



MONTHLY NEWSLETTER

April 2019 | Issue No. 10

The AMSTI-USA Monthly Newsletter is published on the first business day of each month. All issues are archived on the AMSTI-USA page [HERE](#). For questions or comments, please email Cassie Haywood at chaywood@southalabama.edu.

From Leadership

2026 Forecast

Raphaella Archie | Assistant Director

What do you want to be when you grow up?

The job market is constantly changing. In fact, 65 percent of the children entering primary school will ultimately work in a job that does not exist, according to one popular estimate reported by the World Economic Forum. STEM education is recognized as a key driver of opportunity, and data show the need for STEM knowledge and skills will grow and continue into the future. It is estimated that in the next five years, major companies will need to add nearly 1.6 million STEM-skilled employees.

What does STEM education look like in your school, classroom and community. Click the link below to view the 2026 innovation report. Do your current practices align with what is ahead of us?



Resource Link:

https://innovation.ed.gov/files/2016/09/AIR-STEM2026_Report_2016.pdf

Reminder:

Summer Institute early enrollment deadline is **Wednesday, May 1, 2019**. Please enroll now as we will make cancellation decisions the following day and some sessions will reach capacity.

Visit our website for more information: amstiusa.org/training

Materials Corner

Maintaining a Safety Culture that's a "Win" for All!

Angel Madera, Jr. | Assistant Materials Manager



Like many other warehouse operations, our goals here at AMSTI-USA Materials Center involves the shipping, receiving, refurbishing, and storing of products and materials. In our case, teaching kits and the materials they consist of.

An important part of being successful in our operations here, is keeping safety and safe work practices at the same high importance level as our productivity.

This mindset starts at the highest level, our management, which always makes it clear that the expectation is to think safety and work safely while being productive in reaching our operational goals. It's the expectation in how we prepare them to be used in the classroom as well.

With management "setting the tone" of a productive safety culture, employees understand the expectations and take them seriously. Staff embrace the team concept, ensure they are properly building and refurbishing teaching kits, work safely, with good lifting techniques, report and/or mitigate potential hazards, use PPE (personal protection equipment) when necessary, practice safe forklift operation, and help to maintain a clean facility.



Knowing the importance and scope of our mission, we see that promoting and maintaining a safety culture that places safety and productivity at the same level... is a win for all!

Science Highlights

Questioning Student's Thinking in Science and Math

By Christine Sealy

Questioning students about their thinking during science and math can be very challenging. Teachers make quick decisions every day, whether to tell students the answers to their questions or facilitate the student's thinking by asking guiding questions and allowing the students to form their own answers.

Depending on the situation, students learn more about their own thinking and they learn more from each other than hearing the answer from a teacher.

Consider the quotes below about questioning/listening and a list of open-ended questions to ask students:

Good questions don't replace careful listening ...

"Circulating as students work in pairs or groups, teachers often arrive in the middle of an activity. Too often they immediately ask children to explain what they are doing. Doing so may not only be distractive, but may also cause teachers to miss wonderful moments for assessment. Listening carefully first is usually more helpful, both to find out how students are thinking and to observe how they are interacting.

(Storeygard, Hamm, & Fosnot, 2010)



Instead of telling students what to do ...

"Never say anything a kid can say!
This one goal keeps me focused.
Although I do not think that I have
ever met this goal completely in any
one day or even in a given class period,
it has forced me to develop and improve
my questioning skills. It also sends
a message to students that their
participation is essential. Every time I
am tempted to tell students something,
I try to ask a question instead."

(Reinhart, 2000)



Asking open-ended questions ...

- How else could you have...?
- How are these the same?
- How are these different?
 - About how long...?
- What would you do if...?
- What would happen if...?
- What else could you have done?
 - If I do this, what will happen?
- Is there any other way you could...?
 - Why did you...?
 - How did you...?

From Leadership

Farewell to Elizabeth Hammonds and Bob Gregoire

By: Susan Andress

We are losing 2 wonderful employees this month, but both for good reasons.

Elizabeth was a teacher at Hankins Middle School in Mobile County when she attended her first Summer Institute training for 7th Grade Math Year 1 in 2013. She knew from her AMSTI training that she could make a greater impact on students if she became a trainer. In March 2015 she completed her TTT (train the trainer training) and was an outstanding trainer. She continued with this passion for making the biggest impact on the greatest number of students by becoming an AMSTI-USA Specialist for secondary math in July 2015. Her love of mathematics and belief that every student deserves the best education we can provide has pushed her to continue to learn, teach, and advance. Elizabeth has now been promoted to a Secondary Math Specialist position with AMSTI at the State Department of Education. This is bittersweet news for me. I know that she will make an excellent addition to the SDE team and will quickly become indispensable. However, we will miss her deep content knowledge and her positive, get-it-done attitude.



