Watch the *Periodic Table* movie at http://www.BrainPop.com/ to complete this worksheet.

1. The Periodic Table of Elements is a list of all the chemical elements that occur in the ______________. It categorizes elements according to the properties of their ______________, which are the smallest unit of an element.

2. Atoms are made up of a ______________ composed of protons and neutrons and a number of electrons orbiting in shells or ______________.

3. It is the number of protons, neutrons, and electrons in an element’s atoms that determines its ______________. The configuration of the three particles is the only thing that makes one element ______________ from another.

4. The modern table organizes elements so it is easier to see how elements are ______________ to each other. The elements are listed by the ______________ ______________, or the number of protons in the atom’s nuclei. The table also lists the elements ______________, name, and ______________ ______________.

5. Each shell can hold only a certain number of ______________. The number of electrons in an atom’s outer shell plays an important role in that atom’s properties determining what other kinds of atoms it can ______________ with. Atoms bond together in molecules by either ______________ ______________ or ______________ ______________ electrons. ______________ describe the number of electrons in the outer shell.

6. Because atoms with similar numbers of electrons in outer shells behave in similar ways, you can also read the table in vertical rows called ______________. Elements in groups have similar ______________ ______________ properties.

7. The periodic table is also organized by ______________ into different categories. These categories are organized by properties of the elements.

8. Some periodic tables may show elements all the way up to number ______________, but any element over Uranium number ______________ is too unstable to occur in nature and must be made in a lab.

**Try the quiz to help you answer these questions ...**

What do you get when you chemically combine chlorine gas and sodium? A. Table salt B. Car wax C. A bad monster

Which of the following is a noble gas? A. Hydrogen B. Helium C. Carbon

How do you find the atomic number of an atom? A. # of Protons B. # of Neutrons C. # of Electrons

What are metallic elements generally known for? A. Liquid at room temp B. Conductivity C. Generosity

Where would you find the element copper? A. Steak knives B. Telephone wires C. Vacuum tubes

What is the smallest unit of a pure element? A. Atom B. Neutron C. Molecule

What do we call an atom in which the number of protons is not equal to the number of electrons? ______________

How is the Periodic Table organized? A. Rows and aisles B. Periods and groups C. Lines and boxes

When was the first modern Periodic Table developed? A. 1066 B. 1492 C. 1871

What is a molecule? A. Particles that are fragile B. Atoms that have bonded C. Synthetic car seat covers

Who is credited with coming up with the modern Periodic Table? A. Einstein B. Bohr C. Mendeleyev

How are elements listed in the Periodic Table? A. Year discovered B. Atomic Number C. Physical beauty

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Site: CHEMystery
Click the “Visit Site” link if needed and then find the Periodic Table of the Elements section (see the menu on the left side of the page) to help you label this diagram.

Site: Chemical Elements.com (Listed on the Periodic Table Sites page of the Kid Zone)
Use the menu on the left side of the page for links for the element groups to help you complete this section.

1. Where are metalloids found on the periodic table? _____________________________________________

2. Which elements are metalloids? List their symbols. ____  ____  ____  ____  ____  ____  ____

3. What are two uses for metalloids? __________________________________________________________

4. Where are noble gases found on the periodic table? __________________________________________

5. Which elements are classified as noble gases? List their symbols. ____  ____  ____  ____  ____  ____

6. Which elements are classified as nonmetals? List their symbols. ____  ____  ____  ____  ____  ____  ____

7. What does the term “halogen” mean? ________________________________

8. Which elements are classified as halogens? List their symbols. ____  ____  ____  ____  ____

9. Where do you find the transition metals on the periodic table? __________________________________

10. What is unique about the location of the valance electrons in the transition metals? ______________

Done? Try the Element Games!
Go to the JLab Games & Puzzles site listed on the Periodic Table Sites page of the Kid Zone.

Element Games
- Element Flash Cards - Learn the names and symbols of the elements!
- Element Math Game - Calculate the number of protons, neutrons, or electrons in an atom based on information from the Periodic Table of Elements?
- Element Hangman - Discover which element the computer has picked by guessing the letters in its name.
- Element Crossword Puzzles - Use the clues provided to solve each crossword puzzle!
- Element Concentration - Challenge your memory and your knowledge of the elements!
- Element Matching Game - Match an element's name to its symbol!

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