**ATOM BUILDING Names: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block: \_\_\_\_\_\_**

In groups of 2 (or on your own if you prefer), you will build 1 or 2 atoms. Prioritize which atoms you would like to build (number your top 3)

|  |  |  |
| --- | --- | --- |
| **Group #** | **Element(s)** | **Which ones are your top 3 choices?** |
| 1 | Hydrogen and Neon |  |
| 2 | Helium and Fluorine |  |
| 3 | Lithium and Oxygen |  |
| 4 | Beryllium and Nitrogen |  |
| 5 | Boron and Carbon |  |
| 6 | Sodium |  |
| 7 | Magnesium |  |
| 8 | Aluminum |  |
| 9 | Silicon |  |
| 10 | Phosphorus |  |
| 11 | Sulphur |  |
| 12 | Chlorine |  |
| 13 | Argon |  |
| 14 | Potassium |  |
| 15 | Calcium |  |

**Materials:**

|  |  |
| --- | --- |
| **Item** | **What does it represent?** |
| Pompom (Red) | Proton |
| Pompom (White) | Neutron |
| Beads | Electron |
| Florist Wire | Orbitals |
| Pipe-cleaners | To hold the orbitals in place |
| Glue and more florist wire | To hold the nucleus together |

**Method:**

1. Find out a little about your element:
   * is it a metal or non-metal
   * what does it look like
   * what is its main use
2. Draw and label a diagram of what you are going to build

Materials:

Red Pompom: \_\_\_\_

White Pompom: \_\_\_\_

Beads: \_\_\_\_

Amount of florist wire: \_\_\_\_\_\_\_\_\_

Number of pipe cleaners: \_\_\_\_\_

Label – protons, neutrons, electrons and orbitals.

1. Show to the teacher for approval
2. Once approved – collect supplies and begin building

**After building:**

Present your model to another group –include:

* share about your element
* explain how it is formed (particles (protons, neutrons, electrons), orbits, charges and mass)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criterion A: Knowledge and Understanding** | | | | |
| **(0)** | **Beginning (1-2)** | **Developing (3-4)** | **Accomplished (5-6)** | **Exemplary (7-8)** |
| *I have not achieved a standard described by any of the descriptors to the right*. | *I am able to:*  **state** scientific knowledge  apply scientific knowledge and understanding to **suggest solutions** to problems set in **familiar situations** | *I am able to:*  **outline** scientific knowledge  apply scientific knowledge and understanding to **solve problems** set in **familiar situations** | *I am able to:*  **describe** scientific knowledge  apply scientific knowledge and understanding to **solve problems** set in **familiar situations** and **suggest solutions** to problems set in **unfamiliar situations** | *I am able to:*  **explain** scientific knowledge  apply scientific knowledge and understanding to **solve problems** set in **familiar and unfamiliar situations** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criterion D: Reflecting on the Impacts of Science** | | | | |
| **(0)** | **Beginning (1-2)** | **Developing (3-4)** | **Accomplished (5-6)** | **Exemplary (7-8)** |
| *I have not achieved a standard described by any of the descriptors to the right*. | *I am able to:*  **apply** scientific language to communicate understanding but does so **with limited success** | *I am able to:*  **sometimes apply** scientific language to communicate understanding | *I am able to:*  **usually apply** scientific language to communicate understanding clearly and precisely | *I am able to:*  **consistently apply** scientific language to communicate understanding **clearly and precisely** |