Practice Quiz

Learning Goals 1-4

**Learning Goal 1: I can compare and contrast the particle structure and physical properties of solids, liquids, and gases.**

Define the following terms. (Criteria 1)

1. Matter:
2. Particle:
3. Attractive Force:

Describe the arrangement of particles in solids, liquids, and gases. (Criteria 2)

Solids:

Liquids:

Gases:

Determine whether each of the following statements describe a solid, liquid, or gas. (Criteria 3)

1. Particles have high energy and are easily compressible. \_\_\_\_\_\_\_\_\_\_\_\_\_
2. Particles vibrate in place and have a strong attractive force \_\_\_\_\_\_\_\_\_\_\_\_\_
3. The volume of the substance changes when you change container size \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Particles slide by one another and partially take the shape of the container \_\_\_\_\_\_\_\_\_\_\_\_\_
5. Particles do not take the shape of the container \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Learning Goal 2: I can describe the differences between intensive physical properties, extensive physical properties, and chemical properties of matter.**

Differentiate between the following terms. Use the word “particles” in your answers(Criteria 1 and 3))

1. Physical property vs chemical property
2. Extensive property vs intensive property

Identify the following properties as intensive physical, extensive physical, or chemical. (Criteria 2)

1. Density \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Mass \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Color \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Flammability \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Reactivity \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Melting point \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Learning Goal 3: I can describe the differences between physical and chemical changes of matter.

Define the following terms. (Criteria 1)

1. State change:
2. Precipitate:

Identical the following changes as physical changes or chemical changes. (Criteria 2)

1. Burning of wood \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Sublimation of a solid to a gas \_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Dissolving salt in water \_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Reaction of sodium (Na) and chlorine (Cl) to form salt (NaCl)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Boiling of water \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

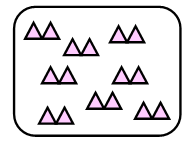
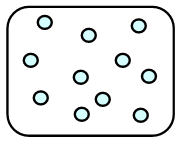
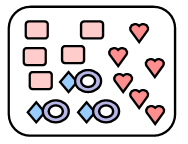
Differentiate between physical and chemical changes. Use the terms “atoms” and “particles” in your answer. (Criteria 3)

**Learning Goal 4: I can classify examples and particle illustrations of matter as pure substance (element), pure substance (compound), mixture (homogeneous), or mixture (heterogeneous).**

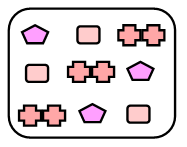
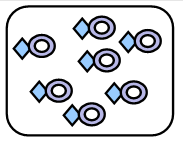
Answer the following questions. (Criteria 1 and 2)

1. How are the atoms in an element particle different from the atoms in a compound particle?
2. How are the particles in pure substance different from the particles in a mixture?
3. How are the particles in a homogeneous mixture different from the particle in a heterogeneous mixture?

Classify the following illustrations as pure substance (element), pure substance (compound), mixture (homogeneous), or mixture (heterogeneous). (Criteria 3)



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