Matter Detectives

Use observations to sort matter and explain your findings.

P.2.5 "Students will demonstrate an understanding of the properties of matter. Conduct a structured investigation to collect, represent, and analyze categorical data to classify matter as solid, liquid, or gas..."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline a clue in each table row, then write S for solid, L for liquid, or G for gas beside each thing to show how you sorted it.

Mina Sorts Matter

1. Mina wanted to sort matter by how it acts. A pencil keeps its own shape. Cooking oil flows and takes the shape of its cup. Air in a tire spreads to fill the space inside. These clues help Mina decide whether a material is a solid, a liquid, or a gas.

2. Mina tested four things. She looked at each thing and moved it or its container. She wrote what she noticed in the data table. The words in the table are observations, not guesses. Use the observations to sort each thing. Then count how many things belong in each group.

MINA'S OBSERVATIONS

Thing	What Mina noticed
Pebble	Keeps its shape when moved.
Wooden block	Keeps its shape when moved.
Water	Flows and takes the shape of its cup.
Air in a balloon	Spreads to fill the balloon as it swells.

3. Mina can use her counts to make a claim about her collection. She can tell which group has the most things and point to the data as proof. She can also compare two things by naming what each does. A good report uses both a group name and an observation.

2 ANSWER WITH EVIDENCE

Use the passage

1. Which two things are solids? Give one clue from the table.

2. What kind of matter is the water? What clue supports your answer?

3. Which kind of matter has the most things in Mina's table? How many?

3 YOUR TURN

Your own words

Choose three things not named in the reading: one solid, one liquid, and one gas. Fill in the table with each thing, one clue you can observe, and its group.

THING	CLUE	SOLID, LIQUID, OR GAS?

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PART 1 · READ AND MARK

Underline a clue in each table row, then write S for solid, L for liquid, or G for gas beside each thing to show how you sorted it. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Which two things are solids? Give one clue from the table.	**The pebble and wooden block are solids. Both keep their shape when moved.**
2	What kind of matter is the water? What clue supports your answer?	**Water is a liquid. It flows and takes the shape of its cup.**
3	Which kind of matter has the most things in Mina's table? How many?	**Solids have the most, with two things.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

THING	CLUE	SOLID, LIQUID, OR GAS?
Coin	Keeps its shape when moved	Solid
Milk	Flows and takes the shape of its cup	Liquid
Gas in soda bubbles	Spreads to fill each bubble	Gas

Accept other accurate clues from the table. For Your Turn, accept different materials if the observations support the group names.