

What Are Objects Like?



Focus: Students learn about and describe objects based on similarities and differences.

Specific Curriculum Outcomes

Students will be expected to:

- 26.0 observe objects and describe their similarities and differences [GCO 1/3]
- 7.0 make and record observations and measurements [GCO 2]

Performance Indicators

Students who achieve these outcomes will be able to:

- observe two objects and describe how they are the same and how they are different

NOTES:

Attitude Outcome Statements

Encourage students to:

- show interest in and curiosity about objects and events within the immediate environment [GCO 4]
- willingly observe, question, and explore [GCO 4]

Cross-Curricular Connections

Math

It is expected that students will:

- demonstrate an understanding of measurement as a process of comparing (identifying attributes that can be compared; ordering objects; making statements of comparison) [1SS1]

English Language Arts

Students will be expected to:

- speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences [GCO 1]
- respond personally to a range of texts [GCO 6]
- use writing and other forms of representation to explore, clarify, and reflect on their thoughts, feelings, experiences, and learnings; and to use their imaginations [GCO 8]
- create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes [GCO 9]

Getting Organized

Components	Materials	Before You Begin	Vocabulary
• Science Card 2 • <i>The Subway Mouse</i> (Read Aloud) • IWB Activity 3	• objects featured in <i>The Subway Mouse</i> (e.g., pine cone, button, pencil, penny, candy wrappers, Popsicle stick, feather, popcorn, bits of newspaper, string, crayon, ticket stub, straw, balloon, lip balm, necklace, earring, paper clip, marble, bottle cap, maple key, jelly bean, bobby pin, seed packet, sunflower seed) • students' Science Journals • collection of buttons • mystery bags (drawstring bags) • objects with interesting shape and texture (e.g., seashells, Silly Putty, pine cone, bark chipping, corrugated cardboard) • digital camera • various tools for close-up viewing (e.g., magnifying glasses, gooseneck camera, hand held microscope, rulers)	• Ensure you have enough mystery bags for each small group.	• object • purpose • shape • texture

Science Background

- Observing is the key to describing objects. Objects can be described by what they look like (shape, size, colour) and what they feel like (soft, rough, smooth, bumpy), as well as what they smell, taste, and sound like.
- Objects can also be described by their purpose, where they are found, how they are used, and what material they are made from.
- Some objects can be made from one material; other objects can be made of two or more materials.

Possible Misconceptions

- Students may be confused about whether certain items are classified as objects or materials. Generally, if the item is used to create an object, then the item must be a material. Some items can be both a material and an object. For example, string is an object when it is used to tie up cardboard boxes for weekly recycling. String is a material, however, when it is used to make a basketball net.

ACTIVATE



Finding Objects

Ask students to examine the illustration on Science Card 2. Point out and read aloud the title question: *Which objects do you see?* Then read aloud the supplemental questions: *What do they look like? What are they used for? What are they made of?*

Invite students to identify all the various objects in the illustration. Ask:

- **What sorts of objects do you see?**
- **What do they look like?**
- **What are they used for?**
- **What are they made of?**
- **How are these objects the same or different from the ones you have seen, used, played with?**

Explain to students that asking questions helps us learn about things in the world around us. Then ask:

- **What yes-no questions can you ask about the objects on this page?**

Students may respond that they could ask: Is it round? Is it heavy? Is it soft? Is it made of metal? Is it made of wood? Can you play with it? Ensure that students address various aspects such as shape, size, colour, and what the objects are made of. Point out that some objects are made of two or more materials.

Once students understand how to form yes-no questions, encourage them to play a guessing game using the illustration on Science Card 2. Have one student choose an object, secretly, and let the other students ask a yes-no question to discover the object.

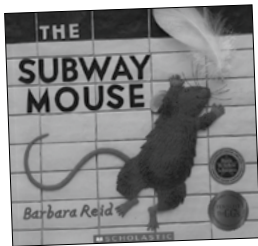


Ask students how objects are the same and how they are different. Make sure they explain their thinking, noting similar or different uses, materials, shapes, and so on. Talk to students about the importance of using descriptive words in science. Encourage students to observe objects in detail and to look for similarities and differences that are not always obvious at first glance. Add new descriptive words to the Word Wall.

CONNECT

Read Aloud: *The Subway Mouse*

Before Reading



Explain to students that you will be reading a book about a mouse named Nib who lives below the platform of a busy subway station and who loves to collect strange and wonderful objects that he finds around his home. Nib soon finds a friend and has more adventures when he sets out on a journey to find a beautiful but dangerous place called Tunnel's End.

Ask students to close their eyes and imagine what Tunnel's End might look like. Invite them to share with a partner what they think Nib will find at Tunnel's End. Have several students share their ideas.

ESL Note:

To help ESL learners develop appropriate vocabulary, begin with a picture walk of the text. Focus on the art and discuss the various objects being shown.

During Reading

As you read the story to students, pause frequently to discuss the text and illustrations. Alternate between asking students to respond in a whole group or with a partner. Prompts for discussion could include:

Pages 2–3:

- What objects do you see?
- There are a lot of shoes. How are the shoes the same or different?

