



[\[Back to index\]](#)

This activity was designed as a group activity for high school Physics students.

This interactive Jigsaw Activity is based on the model of the **Jigsaw Classroom**, developed by Elliot Aronson. In this model, each student becomes an "expert" in one area and is responsible for learning and explaining the content in that area to his or her group.

Student Instructions

Students will be split into groups of five, with any remainders joining groups larger than five. These are your "Jigsaw Groups." Within your groups, number off one through five. Next, groups will split up and each member will become an expert in one aspect of the topic. For this activity, each member will become an expert on one atomic model from history. After numbering off one through five, find all other students in the classroom who share that number. These will be your "Expert Groups." In your Expert Group, research the assigned topic and answer the following questions:



1. Who or what is your model named after?
2. When was your model first described?
3. Give a description of the main features of your atomic model.
4. What scientific experiment or evidence supported the adoption of your model?
5. Draw a diagram showing the main features of your atomic model.

After meeting with your Expert Groups, return to your Jigsaw Groups and

present your findings to your group-mates. By the end of the activity, all members in each Jigsaw Group should have learned all five topics.

Expert groups		
Group Number	Atomic Model	Links (open in a new window)
Expert Group #1	Greek model and Dalton model	Stanford Encyclopedia of Philosophy: Democritus Hellenica: Democritus, Epicurus, and Aristotle on Atoms Click and Learn: Atomic Theories
Expert Group #2	Thomson model	American Institute of Physics: A Look Inside the Atom Eggescliffe School Physics: A Brief History of the Electron Click and Learn: Atomic Theories
Expert Group #3	Rutherford model	Molecular Expressions: The Rutherford Experiment University of Virginia: Rutherford Scattering Click and Learn: Atomic Theories
Expert Group #4	Bohr model	University of Tennessee: The Bohr Model Physics 2000: Bohr's Atom Click and Learn: Atomic Theories
Expert Group #5	Electron cloud model	Universe Today: Electron Cloud Model Regents Exam Prep Center: The Cloud Model Click and Learn: Atomic Theories



© 2010, Brian O'Neill

Banner fractal from <http://creativity103.com>

Atom image copyright Jayanta Behera



This work by Brian O'Neill is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License](https://creativecommons.org/licenses/by-nc-sa/3.0/).