

Youth & Education in Science (YES)

Lesson

Lesson 4: Symbols and Legends

Title**Grades**

k-3

Length

40-minutes.

Topics

- A map symbol represents a feature or object on the ground.
- A legend explains what objects or features the symbols represent.

Materials Needed

Illustration 3, showing a map of the park.

NGSS Alignment

The skills developed in reading maps may help support NGSS for kindergarten Interdependent relationships in Ecosystems: Animals, Plants, and their environments by identifying and describing patterns and location, specifically in the crosscutting concepts.

For Second grade, the activities may help support concepts in the Earth's Systems: Processes that shape the Earth (2-ESS2-2. Develop a model to represent the shapes and kinds of land and bodies of water in an area).

For Third grade the skills developed in the following lessons may help enforce skills in the NGSS 3. Inheritance and Variation of Traits: Life Cycles and Traits by enforcing the description and identification of patterns.

Overview

Students will become familiar with the concepts of symbols.

Students will learn to use a legend to identify features on a map.

Related Links

None.

Vocabulary

Map legend

Symbols

North

South

East

West

Teacher Background

See Nikki's Story in Lesson 1 of Map Adventures.

Lesson Plans

Suggestions for teaching this lesson:

- To begin the lesson, reintroduce illustration 3 to the students.
- Explain that maps are often unable to show the same level of detail for objects or features found on the Earth as shown in illustration 3. Consequently, mapmakers often use symbols to represent some of these objects or features. For example, in a map of your city, mapmakers will not draw a separate picture of every school. Instead, they draw a square with a flag on top as a symbol of a school. Then, each school, whether it is big or small, long or narrow, will have its location marked with this same symbol. Colored symbols are often used to depict features. Features are often symbolized with the color they are associated with. For example, water features such as rivers and lakes are shown as blue; vegetation cover such as trees, shrubs, and grass are shown as green; and constructed features such as buildings and streets are shown as black.
- Explain that when we look at a map, we may be unsure of what a symbol represents. On a map, symbols are identified in an area called the legend. The legend often displays other important information including scale and direction.

- Point out the legend in the illustration. Have the students identify what information this legend shows them. Go over each symbol and have the students find it on the map. Ask the students if they can identify the circle with the red and white triangular shapes? What is the rectangle with the blue and white shapes? If they didn't know the other part of the story and see the other illustrations, could they still identify the carousel and snack-bar? What else could they have been? A tent? A big blanket?
- Ask the students to find things in the illustration that are not on the legend. Explain to them that only a permanent feature or object on the ground would be included on a map. Consequently, things such as the animals or people would not be included on a map or in the legend.

Extended Activity:

Have the students draw maps covering several blocks of area around the school or their home. Encourage them to develop their own symbols and to use them where appropriate. For example, create a symbol for a house and use it for all houses in the area. The maps should be limited to permanent features (no dogs, cats, cars, people, etc.) and show an overhead view.