

Montana Science Teachers Association



NEWS JOURNAL

A publication of the Montana Science Teachers Association

February 2015



Photo by Dr. John Winnie, MSU

In this Issue:

- From the President • MSTA Conference Information • Book Report • Opportunities for Teachers • Opportunities for Students • NSTA • NGSS • Teacher Awards • and more...

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.

John Graves, Editor
graves@montana.edu

Tentative Submission/Publication Dates
August 15/September
November 15/December
February 15/March
April 15/May

Montana Science Teachers Association Membership Application

Name _____ Date _____
Last First

Address _____ Phone (____) _____

City _____ County _____ State _____ Zip _____

School/Affiliation _____

School Phone(____) _____

Email _____

Grade Level	Subject	
<input type="checkbox"/> K-6	<input type="checkbox"/> All sciences	<input type="checkbox"/> Physics
<input type="checkbox"/> 6-9 MS or JH	<input type="checkbox"/> Life Science	<input type="checkbox"/> Chem
<input type="checkbox"/> 9-12	<input type="checkbox"/> Phys Science	<input type="checkbox"/> Other
<input type="checkbox"/> College/Univ.	<input type="checkbox"/> Earth Science	
<input type="checkbox"/> Sup/Admin.	<input type="checkbox"/> Biology	

Dues Category

1 year	\$20.00	_____
MSTA/MCTM	\$30.00	_____
MSTA/MEEA	\$30.00	_____
3 years	\$50.00	_____
Life	\$150.00	_____
Student	\$5.00	_____
Retired	\$5.00	_____

Make checks payable to MSTA

Return to Carol Pleninger
360 73rd Avenue W
Havre, MT 59501

From President Tom Cabbage



Hello MSTA Members,

Well there is no question that winter has arrived and the cold and snow appear to be settling in for the time being. Now is a good time to be thinking about warmer days. It is not too early to be thinking about next fall's MEA/MFT Convention in Billings on October 15-16. Be thinking about not only attending but also sharing your expertise by doing a session or workshop. We all have things we do every year that could be shared with our fellow teachers, a lab or unit that we have created or borrowed (the most sincere form of educational flattery!). The website will be opening soon so start planning to come for the conference and/or presenting. We are in the process of finding and confirming this year's keynote speaker and making plans for a great conference, please plan on join in us in Billings!

Please also think about authoring an article in our publication, this MSTA newsletter, you can share an activity, a lab, or share something you would like to have help with!

Have a good rest of your year!

Tom Cabbage
President MSTA

**Submit an application to present
for MSTA at the MEA-MFT
Conference in the fall:**



http://mea-mft.org/educators_conference.aspx

Opportunities for Teachers

American Wilderness Leadership School

Nestled in the beautiful Bridger-Teton National Forest near Jackson, Wyoming, the American Wilderness Leadership School (AWLS) provides the perfect atmosphere for educational programs. Established in 1976 with the vision of providing educators with a useful hands-on experience that they can bring home to their classrooms, AWLS has provided an accredited wildlife management program for 5,473 teachers who reach more than a million students annually, and a challenging experience for 1,338 students.

The school offers six teacher sessions and one student session for ages 16-18. A registration fee of \$900 covers meals, lodging, and round-trip ground transportation to and from the Jackson, Wyoming, airport.

For information on scholarships, contact the local SCI Chapter in your area and check out the website:
<http://www.safariclubfoundation.org/education/awls/>.



Exhibit at Astronomy & Aerospace Day!

Astronomy & Aerospace Day will be on Sunday, April 19th from 1-4pm. Astronomy & Aerospace Day is Montana's largest astronomy- and aerospace-related event.



This is our opportunity as STEM educators and industry leaders to uniquely communicate the importance of STEM to the community where we live and work. We all recognize how fortunate we are to be able to do what we do day to day. This is our chance to give back and foster stronger ties with our community that gives us so much in return.

If your organization is interested in participating, please let us know by filling out the Google Form below.

<http://tiny.cc/kvr5px>

Thank you for considering being a part of Astronomy & Aerospace Day! On behalf of the organizing committee for this event, we look forward to seeing you April 19, 2015 at the Museum of the Rockies.

More info: <http://eu.montana.edu/AstronomyDay/>

Montana Petroleum Resources Workshop

The 2015 Petroleum Resources Workshop, to be held in Billings this coming June 22ⁿd through 26th. The workshop is fully funded by the Montana Board of Oil and Gas Conservation, designed especially for Montana teachers. The workshop runs for a week, at MSU-Billings campus with room and board provided, including field trips, and teachers will earn over 31 renewal units or 2 graduate College Credits. Over 200 Montana teachers have attended this workshop over the last seven years, and all have found it very educational and enlightening.

