History of the Atom Webquest

Chemistry Name

**Directions - Part I –** A BRIEF History of the Atom

Click the following link: <http://www.timetoast.com/timelines/atomic-scientist>

Use the information in this web page to fill in your History of the Atom Timeline. There are two views: Timeline or List. *There are many additional scientists that contributed to the atomic model. I only expect you to know about six of them.*

History of the Atom Timeline

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | ***1*** | ***2*** | ***3*** | ***4*** | ***5*** | ***6*** |
| ***Date*** | 400 BC |  | 1897 | 1911 |  | 1930 |
| ***Scientist*** |  | John Dalton |  |  | Niels Bohr |  |
| ***Contribution*** |  |  |  |  |  |  |

**Directions - Part II –** Models of the Atom

Click the following link: <http://www.universetoday.com/60058/democritus-atom/>

1. Where was Democritus from? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Why is he important with regard to atomic theory? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Click the following link: <http://www.iun.edu/~cpanhd/C101webnotes/composition/dalton.html>

1. What are the four parts to Dalton’s Theory



1. Why is he important with regard to atomic theory? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Click the following link: <http://education-portal.com/academy/lesson/early-atomic-theory-dalton-thompson-rutherford-and-millikan.html>

1. What did JJ Thomson discover? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What was the name of the equipment (experiment) he did? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What “name” is given his model \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ . Describe his model in the space below.
4. What did Rutherford discover? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. What experiment did he do? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Complete this statement: Rutherford claimed that this also shows that the atom consists mostly of

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and that all the \_\_\_\_\_\_\_\_\_\_\_charge is not evenly spread throughout the atom

but instead squished into a teeny tiny \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the \_\_\_\_\_\_\_\_\_\_\_\_\_of the atom.

Click the following link: <http://www.iun.edu/~cpanhd/C101webnotes/modern-atomic-theory/Bohr-model.html>

1. Bohr’s model proposed that electrons:
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Watch the video about Bohr to learn more.

Click the following link: <http://factmyth.com/factoids/the-bohr-model-is-the-most-accurate-model-of-an-atom/>

1. How is Schrodinger’s model DIFFERENT from Bohr’s? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Can an electron be found in an exact spot within an atom? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Directions - Part III –** What is an Atom?

Click the following link: <http://www.qrg.northwestern.edu/projects/vss/docs/Propulsion/1-what-is-an-atom.html>

Read the top paragraph (only) and answer the following questions:

1. Everything in the universe (except energy) is made up of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .
2. Therefore everything in the universe is made up of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. An atom itself is made up of three tiny kinds of particles called subatomic particles: \_\_\_\_\_\_\_\_\_\_\_,

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .

1. The protons and the neutrons make up the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ called the nucleus.
2. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fly around above the nucleus in a small cloud.
3. The electrons carry a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ charge and the protons carry a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_charge.
4. In a normal (neutral) atom the number of protons \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the number of electrons.