

NEWS JOURNAL

A publication of the Montana Science Teachers Association

Spring 2019



In this Issue:

- **Teacher Lessons**
- **Summer Employment Opportunity**
- **Professional Development**
- **Montana Learning Center's Summer Science Camps for Kids**

Submitting Articles to the MSTA News Journal

When submitting articles, please adhere to the following criteria:

- Electronic submissions are preferred in Microsoft Word format. These can be attached to your email message.
- If in doubt about format, submit your work in .rtf format.
- If truly in doubt, paste your submission in the body of the email message.
- Lab activities may be mailed. Please cite any references.

Judy Boyle, Editor Tentative Submission/Publication Dates

sagemountaintrail@gmail.com August/September (Fall Issue)

December/January (Winter Issue)

February/March (Early Spring Issue)

April /May (Late Spring Issue)

Signs of Spring are slowly emerging and I hope you are getting a chance to enjoy them. Bitterroot rosettes, bluebirds, Sandhill Cranes, Osprey, and Blue Heron are just a few I have observed and so have my students. It has become a daily occurrence for someone to spot a new arrival. In this newsletter you will spot many summer professional development workshops and conferences for you take advantage of.

I was just in St. Louis attending the National Science Teachers Association's national conference and it was so inspirational. I want to congratulate two Montana educators on receiving NSTA awards. Keep reading to learn who they are!

NSTA also announced the Board of Directors' vote to change the NSTA name from "Teachers" to "Teaching". It now goes to the membership. More is mentioned in this newsletter so keep reading!

It is also that time of year when session proposals for the Montana Educators Conference are being submitted. The deadline is May 30, 2019. Please consider submitting a proposal. You have so much to offer!

Thank you for all you do to teach our students about the world around them!
Have a wonderful spring!

Judy Boyle, MSTA President

Congratulations to Montana Recipients of 2019 NSTA Awards!

Rayelynn Brandl, [Clark Fork Watershed Education Program](#), Director, Distinguished Informal Science Education Award

Maggie Chioko Hammel, Science Teacher, Carter County High School, Maitland P. Simmons Memorial Award for New Teachers



- [Watch the video of the award ceremony.](#)
- [Learn more about NSTA Awards.](#)

NSTA 2019-2020 National and Regional Conferences

Regional

Salt Lake City- October 24-26

Cincinnati- November 14-16

Seattle- December 12-14

National

Boston-April 2-5

What's New at NSTA

VOTE YES FOR SCIENCE TEACHING

NSTA's Board of Directors has voted to change the name of the National Science Teachers Association to the National Science Teaching Association. This change reflects the need for a more inclusive name. NSTA feels science educators do not only encompass certified classroom teachers, but includes informal educators, post-secondary educators, pre-service educators, and professional development educators. NSTA wants to welcome all science educators and feels the change from "teachers" to "teaching" is more inclusive. The vote now goes to the NSTA membership. The comment period is open for members and voting will begin May 20, 2019 and close June 20, 2019. If you are an NSTA member, you may comment on the website before the voting opens. Please make sure that you have unchecked the "opt-out" box on your membership account so you receive up-to-date emails and a ballot.

EVENTS and MORE!

July 11 – 13 – Earth Science Field Experience – YBRA, Red Lodge

August 13-14th Idaho Science Teachers Association STEM Together Conference Coeur D' Alene <https://idscienceteachers.wildapricot.org/Register-for-the-Conference>

October 17-18th- Montana Educators Conference- MSTA Membership Luncheon

FREE PROFESSIONAL LEARNING from OPI

Be prepared for the new science assessments in 2020, become an expert on the NGSS and Montana Standards with the [Teacher Learning Hub](#) Science Foundation courses: Montana's New Science Standards 101, 201, 301, and 401.