Elizabeth, we are so glad you will still be in the AMSTI family. ☺



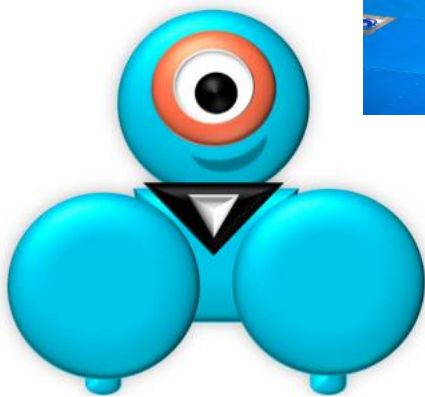
Bob has worked in our warehouse for over 10 years! Prior to joining our team, he was in the Navy and an engineer. In fact, this is his 4th retirement! We joke that we hope it sticks this time. Bob has been integral in many projects over the years. He was our first Building Safety Coordinator, created our monthly checklists, and inspected the building for many years. He also has trained our staff on fire safety including proper fire extinguisher usage. His extensive knowledge of the individual components, kits, and processes make him a valuable team member. His plans are to spend retirement fishing and traveling with his wife, Joan.

Bob, try to stay retired this time and invite us to a fish fry one day. ☺

Science Highlights

2019 Robotics Competition

What do you get when mix partnership with AMSTI-USA and the Mobile County Public School System...? Explosive Educational Fun. On March 22, 2019 AMSTI-USA held its 1st Annual Elementary Robotics Competition. Watch next month's newsletter for an in-depth look at this pilot event and what we're projecting for next year.



Instructional Resources



Project 2061

SCIENCE ASSESSMENT

<http://assessment.aaas.org>

The assessment items on this website are the result of more than a decade of research and development by [Project 2061](#), a long-term science education reform initiative of the American Association for the Advancement of Science.

Here you will find free access to more than 1000 items. The items:

- Are appropriate for upper elementary, middle, and early high school students.
- Test student understanding in the earth, life, and physical sciences, and the nature of science.
- Test for common misconceptions as well as correct ideas.

Intended primarily for teachers, these assessment items and resources will also be useful to education researchers, test developers, and anyone who is interested in the performance of middle and high school students in science.



They're counting collections in New Zealand too! You can find counting ideas for many grade levels along with other rich tasks on their teaching resource pages. <https://nzmaths.co.nz/rich-learning-activities>

How many squares on a chess board?

Size	Squares
8x8	1
7x7	4
6x6	9
5x5	16
4x4	25
3x3	36
2x2	49
1x1	64

$1+4+9+16+25+36+49+64=204$

$5 \quad 14 \quad 30 \quad 55 \quad 91 \quad 140 \quad 204$

T: Tell me what you have found out.

S: I started by looking for how many 1x1 squares and how many 8x8 squares. There was one 8x8 square and 64 1x1 squares.

T: What did you do next?

S: I worked out how many 2x2 squares, first by drawing them. I had to overlap the squares – there were 7 in each row and 7 rows. I recognised that the numbers I had so far (1, 64 and 49) were all square numbers, so I wondered whether there would be 36 3x3 squares. I realised all I had to do was add all the square numbers together.

Size	Number
1x1	100
2x2	81
3x3	64
4x4	49
5x5	36
6x6	25
7x7	16
8x8	9
9x9	4
10x10	1

100 + 81 + 64 + 49 + 36 + 25 + 16 + 9 + 4 + 1

100 + 90 + 100 + 50 + 20 + 25

385

T: Tell me what you have found out.

S: I found out that there were 385 squares.

T: Tell me about your thinking?

S: First I knew there were 100 1x1 squares so I looked at the next size which was 2x2. I focused on the top left corner of this 2x2 square and I knew that as long as the whole 2x2 fitted into the hundreds board, the number of times the top left corner fitted in would tell me how many 2x2 squares there were. I could see that you could move that square as far across as the nine or as far down as the 80s row, so there was one column on the right and one row at the bottom that I couldn't count. That meant there were 100 – 19 2x2 squares. I did the same with the 3x3 square and then just followed the pattern to work out the others.

ALSD SPOTLIGHT ON STATISTICS

CHALKABLE PD TITLE NUMBER: STAT100

This session focuses on content deepening that enhances instruction for Grades 6-12 statistics standards in the Alabama Course of Study: Mathematics. Activities include creating and analyzing boxplots and scatterplots, exploring mean absolute deviation and standard deviation, comparing datasets, and investigating correlational relationships.

Region 10-North
July 22nd and 23rd
Grove Hill United Methodist Church
104 Dubose Ave,
Grove Hill, AL 36451
8:00 a.m.-3:00 p.m.
Maximum Enrollment-75

Region 10-South
July 24th and 25th
Blackbox Theater
at Fairhope High School
One Pirate Drive
Fairhope, AL 36532
8:30 a.m.-3:30 p.m.
Maximum Enrollment-100

Region 10-Central
July 29th and July 30th
Saraland City Schools
Central Office
4010 Lil Spartan Drive
Saraland, AL 36571
8:30 a.m.-3:30 p.m.
Maximum Enrollment-50