Name _____

Pre-Test : Atomic Structure and the Periodic Table

Directions: Circle the letter to indicate whether the following statements are either true ("T") or false ("F").

1. Atomic structure refers to the building of compounds.	T	F
2. The nucleus is the center or core of the atom.	T	F
3. Protons are positively charged particles.	T	F
4. A neutron is a negatively charged particle.	T	F
5. Atomic number is the number of electrons in an atom.	T	F
6. Isotopes are atoms of the same element with different numbers ofneutrons.	T	F
7. Electrons are negatively charged particles.	T	F
8. The Periodic Table organizes elements by their atomic structure.	T	F
9. Chemical symbols are an abbreviated way of symbolizing electrons.	T	F
10. The vast majority of elements are metals.	T	F

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Name _____

Video Quiz

Directions: Fill in the blank with the correct word from the list at the bottom of the page. Not all words from the list will be used.

1. Atomic _____ refers to the arrangement and number of smaller particles in an atom.

2. The _____ is the center or core of an atom.

3. _____ are positively charged particles located in the nucleus.

4. Neutrons have a _____ charge.

5. _____ are atoms of the same element with different numbers of neutrons.

6. _____ are subatomic particles with a negative charge.

7. The sum weight of protons and neutrons in an atom is its atomic _____

8. Elements in the Periodic Table are ordered according to their atomic _____

9. _____ are the most common elements on the Periodic Table.

10. Elements in the family called the alkaline earth metals are very _____

electron cloud
electrons
isotopes
mass units
metalloids
metals
neutral
neutron
nucleus
protons
reactive
structure

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Discussion Questions

Directions: Answer the following questions in the spaces provided (use the back of the sheet if necessary) or as a group.

1. Name the parts of an atom.

2. Provide examples of elements and their atomic number.

3. Provide an example of an isotope.

4. Provide examples of elements and their chemical symbols.

5. What are some of the characteristics of metals?

6. Describe how the Periodic Table is arranged.

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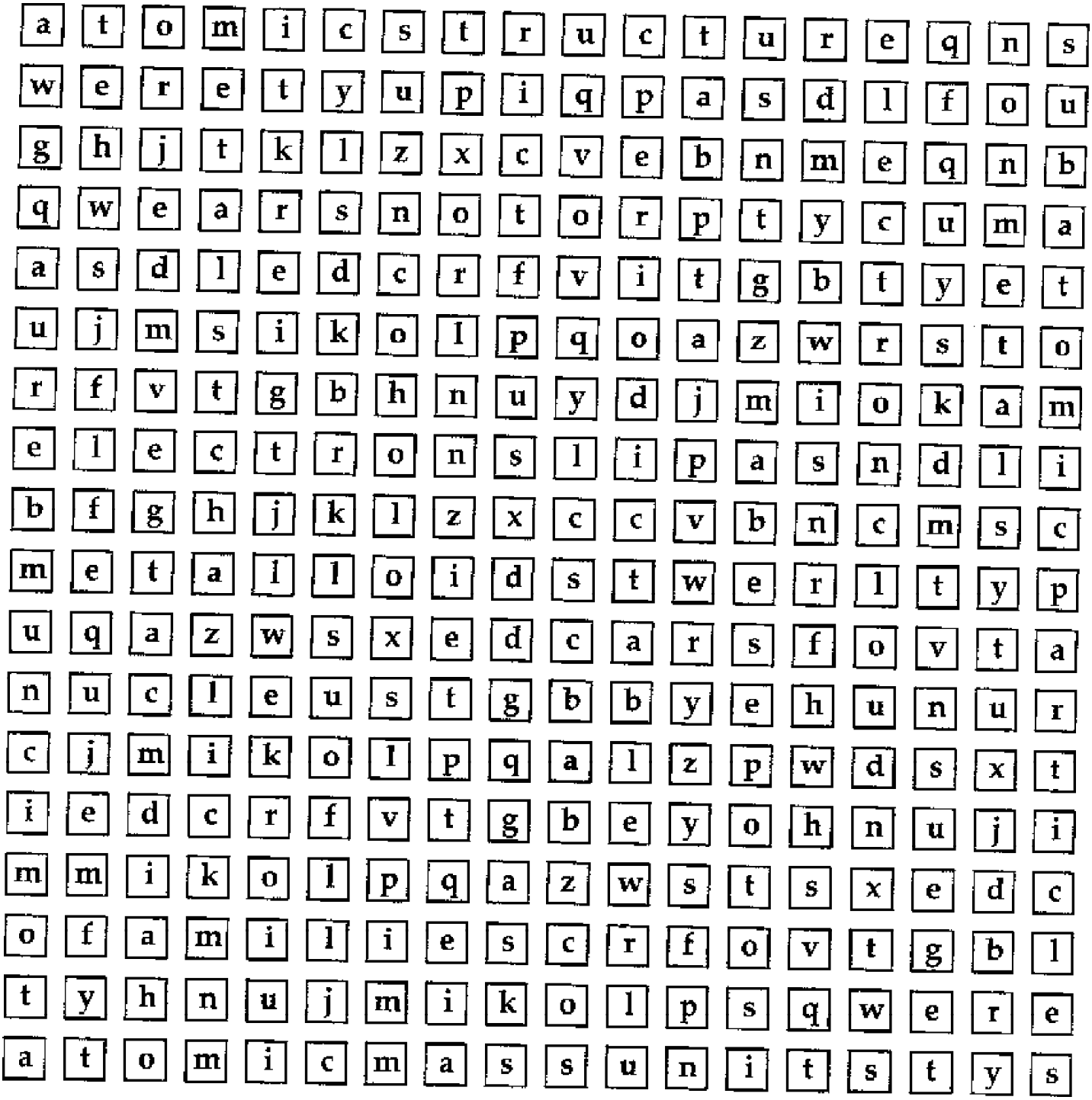
Word Search

