

Name \_\_\_\_\_

## The Periodic Law: A Key to Unlocking the Secrets of the Periodic Table

### Short Answer Key

1. The Periodic Law is a principle that states elements are arranged in order of increasing atomic number, and their properties repeat periodically.
2. Scientists leave gaps in the periodic table based on the Periodic Law's patterns, and these gaps indicate where new elements might be discovered.
3. Elements in the same group on the periodic table have similar properties. For example, elements in Group 18 (Noble Gases) are all gases, colorless, and unreactive.
4. Knowing the properties of elements in the same group helps chemists predict how elements will react with each other. For instance, Group 1 elements are highly reactive with water.
5. Without the Periodic Law, understanding the relationships between elements and predicting their properties would be much more challenging, making the study of chemistry more complex and confusing.