Dr. Arlene Alvarado, Rayelynn Brandl, Chris Doyle, and Abby Peltomaa of the Clark Fork Watershed Education Program (CFWEP) will provide contextual and experiential learning using watershed science as an integrating context. In addition, MPRES-OPI Trainers Chris Pavlovich, Judy Boyle, and Bill Stockton will facilitate lesson development and NGSS alignment. You'll also tour the Clark Fork Watershed and learn how to conduct watershed-based studies.

When: June 13-15, 2019

Where: Montana Tech

Who: 5th - 12th Grade Teachers

How to sign up:

cfwep.org/training
406-496-4898
tgordon@mttech.edu

What:

For teachers interested in incorporating engaging, place-based lessons that tie-in science, math, & ELA.

Stipend: \$150

OPI Renewal Units, CE Option

An optional OPI hub course will follow this workshop. The course will include methods for leading authentic place-based research projects.

Training Objectives:

1. Learn about the restoration of the Clark Fork Watershed and practice watershed monitoring.
2. Develop lessons using CFWEP curriculum to incorporate math and ELA into a cohesive unit.
3. Create watershed education lessons that are adaptable to your place.
4. Review CFWEP lesson plans available for your class.
5. Work with area scientists who are studying Clark Fork Restoration.
6. Tour the Clark Fork Watershed.

MontanaTech



Writing in Science Summer Intensive

Back by popular demand! This 3-day Summer Writing Intensive provides Montana teachers with a community of learners, writers, and practitioners in writing and science in implementing the new Montana Content Standards for Science, while using writing to connect ourselves, our students, and our communities to the content. Teachers will learn specific ways to support writing in the content areas while integrating Indian Education for All seamlessly throughout instruction. Suitable for all grade levels.

July 7-9, 2019

Fairmont Hot Springs

Workshop: No cost, participants pay lodging. (rate \$95/night, add'l \$15 per extra adult in the room)

25 Renewal Units

Register early, limited to 30 participants. Email Christy Mock-Stutz, or call 406-444-0736, if you have any quest

— REGISTRATION NOW OPEN —

2nd Annual MT Science Summer Institute

AUGUST 6-7, 2019 | MSU - BOZEMAN

CONNECTING CLASSROOMS TO CAREERS

Designed for: PK-12th grade educators (formal & informal), pre-service teachers, and administrators

Breakout session topics will include: best practices in 3-D / STEM teaching, learning aligned with NGSS, Montana Science Content Standards, and our theme “Connecting Classrooms to Careers” to help make learning relevant and authentic, and to broaden students’ views of applications of science in their lives.

Keynote: Clay Bolt, Natural History & Conservation Photographer

Registration & conference details can be found at: <https://www.swmss.coop/ssi2019.html>



The University of Montana's School of Public and Community Health Sciences Announces the Research Education on Air and Cardiovascular Health (REACH) 2019 Teacher Workshop

Using air quality and cardiovascular health to bring citizen science research into the classroom!

The University of Montana's School of Public and Community Health Sciences REACH Program provides students the opportunity to learn about the scientific process by doing science. Using the overarching themes of particulate air pollution and cardiovascular health, teachers and students will have access to instruments and curriculum activities as well mentoring by university research professionals allowing students to design and implement a scientific investigation. Students will then have the opportunity to communicate their science research findings before their peers at the annual Environmental Health Science Symposium held on the University of Montana campus. In addition to the science research opportunities for their students, teachers will have access to ongoing professional development through workshops, video conferences, and campus visits.

When: August 12–13 from 9:00 am–3:00 pm
Where: University of Montana
Who: Middle and High School Teachers who are interested in incorporating scientific research into their classrooms.
Sign Up: <http://bit.ly/2019REACHworkshop>
Stipend: \$400.00 (plus travel costs)
OPI Renewal/Continuing Education credits available.
More information: email, brett.taylor@mso.umt.edu

Workshop Participants Will:

- ◊ Learn about the history and aims of the REACH Program.
- ◊ Receive instruction and practice with air quality and cardiovascular monitors.
- ◊ Review and provide feedback for classroom activities covering cardiovascular health, research design, and population health.
- ◊ Build and code a personal air quality monitor.

