

**Scott Foresman**  
**SCIENCE**

**Grade 4**  
**Equipment Kit**  
**Guide**

**Unit D**  
Human Body

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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.

# Exploring Teeth

*Explore Activity (D6)*

## Materials (per group)

| Kit Items      | School-Supplied Items |
|----------------|-----------------------|
| plastic mirror | none                  |

### Safety Note

Make sure students do not place the mirrors inside their mouths.

### Additional Comments

- You may extend this activity by having students make impressions of their teeth by biting on chewing gum or dental wax. They may compare and contrast the impressions of different types of teeth. Caution students not to swallow gum or wax, and not to put the gum or wax back into their mouths. Have them wash their hands after the activity.
- You may also extend this activity by having students compare and contrast their observations of human teeth with observations of teeth of different animals. Students may observe the skulls and teeth of various animals and relate the types of teeth with diet.

# Investigating the Sense of Touch

*Investigate Activity (D18–D19)*

## Video Segment 1

## Materials (per group)

| Kit Items | School-Supplied Items                       |
|-----------|---|
| none      | safety goggles<br>metric ruler<br>bobby pin |

### Hints and Tips

- Bobby pins should be the type that have rounded or plastic tips.
- Make sure students being tested close their eyes or look away so they cannot see when the bobby pin is touching their skin.
- If the skin is touched with two points of the bobby pin, both points must touch the skin's surface at the same time.
- If students can only feel one point consistently, bend the ends of the bobby pin slightly farther apart.

### Safety Notes

- Caution students to avoid pressing too hard on the skin with the bobby pin.
- Remind students to test only the body parts mentioned in the activity.

# Experimenting with the Sense of Smell

*Experiment Activity (D27–D29)*

## Video Segment 2

### Materials (per group)

| Kit Items   | School-Supplied Items                              |
|---|--|
| 6 plastic medicine cups<br>plastic graduated cup, 10 oz<br>6 plastic lids<br>mint extract<br>plastic dropper<br>plastic spoon | water<br>masking tape<br>marker<br>large container |

### Material Substitutions

Other extracts, such as lemon, vanilla, or orange, may be used.

### Advance Prep

You may wish to prepare the mint solutions ahead of time. However, be sure to tell students how the solutions were prepared so they understand the concept of concentration levels of the mint/water solutions.

### Safety Notes

- Remind students not to smell any unknown substance in science class without permission.
- The mint extract contains alcohol. Caution students to not taste the mint extract, or any other material in science class without permission.

# Exploring Food Labels

*Explore Activity (D34)*

### Materials (per group)

| Kit Items | School-Supplied Items                             |
|-----------|---|
| none      | marker<br>3 empty cereal packages<br>masking tape |

### Advance Prep

Have students bring in empty cereal boxes from home. Different groups can trade boxes if necessary for diversity of cereal brands.

### Hints and Tips

- Use the metric terms (grams) for all data.
- Make sure students are looking at the “cereal only” (without milk added) information on the box.

## Investigating How the Heart Works

*Investigate Activity (D46–D47)*

### Video Segment 3

#### Materials (per group)

| Kit Items   | School-Supplied Items    |
|-------------|--------------------------|
| rubber ball | clock with a second hand |

#### Hints and Tips

- If students cannot find a pulse on their wrist, have them find the carotid pulse on the side of the neck.
- Students should tighten and relax their grip only until their arms begin to feel slightly uncomfortable.

#### Safety Note

Caution students to stop the activity if they feel chest or arm pains or if they begin to feel dizzy.

## Conducting a Safety Survey

*Investigate Activity (D56–D57)*

### Video Segment 4

#### Materials (per group)

| Kit Items  | School-Supplied Items |
|------------|-----------------------|
| grid paper | pencil                |

#### Hints and Tips

- Discuss ways to ask a question in an unbiased manner and remind students to always ask the same question in the same way.
- To gather a larger set of information, survey other classrooms.
- Students should combine their data from all of the surveys before making the bar graph.

#### Safety Notes

Remind students of Bicycle Safety Rules: Wear an approved helmet. Obey all traffic rules. Keep to the right side of the road (ride with traffic, not against it). Ride single file. Do not carry passengers. Use hand signals when turning or stopping. Ride at night only if the bicycle has reflectors and lights. Do not wear headphones.

#### Additional Comments

Invite a speaker to come to class and discuss bicycle safety with your students.