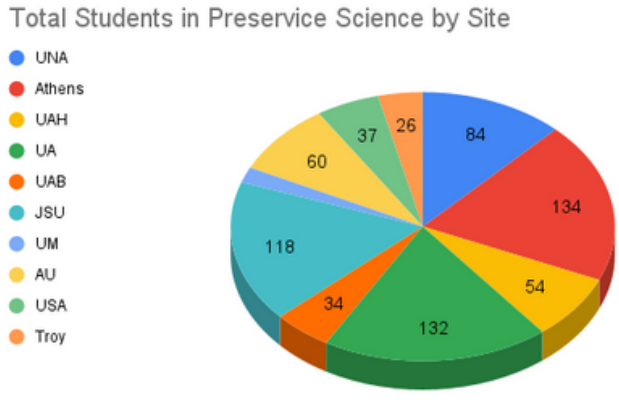
Through partnerships with 23 Colleges of Education, AMSTI Sites delivered professional learning to 1,526 students, totaling an impressive 27,468 hours of mathematics and science training.

AMSTI Preservice Training prepares students in initial certification programs to teach mathematics and science effectively, setting them up for success in the classroom.

Students in AMSTI Preservice Training gain valuable insight into the AMSTI program while being introduced to the course of study standards for mathematics and science. This training offers a fast track to developing both content and pedagogical knowledge, ensuring future educators are well-prepared before they step into the classroom.







Equipment and Materials

- Refining business and warehousing practices with the aim of enhancing the efficient delivery of kits to schools. This initiative not only ensures timely supply but also establishes a solid groundwork for anticipated growth in mathematics, stemming from the collaboration with the Office of Mathematics Improvement (OMI).
- Working to enhance the order fulfillment process and improve efficiency by implementing automated systems to reduce processing time, minimize errors, and ensure accurate and timely shipment of kits to schools.
- Improving operational efficiency and working toward substantial cost savings. By centralizing operations, eliminating waste, optimizing procurement processes, and managing workflows, AMSTI is working to streamline warehouse management.

Equipment & Materials
$5,684,801
17%

Equipment and Materials by the Numbers
FY 2025 1st Semester
AMSTI

3635	2642	751	142
*Science Kits Delivered	Teachers Utilizing Science Kits	Schools Receiving Science Kits	Districts Receiving Science Kits
401	330	185	68
*New Math Kits Delivered	Teachers Utilizing New Math Kits	Schools Receiving New Math Kits	Districts Receiving New Math Kits

Note: Science kits cycle between classrooms and the AMSTI warehouse for refurbishment throughout the academic year. Math kits are assigned long-term to a specific teacher after training and do not cycle. These data indicate **newly-trained **math teachers**.*

Alabama Science in Motion 9-12
FY 2025 1st Semester

5716	763	310	141
Labs	Teachers	Schools	Districts

Strategic Plan Highlights: Math

ACAP Student Experience

Students and Teachers engaged in hands-on test preparation!

- AMSTI Math specialists team up with school systems, administrators, and teachers to offer the ACAP Math Student Experience for students in grades 2-5 and 6-8.
- In the classroom, teachers will facilitate three hours of instructional time where students explore ACAP item types, a practice test, and sample questions to help build student confidence and maximize achievement.
- Teachers then submit follow-up materials from student reflections and student data from the practice test.
- Over **10,000 students** have participated with AMSTI in the ACAP Math Student Experience.

ACAP
Alabama Comprehensive Assessment Program

Connected Resources

Utilizing ACAP data, teacher input, and continued professional learning, AMSTI revised and updated the Critical Standards that were implemented during COVID-19 to a true set of Critical and Supporting Standards based on our Course of Study, learning, progressions, and assessment needs.

Focus Maps give districts and teachers a road map for progressing through the standards. Proficiency Scales help teachers and students understand what the pathway to mastery looks like at each level of the standard. Formative assessment items help teachers assess student knowledge in real time. And professional learning opportunities continue to equip our teachers to enhance their practice and improve student learning.

Focus Maps

Proficiency Scales

Math
Assessment Item
Bank

Strategic Plan Highlights: Math (continued)

LEA Assistance

Job-embedded learning with technical assistance to meet student learning targets

- **Side-by-side coaching:** Statewide, over 4,000 hours of coaching led by AMSTI K-12 Math Specialists.
- **ACAP Summative Data Review:** Reporting Category data was organized, analyzed, and shared with LEA leaders in "Leaders Count, Students Count" meetings.
- **Training of Trainers for AMSTI Math PLOs:** 138 teachers across K-12 to facilitate teacher acquisition of content area knowledge and skills.

