



# Call for Papers

## September 2010: What Do Scientists Do?

Deadline: Closed

## October 2010: Process Skills

Deadline: Closed

## November 2010: Student Science Notebooks

Deadline: Closed

## December 2010: Posing Investigable Questions

Deadline: Closed

## January 2011: Data Collection and Representation

Deadline: August 1, 2010

Creating opportunities to gather data and analysis of that data is a critical step in understanding the scientific endeavor. There are many ways in which data can be represented. Many of the strategies used for data representation are specific to the developmental stage of students. But, it is important for students of all ages to learn how to accurately collect and represent data.

- What types of experiences have you provided students for personal involvement in collecting qualitative and quantitative data?
- What strategies are provided for teaching students how to represent data?
- What types of activities have you conducted that assist students in the development of skills for data analysis?
- What skills do you develop to help students interpret data and pose answers/solutions?
- What opportunities are provided to students that assist them in connecting their data and explanations to scientific knowledge?
- How are students engaged in determining the accuracy of data?

## February 2011: Selecting an Inquiry Experience

Deadline: September 1, 2010

Inquiry takes time. In most situations, it requires a great deal more time than other types of science activities. The time required is not just the classroom time necessary for students to complete the investigation, it also requires a great deal of time on the part of teachers who must plan and provision for these experiences. Inquiry takes planning. Not all science experiences are appropriate for inquiry, some require scaffolding; others are best learned through other strategies such as explicit or direct instruction. These two issues must be addressed by elementary

teachers who are already faced with an overloaded schedule. However, we know the value of inquiry and the impact it has on student learning. Thus, it is important to carefully select the inquiry experiences in which students will be involved. So how is that determination made?

- Is inquiry appropriate for all students at all grade levels?
- Should inquiry be conducted for all learning experiences or is it limited to just a few?
- Is full inquiry always more desirable than guided inquiry?
- How is a topic selected that will provide for the highest quality inquiry experience?
- What have you done to incorporate more inquiry in your instruction?

## March 2011: Shifting from “Cookbook Labs” to Full Inquiry

Deadline: October 1, 2010

Inquiry involves inquisitiveness. But many of the “labs” we provide for students do not allow for that inquisitiveness to occur. Inquiry in the classroom can take many forms; it can be highly structured by the teacher, with students moving toward known outcomes, or they can be free-ranging explorations of unexpected phenomena. Most teachers are familiar with “cookbook labs” that are highly structured—they have many investigations at their fingertips that fall into that category.

- How can these teacher-directed opportunities be shifted to guided, open-ended, or full inquiry experiences allowing for student inquisitiveness and investigation?
- What subtle shifts have you made that prepare students for doing inquiry?
- How do you identify science investigations that can be shifted?
- What examples of labs do you have that have gone through this shift?
- What steps should teachers take to change their investigations to improve student understanding, develop sets of abilities associated with inquiry, provide opportunities to take more responsibility for aspects of their own learning, and take advantage of student curiosity?

Find manuscripts guidelines and submission instructions at [www.nsta.org/162](http://www.nsta.org/162).

# Celebrate a Year of Inquiry with *Science and Children*!

## April/May 2011: Sharing Research Results

**Deadline: November 1, 2010**

An important component of inquiry is providing students with opportunities to share their findings. A goal of science teaching is to make the inquiry authentic, including the appropriate venue for explaining and supporting results. In some situations, it is appropriate to share information as progress is made in the investigation, in others it is more appropriate to share at the conclusion of all research.

- With whom do students share the results of their research?
- How do they share the results of their research?
- How are students taught to use their information to generate and justify explanations and/or alternate explanations?
- What types of experiences have student had with creating an impact or bringing about change through sharing their results of inquiry investigations?

## Summer 2011: Assessing Inquiry Learning, Process, and Products

**Deadline: December 1, 2010**

The National Science Education Standards call for assessment by both teachers and students to improve learning. Research shows that regular and high-quality assessment in the classroom can have a positive effect on student achievement. As teachers we must assess not only the learning of students but also the effectiveness of the opportunities we provide for students to develop this understanding.

- In what ways do you assess the processes students use in inquiry?
- How are inquiry assessment tools developed to assure their effectiveness?
- What resources are used in their development?
- How is the target and criteria for quality inquiry work communicated to students?
- What opportunities are provided to students for the purpose of making changes in what they do based on the feedback they receive from assessments?
- What type of rubric do you use to assess student learning?
- What opportunities are offered to your students that allow them to self-assess?
- How do you use assessment as a tool for learning?
- How do you assess the effectiveness of inquiry opportunities you provide?

**Not ready to pen a feature article?** Consider writing a column. These shorter, focused pieces are the perfect way to share your experiences with the wider elementary science community.

### Science Shorts

This column shares your take on classic classroom activities and how they emphasize science-process skills. After introducing the activity and placing it into classroom context, provide the activity how-to and materials list. Include a guiding question for the activity, the targeted grade level, and the process skills the activity addresses. Rubrics, study guides, worksheets, and other materials should be provided as they will be shared via NSTA Connections, our online resource site.

Length: 1500 words

### Methods and Strategies

This column provides ideas and techniques to enhance your science teaching. This is S&C's "think piece" and connects science teaching with research on teaching and learning. This is done by sharing an account of a method or strategy used in the classroom and explaining how its use is supported by research. While the presentation of the method or strategy is often content-based, the method or strategy should be applicable to other settings and other content.

Length: 2000 words

### Professional Development

This new column will focus on your professional development experiences. Share what has worked for you, what didn't, and provide information so that readers can find similar experiences to improve their practice. Thoughts to consider include, "How does this help the practitioner? What can the teacher take away from this manuscript that would help them either create their own opportunities or tap into this type of opportunity by finding their own resources?"

Length: 2000 words

Don't see a theme that fits your idea? Don't let that stop you from writing! We always make room for good manuscripts on any elementary science topic.

### Details, Details

Limited to 2,000 words (not counting figures, references, etc.), manuscripts should describe classroom-tested lessons and contain enough detail so that teachers can repeat the experience in their own classrooms. Include information about how learning was assessed in the lesson and which specific National Science Education Standards the material addresses.

Submit manuscripts at <http://mc.manuscriptcentral.com/nsta>.