Name
_____Date_____Period_____

A Brief History of the Atom

Directions: Please fill out the following guided notes as we watch a short video describing the history of the atom.

The first recorded development in Atomic History can be found over_____ years ago in Ancient Greece. The philosophers _____ and _____ are considered to be the two co-originators of the idea that all matter consists of **indivisible** particles called _____. This is Greek term "indivisible" and is where we get the word _____.

Democritus' ideas surrounding the atom were rejected and ignored by the _____, government, and society in general until the 1600s. That's over 2000 years!

In 17th century Europe, the _____ Method was developed which **required scientists to provide evidence to support their claims and ideas**. In _____, an English chemist named John Dalton published his ideas about Atoms with support from his research. He proposed the following:

- All matter is comprised of _____.
- These are held together by forces of attraction.
- All atoms are _____.
- Atoms cannot be _____ nor _____.
- Atoms in the same _____ are identical and have the same _____.
- Atoms of different elements combine to form _____.

In the next 100 years, it was found that Dalton's proposals were not entirely correct. In particular, atoms are NOT _____.

In the early 1900's, physicist JJ Thomson concluded that there are two parts to atoms:

1. Heavy part with a _____ charge
2. Negatively charged particles called _____

He described the structure of atoms by comparing it to a _____ _____.

In 1911, one of Thomson's students named Ernest Rutherford extended this research by firing positively-charged alpha particles into a thin sheet of _____ foil, and developed the **Nuclear Model** of the Atom.

This model describes atoms as having a **positively charged core** called the _____, and that **electrons** moved in random orbits around it.

In 1912, Neils Bohr concluded that electrons revolve around a center nucleus, but at certain distances away. These electron orbits are called _____.

Name
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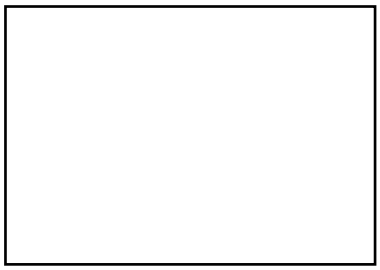
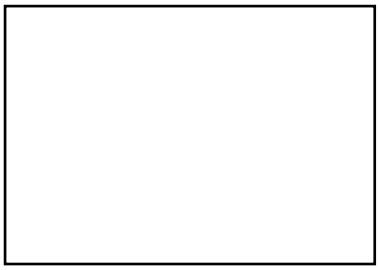
The History of the Atom – Main Points

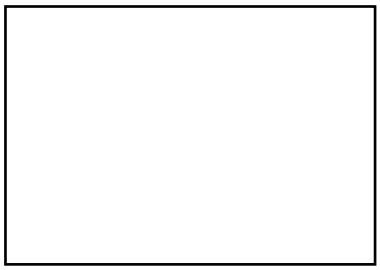
Democritus
400 BC - Ancient Greece



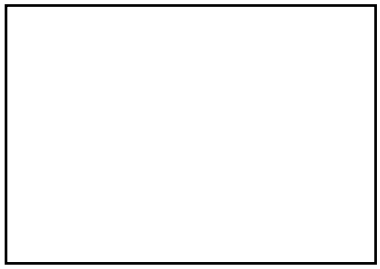
John Dalton
1803-1805



JJ Thomson
1897



Ernst Rutherford
1909-1911



Neils Bohr
1912-1913