

NAME:

DATE:

## Atoms and Elements Webquest

Read and explore the following sites to understand more about what makes up our world.

<http://education.jlab.org/atomtour/index.html>

1. What are atoms?

2. Fill in the following table with information on the three types of particles.

Name of Particle	Charge	Location	Size	Cool Facts

<http://education.jlab.org/qa/element.html>

3. What is an element?

4. How are these elements arranged?

<http://education.jlab.org/itselemental/index.html>

Below the periodic table in the third paragraph, click on ‘how to calculate the number of protons, neutrons, and electrons in an atom of an element.’

5. What four things are shown on a periodic table square for an individual element? Draw and label a sample element.



Define:

a) Atomic Number:

b) Atomic Weight/Atomic Mass Number:

6. How are electrons arranged around an atom?

7. From a periodic table square,

a) How do we determine the number of Protons an element has?

b) How do we determine the number of Electrons an element has?

c) How do we determine the number of Neutrons an element has?

8. Fill in a square for the element Oxygen	9. Use the information on the website and in your textbok to draw a model of an atom of Oxygen

<http://education.jlab.org/elementmath/>

10. Let's play a game! Go to the Element Math Game on the Jefferson Lab website. Select: 10 questions, you would like to be tested on protons, neutrons, and electrons (uncheck nucleons) and the elements atomic weight should NOT be rounded for you. Then click on 'I'm ready! Let's start!'

How did you do? \_\_\_\_\_ / 10

11. Use the jlab website and the search engine of your choice (or your textbook) to define the following terms as they relate to chemistry:

a) Isotope

b) Compound

c) Molecule

d) Chemical Bonds

e) Ionic Bond

f) Covalent Bond

g) Ion