

Orbitals Activity:

Materials for this activity include "Orbitals" activity sheets – Appendix G and small round stickers divided by colors (or different colored markers), one color per group. You will need to refer to the Periodic Table for this activity.

Give each student an activity sheet and a sheet of sticker dots (all one color) or a colored marker. Assign each student one of the elements listed below.

Elements: Li, B, N, F, Mg, Si, S, Ar

If there are more than 8 students in the group, also assign He, Na, P, Cl.

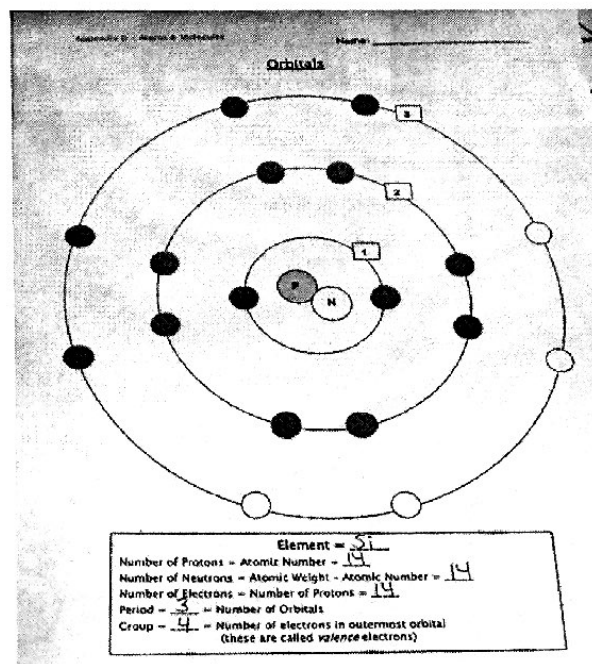
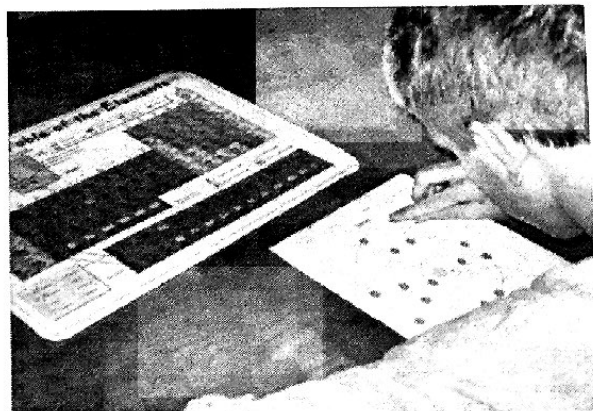
Step 1: Write down the name of the element you were assigned.

Step 2: Determine the Atomic number, Atomic mass (rounded), and the number of protons, neutrons and electrons for the element. Record it on your activity sheet.

Step 3: Fill in the period number of the element. This is how many orbitals it has.

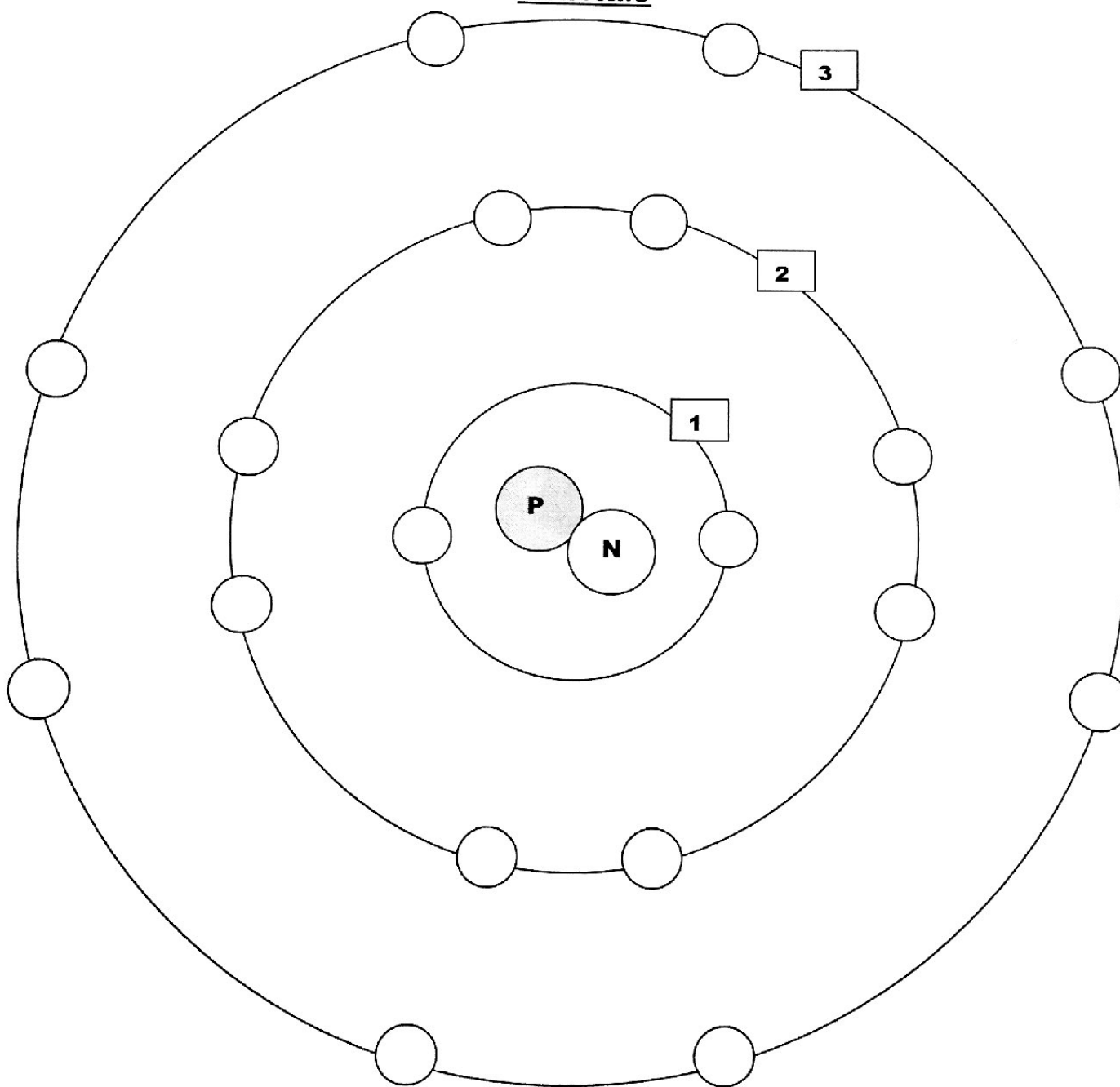
Step 4: Fill in the group number of the element. This is how many electrons are in the outermost orbital.

Step 5: Starting at the innermost orbital, put stickers on (or color in) the spaces corresponding to the total number of electrons. You must fill up one orbital before moving to the next one.



Name: _____

Orbitals



Element = Si

Atomic Number = _____

Number of Protons = Atomic Number = _____

Atomic Mass (rounded to nearest whole number) = _____

Number of Neutrons = Atomic Mass - Atomic Number = _____

Number of Electrons = Number of Protons = _____

Period = _____ = Number of Orbitals

Group = _____ = Number of electrons in outermost orbital
(These are called *valence* electrons)