



# MONTHLY NEWSLETTER

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The AMSTI-USA Monthly Newsletter is published on the first business day of each month. All issues are archived on the AMSTI-USA Wiki page [HERE](#). For questions or comments please email Mike Degen at [mdegen@southalabama.edu](mailto:mdegen@southalabama.edu).

## Summer Institute 2018 | June 11 - 22

### Training Schedule At-A-Glance

<u>Training Offered</u>	<u>Location</u>	<u>Dates</u>
K-5 Science Notebooks	Daphne High School	June 11
K-5 Science Year 1	Daphne High School	June 12 – 15
K-5 Science Year 2	Baker High School	June 18 – 20
6-8 Science Year 1	Baker High School	June 11 – 15 & 18 - 19
6-8 Science Year 2	Baker High School	June 11 – 15 & 18 - 19

**Register Online:** [Summer Institute](#) | [Compressed Training](#)  
**DEADLINE TO REGISTER IS MAY 1**

#### ADDITIONAL NOTES:

- Some sessions have overlapping dates, so please plan accordingly. Training days last from 8:00 – 3:30, with lunch from 11:15 – 12:15.
- AMSTI Math is being revised and currently in the pilot stage. AMSTI Math training will be offered again during Summer Institute 2019.
- Teachers are eligible for **Compressed Training** *only* if they have attended a Year 1 and a Year 2 Summer Institute within the same grade band (i.e. K-5, 6-8, 9-12) and subject area (math/science). All Compressed Trainings will all be held at Baker High School. Minimum registration is 8 participants. If minimum registration for a session is not met we will cancel and participants may either drop into Summer Institute sessions, switch to Online Training during the school year, or cancel. Genetics (new for Grade 7 Science Year 1): June 15 & 18 – 19. Electricity, Waves, and Information Transfer (new for Grade 8 Science Year 1): June 11 – 15
- Have questions? Please contact Mike Degen, Professional Development Coordinator, at [mdegen@southalabama.edu](mailto:mdegen@southalabama.edu) or (251) 665-4684.

# Materials Corner



## Keep-In-Classroom Items



Susan Andress | Business Manager

We expanded a process this school year that will hopefully prove beneficial for both teachers and our staff.

Keep-in-Classroom (KIC) items are kit materials that are kept and maintained by the teacher from year to year, as opposed to the vast majority of materials that are rotated in kits and refurbished by our warehouse staff.

We decided to make certain items KIC because, in most cases, lessons could be extended through scheduled kit returns.

For example, plastic tanks in elementary science kits house living organisms like fish and frogs. If the tank is returned, then those animals must be transferred to another container or euthanized. If tanks are kept, students may continue their study and observation until the next kit arrives.

## What Should I Keep?

**Plants & Animals:** (6) tanks, (2) tank lids, (1) dip net

**Weather Walk:** (6 sets) pre-cut material squares (cloth, foil, clear plastic, yellow plastic, wax paper)

**Wild Organisms:** (16) tanks, (16) tank lids, (2) dip nets, (10) boxes, (12-15) strips (rug, suction cup, Velcro, weather stripping)

**Soils & Shores:** river rock mixture from investigation 2

**Heredity & Diversity:** (1) sprouting kit, (2) tanks, (4) plant holders, (1) clamp lamp, (1) bulb

**Animal Studies:** (24) tanks, (2) tank lids

**Dynamics of Ecosystems:** (10) tanks, (1) tank lid

## KIC Maintenance Tip



Clean plastic tanks promptly with warm water and a cloth. **Never use soap or vinegar** as the detergents and phosphates can distress or even kill your fish! They can also cause the tank to degrade prematurely and become cloudy.



# Message From The Director

## Piloting New AMSTI Math Training This Summer



Rachel Broadhead | Director

The mission and vision of AMSTI has always been to equip teachers with best practices for teaching highly technical subjects like math and science, and to provide the follow-up job-embedded support so they can execute these pedagogies in the classroom.

Beginning this summer, we will hold a small pilot of the new math training to prepare for a full-scale rollout in summer 2019. This pilot will be limited to teachers at new AMSTI schools, but we project that this revised math training will be available for all AMSTI schools at Summer Institute 2019 and moving forward into compressed training during the 2019-20 academic year.

In the past, we worked towards sustainable implementation of mathematics best practice with an ancillary textbook resource, using units from Investigations in Number, Data, and Space as pull-out resources for instruction. While this resource provided the best practices we sought, the idea of “ancillary” or “pull-out” units impeded sustainability.

