

## Safety in Science

You should always be very careful when you do a science activity or experiment. This page tells you some things to remember when you do science.

- Listen to your teacher's directions and instructions.
- Read the activity carefully before you begin.
- Never taste or smell anything, unless your teacher tells you to.
- Protect your eyes and hands with goggles and gloves.
- Handle all sharp objects and science equipment carefully.
- Keep your work place neat and clean.
- Clean up spills right away.
- Tell your teacher if you have an accident or see something that might not be safe.
- Wash your hands carefully after doing a science activity.

## Materials List

12 Igneous rocks	Liquid Bluing*	Rock & Mineral
12 Metamorphic rocks	Masking tape*	Identification Keys
12 Sedimentary rocks	Metal spoons*	Safety Goggles*
Ammonia*	Modeling clay	Salol
Bowls (small)*	Paper plates*	Sand
Charcoal briquettes*	Paper towels*	Scissors*
Clay	Pencils*	Silt
Colored pencils*	Petroleum jelly*	Soil*
Glue*	Plastic cups*	Stir sticks*
Hand lens	Plastic knife*	Teaspoon*
Index cards*	Plastic spoons*	Tray*
Kosher salt*	Porous rock*	Unglazed pottery*

\* = Materials not contained in the kit

**Flip4Science™**

# **Rocks & Minerals**

*Building the Scaffolding for Inquiry*

Directed Inquiry • Guided Inquiry • Full Inquiry

**Teacher's Guide**

**Dr. Karen Ostlund, Ph.D.  
and Dr. Tim Cooney, Ed.D.**



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## How to Use Flip4Science

*Flip4Science™: Rocks & Minerals* is an exciting new way to help your students understand and practice hands-on science.

*Flip4Science: Rocks & Minerals* uses the latest research on scaffolded inquiry and scientific processes to ensure that your students are being prepared for high-stakes science tests mandated by No Child Left Behind.

### Teacher's Guide

The Teacher's Guide for *Flip4Science: Rocks & Minerals* provides all the teaching support that you need to make this program successful. Each of the six lessons includes:

- National Science Education Standards (NSES) addressed in the lesson
- Student Objectives
- Explore Activity
- Teacher Background
- Vocabulary Development
- Common Misconceptions
- Real World Connections

Also included for the teacher and the student are:

- Procedures for setting up center activities
- Procedures for completing Directed and Guided Inquiry activities
- Student recording sheets for Directed and Guided Inquiry activities
- Full Inquiry options and recording sheets

### Center Book

The *Flip4Science: Rocks & Minerals Center Book* is a full-color set of activities for students. This book can be used by small groups or the whole class. The Center Book includes the following:

- Student procedures for completing Directed Inquiry activities (one per lesson)
- Student procedures for completing Guided Inquiry activities (one per lesson)
- Full Inquiry options (one per unit)

### Science Journal

A set of five Science Journals come in the kit for students to record and share their science observations. The Science Journal features left-hand pages that are half-blank for drawing and half-lined for writing, and right-hand pages with a 1 cm grid for creating charts, graphs and diagrams. This is a great tool for students to express their ideas and for teachers to assess students' understanding of important concepts.

### Manipulatives

Included in the *Flip4Science: Rocks & Minerals* kit are many manipulatives that you will need to complete each Directed and Guided Inquiry activity. Items that can be easily obtained from home or school are not included in the kit. A complete materials list is provided for you in the inside front cover of this book.