



Looking Through the Lens

A newsletter focusing on science content, pedagogy,
and topics for elementary teachers



Southern Nevada Regional Professional Development Program

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Setting Up an Environment for Teaching Science

The first few weeks of school are an excellent time to establish a classroom community of scientists. Having children become familiar with expectations, scientific tools, and safety procedures before they begin doing science is invaluable.

Consider the types of student grouping that will work for science. Collaborative groups of three or four work well. This gives all the students an opportunity to work with the materials and to interact with each other. Having specific jobs for each student gives everyone a chance to be involved. As a community, discussions can take place to settle upon procedures for working in groups. Expectations for an acceptable working volume can be role-played and discussed as well. Recording these expectations and procedures in a classroom procedures book serves as a reminder for everyone.

Safety procedures in science are critical. Students need to know how to handle organisms and work with materials. Using eye protection is not only a safety precaution but also a great habit for students to form. Using disposable gloves is especially beneficial when working with animals or owl pellets with hand washing as a follow up must.

Knowing how to use scientific tools correctly, responsibly, and appropriately is important. Setting up centers with different scientific tools that are going to be used during the year gives students a chance to explore and manipulate them in an unstructured setting. Hand lenses, balances, and meter tapes are some tools that students use in science. Having task cards or activities at each center provides guidance in using the tools. Mini-lessons on the appropriate use of tools work well. The FOSS Measurement Kit, which is

available for intermediate grades, also provides a basis for using measurement tools.

The beginning of the year is a great time to set up science notebooks. A “jumbo-sized” notebook made from butcher paper can serve as a model when setting up a table of contents and vocabulary banks, as well as a place to model recording techniques, drawing and labeling diagrams, or organizing data.

Having students *Draw a Scientist* is a great way to determine how they view scientists and what they do. Many interesting as well as eye-opening drawings show up this way. Drawings can be displayed and then sorted according to commonalities. This sets the stage for discussions about scientists and what they do. This same activity can be done at the end of the year and comparisons can be made to their initial drawings.

It is well worth the time to help students develop process skills. Being able to observe critically, ask good questions, know how to collect data, organize and interpret the data, draw conclusions, and communicate results are skills students need to do science. Mini-lessons, modeling, and mini-activities can help address them.

And don't forget incorporating technology. If you plan to use digital cameras in your classroom, this is good time to introduce and have your students become familiar with them. Depending on the age of your students they can be taught to save the pictures, insert them into documents, and print them.

Investing this time is a fabulous time saver as in the long run students will know what is expected when doing science.



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