New AMSTI Math training will center on the Alabama Course of Study for Mathematics content and practices in a grade-banded, vertical approach. Teachers across grades will work together to deepen understanding of the standards, connect important elements of coherence across grades, and explore the eight effective teaching practices for mathematics.

This learning will take place in the context of professional learning groups and the AMSTI formative assessment cycle through the Four Essential Questions of a PLC:

**1. What do we expect our students to learn?**

*Teachers in grade band groups (K-2, 3-5, and 6-8) will explore the progression of understanding articulated in our standards in the targeted domains.*

**2. How will we know they have learned it?**

*Teachers will analyze student work samples for evidence of the expected understanding and consider a variety of ways to collect evidence during daily instruction.*

**3. How will we respond when they don't learn it?**

*Teachers will connect the current level of understanding to the learning progression in order to make strategic instructional decisions and consider a variety of ways to respond based on student need.*

**4. How will we respond when they already know it?**

*Teachers will connect across grade levels to the expected understanding and consider developmentally appropriate ways to extend learning for students already at mastery.*

# Math Highlights

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Get Counting with Counting Collections  
Teachers Participate in Multiplicative Reasoning OGAP

By Angela Williams  
By Elizabeth Hammonds



Students engaged in a counting collections activity.

## Get Counting with Counting Collections

By Angela Williams

Counting is the basis for all of the math students will encounter in primary school, secondary school, college and beyond. Because it is so fundamental, our K-2 teachers chose counting as a focus for our Professional Learning Communities (PLCs).

This year has been a great opportunity to learn and grow for me as a AMSTI math specialist, as well as for the teachers who have welcomed other math specialists into their classrooms. Something we are trying out in these grades is gathering evidence of students' mathematical understanding using an activity called

counting collections. Counting collections tasks students to count groups of objects as their teacher circulates about the classroom, dropping in on the small groups to discuss what the students are doing and to help them think through solutions. The teacher will then highlight the most effective strategies with the rest of the class.

There is so much one might learn about a child from his or her counting skills.

The data have already proven to be valuable in providing insight into an individual's understanding, identifying whole class versus small group instructional needs, and in observing student growth over time.

For more information about counting collections, please see these terrific digital learning resources:

- <https://tedd.org/activities/counting-collections/>
- <https://coetedd-wpengine.netdna-ssl.com/wp-content/uploads/2014/10/School-Wide-Counting-Collections.pdf>
- <https://www.teachingchannel.org/videos/skip-counting-with-kindergarteners>



Math teachers collaborating during a recent OGAP session.

## Teachers Participate in Multiplicative Reasoning OGAP

By Elizabeth Hammonds

Teachers from Jackson Intermediate School, Grove Hill Elementary School, Monroeville Middle School, Thomasville Middle School, and McIntosh Elementary School participated in a year-long OGAP Professional Development and Professional Learning Team (PLT) to better help students with multiplicative reasoning and number sense.

Third and fourth grade teachers participated in a grade level PLT while fifth and sixth grade teachers

participated in a cross-grade-band PLT.

OGAP, which stands for Ongoing Assessment Project, is a systematic and intentional formative assessment system in mathematics grounded in the research on how students learn mathematics.

Through extensive professional development, supported by tools and resources, teachers learn how to use formative assessments in their classrooms and analyze the resulting information about student thinking to guide subsequent instruction.

OGAP is not a curriculum, but is designed to be used with an existing curriculum on a regular basis.

Over the last thirty years, a wealth of research has also been conducted on children's development of multiplicative and rational number reasoning.

The growing understanding of "learning trajectories" or common pathways of development in these areas can provide teachers with a clear progression of learning goals, how students' thinking develops, and learning activities that are likely to move students along the pathway towards achieving those goals (Daro, Mosher, Corcoran, 2011).

