

## Physical Science Worksheet: Chapters 2 and 3

### Multiple Choice

- Matter is defined as anything that  
A) can be seen and touched. B) has mass and takes up space. C) can be weighed. D) contains kinetic or potential energy.
- The element that is most abundant in Earth is  
A) iron. B) oxygen. C) silicon. D) magnesium.
- The science of what matter is made of and how it changes is called  
A) chemistry. B) physics. C) kinetics. D) engineering.
- The chemical element that is most abundant in the human body is  
A) nitrogen. B) iron. C) carbon. D) oxygen.
- A substance that cannot be broken down into simpler substances is  
A) a compound. B) a mixture. C) an element. D) an atom.
- The smallest unit of a substance that behaves like the substance is  
A) an element. B) an atom. C) a molecule. D) a compound.
- A molecule of water ( $H_2O$ ) is made from \_\_\_\_\_ combining two hydrogen atoms and one oxygen atom.  
A) physically B) ionically C) thermally D) chemically
- You put 1 gram of salt into 1 liter of water and stir. The resulting liquid is an example of  
A) a pure substance. B) a heterogeneous mixture. C) a homogeneous mixture. D) an immiscible mixture.
- The chemical symbol for sulfuric acid is  $H_2SO_4$ . How many atoms are contained in each molecule of sulfuric acid?  
A) 3 B) 5 C) 6 D) 7
- How many oxygen atoms are in one molecule of table sugar ( $C_{12}H_{22}O_{11}$ )?  
A) 2 B) 11 C) 12 D) 22
- A material that can be represented by a chemical formula is  
A) an element. B) a mixture. C) a homogeneous solution. D) a pure substance.
- The chemical formula for water,  $H_2O$ , means that each water molecule contains  
A) two hydrogen atoms and two oxygen atoms. B) two hydrogen atoms and one oxygen atom. C) two hydrogen atoms and zero oxygen atoms. D) one hydrogen atom and two oxygen atoms.
- Which of the following is an example of a gas-liquid mixture?  
A) the air we breathe B) a carbonated drink C) a helium balloon D) ice cubes
- Knowing the chemical properties of a substance will tell you how the substance  
A) looks. B) smells. C) can be broken down into atoms. D) reacts with other substances.
- Which state of matter will hold its shape without a container?  
A) solid B) liquid C) gas D) plasma
- A liquid changes rapidly into a gas at the liquid's  
A) boiling point. B) freezing point. C) melting point. D) condensation point.
- A physical property of gold is its  
A) density. B) reactivity with powerful acids. C) non-flammability. D) None of the above
- Which of the following is not an example of a physical property?  
A) freezing point B) boiling point C) reactivity D) density
- Lead has a density of  $11.3 \text{ g/cm}^3$  and a mass of 282.5 g. What is its volume?  
A)  $2.5 \text{ cm}^3$  B)  $25 \text{ cm}^3$  C)  $250 \text{ cm}^3$  D)  $2500 \text{ cm}^3$
- A substance has a mass of 360 g and a volume of  $7.5 \text{ cm}^3$ . What is its density?  
A)  $2700 \text{ g/cm}^3$  B)  $270 \text{ g/cm}^3$  C)  $480 \text{ g/cm}^3$  D)  $48 \text{ g/cm}^3$
- Which of the following is an example of a physical change?  
A) dissolving salt in water B) burning wood into charcoal C) cooking an egg D) rusting iron
- Grinding quartz crystals down to produce sand is an example of a  
A) change of state. B) chemical change. C) chemical reaction. D) physical change.
- Digesting food is an example of  
A) physical change. B) change of state. C) chemical change. D) buoyancy.
- Which of the following is an example of chemical change?  
A) strumming a guitar B) converting matter into energy C) grilling a burger D) melting of copper
- Which of the following is an example of a chemical change?  
A) ice melting B) paint fading C) pounding gold into a coin D) a puddle of water evaporating