Prepared Graduates

#AMSTIworks

Teachers who engage in professional learning sessions can request and receive AMSTI materials tailored to their specific content training. By providing high-quality, relevant instructional resources, AMSTI empowers educators to prepare students from all 638 zip codes for graduation and future success—whether in college, career, or military service.

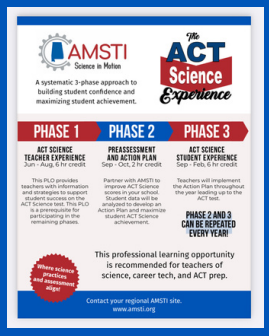
AMSTI training equips teachers with the latest research and best practices, ensuring they stay up-to-date on all K-12 math standards.

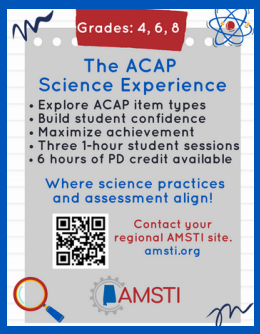
Strategic Plan Highlights: Science

Student Learning

The AMSTI ACAP Science Experience

- **Teachers:** 6 hours of professional learning
- **Students:** Three 1-hour sessions designed to maximize achievement and build confidence
- **Impact:** 13,479 students participated in Spring 2025



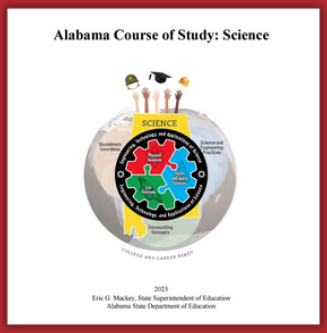


AMSTI-ASIM ACT Science Experience

- **Students**: Increased scores on ACT Science by an average of 1.62 points (largest gains were in high-poverty schools); Increased benchmark scores on ACT Science by 109%

Educator Effectiveness

- The AMSTI Science Teacher Leader Academy (STLA) was piloted in 3 regions.
- AMSTI-ALSDE Science Specialists continue to develop new professional learning. opportunities for 2023 *ACOS: Science* rollout.
- Science Foundational Training 2024 was offered to teachers throughout Alabama.



- AMSTI strives to empower teachers by enhancing their awareness and use of data, enabling them to strategically plan instruction and effectively prepare students for success on the ACT.

Organizational Effectiveness

- ASIM (9-12) implemented their Teacher Information Form and continued utilizing their Lesson Request Form to improve data collection.
- The development of ACES (AMSTI Center for Educator Support) continued to simplify the science materials request process for K-8 teachers.

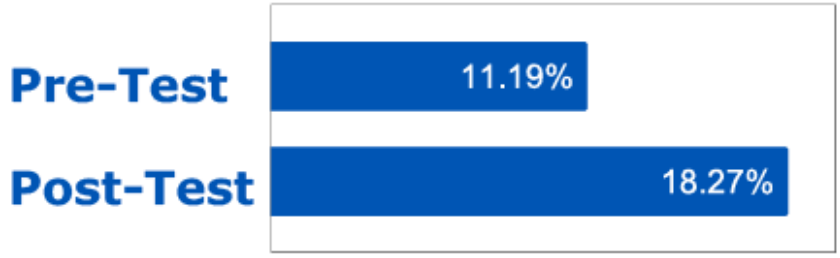
Science Data from Region 2

ACT Science Experience Post-Test Data Comparison

This data is from practice ACT science tests administered to all 11th-grade students from the 8 schools in region 2 who participated in the AMSTI - ASIM ACT Science Student Experience

