

An occasional  
newsletter about  
Birmingham  
science

# Newtonian News

Volume 1, Issue 2

September 2011

Edited by Jennifer Gottlieb, Science Coordinator  
248-203-3781     jg15bps@birmingham.k12.mi.us

## Secondary Science Meeting August 31, 2011

### Now What?

- Articulate concepts, skills, vocabulary, and prerequisites for each grade level
- Lab reports – common framework, format, and expectations that increase in rigor and sophistication from 6 to 12
- Share documents on Atlas
- Explore reading strategies across the grade levels
- Meaningful interventions are in place for and used by struggling BPS students
- Expand Problem Based Learning (PBL) opportunities for students
- Re-examine PLC time
- Explore student-centered/inquiry learning opportunities





## Teacher Resources

### NSTA's Social Networking Dashboard

<http://www.nsta.org/involved/dashboard.aspx>

Twitter, blogs, Learning Center updates.....everything is all in one place if you want to check out what new with NSTA.....A great way to collaborate with science teachers across the globe!



### Teachers Try Science

Teachers TryScience is a web site for teachers. This site provides free and engaging **lessons**, along with **teaching strategies and resources**, which are designed to spark students' interest in science, technology, engineering and math (STEM). What's more, the site features **collaboration** tools to enable teachers to discuss and share effective instructional practices.

<http://teacherstryscience.org/>

### NOAA Teacher at Sea Program

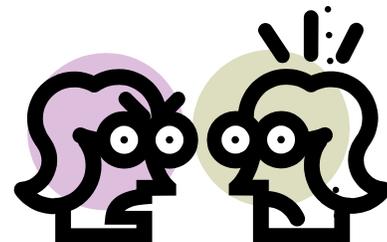
Apply to work aboard a National Oceanic and Atmospheric Administration (NOAA) research and survey ship! Applications are available October 1 and are due on November 30. Visit <http://bit.ly/nQD3cA> for



## This Month in the Science Journals

### Science Scope

- **After the Lab: Learning Begins When Cleanup Starts** Having students design their own methods regarding data collection during a lab may help them formulate appropriate investigative procedures. The authors use a modified gallery walk to develop science skills.
- **Data Versus Evidence: Investigating the Difference** Science teachers and graduate students have developed activities and assessment tools that begin to help students make the distinction between data and evidence. Two activities are covered in this article.
- **Developing Intuitive Reasoning With Graphs to Support Science Arguments** This article describes two activities—one math activity and one science activity—that teach students how to make a scientific argument and articulate a scientific claim.
- **Fostering Argumentation Skills: Doing What Real Scientists Really Do** This article illustrates how scientific argumentation paints an accurate picture of the work that scientists really do. It also demonstrates how teachers can foster argument based science inquiries where students generate arguments to support their claims using relative and supportive evidence.
- **The Multiple Faces of Argument in School Science** This article summarizes, provides examples of, and explains the advantages and disadvantages of three argument-based instructional approaches.



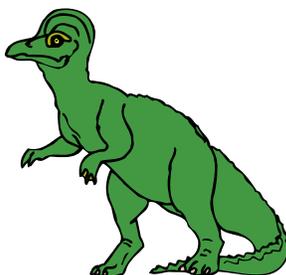
### The Science Teacher

- **What Students Really Want in Science Class** The authors asked biology students "What helps high school students learn science?" They share the digital resources and other classroom activities that students thought would help them learn science.
- **I'll Bring the Popcorn** Use recent Hollywood movies to generate interest in your science classroom. Movie clips can provide data for content-rich problem solving, show students exotic phenomena, allow them to apply science concepts in a new setting and foster connections between science and the humanities.
- **Avatar in the Science Classroom** This article discusses linking science



and pop culture to design imaginary ecosystems. The author presents "The Dream Ecosystem" project, based on the movie *Avatar*.

- **Adopt-A-Dino** This article discusses a creative visualization project to motivate and engage students. Students depict a dinosaur in its ecosystem and include all three elements of the environment: air, land, and water. Students explore scientific content in evolution, natural selection, food webs, ecosystems and geologic time.



## This Month in the Science Journals!

This is a small sample of the articles and features in the NSTA journals this month. If anything looks interesting, let me know and I'll send you a copy!

Jennifer Gottlieb

[jg15bps@birmingham.k12.mi.us](mailto:jg15bps@birmingham.k12.mi.us)