

Effective and Safe Classroom Activities

Online Resources



Conducting safe classroom demonstrations and activities is essential to successful elementary science education. The following resources provide Core Knowledge's recommendations for developing effective science classroom activities.

These resources, included at the back of the Teacher Guide on pages 213–217, consist of the following:

- Classroom Safety for Activities and Demonstrations
- Strategies for Acquiring Materials
- Advance Preparation for Activities and Demonstrations
- What to Do When Activities Don't Give Expected Results

These resources may also be accessed within the CKSci Online Resources Guide for this unit:

www.coreknowledge.org/cksci-online-resources

MATERIALS AND EQUIPMENT

The unit, like all hands-on science, requires a large variety of materials to support various ways of learning (including doing, discussing, listening, watching, reading, and writing). Prepare in advance by collecting the materials and equipment needed for all the demonstrations and hands-on investigations.

- Roll paper, poster board, or a bulletin board should be dedicated at the beginning of the unit to serve as a question board to cumulatively document and return to student questions. The question board is referred to in the materials for lesson segments in which it is used but is not repeated in the materials listed here.
- Internet access and the means to project images/videos for whole-class viewing is also required in many lesson segments but is not repeated below.
- Additional materials may be required for suggested but optional support, challenge, and extension activities.

Lesson 1 The Sun and Its Predictable Patterns

Lesson 1.1

- globe (or ball)
- flashlight

Lesson 1.2

- compass

Lesson 1.3

- scissors (1 per student)

Lesson 1.4

- large sheet of butcher paper or poster paper (or a large area of space on the board)
- marker

Lesson 2 Annual Patterns of Sunrise and Sunset

Lesson 2.1

- assortment of sunrise pictures
- assortment of sunset pictures

Lesson 2.2

- large sheet of paper
- markers (in 4 assorted colors)

Lesson 2.3

- roll of butcher paper (white or a light color)
- markers (in assorted colors, 2 of each color)

Lesson 2.5

- coloring utensils (crayons, colored pencils, markers)

Lesson 3 The Moon and Its Predictable Patterns

Lesson 3.1

- poster paper
- marker

Lesson 3.2

- compass

Lesson 3.3

- clay (4 small balls per student, plus extra)
- paper plates (1 per student)
- plastic dull or play dough knife (1 per student)

Lesson 3.4

- large sheet of paper
- markers
- ruler
- variety of pictures of the moon in the new moon, full moon, quarter moon, and crescent moon phases

Lesson 3.5

- coloring utensils

Lesson 4 Stars and Their Predictable Patterns

Lesson 4.1

- flashlight

Lesson 4.2

- 2 pictures of a starry sky

Lesson 4.3

- beach ball
- red construction paper (several sheets)
- yellow construction paper (several sheets)
- green construction paper (several sheets)
- scissors
- tape

Unit Capstone

- flip chart poster paper
- markers

Unit Supplement

- glow-in-the-dark markers or fabric paint (2 per group)
- black construction paper (1 sheet per group)
- tape