

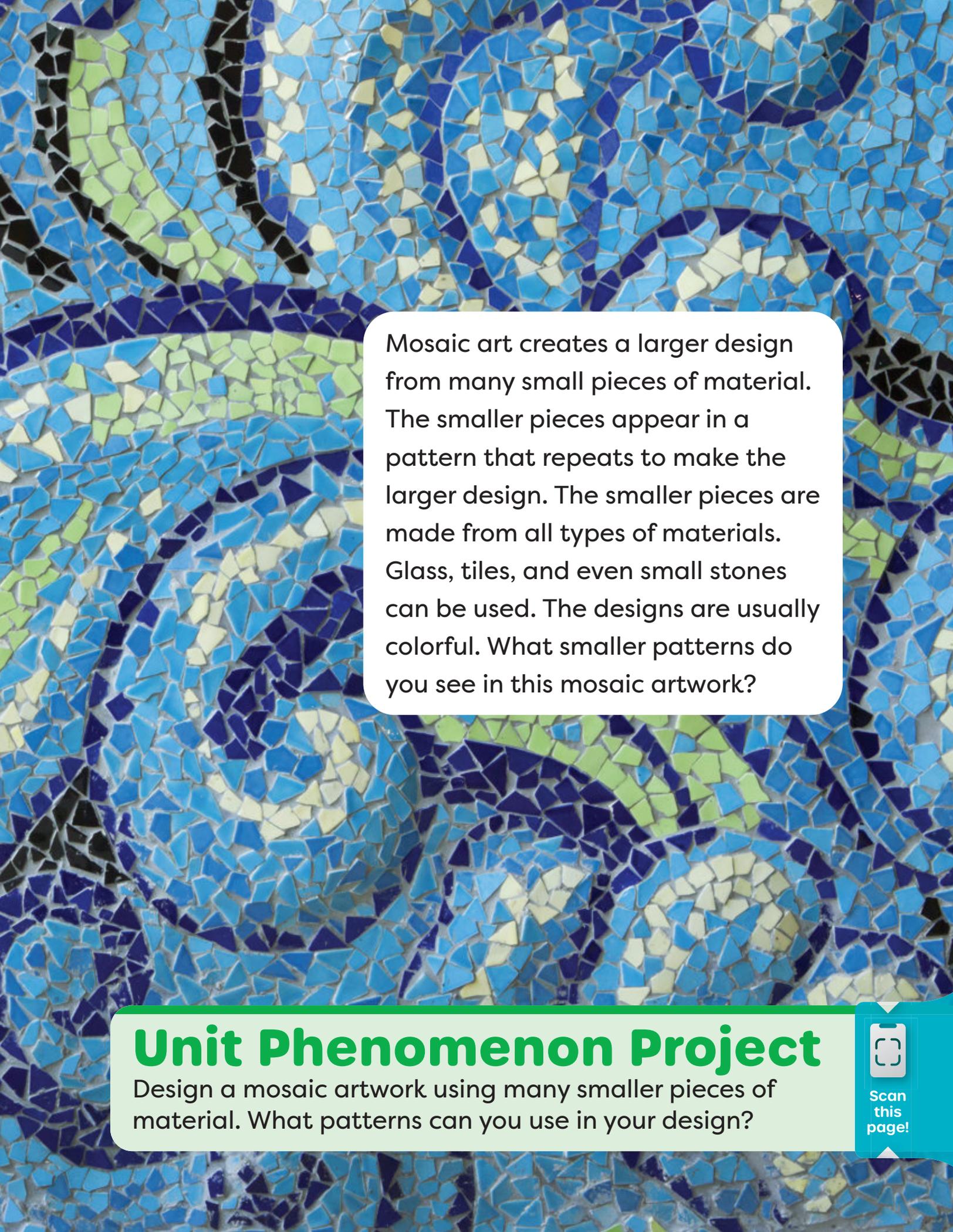
UNIT

1

Matter and Its Interactions

Chapter 1A:
Properties of Matter

Chapter 1B:
Changing Matter



Mosaic art creates a larger design from many small pieces of material. The smaller pieces appear in a pattern that repeats to make the larger design. The smaller pieces are made from all types of materials. Glass, tiles, and even small stones can be used. The designs are usually colorful. What smaller patterns do you see in this mosaic artwork?

Unit Phenomenon Project

Design a mosaic artwork using many smaller pieces of material. What patterns can you use in your design?



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Properties of Matter

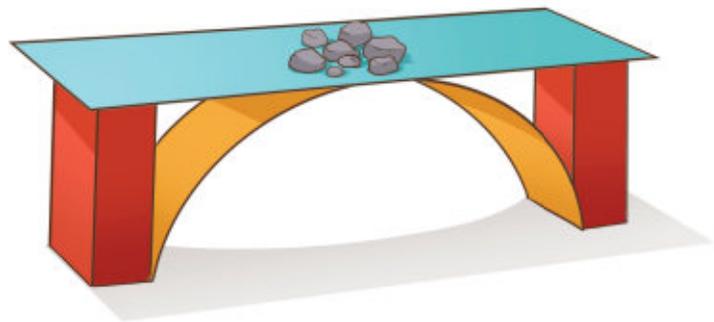
Essential Question

Why are things made from different materials?

