



Name: _____

Changing Matter by Karen Larsen

Read along questions

1. Look around the room. List two examples of matter and write them down. Now list two properties that describe each example.

Answers will vary by student.

Properties could be anything the student can observe (example-see, measure, hear)

2. The two properties that all matter has are mass and space.

Mass is the amount of "stuff" in an object. In 3rd grade it could also be called weight.

Space is the area matter takes up.

3. Describe the motion of the molecules in each state.

Solids move slow. Molecules vibrate and are tightly packed together.

Liquids move freely. Molecules flow past each other

Gases move quickly. Molecules move in all directions.

4. Give two reasons why you think ketchup is a liquid.

Answers can vary. It flows and can be poured. It takes the shape of its container.

5. You cannot walk through a solid because the molecules are packed so close together.

Can you walk through a liquid? Yes or No (circle one).

Give an example: Water in a pool.

Can you walk through a gas? Yes or No (circle one).

Give an example: We are always walking through air.

6. List where each of the following may be found in your body.

Solid bones, organs, teeth

Liquid tears, blood, urine, sweat

Gas air in lungs, gas in stomach

7. A physical change can be reversed. A chemical change is permanent.

Decide which type of change is happening in each statement. **Circle** your choice.

- | | | | | |
|---------------------|----|-----------------|----|-----------------|
| Ice melting | -> | Physical Change | OR | Chemical Change |
| Fireworks exploding | -> | Physical Change | OR | Chemical Change |
| Chocolate melting | -> | Physical Change | OR | Chemical Change |

8. Heat energy added to matter can cause a physical change or a phase change. Name of the phase change when heat is added.

Ice to water **melting**.

Water to water vapor **boiling/evaporation**.

What is happening to the water molecules in each change? **Heat is added, so the molecules move faster**

9. What happens to molecules when heat is removed or cooled?

It can change from a gas to a liquid or from a liquid to a solid

Give an example of where you have seen this happen. **Putting water in the freezer becomes ice.**

10. How does the author use pictures and text boxes to support facts throughout the book?

Kelsey HELP!

11. The last page (pg.26) of the text states "Why Matter Matters." First, explain the two meanings of the word "matter" (homonyms). Then in your own words, summarize why matter, matters.

Meaning 1: _____

Meaning 2: _____

12. Something I would like to learn about states of matter is:

Answers will vary by student.