SEPA SCIENCE EDUCATION PARTNERSHIP AWARD
SUPPORTED BY THE NATIONAL INSTITUTES OF HEALTH

The REACH Program is funded by a Science Education Partnership Award through the National Institute of Health.
Grant # 1R25GM129849-02A1

Experience Science at the Lake this Summer!

The Montana Learning Center at Canyon Ferry Lake offers camps for students entering grades 1-12. Camp staff are certified teachers, many of whom are award-winning. The student to staff ratio is 1:8. Instructors and counselors are CPR & First Aid certified.

Our camps create fun and meaningful memories and skills your child will build on for the rest of his or her life.

For full camp descriptions and registration, visit our website at www.montanalearning.org.

Discovery

Camp Discovery is a four-day, daytime only, camp for students entering grades 1-3. Campers are bused to the MLC from Helena Monday through Thursday.

Cost: \$300. Includes lunch and snacks.

July 8th - 11th - **Nature Knows Best**
July 15th - 18th - **Science Detectives**
July 22nd - 25th - **Make It Move**
July 29th - August 1st - **Nature Knows Best**
August 5th - 8th - **Science Detectives**

Young Naturalist Adventures

Camp Young Naturalist Adventures is a five-day overnight camp for students entering grades 4-6. Students arrive on Sunday afternoon and leave Thursday afternoon.

Cost: \$450. Includes lodging and meals.

July 7th - 11th - **Grossology**
July 14th - 18th - **Space Quest**
July 21st - 25th - **Upcycled Ecology**
July 28th - August 1st - **Grossology**
August 4th - 8th - **Upcycled Ecology**

Innovations

Camp Innovations is a five-day overnight camp for students entering grades 7-9. Students arrive on Sunday afternoon and leave Thursday afternoon. Campers experience offsite field trips and the night sky.

Cost: \$500. Includes lodging and meals.

July 7th - 11th - **The Wonders of Water**
July 14th - 18th - **Montana Treasures**
July 21st - 25th - **All Girls STEAM Camp**
July 28th - August 1st - **Montana Treasures**
August 4th - 8th - **Crime Scene Investigation**

Extreme Yellowstone Expedition

Extreme Yellowstone Expedition is a five-day overnight camp for students entering grades 7-9. Camp dates are August 11-15, with students arriving and leaving in the afternoon. The American Explorers Basecamp in Paradise Valley will be the hub for lodging, science experiences and a jumping off point for excursions to Geyser Basin, Yellowstone Falls and Lamar Valley.

Cost: \$1,000. Includes lodging, meals, high-ropes course, horseback riding and whitewater rafting.

Explore the Universe

Using state-of-the-art telescopes and cameras to image the night sky, campers will gain astronomical knowledge and enhance their observing skills. They will develop a plan to continue exploring space, the final frontier. This five-day overnight camp is for students entering the 9th - 12th grades and is from July 7 – 11.

Cost: \$750. Includes lodging, meals and activities.

Lewis & Clark Leadership Course

Lewis & Clark Leadership Course is an eight-day overnight camp for students entering grades 9 - 12. Camp dates are August 6 - 13. Campers experience the actual sites and scenes of Lewis and Clark's journey of discovery. Activities include a canoe expedition through the wild and scenic Upper Missouri River and outdoor discovery training at the lake and in the Big Belt Mountains.

Cost: \$1,499. Includes lodging, meals for eight days and gear rentals.

For full camp descriptions and registration, visit our website at www.montanalearning.org.

Call for Presenters:

All of you wonderful science teachers need to share your expertise and knowledge with others. Please consider presenting at the Montana Educators Conference in Belgrade, Montana, October 17th and 18th. Deadline to submit is April 30, 2019.

