**SANGAM SKM COLLEGE-NADI**

**YEAR 12**

**CHEMISTRY**

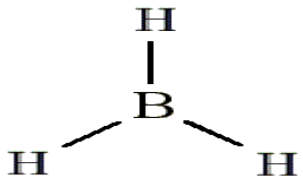
**WORKSHEET 4**

**STRAND 2: INVESTIGATING MATTER**

1. Describe the reason for the trend of Electronegativity across the period.

   As you move across the period, number of valence electrons increases. The nucleus attraction for these valence electrons increases. Hence due to stronger electron affinity, electronegativity also increases.

2. Study the diagram of the Borane molecule below and answer the questions that follow:




   (i) State the **number** of electron groups present in the Borane molecule.

   3

   (ii) Describe the electron group geometry of the Borane molecule.

   Trigonal planar

   (iii) Describe the molecular geometry (shape) of the Borane molecule.

   Trigonal planar

3. **Matching:** Please match the compounds in **group A** with their major type of solid in **group B**

| Group A | Group B |
|---|---|
| Solid iodine (1)<br>Diamond (6)<br>Copper (3)<br>Graphite (5)<br>Aluminum (3)<br>Silicon dioxide (6)<br>Sodium chloride (2)<br>potassium chloride(2)<br>Plastics(4)<br>Polythene(4)<br>Iron(3) | (1) discrete molecular,<br>(2) ionic,<br>(3) metallic and<br>(4) covalent solids – linear solids<br>(5) covalent solids – 2D structure<br>(6) covalent solids – 3D structure |

# SANGAM SKM COLLEGE NADI

## CHEMISTRY
## YEAR 12
## WEEK 4- WORKSHEET

**Fun mole maze**

Not only is the mole our chemistry mascot, it is a fundamental unit of matter. One mole contains $6.022\times10^{23}$ of whatever is being measured. It is often a challenge for students to understand that the mole provides a way of measuring matter. The maze puzzle on the next page focuses on the mole with concepts such as molar ratios, gas laws, and solutions.

**INSTRUCTIONS**

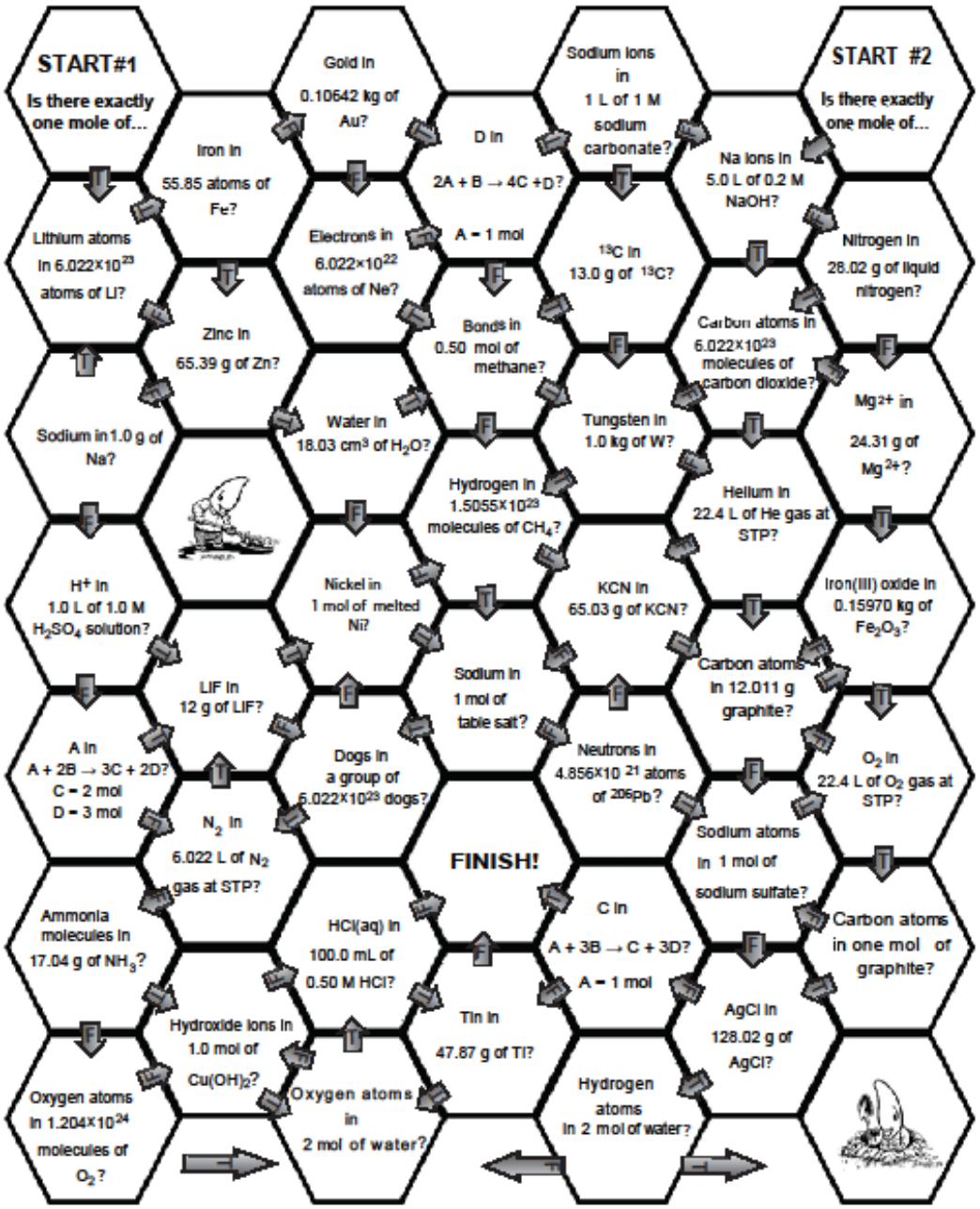
Begin at one of the two starting locations (Start 1 and 2) and work through the questions to reach the finish space (Finish).

In each space there is a question that continues from that statement in the start box.

For example: "Is there one mole of Lithium atoms in $6.022\times10^{23}$ atoms of Li?"

If the content of hexagon equals one mole, follow the "true" arrow marked with a "T". If it does not equal one mole, follow the "false" arrow marked with a "F". Continue until the Finish is reached. At the bottom of the puzzle, students can record their "T" or "F" paths in the space provided. You have to reach to **FINISH.**

# Fun mole maze




Start 1 T F, T, F, T,F,T,F,T

Start 2 F,F,T,F, F,F,F,T