2024 - 2025

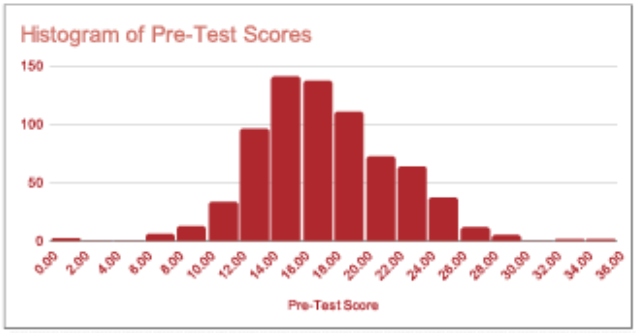
Benchmark Comparison

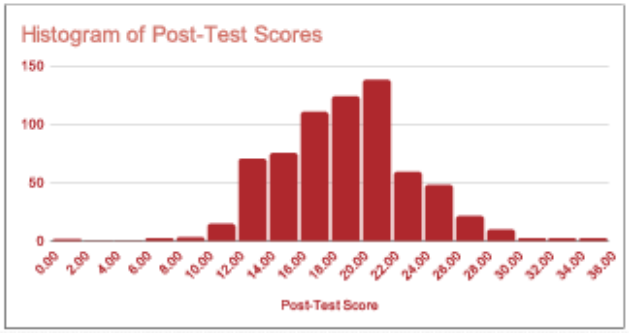


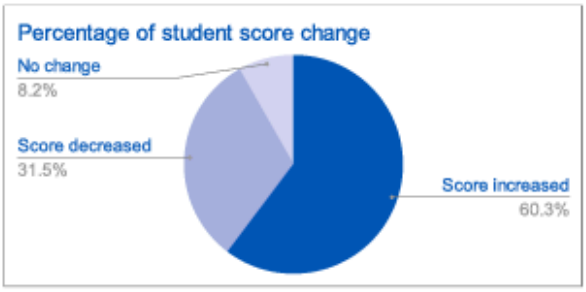
The ACT Science College Readiness Benchmark is 23

According to ACT, students who meet a benchmark on the ACT have approximately a 50% chance of earning a B or better and approximately a 75% chance of making a C or better in a corresponding college course.

Score Comparison







Statistics

	Pre	Post
Number of Students Tested	733	684
Number of Students Benchmarked	82	125
Percent of Students Benchmarked	11.2%	18.3%
Lowest Score	1	1
Highest Score	35	35
Average Score	17.0	18.5

Number of students who took the pre and post practice test: 511

Science Data from Region 2 (continued)

Pre-Test ACT Science National Ranks		
Students	**#**	**%**
Top 10% of all test takers **Score 27-36**	12	1.6%
Top 25% of all test takers **Score 23-26**	70	9.5%
Top 50% of all test takers **Score 19-22**	183	25.0%
Below Average **Score 18 or lower**	468	63.8%

Post-Test ACT Science National Ranks		
Students	**#**	**%**
Top 10% of all test takers **Score 27-36**	19	2.8%
Top 25% of all test takers **Score 23-26**	106	15.5%
Top 50% of all test takers **Score 19-22**	202	29.5%
Below Average **Score 18 or lower**	357	52.2%

National Comparison

These charts compare students' ACT science score to the national ranks during the 2024-2025 reporting year.

