**Introduction to Atoms**

*Webquest*

Use the links on the class webpage at brunnerscience.weebly.com to watch the videos and answer the questions. below. ***Please re-watch and/or pause any videos if needed.***

**Part A: Chem4Kids- Atoms all Around Us**

*Read the atoms around us introductions page and answer the questions below…*

1. What do you need to build molecules? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What three parts of an atom make the universe go? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Click on Structure on the right side of the page under ATOM BASICS…*

1. Look at the picture on the right what charges each of the atom particles have….
2. Protons \_\_\_\_\_\_\_\_\_
3. Neutrons\_\_\_\_\_\_\_\_
4. Electrons\_\_\_\_\_\_\_\_
5. What two parts go in the middle (nucleus) of the atom? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. What part flies around the outside of the atom? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Click on the electrons tab under ATOM BASICS on the right side of the page…*

1. How much smaller is an electron than a proton? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Is it possible to see an electron spinning around a nucleus?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What is covalent bonding? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part B: Study Jams- Atoms: Protons, Neutrons, and Electrons**

*Press “Play Video”*

1. What is at the center of every atom? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What two particles make up the nucleus of an atom? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Where are electrons and what charge do they have? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. What is the number of protons equal to? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. What determines the type of element an atom makes? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. What forms when two atoms combine? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part C: Study Jams- Periodic Table**

*Press “Play Video”*

1. What is the name of the chart that shows all the elements that scientists have discovered? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What does an atom’s atomic number represent? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Why isn’t water on the period table?
4. How is the periodic table helpful to scientists?
5. What does Au stand for? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part D: Interactive Periodic Table**

*Click on an element and click on the brief description link. It will tell you about the element. Fill in the chart below for 5 elements.*

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Symbol | Atomic Number | One Fact about the element |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**Part E: Build An Atom**

Click the Game Icon and play the first game

What is your score: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part F:** Hopefully you feel a little bit better about the structure of an atom and how to use the periodic table to determine the structure of a particular atom. Complete your Bill Nye Atoms document. Then, attach it to this document.

**Part G: If time allows play the Atomic Math Game for more practice and/or do the Atom Word Search**