

States of Matter

A. Fill in the Blanks

Word Bank: container gas solid evaporation ice

1. A _____ has a shape of its own and doesn't flow.
2. A liquid takes the shape of its _____.
3. When liquid water freezes, it turns into solid _____.
4. The process of a liquid turning into a gas is called _____.
5. Air is an example of a _____.

B. Match the Following;

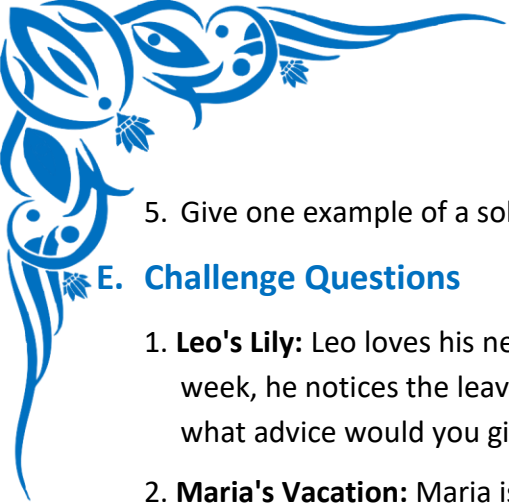
Column A	Column B
1. Solid	A. The process of a liquid turning into a solid.
2. Liquid	B. Spreads out to fill its entire container.
3. Gas	C. The process of a solid turning into a liquid.
4. Melting	D. Has a definite shape that doesn't change.
5. Freezing	E. Flows and takes the shape of its container.

C. Practice Problems

1. Circle all the liquids in the list below: Milk Rock Juice Steam Pencil Water
2. Circle all the solids in the list below: Book Water Air Chair Spoon Helium
3. Circle all the gases in the list below: Oxygen Honey Helium Smoke Wood
4. Describe a solid in one sentence.
5. Describe a liquid in one sentence.

D. Warm-up Questions

1. Name the three states of matter.
2. Is a wooden chair a solid, liquid, or gas?
3. What state of matter is the air we breathe?
4. Can a liquid keep its own shape? (Yes or No)



5. Give one example of a solid object in your classroom.

E. Challenge Questions

1. **Leo's Lily:** Leo loves his new peace lily. He waters it with a full cup of water every single morning. After a week, he notices the leaves are turning yellow and the soil is always muddy. What is the problem and what advice would you give Leo?
2. **Maria's Vacation:** Maria is going on vacation for two weeks. She has a tomato plant on her sunny porch. What could she do to make sure her plant gets water while she is gone?
3. **The Classroom Experiment:** A teacher puts one plant by the window and another identical plant in a cabinet. She waters them both equally. After two weeks, the plant from the cabinet is pale and weak. What is the one main thing (the variable) that caused this difference?
4. **Sam's Seeds:** Sam plants a sunflower seed in a pot of dry, sandy soil and puts it in the sun. His sister, Amy, plants her sunflower seed in a pot of dark, rich soil and also puts it in the sun. They both water their seeds. Whose seed is likely to grow into a healthier plant? Why?
5. **Weed in the Crack:** You see a small weed growing in a tiny crack in the sidewalk. It gets sunlight and rain. Where is it getting its nutrients from?

F. Word Problems & Application

1. Leo leaves his chocolate ice cream cone in the sun. After a few minutes, it starts to drip all over his hand. What state was the ice cream at first, and what state is it changing into?
2. Maria is helping her dad make pasta. He boils water in a pot. She sees lots of steam rising from the pot. What change of state is happening to the water?
3. On a hot summer day, a small puddle on the sidewalk slowly disappears. No one cleaned it up! Where did the water go, and what is this process called?
4. Sam wants to make fun-shaped ice cubes. He pours water into a dinosaur-shaped tray and puts it in the freezer. What change of state will happen to the water?
5. A bicycle tire is filled with air. Is the air inside a solid, liquid, or gas? How do you know?

G. True or False

1. A rock is a type of liquid.
2. Gases have a definite shape.
3. Melting is when a liquid turns into a solid.
4. A single Lego brick can be poured like water.
5. Milk is a solid because it comes from a carton.