

Drawing Bohr Models of the Atom

How to do it:

1. Determine the number of electrons, protons & neutrons from the atomic number and atomic mass.
 - Atomic number = # protons and # electrons
 - Atomic mass – Atomic Number = # neutrons
2. Draw a little circle for the nucleus and label with the number of protons and neutrons.
3. Draw larger circles for each energy level and place dots representing the electrons in each energy level on these circles.
4. You use the periodic table
 - Each period represents an energy level
 - Each square represents an electron
 - You will notice that each period has a certain number of squares
 - This tells you how many electrons can fit in each energy level

<u>Energy Level</u>	<u>Electrons Allowed</u>
1st	2
2nd	8
3rd	8
4th	18
5th	18
6th	32
7th	32

Sodium Example:

1. Determine the number of electrons, protons, neutrons and energy levels
Atomic number 11 Thus: number of protons = 11
Atomic mass 23 electrons = 11
In period 3 neutrons = 23-11=12
Energy levels = 3
2. Draw the nucleus and energy levels
3. Label the nucleus
4. Place a dot for each electron on the energy levels

Sodium has
1st energy level = 2 e⁻
2nd energy level = 8 e⁻
3rd energy level = 1 e⁻
total = 11 e⁻

