

## The Universal Periodic Table

### Materials:

- Periodic Table
- Notes on the Periodic Table
- Pencil
- Book(s) on elements (optional)

### Procedure:

You are a part of a collection of scientists who have been chosen to assist a group of alien scientists. In order to be able to converse scientifically, you must learn their language, and most importantly, you must arrange their elements according to the trends that exist in the periodic table. Below are clues for the alien's elements. So far, the aliens have only discovered elements in **groups 1, 2, and 13-18**, and **periods 1-5**. Although the names of the elements are different, they must correspond to our elements if our belief of universal elements holds true. Read each clue carefully, and then place the symbol for that clue's element in the blank periodic table provided.

1. **Livium (Lv):** This element is responsible for life. It has 2 electron energy levels and 4 electrons available for bonding in the outermost energy level.
2. **Computerchipium (Cc):** This element is important for its use as a semiconductor in computers.
3. **Lightium (L):** This is the lightest of elements; aliens previously used it in their aircraft until their aircraft caught fire in a horrific accident.
4. **Breathium(Br):** When combined with Lightium (L), it makes the alien's most common liquid whose formula is  $L_2 Br$ .
5. **Francium (F):** A metal found in period 4 group 13.
6. **Moonium (Mo):** An element with an atomic number of 34.
7. **Explodium (Ex):** This element is the most reactive metal on the alien's table.
8. **Violetium(V):** This element is found as part of a compound in bananas. When burned, it has a violet colored flame.
9. **Sparkium (Sp)** and **Burnium (Bu)** are members of the alkali metal group, along with Violetium(V) and Explodium (Ex). Their reactivity, from least to greatest, is Sp, Bu, V, Ex.
10. **Balloonium (Ba):** A noble gas used to fill balloons.

11. **Toothium (To):** This element is added to juices to help build strong bones and teeth.
12. **Metalloidium (M)** and **Poisonium (Po):** Two metalloids found in period 4. Po is more massive than M.
13. **Lowigium (Lo):** A period 4 halogen.
14. **Darkbluium(Dk):** Has an atomic mass of 115.
15. **Hugium (Hu):** The element on the alien's periodic table that has the most mass.
16. **Glucinium (Gl):** The element found in period 2, group 2.
17. **Reactinium (Re):** The most reactive non-metal on the periodic table.
18. Balloonium (Ba), Signium(Si), Stableium(Sb), Supermanium (Sm), and Hugium (Hu) are all noble gases. They are arranged above from least to most massive.
19. **Cannium (Cn):** This element helps to preserve foods; it is used in can manufacturing.
20. Burnium (Bu), Blue-whitium (Bw), Bauxitium (Xi), Computerchipsium (Cc), Bringer-of-lightium (Bl), Stinkium (Sk), Purium (P), and Stableium (Sb) are all found in period 3. Bu has 1 electron in its outer energy level, Bw has 2, Xi has 3, Cc has 4, Bl has 5, Sk has 6, P has 7 and Sb has 8.
21. **Scottishium (Sc):** A metal element found in group 2.
22. **Infectium (If):** This element, mixed with alcohol, is used on cuts.
23. **Abundantcium(Ab):** One of the most abundant gasses in the universe. It has 7 protons, 7 neutrons, and 7 electrons.
24. Some additional clues: The number after the symbol indicates the number of electrons in the outer energy level: Notalonium(Na): 5, Earthium (E): 6, Boracium (B): 3.