Professional Development Important Dates	
<b>March 23</b>	<b>Cycle 4 Online Enrollment Closes</b> *Online Trainings are only available to those who have completed Year 1 and Year 2 Summer Institutes. Registration is open year-round <a href="#">HERE</a> .
<b>March 31</b>	<b>Cycle 3 Online Course Ends.</b> Be sure to have all investigations and coursework completed.
<b>May 25</b>	<b>Cycle 4 Online Course training ends.</b> Be sure to have investigations and coursework completed.
<b>April 24</b>	Meeting for AMSTI School Principals, more information TBA.
<b>June 11 - 22</b>	<b>Summer Institute 2018</b> @ Baker High School (Mobile): K-5 Sci. Year 2, 6-8 Sci. Year 1 and Year 2 @ Daphne High School (Baldwin): K-5 Sci. Notebooks & K-5 Sci. Year 1

# Science Highlights

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A Science Lab How-To: Self-Inflating Balloon  
Saraland Elementary "Rocks" with Soils and Shores

By Rose Mary Henderson  
By Aimee Rester



## A Science Lab How-To: Self-Inflating Balloon

By Rose Mary Henderson

This month I wanted to share an engaging, hands-on activity, inspired by "Wack-A-Pack" self-inflating balloons, using supplies that can be found at most grocery stores.

The components of a self-inflating balloon are citric acid, baking soda and water. These can also be ordered from science websites, but make sure to get the SDS sheets. When the system is "wacked", the chemicals mix and react. Students may be familiar with baking soda (sodium bicarbonate) from recipes. They also may know that citric acid gives some fruits their sour taste. (Though do not let them taste anything. AMSTI has a strict "don't eat the experiment" policy!)

Start with a micro-version of the reaction. Have students put a drop of water on a clean experiment area. Add a pinch of baking soda and a pinch of citric acid. When these dissolve in the water there will be an audible fizz as bubbles and gas form!



Of course, they will now want a bigger reaction. Turn their enthusiasm into a learning opportunity and engineering project. Challenge them to create a device to capture the gas formed by placing the solids in a sealable bag

and the water in a small cup (so it cannot mix, see below), then seal it up.



Now it's time to give the bag a quick shake and watch it inflate! (Can they come up with a ratio of reactants that inflates the bag without popping it?)

Observant students will notice that the bag starts to feel cold as they shake it. Was it just their imaginations or did the temperature really change? Gather more evidence! This time, in a cup.



Dr. Salomon Itza (Univ. of Mobile) shows volcanic rocks to students at Saraland Elem.

## Saraland Elem. “Rocks” with Soils and Shores!

By Aimee Rester

Second graders in Mrs. Irvin's class at Saraland Elementary School became geologists as they recently studied the volcanic rocks: basalt, tuff, and scoria.

They learned that weathering is the process where rock is dissolved, worn away, or broken down into smaller pieces over long periods of time, and experienced the weathering process firsthand by rubbing rocks together to create sand and by washing the rocks in water, observing as the sand fell off the surface.

During a recent lesson, Mrs. Pavelka's second grade class hosted a special guest. Dr. Salomon Itza of the University of Mobile stopped by to share some volcanic rock samples and participate in experiments to show how chemicals can affect our soil.

## Testing Tip: Troubleshooting Scantron Testing

### Reducing Student Testing Issues

When preparing or maintaining students' testing devices, it may help to take the following steps to prevent or troubleshoot testing disruptions:

- 1. Clear the internet browsing history and delete cookies** – When multiple students are testing on the same devices over an extended period, clear the devices' caches periodically to prevent stockpiled information from causing hang-ups during student testing.
- 2. Restart the testing device** – Occasionally, what appears to be a testing issue may actually be a computer-processing issue. In such cases, it may be necessary to restart the student's testing device in order for him or her to have a smoother testing experience.
- 3. Use Scantron's Network Diagnostic Tool** – Technology coordinators may want to utilize the Network Diagnostic tool to ensure that your school has the bandwidth to test the number of students that it is testing simultaneously. [Click here](#) to access the job aid for running the Performance Series Network Diagnostic tool.

### Troubleshooting Login and Data-Transfer Problems

The Alabama Scantron team frequently receives emails about students and/or staff not being able to log into the Performance Series site. As a friendly reminder, all student data within our site transfer automatically from INOW. Similarly, all staff data in our site transfer automatically from INOW, the Education Directory (Ed Dir), and the Teacher Certification website.

For your benefit, we have created a document entitled “Troubleshooting Login and Data Transfer Issues.” In addition to being comprehensive, the document's table of contents is hyperlinked, allowing you to locate the information you need as quickly as possible. [Click here](#) to access the document.

### Important Notes for Creating Normal Achievement Tests

Recently, several Alabama educators have expressed interest in learning more about Scantron's test-creation solution, Achievement Series. [Click here](#) for an overview of Achievement Series.

If you need guidance creating tests, [click here](#) to access step-by-step instructions for creating normal Achievement Tests.