

Name _____
Period _____

JMJ

Date _____
Class _____

Lesson 1

HW #1

1. The periodic table is a chart that uses _____ and _____ to arrange elements according to their _____ and _____ properties.
2. Russian chemist _____ developed the periodic table by organizing elements according to _____
3. Mendeleev noticed that elements had repeating patterns, or are _____ with properties such as melting point, _____ and _____
4. Moving from _____ to _____ melting points on the periodic table first _____ and then _____
5. _____ fixed problems that scientist discovered with Mendeleev's table by listing elements according to increasing _____
6. The AN of an element is the number of _____ in the nucleus of each of the element's _____
7. Each element key on the periodic table has important information, including _____ and _____
8. Both _____ and _____ properties change as you read across a period on the table.
9. Almost all elements in the periodic table are _____
10. _____ is/are on the left side of the periodic table, _____ is/are on the right side, except for _____ and _____ which are between metals and nonmetals.
11. New metals, like Bohrium, are _____ or made by people.
12. The periodic table can be used to understand and _____ an element's _____

HW #2

1. Compare Mendeleev's and Moseley's version of the periodic table.
2. Why did Mendeleev have gaps in his periodic table?
3. Which set of elements usually has more in common, periods or groups? Explain your answer.
4. How could the periodic table help scientists predict the properties of new elements that might be added to it?

Lesson 2

HW #3

1. What are the four main properties of a metal?
2. Name two differences between Alkali and Alkaline Earth metals.
3. What happens if Alkali metals react with water?
4. What are some everyday uses of transition metals?
5. What are some differences between transition and Alkali/Alkaline Earth metals?
6. Why are the elements in groups 3-12 known as transition elements?
7. Why are the Lanthanide and Actinide series located on the bottom of the periodic table?

Lesson 3

HW #4

1. What are the four main elements of life? Which the most important?
2. Name three characteristics of nonmetals in Group 14-16. How are they alike? How are they different?
3. What can halogens react with?
4. How are halogens similar to Alkali metals? How are they different to noble gases?
5. Why weren't noble gases discovered before constructing the periodic table? When they were, where were they placed?
6. What is hydrogen classified as? Why? What other properties does it have?

HW #5

1. What are the 8 elements that are metalloids?
2. Why do metalloids have so many uses?
3. Many homebuilders use cellulose to insulate attics and walls. The insulation helps homes stay cool in summer and warm in winter. Cellulose is a plant fiber largely made of carbon. Based on the properties of cellulose, would you expect carbon to be a metal, a nonmetal, or a metalloid? Why?
4. Why do you think manufacturers use metalloids instead of metals for some electronic devices?