Chapter Project

A bridge is made with many different materials. Each material is chosen for a reason. Metal nails hold the floorboards together. Rope is strong but can bend to hold up the bridge. Build a bridge out of paper using the steps below.

1. Fold pieces of paper to make the ends.
2. Add a curved piece of paper to join the ends.
3. Put a long piece of paper on top to make the bridge. The bridge walkway must be at least 20 centimeters long.
4. Test the bridge strength using rocks.



Lesson 1

Describe Matter

Key Terms

texture

particles

Recall

1. The table you are sitting at is an example of s_____ matter.
2. The water you drink is an example of l_____ matter.
3. The air you breathe is an example of a g_____.

Engage



Amethyst Crystals



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1. How can you describe the crystals?
2. What do you think the surface would feel like?
3. What would happen if you tried to pick up the crystal?



Cookie Inspector

In **Engage**, you described a crystal using your sense of sight. Now, you will **Explore** using your sense of sight and touch to describe cookies.

1. Work in pairs. Use your eyes to look at the first cookie. You may use a magnifying glass to help you.
2. Use your hands to feel the cookie.
3. Circle the words in the table to show your observations.
4. Repeat steps 1 to 3 with each cookie.



	Shape	Color	Texture
Cookie 1	Circle Rectangle	Light Dark	Smooth Bumpy
Cookie 2	Circle Rectangle	Light Dark	Smooth Bumpy
Cookie 3	Circle Rectangle	Light Dark	Smooth Bumpy

How else can you describe the cookies?

Explain

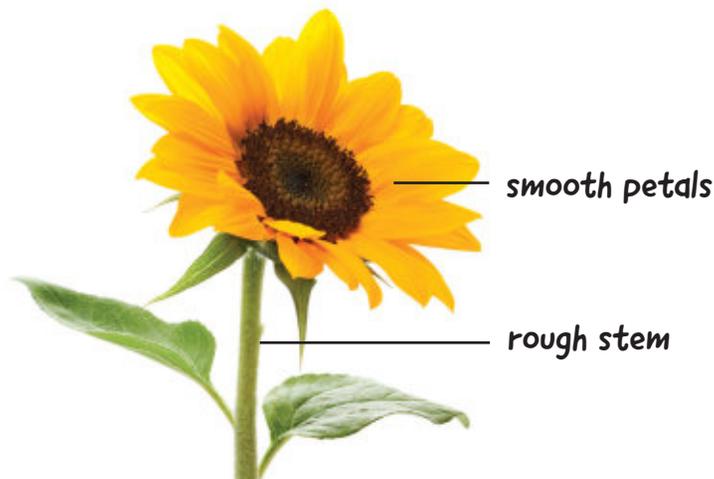


How Can Matter Be Described?

You have learned that you can use your senses to describe matter. You can touch an object to see how it feels. You can look at an object to see its color or shape.

In **Explore**, you used your sense of sight and touch to describe the cookies. All matter can be described by texture, shape, color, and size. **Texture** describes how an object feels.

Look at the sunflower. You can see it has a stem and yellow petals. Parts of the sunflower feel smooth. Other parts feel rough.



✓ Check Your Understanding

Describe the size, shape, color, and texture of the ladybug.

A ladybug is _____. (size)

A ladybug is _____. (shape)

A ladybug is _____. (color)

A ladybug is _____. (texture)

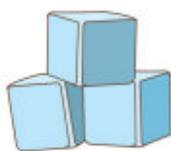


What Are the States of Matter?

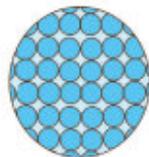
You have used shape, texture, color, and size to describe objects. Matter can also be described by its form. Solids, liquids, and gases are the forms of matter. These are called states of matter.

All matter is made up of tiny pieces called **particles**. A particle is a very small piece of matter.

The image below shows the particle arrangement in solids, liquids, and gases.



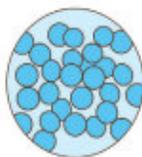
Solid



A solid has a specific shape. The particles are very close together. They cannot move around.



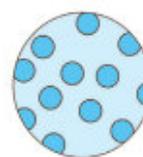
Liquid



A liquid takes the shape of the container it is in. The particles are packed loosely. They have space to move around each other.



Gas



A gas has no shape at all. The particles are very spread out. They can move around each other and float away.



Check Your Understanding

Draw the particles for each state of matter.



Elaborate



States of Matter in the Body

- (a) Think about your body. It has all three states of matter. Where can the different states of matter be found? Discuss with your classmate how you found them.

(b) On the picture below, draw arrows and label the states of matter you found.



- (c) Sort your answers from (b) in the table below.

Solid	Liquid	Gas