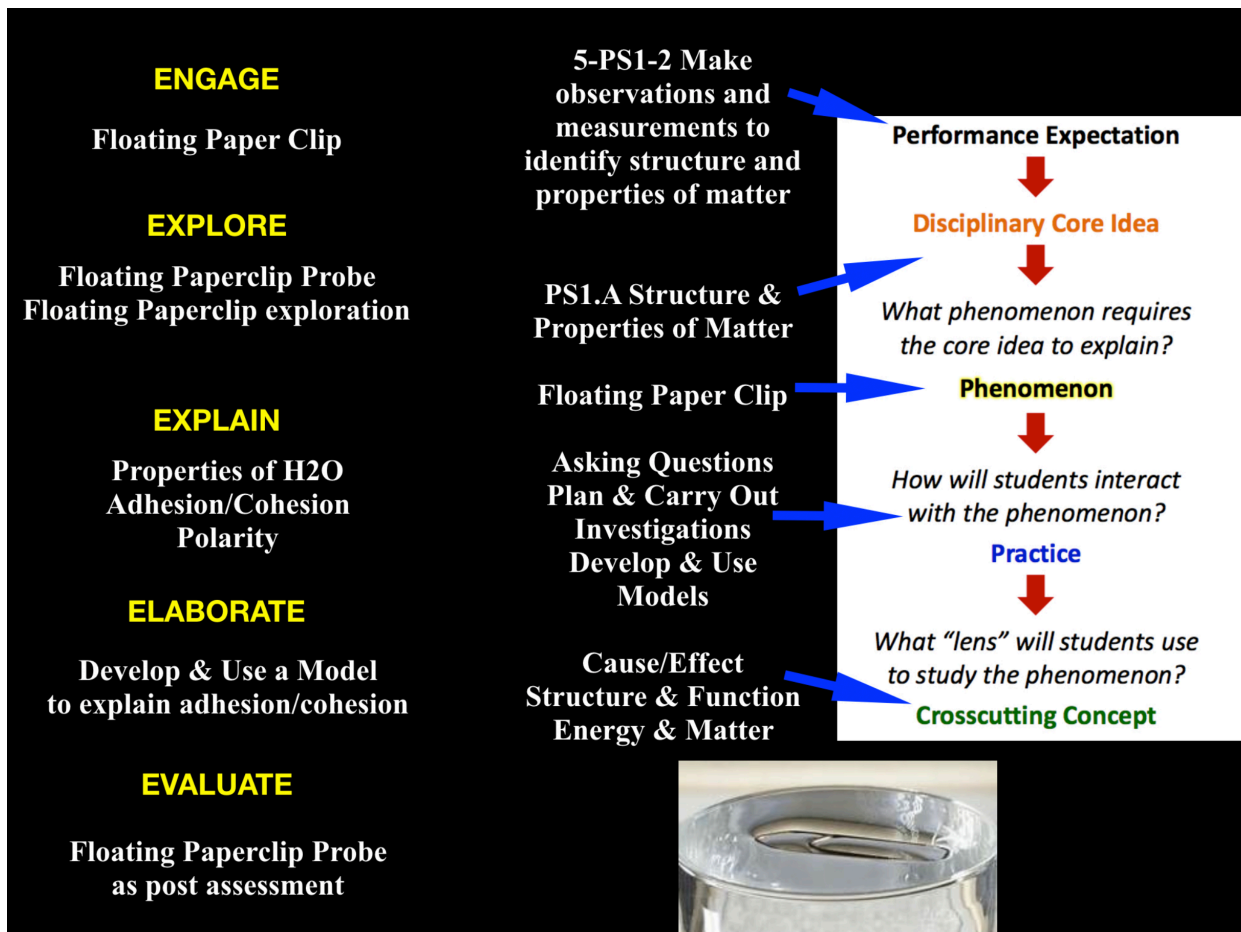
Submit here: <https://www.mfpe.org/edconference/>



Montana Science Teachers' Association

Phenomenon and the 5 Es

Many teachers are familiar with the 5 Es, but NGSS encourages us to teach phenomenon-driven inquiry. Here's one way to think of putting the two together:



[Check out this page](#) for more ideas and resources.

MSTA Regions

