

Structures of atoms and isotopes

An atom is what makes up the elements in the periodic table. An isotope to an atom is the same element with a different atomic mass. In this project you will be making a 2D model of an atom and one of its isotopes. This will help to teach the different parts of an atom and show the difference between isotopes.

Supplies: I recommend getting these supplies at Walmart or the nearest craft store (sometimes Walmart is cheaper).

- Card stock paper
- Different colored pom pom balls
- Hot glue
- Pencil/Marker/Pen

Step 1: Start by handing out two sheets of paper to each person that will be making a model. On the top of the first paper write an element found on the periodic table, the atomic number, and the atomic mass. On the second sheet of paper write the same element, with the atomic number, and the atomic mass matching one of the isotopes. You should also write a place where the student can fill in the number of protons, neutrons, and electrons on each paper.

Step 2: Have the people participating pick 3 colors of pom poms. These will represent the protons, neutrons, and electrons.

Step 3: Have each person decide what color each part will be and label it.

Step 4: have them determine the number of protons in their atom and glue them in the middle of the page.

Step 5: Have them decide how many neutrons there are and glue them around and, on the protons, to create the nucleus of the atom.

Step 6: Have them decide how many electrons there are and glue them around the nucleus.

Step 7: Have them write the number of protons, electrons, and neutrons at the top of their sheet in the indicated spot.

Step 8: Clean up all the non-used pom poms (save them for another project), glue, and pens. All of the garbage can be disposed of in the trash cans.