Directions: Find and circle the following vocabulary words in the puzzle. After completing the puzzle, write the definition of each word on the back of the page.

atomic mass units	atomic number	atomic structure	electron cloud
electrons	families	isotopes	metalloids
metals	neutron	nonmetals	nucleus
Periodic Table	protons	subatomic particles	



 Name_____

Internet Lesson

The Web Site for This lesson Plan is not available at this time!

Name _____

Navigating the Periodic Table

Directions: Using a copy of the Modern Periodic Table, answer the questions in the spaces provided.

1. How many periods are there in the Modern Periodic Table?

2. How may groups are there in the Modern Periodic Table?

3. What are the general properties of the elements in the first two groups on the left side of the Modern Periodic Table?

4. What are the general properties of the elements in the group to the right in the Modern Periodic Table?

5. Find the element "oxygen."
a. What does the "8" on top of the chemical symbol signify?

b. What does the number 15.999 signify?

6. Find the element "calcium."
a. What is the chemical symbol for calcium?

b. What is the atomic number of calcium?

c. What is the atomic mass (weight) of calcium?

7. Find the element "copper."
a. What is the chemical symbol for copper?

b. What is atomic number of copper?

c. What is the atomic mass (weight) of copper?

8. Find the element "nitrogen."
a. What is its atomic number?

b. How many electrons orbit its nucleus?

c. How may protons does it have?

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Themes on the Periodic Table

Directions: Answer the following questions using the Periodic Table and a chemistry reference book, such as a textbook or encyclopedia.

1. How many groups (families) are there in the Periodic Table?

2. How many elements are in your Periodic Table?

3. How many periods are there in your Periodic Table?

4. What is the basic theme of organization in the Periodic Table?

5. a. Why are elements 57 through 70, and 89 through 102, found separately at the bottom of the table?

   b. As what can the vast majority of elements in the Periodic Table be classified?

6. Look at the bold line shaped like a staircase on the right side of the table. What does it divide?

7. a. What are the metalloids?

   b. Provide three examples of metalloids.

   c. What is a metalloid?

8. Describe two trends in the Periodic Table as you go from left to right along periods.

9. Group 1 includes the alkaline metals. What are the general properties of elements in this group?

10. Between groups 2 and 3 are the transition metals.
    a. Describe the general properties of the transition metals.

    b. List three examples of transition metals and their uses.

11. Group 14 is called the carbon group.
    a. What is the element at the top of the group?

    b. List three elements in this group and their uses.

12. Group 18 is referred to as the noble gases.
    a. Briefly describe the characteristics of these elements.

    b. List two elements in this group and their uses.

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8a

Name _____

Post - Test : Atomic Structure and the Periodic Table

Directions: Answer the following questions in the spaces provided. Use the back of the sheet if necessary. Questions are worth five points each.

Fill in the blank with the correct word.

1. Atomic _____refers to the arrangement and number of smaller particles of an atom.

2. The _____is the center of the atom.

3. The atomic number is the number of _____in an atom.

4. Protons have a _____charge.

5. _____are atoms of the same element with different number of neutrons.

6. The electron _____is the space in which electrons are likely to be found.

7. Elements on the periodic table are represented by chemical _____

8. The columns in the periodic table are referred to as _____

9. Metalloids have properties of both metals and _____

10. Elements to the far left in the Periodic Table are very _____

Circle "T" if the statement is true, or "F" if it is false.

11. The weight of subatomic particles is measured in units called atomic mass units. T F

12. A neutron has a negative charge. T F

13. Electrons are larger than protons and neutrons. T F

14. The position of elements on the Periodic Table is dictated by the number of protons. T F

15. Rows in the Periodic Table are referred to as "periods." T F

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8b

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Post - Test : Atomic Structure and the Periodic Table

Circle the correct answer

16. The atomic number of an element is also equal to its number of
    a. electrons
    b. atoms
    c. molecules
    d. subatomic particles

17. A proton weighs _____ atomic mass units.
    a. 3
    b. 5
    c. 2
    d. 1

18. The majority of the elements on the Periodic Table are
    a. false
    b. metals
    c. unreactive
    d. harmful

19. Metals tend to be good
    a. conductors
    b. insulators
    c. buffers
    d. gases

20. Elements in the noble gases tend to be
    a. very reactive
    b. stable
    c. strong
    d. heavy

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