

Chapter 14 - Atomic Theory – Scientist Timeline

Below is a list of individuals that have made significant contributions to the concept of the atomic theory. Your task today is to match the scientist with the appropriate description. Some scientists will have more than one description associated with them.

Activity 1: Timeline

Under each scientist's name there is a line. On each line, write the year that they did their work. You should be completing the research for Activity 2 while you do this activity. These scientists did many things – some having to do absolutely nothing with the atom. So, be sure that the date you record – relates to the atom.

List the scientists in chronological order based on their discoveries related to the atomic theory.

Activity 2: What the scientists did.

Cut each of the scientist rectangles on the 2nd sheet of paper. Spread them out across your work table. These are going to be your headings. Next, cut each of the “things they did” descriptions. You are going to research each description and determine which heading / scientist the item goes under. Once you have all in place – ask your teacher to check it.

John Dalton	
JJ Thomson	Ernest Rutherford
Democritus	Niels Bohr
James Chadwick	Werner Heisenberg

John Dalton _____	Werner Heisenberg _____
JJ Thomson _____	Ernest Rutherford _____
Democritus _____	Niels Bohr _____
James Chadwick _____	Dmitri Mendeleev _____

Discovered the electron	Uncertainty principle A particle's position, energy, and time can never be precisely known
Created a model of the atom with electrons moving around the nucleus in fixed orbits	Discovered the neutron
Did the gold foil experiment	Hypothesized that the atom was a tiny hard sphere
Discovered that the proton had a positive charge	Discovered that the atom is mostly empty space
Believed that the universe was made of tiny "uncuttable" particles	Believed that atoms of a given element are identical
Greek Philosopher	Created the atomic theory
Worked with the Quantum Theory	Used the cathode ray tube in his discovery
Found the missing mass of the atom's nucleus	Created the "plum pudding" model of the atom

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KEY

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John Dalton 1803	Werner Heisenberg 1925
JJ Thomson 1897	Ernest Rutherford 1911
Democritus 370 BC	Niels Bohr 1915
James Chadwick 1932	

<p>Discovered the electron JJ Thomson</p>	<p>Uncertainty principle A particle's position, energy, and time can never be precisely known Heisenberg</p>
<p>Created a model of the atom with electrons moving around the nucleus in fixed orbits Bohr</p>	<p>Discovered the neutron Chadwick</p>
<p>Did the gold foil experiment Rutherford</p>	<p>Hypothesized that the atom was a tiny hard sphere Dalton</p>
<p>Discovered that the proton had a positive charge Rutherford</p>	<p>Discovered that the atom is mostly empty space Rutherford</p>
<p>Believed that the universe was made of tiny "uncuttable" particles Democritus</p>	<p>Believed that atoms of a given element are identical Dalton</p>
<p>Greek philosopher Democritus</p>	<p>Created the atomic theory Dalton</p>
<p>Worked with the Quantum Theory Heisenberg</p>	<p>Used the cathode ray tube in his discovery JJ Thomson</p>
<p>Found the missing mass of the atom's nucleus Chadwick</p>	<p>Created the "plum pudding" model of the atom JJ Thomson</p>