For a registration form and more information, contact Lana Petersen

2406 Locust Street Butte, MT 59701

ljpet@hotmail.com 406.782.2342



New Activity on the SciJinks Web Sit

Lightning Detection

Why would we want a tool to detect lightning? It's pretty hard to miss, isn't it? Well, it turns out there are different kinds of lightning, and detecting some kinds early can help meteorologists predict when a storm will get worse. Read the latest SciJinks article to learn about the history, use, and future of lightning detection. <http://scijinks.gov/lightning-detection>. SciJinks is a joint NOAA and NASA educational website about weather and other Earth science topics. It targets middle- and high-school aged students.



#MTedchat and OPI Renewal Units



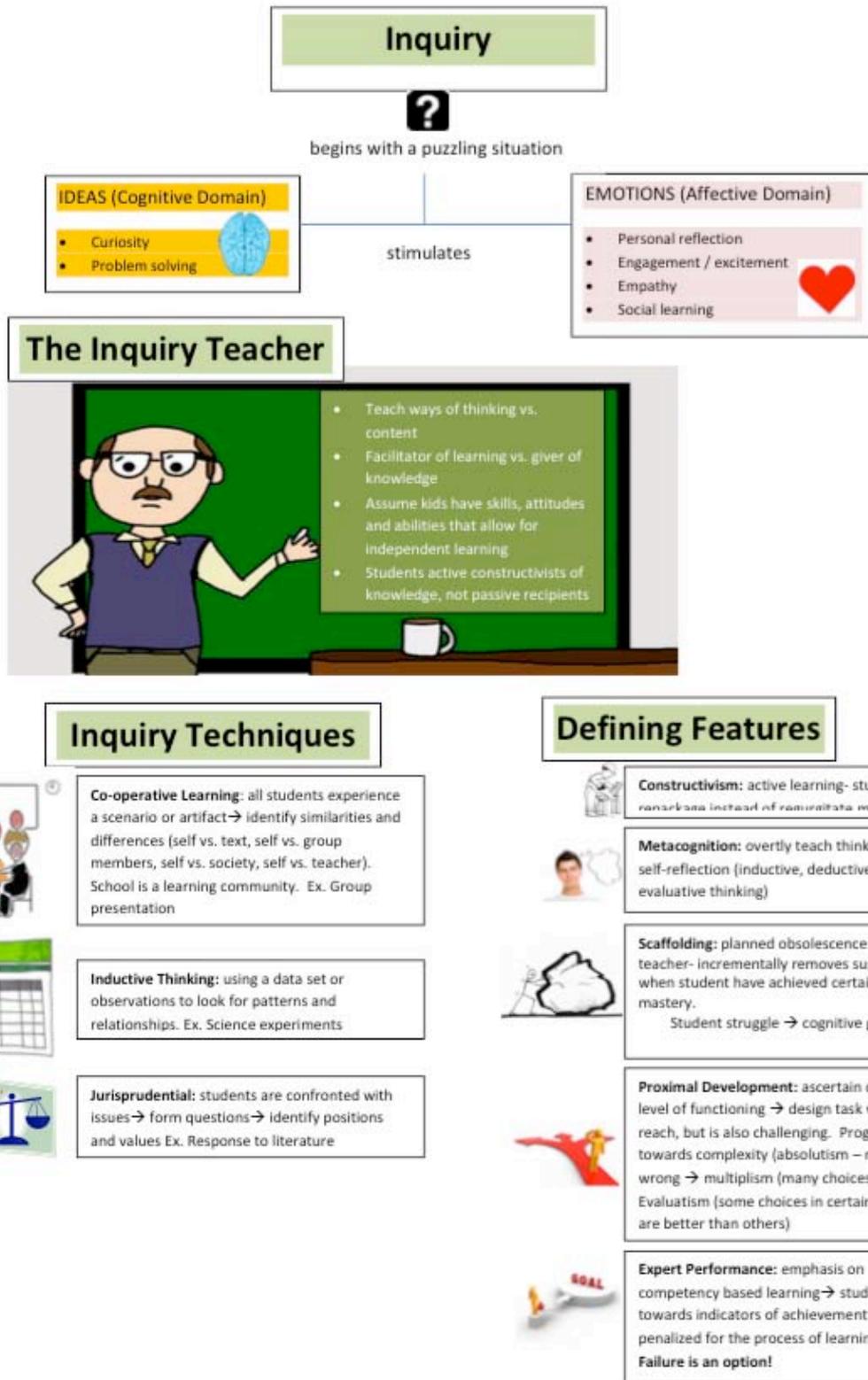
#MTedchat is a statewide Twitter chat developed to strengthen Montana's network of innovative and connected educators. Great timing and enthusiastic participants from across the region has made our chat a huge success drawing Montana's highest education leaders and professionals from far beyond our state lines. Join the conversation with moderators Crista Anderson (@cristama) and Jessica Anderson (@TriSciCurious) Tuesday evenings at 8:00 PM MT.



