

TEST NAME: **Williams Montessori Mr Dougs PT, PCC & ECM mini assessment**  
TEST ID: **1942279**  
GRADE: **08 - Eighth Grade**  
SUBJECT: **Life and Physical Sciences**  
TEST CATEGORY: **Shared Classroom Assessments**

Student: \_\_\_\_\_  
Class: \_\_\_\_\_  
Date: \_\_\_\_\_

1. The table below shows several minerals found in Earth's crust.

Mineral	Chemical Composition
graphite	C
quartz	SiO <sub>2</sub>
calcite	CaCO <sub>3</sub>
hematite	Fe <sub>2</sub> O <sub>3</sub>

Based on the information in the table, which mineral is also an element?

- A. graphite
- B. quartz
- C. calcite
- D. hematite

2. Which term correctly describes all of the following materials?

salt water, vinegar, bronze, air, beach sand

- A. compounds
- B. mixtures
- C. solutions
- D. elements

3. What is the smallest unit of an element that still retains the element's properties?

- A. a proton
- B. a crystal
- C. an atom
- D. a molecule

4. Which substance is composed of only one type of atom?
- A. water
  - B. gold
  - C. salt
  - D. sugar
5. Which pair of elements has the **most** similar properties?
- A. Li and B
  - B. I and Ca
  - C. K and He
  - D. N and P
6. Which characteristic of an element determines its placement in the periodic table?
- A. mass
  - B. size
  - C. number of neutrons
  - D. number of protons
7. Which statement **best** explains how periods on the periodic table are organized?
- A. increasing atomic number from left to right
  - B. increasing number of neutrons from left to right
  - C. decreasing number of electrons from left to right
  - D. decreasing atomic mass number from left to right
8. A student kept a notebook during an investigation. Which recorded observation was **MOST likely a physical change**?
- A. The solution was heated for two minutes until it boiled.
  - B. A solid formed when two liquids were mixed together.
  - C. Two solutions were mixed and the resulting solution felt hot.
  - D. The color of two mixed solutions changed from clear to white.

9. **Which is the BEST explanation of why heat is released when wood burns?**
- A. Burning creates energy by increasing particle motion.
  - B. Burning destroys matter and creates energy from it.
  - C. Burning releases energy stored in chemical bonds.
  - D. Burning causes convection currents which create heat energy.
10. **When iron combines with oxygen in a moist environment, rust forms because of a**
- A. chemical reaction.
  - B. physical reaction.
  - C. change in density.
  - D. change in temperature.