

MONTHLY NEWSLETTER

March 2019 | Issue No. 9

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.

2019 Summer Training Schedule

Notes

- **Deadlines:** Preliminary registration deadline: **May 1, 2019** (This is when we will decide if sessions need to be canceled or expanded based on enrollment.) Final deadline: **June 17, 2019**
*We anticipate Year 1 sessions reaching capacity, so register early!
- Visit our website for information including links to registration forms, session cancelations (if any), and FAQ. <https://www.amstiusa.org/training>
- Some sessions have overlapping dates, so be careful when registering.
- All days are from 8:00 – 3:30 with lunch from 11:15 – 12:15.
- **Math** training has been revised. The only teachers that are eligible for Math Year 2 are those that completed Math Year 1 last summer.
- Teachers are eligible for **Science Compressed Training** after they have completed Year 1 and Year 2 Summer Institute in the same grade band (K-5 or 6-8). All face-to-face Compressed Training will be drop-in. Year 2 will drop into Summer Institute at Daphne High School. Year 1 will drop into Summer Institute at Kate Shepard.
- All teachers that are eligible for Science Compressed Training are eligible for **Science Online Training**. It happens each quarter and aligns to your school's rotation schedule. More information and registration form are on [our website](#).
- If your school needs to hold a "Jane Doe" spot, please email Cassie Haywood (chaywood@southalabama.edu). The new hire will need to complete the registration form as soon as they are hired.

Summer Institute

- [Kate Shepard](#) (Mobile County)
 - K-5 Science Year 1: July 9 – 12
 - 6-8 Science Year 1: July 9 – 12 & 15 – 17
 - 6-8 Science Year 2: July 9 – 12 & 15 – 17
 - K-5 Math Year 1: July 15 – 18
- [Daphne High School](#) (Baldwin County)
 - (Pilot) K-5 Math Year 2: July 9 – 11 (only for Math Year 1 2018 attendees)
 - K-5 Science Year 2: July 15 – 17
- [AMSTI Office/Warehouse](#) (93 Sidney Phillips Drive, Mobile, AL 36607)
 - 6-12 Math Year 2: July 9 – 12
 - 6-12 Math Year 1: July 16 – 19

Compressed Training

- Due to funding constraints, compressed training eligible teachers may choose to attend Summer Institute sessions (see above for dates & locations) or enroll in Online Training during school year.

Materials Corner

New Energy Works Teacher's Edition

Susan Andress | Business Manager

All 4th grade science teachers that are certified and currently receiving Energy and Waves will receive a revised teacher's edition during 4th quarter kit delivery. I plan to ship them together in one box if there are more than 1 teacher that qualifies per school.

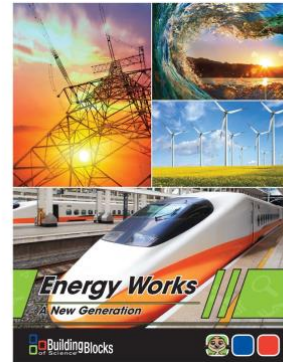
The Building Blocks of Science® is a hands-on, inquiry-base curriculum development by Carolina Biological Supply Company to establish a solid foundation in elementary science while addressing the Next Generation Science Standards. This program was developed as a core curriculum that utilizes interactive investigations, literacy components, and digital resources to teach science content and investigative skills.

The new 3rd Edition units add an array of newly developed digital features and literacy components to Building Blocks of Science's student-centered investigations including:

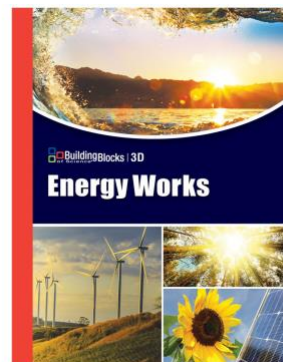
- Simulations that are directly related to lesson content
- Lesson-specific interactive whiteboard activities
- Interactive digital student reader
- Differentiated student reader on eBooks
- Student Investigation Sheets in both print and digital form
- Online assessment tools
- Interactive eTeacher's Guide

Due to these new features and its use of the 5E Instructional Model, the Engineering Cycle, and Science Notebooking, the AMSTI-SDE determined that this new edition should be utilized by our trained AMSTI teachers. The best part is that no recertification is required. (Yay!)

Old Version



New Version



If anyone receiving a copy is retiring, changing grade levels/subjects, or transferring to a non-AMSTI school for next school year, please return the unused book during 4th quarter kit returns in May. All future trainings will be using this edition.

