Scott Foresman

SCIENCE

Grade 1

Equipment Kit Guide

Unit C

Earth Science

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Contents

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Equipment Kits and Teacher's Guide

Equipment Kit Management

About Your Kits

The equipment in *Scott Foresman Science* is packaged in sturdy plastic bins for your convenience. The quantities included support eight groups of four students each.

Unit Kit/ Grade Level Kit

The Unit Kit contains most of the items you will need to conduct hands-on activities with your students. Equipment for each unit is contained in one or two bins. The Unit Kit is designed to be purchased separately. Each bin is clearly labeled with the grade level, bin number, unit name, and contents. A label inside the lid of each bin references the materials by activity. Only activities requiring kit items are listed.

Unit Kits are also available in a Grade Level Kit configuration. In this format, a common bin eliminates items duplicated across the units for cost savings and convenience.

Demonstration Kit

The Demonstration Kit gives teachers the opportunity to rehearse activities before conducting them in the classroom. Kit-provided materials for each activity are pre-packaged and labeled for easy identification. When used in conjunction with the activity videos, the demonstration kits make it easy to prepare and conduct all investigations and experiments.

Storage of the Kits

Your equipment is packaged in sturdy, translucent plastic bins and labeled for easy storage and access. Bins may be stacked or stored on shelves or carts. Bins are labeled on all sides for quick identification and location of items. This provides convenient organization of materials before and after use.

Replacement Materials

Use the Packing List/Replacement Parts Price List to reorder items as needed for the Unit Kit or Grade Level Kit. These order forms are packed in the plastic bins and can be photocopied. Each list provides a column for entering the quantities of items you need to replace. Materials are organized alphabetically and identified as consumable or nonconsumable.

Complete consumable Replacement Kits are available as well. These kits replenish all the consumable materials for each Unit Kit or Grade Level Kit.

Using the Teacher's Guide

This guide will help you better prepare to conduct the program activities in your classroom. Reviewing the guide while practicing with the activity video and demonstration kit or simply reading the guide upon receiving your classroom kit will make it easy to facilitate an activity with your students.

Getting Started

Familiarize yourself with the kit contents. To make sure your shipment is complete, check the packing statement provided with your kit.

Activity Notes

The Activity Notes in this guide provide comprehensive information to make your activity sessions a success. This information may include:

Video Segment

The video segment number is indicated to help you cue the tape to each Investigate and Experiment activity.

Materials

A materials list for each activity identifies kit-supplied and school-supplied materials. Use this list as a check of your kit contents and as a list for class preparation.

Material Substitutions

For increased flexibility, material substitutions, when appropriate, are indicated.

Advance Prep

These instructions offer preparation guidance as necessary. With these suggestions, you will always be well prepared to conduct activities in your class.

Hints and Tips

Detailed hints and tips help to ensure student success in the classroom. Notes range from how to enhance students' success to increasing your understanding of activity concepts.

Safety Notes

While safety should be practiced at all times for each activity, it may be necessary to consider specific activity concerns. These notes give activity-specific safety tips.

Additional Comments

This section provides extension ideas, alternate activities, and other helpful information.

Graph rocks.

Explore Activity (C9)

Materials (per group)

Kit Items	School-Supplied Items
none	rocks

Advance Prep
Gather a wide variety of rocks for children to sort. You may wish to have each child bring several different rocks to class for this activity.

Experiment with weathering.

Experiment Activity (C10–C11)

Video Segment 1

Materials (per group)

Kit Items	School-Supplied Items
none	2 small pieces of chalk clock with a second hand 2 containers with lids

Material Substitutions
Small pieces of sandstone are a possible substitute for chalk. Sidewalk chalk works well for this activity.

Advance Prep
- Try to gather same-sized containers to use for each trial.
- Disposable plastic containers such as yogurt containers would work well in this activity.

Hints and Tips
- Use at least two small pieces of freshly-broken chalk with rough ends.
- This activity may get noisy! Close the classroom door before children begin shaking their containers.

Observe a rock.

Science Center Activity (C11a)

Materials (per group)

Kit Items	School-Supplied Items
hand lens balance string dropper	metric ruler rock

Hints and Tips
Review with children how to use a hand lens, balance scale, and dropper.

What kinds of soils are there?

Investigate Activity (C14–C15)

Video Segment 2

Materials (per group)

Kit Items	School-Supplied Items
hand lens 3 paper plates clay soil humus sandy soil	safety goggles 3 craft sticks

Material Substitutions
You may use any types of soil for this activity. Be sure the three soils you select look and feel different since children will have to find characteristics upon which to classify the soil samples.

Safety Note
Instruct children to wash their hands with soap and water immediately after completing the activity.

Additional Comments
Use the leftover soil from this activity to plant seeds or dispose of it in a garden or other planted area.

Make compost.

Science Center Activity (C15a)

Materials (per group)

Kit Items	School-Supplied Items
sand potting soil plastic resealable bag	spoon water leaves grass measuring cup

Material Substitutions
Children can also use twigs to make the compost mixture.

Hints and Tips
It may take several weeks for organic matter to decay.

Safety Note
Children must wash their hands well after making compost.

Reuse a container.

Explore Activity (C21)

Materials (per group)

Kit Items	School-Supplied Items
none	container art supplies scissors

Advance Prep
Have children bring different types of containers from home to recycle. You can also have children save containers from their lunch the day before conducting the activity.

Safety Note
Make sure all containers are clean before allowing children to handle them.

Make something from junk.