Pages 4–5:

- What objects do you see?
- What are they used for?

Pages 6–7:

- What objects do you see?
- Are the objects made of one or more than one material?

Pages 8–9:

- What objects do you see?
- How are these objects the same or different?

- **What do they look like?**
- **What do you think they're made of?**
- **What are they used for?**
- **How do you think these objects got there for Nib to find?**
- **How are these objects the same or different from ones you have seen, used, or played with?**

Pages 18–19:

- **What object do you see?**
- **What do you think it's made of?**
- **What is it used for?**

Pages 20–21:

- **What objects do you see?**
- **How are they the same or different?**
- **What are they used for?**

Pages 28–29:

- **What objects do you see?**
- **What are they used for?**
- **Are they made of one material or more than one material?**
- **What do the objects look like?**
- **How are they the same or different?**

Pages 34–35:

- **How are the objects the same as, or different from, Nib's treasures in Sweetfall (see pages 8–9)?**
- **Why might Nib collect different types of objects in his new home at Tunnel's End?**

After Reading

Ask students if their predictions about what Tunnels' End might look like and what Nib would find there were correct. Invite students to describe some treasures that they have collected and what makes the objects so interesting.

Discuss with students how observing objects allows us to describe and sort them. Ask questions such as:

- **What properties can be described by how something looks?** (e.g., shape, size, colour, lustre)
- **What properties can be described by how something feels?** (texture, e.g., soft, rough, smooth, bumpy)
- **How else can we describe objects?** (e.g., what they're used for, what materials they're made from, if they're made from one or more materials)
- **How do these observations help us to sort objects?**

Story Objects

Provide various objects and materials featured in *The Subway Mouse* (e.g., pine cone, button, pencil, penny, etc.). In pairs, have students choose two objects and describe how they are the same and how they are different. To extend and enhance their observations, encourage students to use magnifying glasses, digital cameras, gooseneck cameras, hand-held microscopes, rulers and so on. To prompt thinking, ask:

- What is it?
- What does it look like?
- What does it feel like?
- What is made of?
- Is it made of one of more materials?
- Does it have a single purpose or more than one purpose?
- What is the difference between this object and this object?
- How can we sort some of the objects?



Invite students to record their observations in their Science Journals.

Sorting Objects

Provide a collection of buttons of varying materials, sizes, shapes, and colours for students to sort. (If you do not have a collection of buttons, use a collection of another object already available, e.g., used crayons, coins, elastic bands, leaves.)

Tell students that you are going to pick different sorting rules for them to sort the buttons. The first sorting rule will be based on colour. Ask students to sort the buttons by a specific colour and use a sorting mat or hula hoop for students to show their work. At the bottom of the mat or hoop, have students record their sorting rule, for example, “All Brown Buttons.”

Then ask students to sort by other criteria (e.g., a different colour or by size, shape, number of holes in the button, or the material the button is made of) and to record their sorting rule.

Lead students to see that some buttons can be placed in more than one category; for example a large red button with two holes would belong in the “red” category, the “large” category, and the “two-hole” category.

Challenge students to choose their own sorting rule, then invite them to go on a gallery walk to view or guess the sorting rules used by others. Students can take photos of their sorted objects and compile them into a class book.

IWB Activity:

- To provide students with an additional challenge for sorting objects using various sorting rules, invite them to use Activity 3: *Sorting objects* (see the Teacher's Website).

A small illustration of a sorting mat with various objects, positioned below the 'IWB Activity' section.

CONSOLIDATE

Mystery Bag

Provide small groups of students with a mystery bag that houses an object with an interesting shape or texture. Ask students to take turns feeling the object and describing it. Some examples of interesting objects include seashells, Silly Putty, pine cones, hair brush, bark chippings, bubble wrap, and so on.



Students can take turns placing objects with interesting textures and shapes inside the bag for the rest of the group to describe.

As a whole group, have students discuss the experience. Ask:

- **What were some of the words you used to describe how the objects felt?**
- **Why is it difficult to figure out what the materials were?**

Look at the collection of the objects that were put in the bag. Ask:

- **What categories can we sort the objects into?**

Describe Me

Ask students to help you describe the objects they have been investigating. Students may respond that objects can be all different shapes, sizes, made from different materials, etc. Add any new vocabulary generated from this discussion to the Word Wall. Record any questions students have on the I Wonder Wall.

EXPLORE MORE

Show and Compare

In pairs, students can compare an item they each have (for example, coat, shoes, pencil case, backpack, water bottle, etc.). Invite students to take pictures of the two items and provide a sentence that compares them in some way (e.g., Lisa's water bottle is tall, but mine is short. John's coat is puffy. Mine is thin.) Students could extend this activity further by recording the purpose for both items but noting the differences (e.g., Both our pencil cases carry things, but mine is made of cloth and Jordan's is made of plastic.). Students could compile their work into a "Class Book of Objects."