**Present for MSTA at the MEA-MFT Fall
conference:**

http://mea-mft.org/educators_conference.aspx

An Inquiry infographic by Marcie Reuer

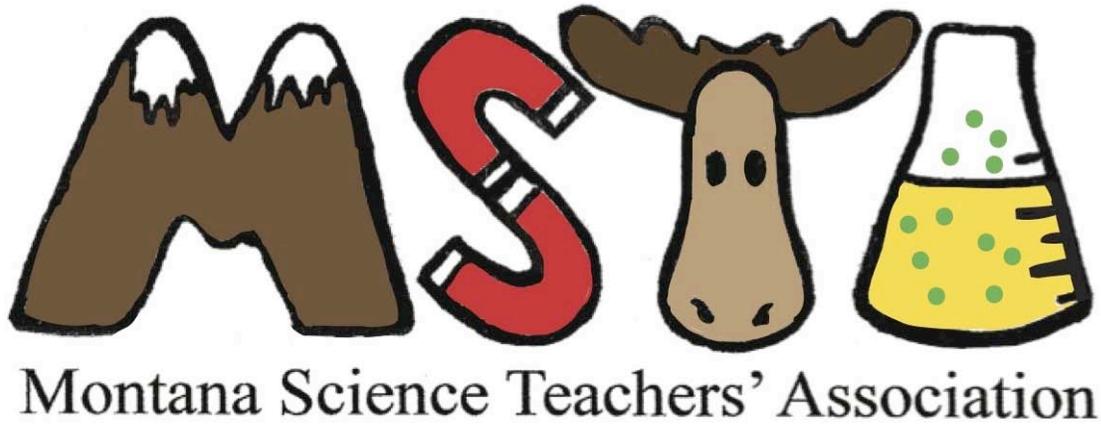


One of the Science and Engineering Practices is Engaging in Argumentation. For an overview of this Practice, view Paul Andersen’s [video on Argumentation](#).

The following rubric may assist you as you help students engage in argumentation.

ORAL RUBRIC

Aspect of the Argument	Point Value		Comments or Suggestion
	0	1	
The Question			
The question is sufficient			
The Claim			
The claim is sufficient			
The claim is accurate			
The Evidence			
Includes data			
Includes an analysis of the data			
Includes an interpretation of the analysis			
Used appropriate, reliable references that were accurately cited			
The Justification			
Explains why the evidence is important or why it is relevant			
Links the evidence to an important concept or principle			
The Challenge			
The alternative explanation(s) being challenged is (are) explicit			
Explains why the alternative explanation is inaccurate			
Language of Science			
Use of scientific terms is correct			
Used ecology terms from class			
Mechanics			
The order and arrangement of the sentences enhances the development of the main idea (organization)			
The author used complete sentences, proper subject-verb agreement, and kept the tense constant (grammar)			
The author used appropriate spelling, punctuation, and capitalization (conventions)			
Total Score	___/15		



Check out Paul Andersen's [HORIZONTAL TRANSFER](#) podcast





Nominate an outstanding 7th-12th grade science, mathematics or computer science teacher for the Presidential Awards for Excellence in Mathematics and Science Teaching

Nominations close on April 1, 2015

[More information here](#)



NOTE: The MSTA website is under construction. An announcement will be sent through the Listserv when it's up and running again.