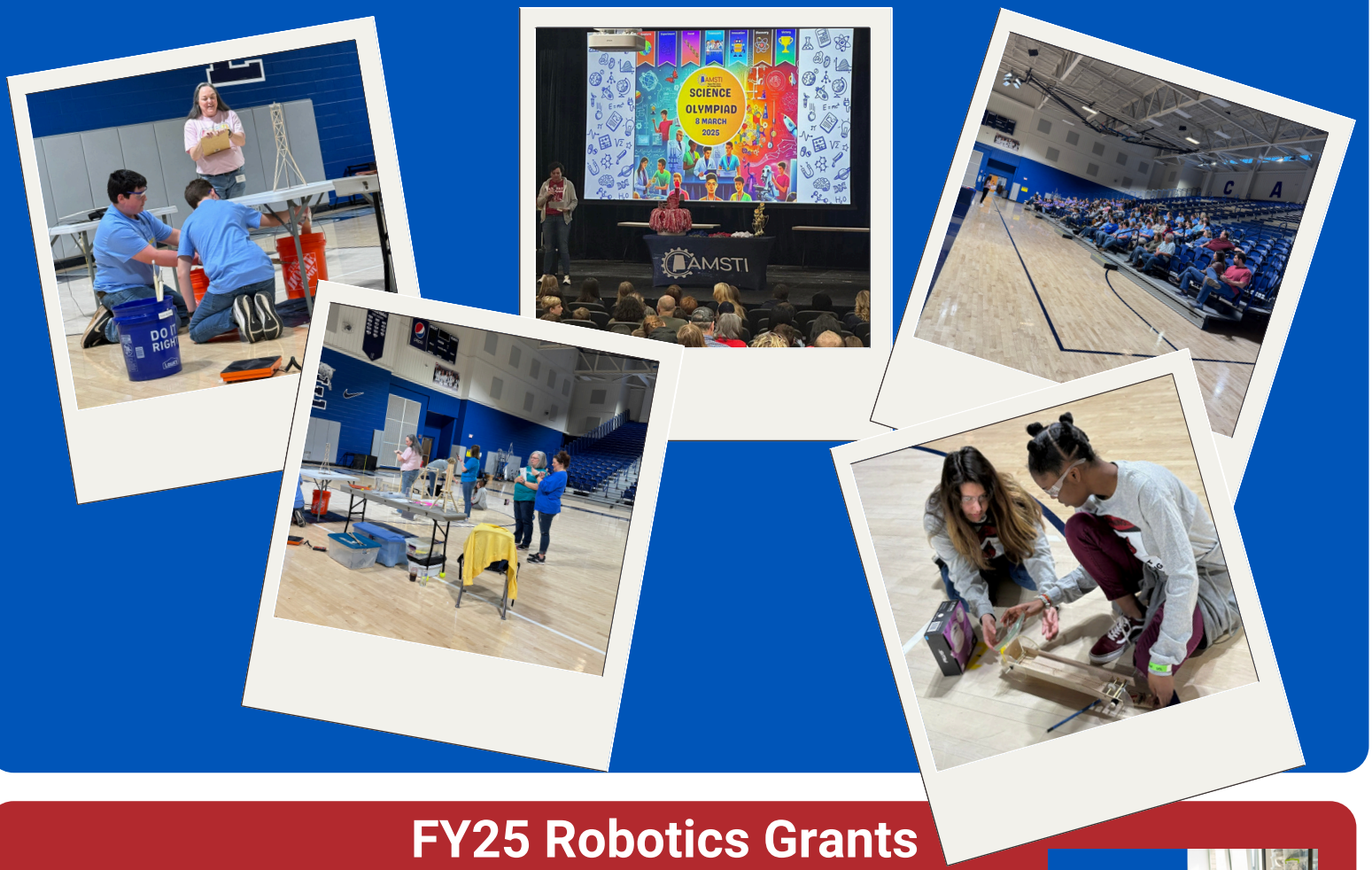
The maximum ACT is score is 36, with the top 10% of test-takers getting a science score of 27-36. The national average ACT science score is 20, and a score 21 or above is often considered a good score.

ATHENS STATE UNIVERSITY

Strategic Plan Highlights: Digital Literacy and Computer Science

Science Olympiad

- Elementary AMSTI event introduced – JSU Region
- AMSTI South event sustained – Troy Region
- AMSTI North event reinstated – Athens Region
- Planning, venue scouting, and team/volunteer recruitment initiated for all regional events
- Awards procured and significant efforts dedicated to ensuring the success of Science Olympiad events



FY25 Robotics Grants

- The legislature appropriated $1,000,000 for grants.
- A maximum of $3,500 per school can be awarded.
- Schools apply through a process in DocuSign.
- Approximately 675 applications were received.
- Applications are reviewed August-October.
- Awards are announced during the second semester of each academic year.

PRIORITY

AMSTI Proficiency Scales

AMSTI has published proficiency scales that outline essential math and science standards from kindergarten to 12th grade, including K-8 DLCS. These resources, available on our website and Wakelet, provide teachers with valuable tools for both instruction and assessment of student progress.

Our professional development sessions introduce participants to proficiency scales, emphasizing their benefits and providing guidance on effective implementation for instruction and assessment. Additionally, we offer guidance to supports teachers in creating student-friendly versions of proficiency scales for immediate classroom application. During the 2024-2025 school year, new proficiency scales for the 2023 *ACOS: Science* were created. In spring 2024, newly revised Critical Standards, Focus Maps, and Proficiency Scales were released for K-12 Mathematics.

