

5-7

Matter

1. What is matter composed of?

mass + volume

2

2. Why can't we see atoms with the naked eye?

very, very small!!

2

3. How do the properties of a compound compare to the properties of the elements that make it?

not a like very different

2

4. Consider three 10 g samples of water, ice, and steam. How do the volumes of these three samples compare?

water, ice, steam
smallest, largest - least dens

3

5. Draw three atomic level models for solid, liquid and gas.

3



6. Classify the following as physical or chemical changes/properties.

- A shirt scorches when you leave an iron on it. C.C.
- The tires on your car seem to be getting flat in the cold weather. P.P.
- Your grandmother's silver tea set is turning black over time. C.C.
- Spray-on oven cleaner converts grease into a soapy material. C
- Acids produced by bacteria in plaque cause teeth to decay. C
- Sugar will char if overheated while making homemade candy. C
- Hydrogen peroxide fizzes when applied to a wound. C
- Dry ice "evaporates" without melting as time passes. P
- Coffee beans are processed in a grinder. P
- Carbonated soda pop loses its fizz. P
- A short-order cook fries an egg. C
- Water expands when frozen, decreasing its density. P
- Rain droplets high in the atmosphere form hail. P

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7. Explain the difference between an element and a compound

2

↓
one type of atom

↓
2 or more atoms bond together

27)

8. Define pure substance and mixture.

2
one type of
Element or
Compound
2 or more substances

9. Classify the following as pure substance or mixture. If a mixture, then classify as homogeneous or heterogeneous.

8
A multivitamin tablet. M - homo
The blue liquid in your car's windshield washer. M - homo -
A Spanish omelet. M - hetero
A diamond. P.S.
A jar of jelly beans M - hetero
Tea M - homo
Saline solution M - homo
Bag of m&m's M - hetero

10. Identify 10 hold items other than the ones listed on this homework assignment.

Substance 2 physical properties pure/homogeneous/heterogeneous

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