Teacher Award Opportunities

For information on awards, visit nsta.org

NSTA Awards

AWARD	WHO CAN APPLY	BRIEF DESCRIPTION
Robert H. Carleton Award–Dow	NSTA member	\$5000/citation/all expense paid trip
Ciba Middle/HS Teaching Awards	middle/high school science teachers	\$2000 prize/\$500 expenses
Ciba Middle/HS Principal Awards	middle/high school principals	\$2000 prize/\$500 expenses
DCAT Making a Difference Award	grades 6-12 science teachers	\$2500 prize to school/flight & 2 nights-principal and teacher
Delta Ed/Frey-Neo/CPO Science Award	preK-12 science teachers	\$1500 prize/\$500 expenses
Distinguished Informal Science Award	NSTA member	citation/3 nights hotel/\$500
Distinguished Service to Science Education Award	NSTA member	citation/3 nights hotel/\$500
Distinguished Teaching Award	NSTA member	citation/3 nights hotel/\$500
Faraday Science Communicator Award	not a science teacher/ but an individual or organization which promotes science	\$2500 expenses
Fellow Award	NSTA member	citation & pin
Legacy Award	NSTA member	\$500 expenses-family member/ 2 nights lodging
Maitland P. Simmons-Memorial Award for New Teachers	NSTA member	\$1000 expenses/certificate
Wendell G. Mohling Outstanding Aerospace Educator Award	K-12 science teachers	\$3000 prize/\$2000 expenses
SeaWorld/Busch Gardens Environmental Educator of the Year	K-12 science teachers	\$5000/all expense paid trip Deadline: November 28
Shell Oil Company	K-12 science teachers	\$10,000 prize/all expense paid trip/ finalists all expense paid trip
Sylvia Shugrue Award	elementary science teachers	\$1000 prize/\$500 expenses/citation
Vernier Technology Awards	K-12 science teachers	\$1000 prize/\$1000 products/\$1000 expenses
Zula International Awards	preK-2 science teachers with memberships in either NSTA, CESI, NAEYP, or NHSA	\$400 prize/\$1000 expenses

All award deadlines are November 30, except for Shell Oil Company which is October 15 and SeaWorld/Busch Gardens which is November 28.

Mark Your Calendars

March 12- 15 – NSTA National Conference – Chicago, IL

March 16-17 – State Science Fair – U of M, Missoula

March 19 – 20 – MEEA Conference – Polson, MT.

March 27 – 28 – Billings Science Expo – MSU – B

April 11 – Expanding Your Horizons – MSU – Boz.

April 15-18 – NCTM National Conference – Boston, MA.

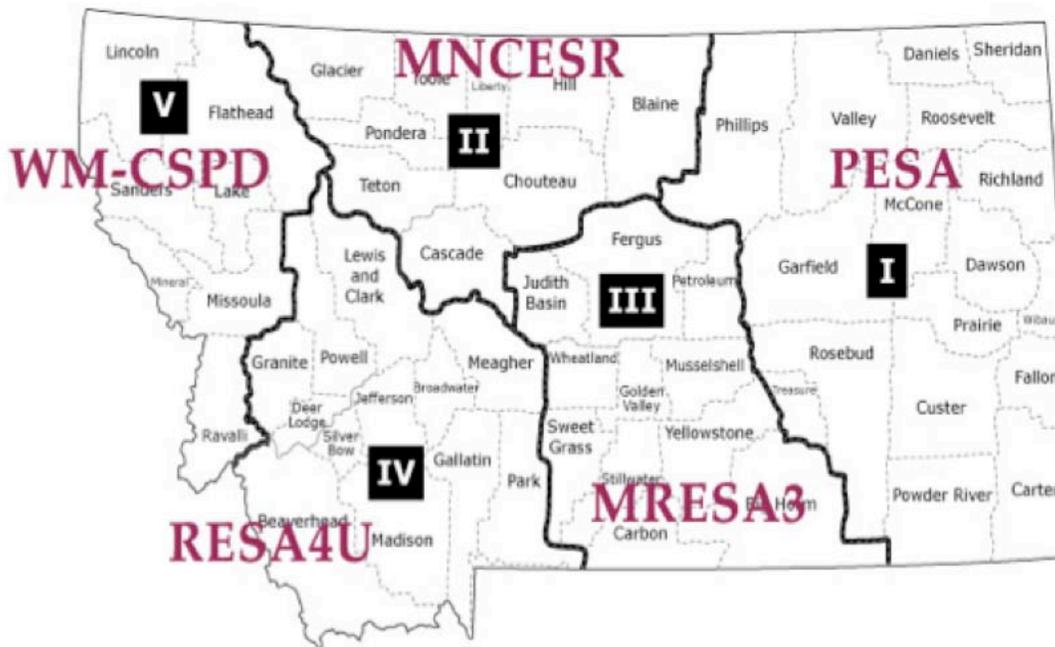
April 19 – Astronomy and Aerospace Day – MOR –
Bozeman

April 24-25 – Springtime in The Rockies – MLC – Canyon
Ferry

June 22-26 – Montana Petroleum Workshop – MSU-
Billings



MSTA Regions



Numerous representative and board positions are currently available. If interested in running for an MSTA office, please contact Tom Cabbage:

tom_cabbage@gfps.k12.mt.us

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