Science Center Activity (C21a)

Materials (per group)

Kit Items	School-Supplied Items
none	discarded materials such as boxes, containers with lids, paper art materials such as glue, yarn, crayons, paper, twist ties, paper fasteners, scissors, tape

Hints and Tips
Children may need assistance finding suitable materials to assemble their creations.

Safety Note
Avoid items with sharp edges.

Chart the weather.

Explore Activity (C29)

Materials (per group)

Kit Items	School-Supplied Items
none	paper crayons

Hints and Tips

- Place a large thermometer outdoors by a classroom window to give children the chance to observe the temperature outdoors. Have children observe the temperature first thing in the morning, at noon, and just before dismissal for several days. Encourage children to discuss how the temperature changes throughout the day.
- At the end of each day, have children look outside, check what they recorded earlier on their chart for that day, and then tell how the weather has changed or if it has remained the same.

Additional Comments
As an extension, children might chart the weather in other states or countries.

How can you observe wind?

Investigate Activity (C30–C31)

Video Segment 3

Materials (per group)

Kit Items	School-Supplied Items
paper plate yarn	8 streamers glue

Material Substitutions
Tissue paper strips can be substituted for streamers. You may wish to provide streamers of different colors.

Advance Prep
- Cut 12 to 15-inch streamers before beginning the activity.
- Punch holes in the paper plates before children begin the activity.

Use a thermometer.

Explore Activity (C33)

Materials (per group)

Kit Items	School-Supplied Items
thermometer	cup of cold water

Hints and Tips
- Show children how to hold the sides of the thermometer's plastic backing to prevent their first reading from measuring their body temperature.
- If children are confused by two sets of numbers on the face of the thermometer, use masking tape to cover the Fahrenheit side.

Additional Comments
Check the thermometers every hour. Ask children to explain why the readings changed at various times.

Make a weather wheel.

Science Center Activity (C33a)

Materials (per group)

Kit Items	School-Supplied Items
none	2 eight-inch paper circles 1 four-inch paper circle fastener crayons scissors

Advance Prep
Cut 2 eight-inch circles and 1 four-inch circle for each child. Use construction paper or poster board.

Hints and Tips
Tell children to draw their weather symbols towards the edge of one of the eight-inch circles so the pictures can be seen when the weather wheel is complete.

Safety Note
Tell children how to properly use the scissors and fastener to prevent injury.

How can you make a cloud?

Investigate Activity (C36–C37)

Video Segment 4

Materials (per group)

Kit Items	School-Supplied Items
plastic jar metal lid	warm water ice cubes

Advance Prep
Have warm water available for use in this activity. For best results, remove any cardboard or rubber inserts from inside the metal lids.

Hints and Tips
- The jar and the water should be warm when children place the ice cubes on the lid.
- Placing the jar in a dim corner and using a flashlight may make the clouds more visible.

Make a cloud picture.

Science Center Activity (C39a)

Materials (per group)

Kit Items	School-Supplied Items
cotton balls	glue crayons blue construction paper writing paper markers

Hints and Tips

Children can use markers to color cotton balls gray or black. These cotton balls can be used to represent storm clouds.

Dress for the seasons.

Explore Activity (C41)

Materials (per group)

Kit Items	School-Supplied Items
none	paper crayons

Hints and Tips

Gather pictures of people doing various outdoor activities to help stimulate children's ideas. You may also want to brainstorm a list of outdoor activities that children can refer to for ideas.

Additional Comments

Assign a different season to each child. Tape four drawings together to create a year showing all seasons.

Show how a tree changes.

Science Center Activity (C43a)

Materials (per group)

Kit Items	School-Supplied Items
none	construction paper, 12 x 18 inches tissue paper glue crayons scissors cotton balls (optional)

Safety Note
Be sure children are using scissors properly.

Compare the day and night sky.

Explore Activity (C49)

Materials (per group)

Kit Items	School-Supplied Items
none	construction paper art supplies crayons

Hints and Tips
Remind children to focus their drawings on the sky, not on the surroundings such as buildings, mountains, trees, and so on.

Safety Note
Tell children not to look directly at the sun when making their drawings.

Find out why the sun looks small.

Explore Activity (C51)

Materials (per group)

Kit Items	School-Supplied Items
paper plate	metric ruler

Hints and Tips

- Children should measure the paper plate across its center.
- Make sure children understand that the size of the paper plate does not change as it moves farther away, but merely one's perception of its size changes.

Sort day and night things.

Science Center Activity (C51a)

Materials (per group)

Kit Items	School-Supplied Items
none	objects used during the day or at night 2 boxes

Advance Prep

Label the two boxes. One should be labeled "day" and the other "night."

What star picture can you make?

Investigate Activity (C58–C59)

Video Segment 5

Materials (per group)

Kit Items	School-Supplied Items
none	black or blue construction paper glue white crayon yellow or white hole-punched dots

Material Substitutions
A sharp pencil can be used to make holes in the construction paper. Children then use the crayon or chalk to connect the holes. This is an alternative to using hole-punched dots.

Advance Prep
Punch holes from yellow and/or white construction paper for children to use in creating their star pictures. You should punch enough dots for each group or child to have at least 15 dots.

Additional Comments
Use glow in the dark crayons to connect the dots. Then have children look at their pictures in the dark.

Show the phases of the moon.

Science Center Activity (C59a)

Materials (per group)

Kit Items	School-Supplied Items
none	black paper, 12 x 18 inches white paper glue scissors marker

Advance Prep
Cut the sheets of black paper in half horizontally. Fold each 6 x 18-inch paper in half like an accordion to make a sheet with four sections.

Safety Note
Remind children to be careful when using the scissors.