NATIONAL GEOGRAPHIC

RESOURCE LIBRARY
ACTIVITY : 45 MINS

Classifying Information

Students practice classification skills using a collection of their shoes.

GRADES

3 - 5

SUBJECTS

Biology

CONTENTS

11 Images

OVERVIEW

Students practice classification skills using a collection of their shoes.

For the complete activity with media resources, visit:

http://www.nationalgeographic.org/activity/classifying-information/

Program

bioblitz

DIRECTIONS

1. Activate prior knowledge.

Show students the Classifying Information photo gallery, which shows students at a BioBlitz.
Ask: *What do you think these students are doing?* Explain to students that they are

classifying information. List the following sports on the board: baseball, basketball, soccer, and volleyball. Show students the Sports Cards illustration and prompt them to think about similarities and differences. Ask:

- *How many of these use a ball?*
- *How many of these use a net?*
- *How many of these are played on a court?*
- *How many of these use a hoop?*

Make sure students recognize that identifying similarities and differences is one way to begin classifying information.

2. Build background.

Explain to students that they can group many things based on characteristics and that something with unique characteristics can be grouped into its own category. Show students the Insect Cards illustration. Ask: *Which of these is not an insect? How do you know?* Tell students that scientists collect, study, and observe specimens. They record every detail and then compare their observations to existing records. New species are classified according to their similarities and differences to known species. This is called relatedness. New species are then given a unique scientific name.

3. Have students practice classifying information.

Collect a shoe from each person in the class and place the shoes on a table that everyone can see. Ask students to classify the shoes based on shared characteristics, such as type, color, markings, kind of closure, or materials. Ask:

- *How many different ways can you classify the shoes?*
- *What characteristic is the most common?*
- *What is the least common?*

4. Have students reflect on their experience.

Ask students to share what they've learned about classifying information. Ask: *Why do you think scientists use a classification system to better understand life on Earth?* Encourage students to answer the question based on their experience with the activity.

Informal Assessment

Ask each student to describe, in his or her own words, what it means to classify. Then ask students to provide one example of classifying information from their daily lives.

Extending the Learning

Explain that scientists name species based on a unique characteristic, where it was found, or who found it. Have students create scientific names for each unique "species" of shoe.

OBJECTIVES

Subjects & Disciplines

Biology

Learning Objectives

Students will:

- demonstrate classification skills
- reflect on their experience and apply that understanding in a new context

Teaching Approach

- Learning-for-use

Teaching Methods

- Discussions
- Hands-on learning

Skills Summary

This activity targets the following skills:

- Critical Thinking Skills
  - Applying

- Understanding

National Standards, Principles, and Practices

NATIONAL SCIENCE EDUCATION STANDARDS

• **(K-4) Standard C-1:**

The characteristics of organisms

Preparation

What You'll Need

MATERIALS YOU PROVIDE

- Paper
- Pencils
- Pens

REQUIRED TECHNOLOGY

- Internet Access: Optional
- Tech Setup: 1 computer per classroom, Projector

PHYSICAL SPACE

- Classroom

GROUPING

- Large-group instruction

BACKGROUND & VOCABULARY

Background Information

A BioBlitz is a way for communities to learn about the biological diversity of a geographical area and to better understand how to protect the species found at that location. In order to undertake a BioBlitz, students need to have a specific set of skills. These skills involve observing natural phenomena, identifying different species of organisms, classifying them into categories, and mapping the data for conservation and management in the future. Scientists use a classification system to identify, name, and better understand living things.

Prior Knowledge

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Recommended Prior Activities

- None

Vocabulary

Term	Part of Speech	Definition
bioblitz	*noun*	a field study in which groups of scientists and citizens study and inventory all the different kinds of living organisms within a given area.
characteristic	*noun*	physical, cultural, or psychological feature of an organism, place, or object.
classify	*verb*	to identify or arrange by specific type or characteristic.
observation	*noun*	something that is learned from watching and measuring an object or pattern.
relatedness	*noun*	being connected by similarities.
scientific name	*noun*	the name, usually in Latin, of an organism's genus and species.
species	*noun*	group of similar organisms that can reproduce with each other.

For Further Exploration

Websites

- National Geographic: BioBlitz

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