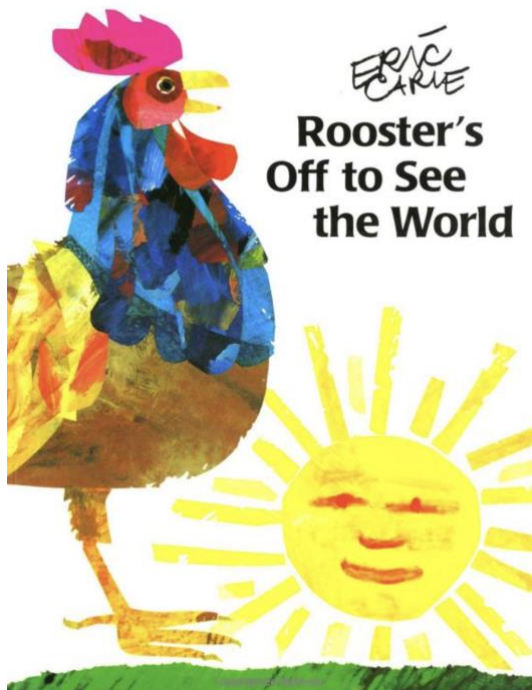
Please note that we do not want any of the 2nd edition copies back, so you may do with those as you please.

Contact Chelsea Bailey at cbailey@southalabama.edu if you have any questions about using your revised teacher edition for Energy Works.

Math Highlights

Using Literature to Build Mathematical Understanding

By: Angela J. Williams



Children love to be read aloud to and elementary teachers use literature to enhance students' reading comprehension and give students experiences that create a love for reading. Alabama's English-Language-Literacy standards specifically highlight the use of social studies, science, and technical subjects to enhance reading and writing instruction.



- <https://www.nctm.org/publications/exploringmath/>
- <https://www.the-best-childrens-books.org/math-for-kids.html>
- <https://earlymath.erikson.edu/4-books-inspire-algebraic-thinking-young-children-algebraic-sentence/>
- <http://www.teachhub.com/using-children%E2%80%99s-literature-motivate-math-lessons>
- <http://www.marilynburnsmathblog.com/using-childrens-literature-to-teach-math/>
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While these are specific to grades 6-12 in the standards, this integration can begin in Kindergarten. The ELL Standards in the primary grades ask for students to read more complex text that provide facts and background knowledge. So, why not use students' love of literature during reading instruction to deepen their understanding of math concepts. Literature provides an opportunity for students to experience math in context- it can embed meaning for concepts into a situation that students can relate to, it invites students into a mathematical world in a motivational way by generating interest, and it can promote problem-solving and critical thinking skills' development.

Math Highlights

Habits of Mathematically Proficient Students

By Jennifer Fagerstrom

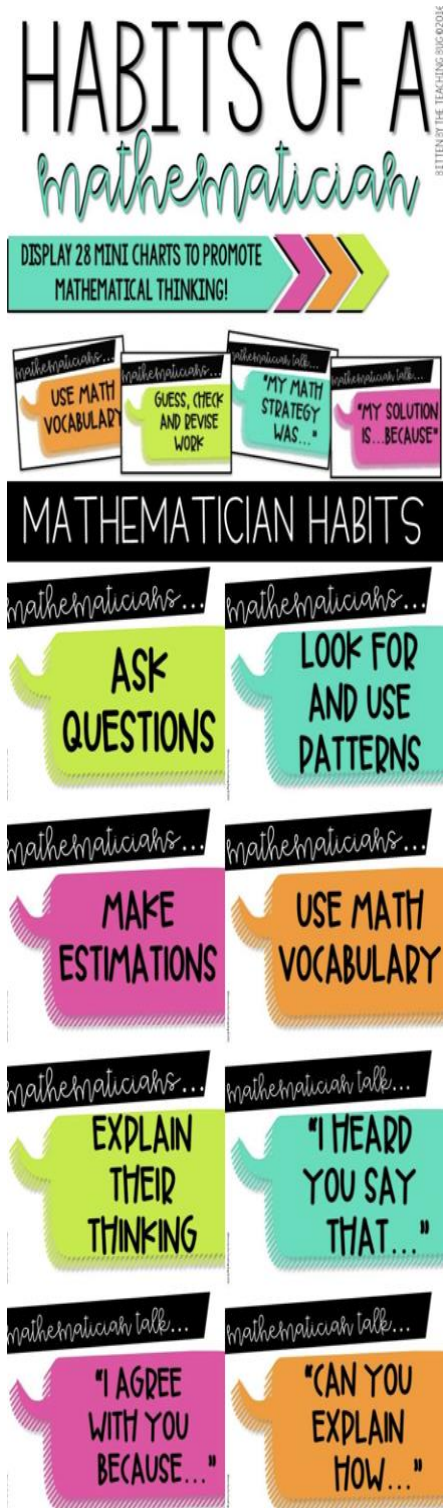
How do you develop a habit? For example, as an adult, we either have good table manners or we don't, so how did that happen? Did these manners just magically appear? Or did something happen that helped you to acquire these habits? If you have good table manners, odds are that growing up you were offered repeated experiences such as eating at the table with others that modeled and reminded you of how table manners looked and sounded.

