**Atomic Structure Webquest**

**Introduction**

Atoms are the basis of chemistry. They are the basis for every object in the Universe. Remember that matter is composed of atoms. Matter is the “stuff” that objects, large and small, are made of. Atoms can combine to create molecules.

**Part I** – Visit the following websites and watch the video (use your headphones)

* Atom Song: **https://tinyurl.com/ydhfpbjb**
* Show Me Science – Atoms & Elements: [**https://tinyurl.com/ybraxc4y**](https://tinyurl.com/ybraxc4y)

**Part II** – Visit the following website then use the information to complete the prompts.

* [**https://education.jlab.org/atomtour/index.html**](https://education.jlab.org/atomtour/index.html)

1. What are atoms?
2. Recreate the table below with information on the three types of subatomic particles.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name of Particle** | **Charge** | **Location** | **Size** | **Facts** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**Part III** – Visit the following website then use the information to complete the prompts.

* [**http://education.jlab.org/qa/element.html**](http://education.jlab.org/qa/element.html)

1. What is an element?
2. How are elements arranged?

**Part IV** – Visit the following website then use the information to complete the prompts.

* [**http://education.jlab.org/itselemental/index.html**](http://education.jlab.org/itselemental/index.html)
  + Below the periodic table: click on “how to calculate the number of protons, neutrons, and electrons in an atom of an element”

1. What four things are shown on a periodic table “square” for an individual element?
   1. Draw and label a “square” from the periodic table using a sample element of your choice.
   2. Define Atomic Number.
   3. Compare & Contrast Atomic Mass (weight) vs. Mass Number
2. How are electrons arranged around an atom?
3. Given a periodic table “square”
   1. How does one determine the number of Protons an element has?
   2. How does one determine the number of Electrons an element has?
   3. How does one determine the number of Neutrons an element has?

**Part V** – Visit the following website then go to the “Element Math Game”. Select 10 questions and click “I’m ready to start”

* [**http://education.jlab.org/elementmath/**](http://education.jlab.org/elementmath/)Record your score.