bitly.amsti.org/Scales

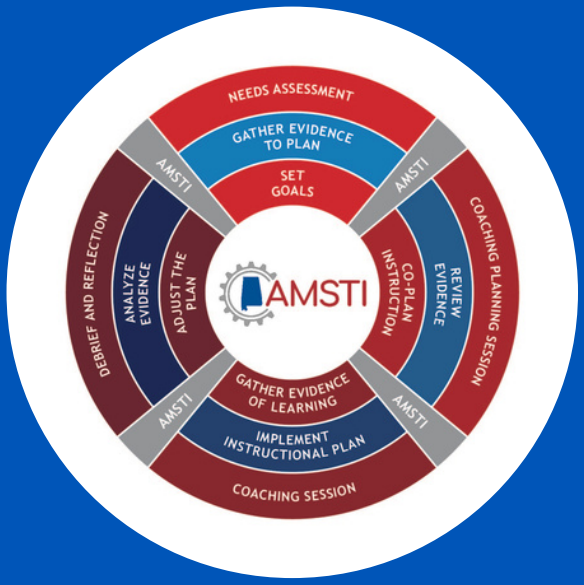
PRIORITY

AMSTI Coaching

AMSTI supports K-5 math coaches through a formal learning pathway of Coaching Academies, Coaching Communities, and side-by-side mentoring provided by regional staff. AMSTI is proactively investing in teachers by offering the Math and Science Teacher Leader Academy, equipping educators with the skills and knowledge to take on leadership roles in mathematics within their schools.

AMSTI provides in-classroom coaching support for Grades 6-12 math teachers participating in AMSTI content and #AMSTI4all training, while also working to establish a cohesive coaching plan similar to the one offered for Grades K-5 math teachers.

AMSTI Science Specialists support educators and teacher leaders through coaching. Coaching cycles utilize a student-centered approach to analyzing student evidence, co-planning instruction, co-teaching lessons, and reflecting on student evidence to plan next instructional steps.

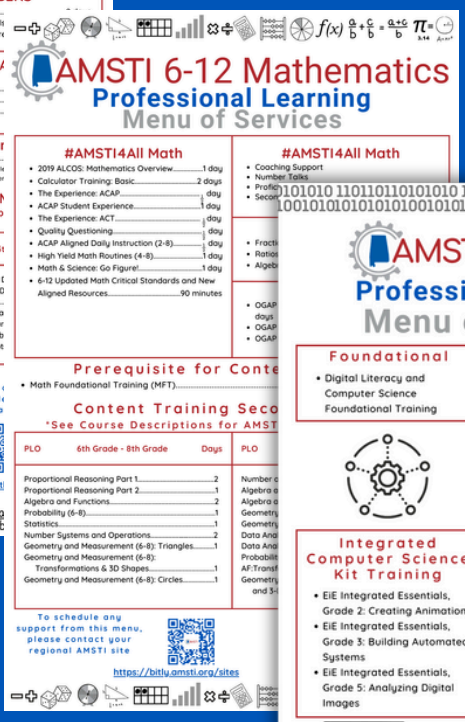


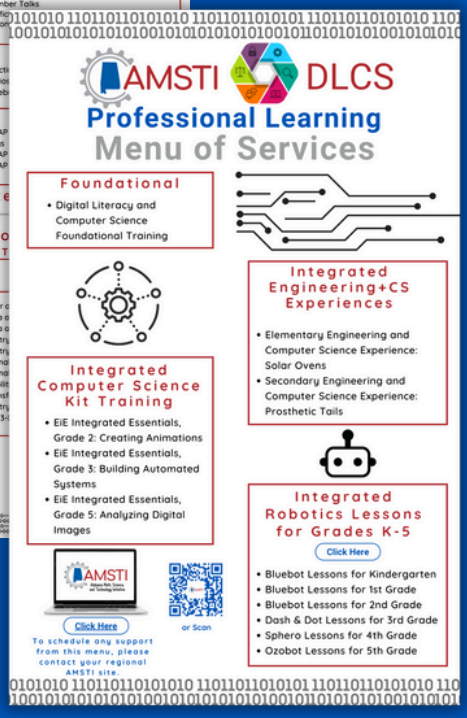
PRIORITY

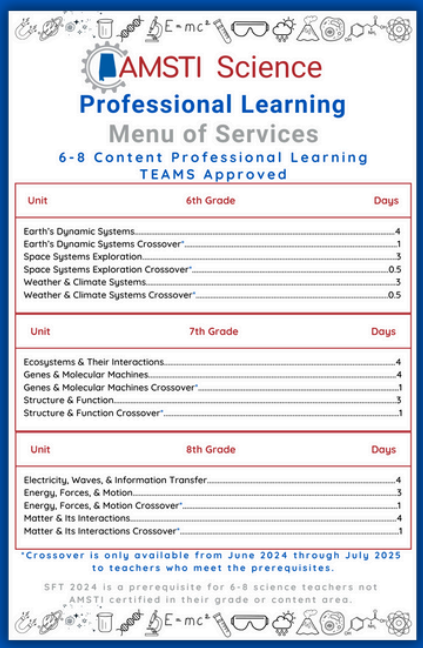
AMSTI Menus of Service

AMSTI offers a variety of STEM related educational services. Both AMSTI and AMSTI-ASIM sites collaborate with LEAs and/or schools to offer professional learning opportunities (PLOs) to all Alabama teachers according to the service menus. These PLOs aim to provide teachers with standards- and evidence-based professional development that aligns with the vision of AMSTI and AMSTI-ASIM.