Most likely, you had lots of opportunities to try your new learning out in different settings such as breakfast, Sunday dinner at a relative's house, the school cafeteria, or restaurants to name a few. As a result, your table manners developed over time, through multiple experiences and with some help along the way from someone who modeled these practices in a real-life setting.

So, what do the Standards for Mathematical Practice have to do with table manners? If the SMP are considered to be habits that mathematically proficient students have acquired, how do students develop them?

- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools and strategically.
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

For more information, visit <http://www.nctm.org/principlestoactions>



Science Highlights

Finding the Seeds in Our Fruit

By Chelsea Bailey



“What do you know about fruit?” Students in the classroom take a few minutes to jot down their ideas about fruit.

“It has natural sugar in it,” said one girl. “It makes us strong and healthy,” claimed another. “It has seeds,” claims yet another.

Students at MIS explore seeds in different fruits.

As I work with a class of third and fourth graders combined, I see the fruits of dedicated teachers who have overcome the challenge of teaching multi-grade levels in the same room. The handful of teachers at Monroe Intermediate School sow seeds of potential and possibility every day. Shout out to Principal Conquesa Dotson and 3rd/4th grade teacher LaTonya Norwood for planting greatness in these young minds.



Science labs look delicious as we explore differences in seeds.

Science Highlights

Energy Forms

By Rose Mary Henderson

Teachers, this is a great way to learn Energy Forms and HTML5 from PhET Interactive Simulations.

They just published the 6th new HTML5 simulation, [Energy Forms and Changes](#)! Explore how heating and cooling iron, brick, and water adds or removes energy. See how energy is transferred between objects. Build your own system with energy sources, changers, and users. Track and visualize how energy flows and changes through your system. A big thank you to the [Next-Lab](#) project for their partnership on this project!

Sample learning goals:

- . Predict how energy will flow when objects are heated or cooled, or for objects in contact that have different temperatures.
- . Describe the different types of energy and give examples from everyday life.
- . Describe how energy can change from one form into another.
- . Explain conservation of energy in real-life systems.
- . Design a system with energy sources, changers, and users.

Check it out on the website or in the [iPad](#) or [Android](#) app and please share the news with a Physics teacher in your school.



[The 11th American Geosciences Institute \(AGI\)/Exxon Mobil Exploration Teacher Leadership Academies](#) will be held July 7-12, 2019. Each year teachers meet in Houston for week-long academies at which they learn Earth science content, explore hands-on STEM activities, and gain real-world science experiences. This academy prepares teachers with geoscience teaching techniques, resources, and tools that they can share with their colleagues and students.

Funding from Exxon Mobil and AGI covers academy related costs for the teachers, including travel within the U.S. to Houston, meals, lodging, and educational materials. Participants have opportunities to interact with their peers from other locations, gain skills and knowledge for teaching Earth and space science, and develop plans for presenting effective teacher workshops.

We welcome applications from all states and school systems serving U.S. students, including those that are a part of the DoDEA network and U.S. territories. Teachers are encouraged to come as a team of two to four, from one grade level or several across the K-8 range, so that they can continue to support each other when they return to their local setting. Academy participants will be expected to lead at least one post-academy experience, which can be a workshop, conference presentation, or other professional learning event. We ask that all academy participants share what they learned, help spread geoscience awareness, and apply what they learned in their classroom.

We encourage science supervisors, principals, science coaches, and other administrators to nominate teachers for the academy. We recommend that you nominate teachers before April because that is when the application review process starts. Nominated teachers will then receive more information about how to apply. The application process is competitive and we anticipate having space for up to 30 teachers and we will continue to accept applications until the academy is full.