Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pd: \_\_\_\_\_ Ast: \_\_\_\_\_

**Periodic Table Study Guide**

***Use your notebook to answer the following questions.***

1. How did Mendeleev originally organize his periodic table?
2. What made Mendeleev’s periodic table better than prior attempts to organize the elements?
3. What is the main difference between the modern periodic table and the one Mendeleev came up with?
4. Why do we call it the “periodic” table?
5. Identify the information included in the boxes on the periodic table:

26

Fe

Iron

55.847

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1. Why do some of the element symbols not seem to make sense based on the name of the element?
2. What determines the atomic number? Why is this important?
3. What determines the atomic mass? Why is this not often a whole number?
4. What are the vertical columns on the periodic table called? (give both names)
5. What is special about elements in the same group?
6. What are the horizontal rows called?
7. What is the pattern of protons in the periodic table?
8. What is the pattern of atomic mass in the periodic table?
9. What is the pattern of characteristics in the periodic table?
10. What are valence electrons? Why are they important?
11. What is the pattern of valence electrons in the periodic table? What groups is this true for?

***Use a periodic table to answer the following questions:***

1. Where are the metals located on the periodic table?
2. Where are the nonmetals located on the periodic table?
3. What classification of elements are between the metals and nonmetals on the periodic table?
4. What is the standard state for the majority of elements on the periodic table?
5. How many protons does copper (Cu) have?
6. What is the atomic mass of krypton (Kr)?
7. What element is the heaviest gas?
8. What element is the lightest metal?
9. Which element has 101 protons in its nucleus?
10. How many metalloids are in the nitrogen (N) family?
11. How many metals are in period 4?
12. Which elements are liquid in their standard state?
13. Which element has the fewest neutrons in its nucleus (*on average*)?
14. What is the element symbol for sodium?
15. What is the heaviest known element? What is its atomic mass?
16. What element is the lightest gas?
17. What element is the lightest solid?
18. What element is the lightest liquid?
19. What element is the lightest metal in the copper family?
20. What element is the lightest metal in the carbon family?
21. What is the lightest element that is named after a country?
22. What is the lightest synthetic element?
23. What is the heaviest naturally occurring element?
24. What is the heaviest gas in the fluorine family?