SCIENCE







MATH

DLCS

AMSTI PR & Social Media

Strengthening stakeholder relationships is a key theme in AMSTI's strategic plan. The AMSTI Public Relations (PR) Committee has explored ways to leverage our social media platforms to highlight the value of AMSTI. The charts below show the increase in followers and interactions on Facebook, X (formerly known as Twitter), and Instagram. Please note that while X experienced a significant decrease in reach, the overall decline across X and Instagram was offset by gains on Facebook. AMSTI is committed to engaging all stakeholders on their preferred social media platform, whatever it may be. Our social media platforms feature a range of valuable resources, including professional development opportunities from regional AMSTI sites and AMSTI Affiliates, AMSTI@Home resources, and meaningful highlights from stakeholders across the state.

Number of Reaches		
Social Media Platform	**8/1/2024 - 12/31/2024**	**Percent increase over previous year for the same period**
Facebook	**227,095**	**123%**
X (Twitter)	**22,358**	**-81%**
Instagram	**7,819**	**-18%**



Number of Followers		
Social Media Platform	**8/1/2024 - 12/31/2024**	**Percent increase over previous year for the same period**
Facebook	**5,116**	**21%**
X (Twitter)	**5,576**	**3%**
Instagram	**828**	**17%**

PR Spotlight: AMSTI Testimonials

I did my very first training for 7th grade science in the summer of 2004. Since then, I have been trained on the 8th grade kits and I have been certified to train for AMSTI. This program has made it possible for me to make science come alive in my classroom and has given me and my students resources that I could only have dreamt of, otherwise! It has also given me the opportunity to meet and form professional relationships with so many other teachers from around the state! ***There's just nothing like it!***

Paige Strickland
Region11- Troy

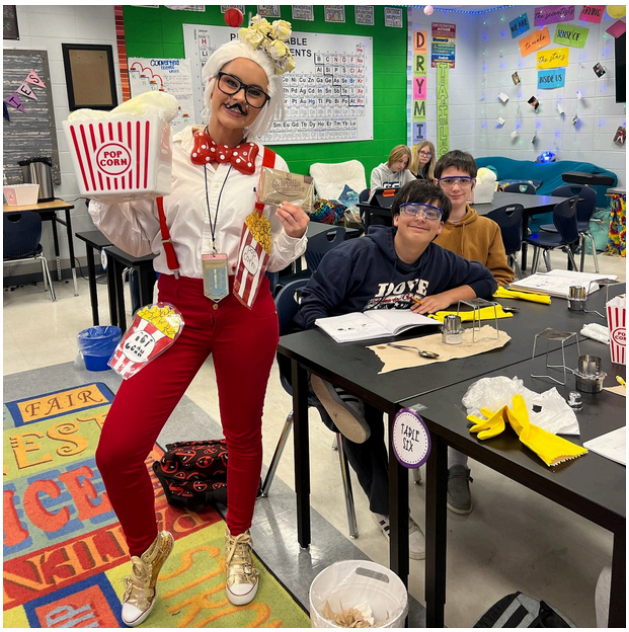
Having my students use AMSTI kits for hands on learning has greatly improved their learning! They have *fun, work cooperatively and retain information*. We **LOVE** the Energy and Waves kit. After learning all about circuits, my students are able to design, build and wire houses with working circuits using switches to show the conversion of electricity into light, sound, motion, and heat. I am always amazed at their creativity and knowledge of electric circuits!

Ramona Brewer
Region 02- Athens

AMSTI has truly revolutionized my classroom, elevating my students' learning through hands-on scientific discoveries. The driving force behind this transformation is Aaron Casby, our Region 8 Middle School Science Specialist. His passion for sharing knowledge with educators is nothing short of inspiring. Thank you, AMSTI, for empowering educators with the resources we need to not only thrive in our classrooms but also inspire a love for science that goes beyond the classroom walls.

