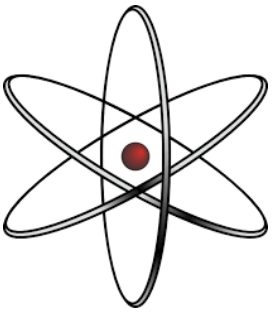
Name: _____ Per____

Atomic Structure Puzzle



Introduction:

What is an atom? Over time, as new knowledge has been obtained, the definition of of an atom has evolved or changed to accommodate the information. Clue into atomic structure with this puzzle activity and then join efforts with the whole class to decode a message about the atom.

Purpose:

The purpose of this cooperative activity is to answer a series of atomic structure questions on a puzzle sheet and use the answers to decode a puzzle about our knowledge of the atom. There are 15 puzzle sheets, each with 20 unique puzzle pieces that have WHOLE NUMBER ANSWERS.

Procedure:

Each group will do the following:

1. Answer the puzzle piece questions
2. Cut out the puzzle pieces and arrange in numerical order from lowest to highest.
3. Reverse the puzzle pieces to that the letters are facing up. The reverse side of each puzzle piece has a clue, which may be a letter, punctuation mare, or blank. (Blanks correspond to spaces after periods).
4. Record your clue on the Atomic Structure Puzzle Quote Sheet, under the appropriate SET Number.
5. Record this saying under the document camera so that all groups can record this information
6. Once the entire class has recorded their clue, decode the message about the atom and record.

Pre-Lab Questions

Answer the following questions using the following possible answers

Mass number	*Atomic mass*	*Proton*
Electron	*neutron*	

1. Which term(s) are found on the periodic table?

2. Which terms do not change for a given element?

3. Which terms change for different isotopes of an element?

4. For an ion, either cation or anion, which term changes?

5. True or False: Mass number is not on the periodic table; it must be given or calculated.

Post Lab Questions

After you solve the whole class puzzle write the quote about the atom below.

Atomic Structure Puzzle Quote Sheet

Set 1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Puzzle clues arranged in numerical order, lowest to highest