

Atomic Theory Banner Assignment

Explanation: We've been experimenting with incorporating art and history into our chemistry class this year, and this assignment will continue that process. In the past, this would have been a research paper assignment and a report to the class, but this should be faster and more fun, while having you learn just as much.

You will choose an atomic theorist from the list below and do some background research into who they were and how they contributed to our understanding of the atom. You will need to find an image/photo of the person as well as their most famous experiments or apparatus. We will create a classroom banner, similar to the ones on art history in Josh Graham's room. I will put a timeline on the banner, and you will draw (in pencil) the person and their apparatus, then type up a caption of with one good paragraph (several sentences long) describing briefly what they did, what they discovered, how they discovered it, etc. Also describe in a second paragraph why it is important or what their discoveries mean for our understanding of the atom.

For example, if you had chosen Democritus, you would draw an illustration of him based on sculptures or paintings that have been done (no one really knows what he looked like) and maybe an illustration of a sandy beach breaking down into individual grains, or of a clepsydra, or of platonic solids, etc. Then your paragraph would say he was one of the first of the atomic theorists, who said all materials were made of indivisible atoms, that atoms of different materials were different shapes, and that they join together to make substances, with void space between. The implications/importance for science (second paragraph) are that we now know he was essentially correct: that an atom is the smallest particle of an element that still has all of the properties of that element.

We will glue the captions onto the banner with the illustrations, which we will color. We will also include color printouts, etc. This will take some planning to get everything to fit, and we will work on it in class for several days. Be prepared on Monday to begin the drawings – have your research done by then.

Atomic Theorists:

Greek matter theorists (Democritus, Empedocles, Aristotle, etc.): Dave

Robert Boyle

Antoine Lavoisier

John Dalton

Count Alessandro Volta

Michael Faraday

Amedeo Avogadro

Stanislao Cannizzaro

J. J. Berzelius

Dmitri Mendeleev

J. J. Thomson

Max Planck

Erwin Schrodinger

Niels Bohr

Ernest Rutherford

James Chadwick

Robert Millikan (and Sam Fletcher)

Louis de Broglie

Albert Einstein

Otto Hahn

Lise Meitner

Marie and Pierre Curie

Glenn Seaborg

Werner Heisenberg

Murray Gel-Mann