

**Science 9: Matter and Chemical Change Review**

1. Identify or illustrate the following W.H.M.I.S symbols.



Toxic



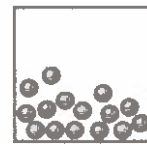
Compressed Gas



Reactive

2. Identify the five main points in the particle model of matter.

3. Identify each state of matter and describe the action of the particles in that state.



4. How is matter classified? (Use a flow chart)

5. Using a triangle relationship illustrate what happens when matter changes state and identify in your illustration whether energy is needed or given off.

6. What happens during a physical change?

7. What happens during a chemical change?

8. What are the clues that describe a change as being chemical?

9. Give a physical property and a chemical property for each example of matter.

<b>Matter</b>	<b>Physical Property</b>	<b>Chemical Property</b>
Gold		
Iron		
Water		
Hydrogen		

10. What are the four original elements?

11. Explain what the Law of Conservation of Mass describes.

12. Explain what the Law of Definite Composition describes.

13. What is Dalton's Atomic theory as it applies to matter?

14. Put all the models of the atom in chronological order including the name of the scientist who is responsible for each model?

15. Describe each Chemical Family and explain how it is represented in the Periodic Table.

<b>Chemical Family</b>	<b>Description</b>	<b>Table Representation</b>
Transition Metals		
Other Metals		
Metalloids		
Non – Metals		
Rare Earth Metals		
Alkali Metals		
Alkaline Earth Metals		
Noble Gases		
Halogens		

16. What system did Medeleev use to organize the elements?

17. Explain what each of the following tells us about an element

**Atomic Number**

**Mass Number**

## Atomic Symbol

## Atomic Mass

18. How many elements are known? What are the Horizontal rows called? How are they numbered?

19. Explain the difference between organic and inorganic compounds.

20. Write the chemical formulas as determined by the name of the compound.

Aluminum oxide

Calcium nitrite

Sodium chloride

21. Write the name of the compound as determined by the chemical formula.

~~NO<sub>2</sub>~~ NO<sub>3</sub>

~~C<sub>8</sub>H<sub>12</sub>O<sub>6</sub>~~ C<sub>8</sub>H<sub>12</sub>O<sub>6</sub>

~~C<sub>12</sub>H<sub>22</sub>O<sub>11</sub>~~ C<sub>12</sub>H<sub>22</sub>O<sub>11</sub>

NaCl

22. Compare the properties of molecular and ionic compounds.

31. What three things are needed for combustion reactions?

32. List some harmful by – products of combustion.

33. Illustrate a molecular model and an ionic model.