Tina Lewis
Region 8- WCCS - ASU

PR Spotlight: AMSTI Testimonials



I am incredibly grateful for the guidance and support AMSTI has provided to both me and my students throughout our science journey. They equip us with manipulatives that allow us to explore, experiment, and understand the content at a deeper level. However, it is AMSTI Specialist Jim Kacmarzyk that has brought a fresh perspective to our classroom. Jim's passion for science and commitment to fostering a love for learning in young minds is truly inspiring. Like I tell every Math and Science teacher I have ever met, "*Get AMSTI trained. You will not regret it.* I **CANNOT teach** without it!"
Thank you, Jim and thank you, AMSTI.

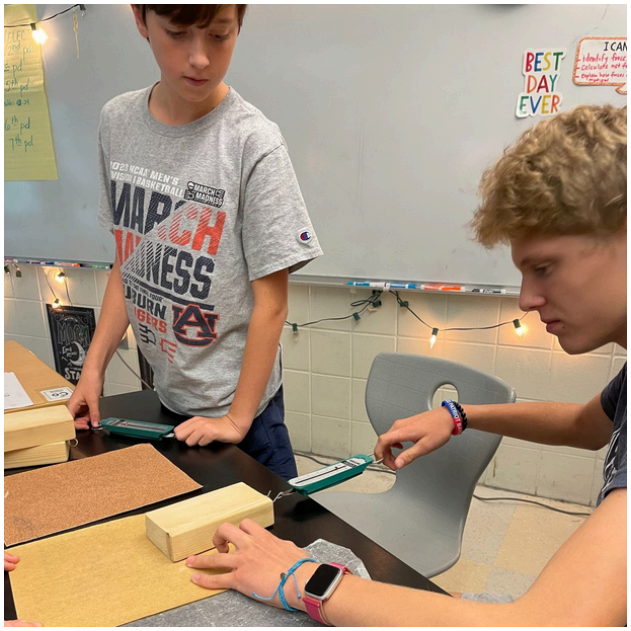
Brooke Gilbert Neal
Region 10 - USA

AMSTI
Alabama Math, Science, and Technology Initiative

AMSTI has totally changed the way that I teach science. Since AMSTI provides so many amazing science tools and supplies (that I could not afford to purchase on my own), my students are able to have hands-on science experiences most every day! I love the way the new AMSTI units connect so closely with our science standards and the ACAP assessment. My students feel so prepared. The support and professional development that AMSTI offers is top notch! I am a huge fan of AMSTI and grateful for it.

Janie Giffin
Region 07- UM

AMSTI
Alabama Math, Science, and Technology Initiative



Science is more than just reading from a textbook or listening in on a lecture! It's a way of doing as well as knowing! AMSTI has put together the most incredible tools to help teachers find that perfect balance! I'm so thankful that I didn't have to figure it all out by myself, and especially thankful that I don't have to for all of the materials necessary to carry out a lab for 100+ students!

Esther Ballard
Region 1 - UNA

AMSTI
Alabama Math, Science, and Technology Initiative

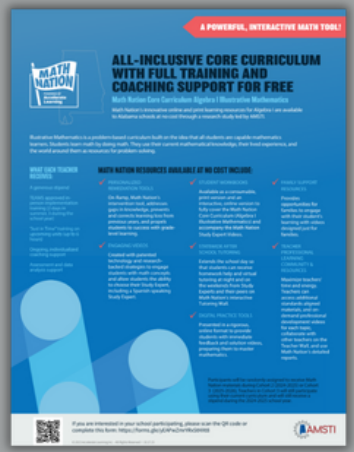
PR Spotlight: Curio XR and Math Nation

AMSTI received a $4 million multi-year grant to use Virtual Reality with CurioXR to enhance students knowledge and skills in Geometry classrooms.

AMSTI is working with CurioXR through an Education, Innovation, and Research (EIR) grant to develop geometry lessons utilizing virtual reality headsets for hands-on, real-world experience of geometry concepts. During the feasibility study, teachers were introduced to using virtual reality (VR) as a supplemental teaching tool in their classrooms. Data was collected concerning the usability of the tool and on six pilot geometry lessons. The first implementation cohort (Cohort 1) is already full in preparation for the 25-26 academic year!

AMSTI is working with Math Nation through a multi-year Education, Innovation, and Research grant. As a part of the study of Algebra I, the reported data shows that pilot schools have exceeded all targets for the adoption and implementation of the Math Nation curriculum. We are exceeding each of our goals for implementation, participation, and use of the product.

