

Physical and Chemical Changes/ States of Matter Study Guide

Directions: Read each description. Mark it with a P if it describes a physical change, and a C if it describes a chemical change.

- _____ 1. Painting a wall
- _____ 2. Melting ice cream
- _____ 3. Puddle evaporating
- _____ 4. Using a hand warmer
- _____ 5. Bleaching clothes
- _____ 6. Cutting your fingernails
- _____ 7. Breaking a bone
- _____ 8. Boiling water
- _____ 9. Baking brownies
- _____ 10. Dying your hair

11. Explain the difference between a physical and chemical change.

12. What indicators help you determine whether the change was physical or chemical?

Physical: _____

Chemical: _____

Choice Bank:

Takes the shape of the container its in

Has no set shape

Has a set shape that doesn't change

Molecules tight together and vibrate in place

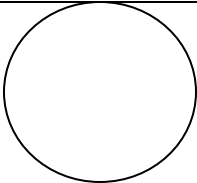
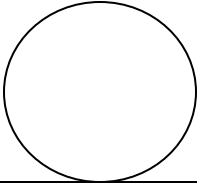
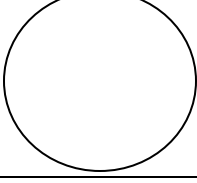
Molecules still close together, but can move past each other

Molecules are spread out, quickly moving in all directions.

Has no set volume

Has a set volume

Has a set volume

	Picture	Movement of Molecules	Shape	Volume
Solid				
Liquid				
Gas				

Physical and Chemical Changes

Directions: Read each description. Mark it with a P if it describes a physical change, and a C if it describes a chemical change.

- ___P___ 1. Painting a wall
- ___P___ 2. Melting ice cream
- ___P___ 3. Puddle evaporating
- ___C___ 4. Using a handwarmer
- ___C___ 5. Bleaching clothes
- ___P___ 6. Cutting your fingernails
- ___P___ 7. Breaking a bone
- ___P___ 8. Boiling water
- ___C___ 9. Baking brownies
- ___C___ 10. Dying your hair

11. Explain the difference between a physical and chemical change.

A physical change is a change in appearance but not composition. A chemical change is a change in composition - the substance becomes a different substance.

12. What indicators help you determine whether the change was physical or chemical?

Physical: A change of state or shape, and dissolving

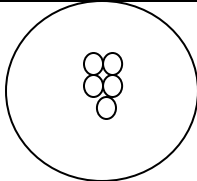
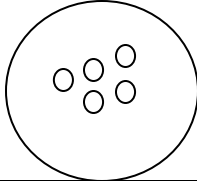
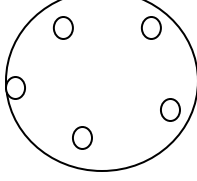
Chemical: A change of color, release of odor, release of light, release of gas, or release of heat are all indicators of a chemical change.

Choice Bank:

Takes the shape of the container its in
Has no set shape
Has a set shape that doesn't change

Molecules tight together and vibrate in place
Molecules still close together, but can move past each other
Molecules are spread out, quickly moving in all directions.

Has no set volume
Has a set volume
Has a set volume

	Picture	Movement of Molecules	Shape	Volume
Solid		Molecules tight together and vibrate in place	Has a set shape that doesn't change	Has a set volume
Liquid		Molecules still close together, but can move past each other	Takes the shape of the container its in	Has a set volume
Gas		Molecules are spread out, quickly moving in all directions.	Has no set shape	Has no set volume