- Personalized Remediation Tools
- Engaging Videos
- Student Workbooks
- Statewide After School Tutoring
- Digital Practice Tools
- Family Support Resources
- Teacher Professional Learning Community Resources



Alabama's Comprehensive Plan for STEM Literacy

Each section of the ALSDE Office of Student Learning (OSL) created Blueprints for Achievement detailing the vision, skills, incentives, resources, and action plans that will support the implementation of the ALSDE's strategic plan, Alabama Achieves.

AMSTI's plan can be accessed via the QR code or link.

AMSTI Affiliate Highlights

At Huntsville Botanical Garden, our education and outreach programs are about more than just learning; they're about making delightful discoveries in nature and within ourselves.
Dive into a world of learning at the Garden, where adults and children alike can deepen their understanding of the botanical world. Our diverse programs, including adult education, children's activities, and the Nature Academy, offer everything from gardening tips to plant identification. There's a discovery for every age and interest. Let's embark on this green journey together!

AMSTI now has **47** affiliates where Alabama teachers have access to a growing menu of quality professional learning opportunities.

AMSTI Affiliate

Cultivate
GROWING STEM EDUCATORS

The Smithsonian Science Education Center is transforming K-12 Education Through Science™ in collaboration with communities across the globe. Our core goals are to promote authentic, inquiry-based K-12 STEM teaching and learning; advance STEM education for sustainable development; and translate the research and collections of the Smithsonian into meaningful tools and convenings for K-12 STEM teachers and students. We accomplish this through creating meaningful curriculum, games, videos, and professional learning opportunities.

Smithsonian
Science Education Center

The Weeks Bay National Estuarine Research Reserve (NERR) is one of 30 NERRs in a nationwide system. The Weeks Bay NERR is a collaborative effort between the State Lands Division of the Alabama Department of Conservation and Natural Resources (ADNCR) and the National Oceanic and Atmospheric Administration (NOAA). The mission of the Weeks Bay NERR is to provide leadership to promote informed management of estuarine and coastal habitats through scientific understanding and encourage good stewardship practices through partnerships, public education, and outreach programs.

Weeks Bay
Reserve

Alabama Math, Science, and Technology Initiative

Vision

Be Alabama's STEM educator talent development system

Mission

To support Alabama educators and students in learning STEM by doing STEM

Beliefs

Expertise - delivering content and pedagogical knowledge with resources and support informed by evidence of effective practice

Efficacy - maintaining high expectations for staff and stakeholders

Empowerment - building sustainability and connecting STEM providers in Alabama communities

Engagement - learning by doing for staff and stakeholders

Every child. Every chance. Every day.

AMSTI
Alabama Math, Science, and Technology Initiative

The Alabama Math, Science, and Technology Initiative, known as AMSTI, is the Alabama Department of Education's initiative to improve STEM teaching statewide, including improvements in each individual subject and the integrated STEM subjects.

AMSTI Provides Services Through:

On-Site Support

AMSTI provides on-site support, including coaching, that ensures that instruction and assessment are being carried out according to the overarching teaching and learning framework.

Professional Learning

AMSTI offers a variety of professional learning opportunities for educators, including training in the science of learning, use of the equipment and materials, up-to-date information, and requested topics to help them to implement instruction and assessment that supports student mastery of the Alabama Courses of Study.

Instructional Materials

AMSTI provides the equipment, materials, and lessons necessary for teachers to deliver quality, hands-on lessons in the core areas of math, science, and digital literacy & computer science (DLCS).

Effectiveness

The concept of "AMSTI for All" delineates the endeavors of an AMSTI or AMSTI-ASIM site in offering a comprehensive range of services to district leaders. This framework aims to facilitate discussions on how the needs of Local Education Agencies (LEAs) can be addressed through professional development, educator assistance, and instructional materials provided by AMSTI and AMSTI-ASIM. In Alabama, every public school educator is granted complimentary access to AMSTI's offerings, encompassing mathematics, science, digital literacy, computer science, and general training, support, and resources.

The initiatives outlined in this report are designed to provide continuous support, yielding both direct and indirect benefits that enhance math and science assessment scores for K-12 students. Furthermore, these programs aim to equip students with the necessary skills to transition seamlessly into higher education or the workforce.


We have character!


JAX STATE

JUNE 2025 ERIC G. MACKEY, Ed D, STATE SUPERINTENDENT

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