## Analysis Activity **ATOM FORMATION**

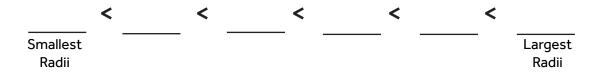
## **Directions:**

1. Log into Collisions and navigate to the Atoms Game.

- 2. Play the Tutorial levels, if you haven't done so already.
- 3. Exit the levels and enter the Atoms Sandbox. 👫
- 4. Build each atom listed in the table below based on the proton # provided and record the requested information.

| Atomic Number             | 2               | 7 | 12 | 15 | 9 | 16 |
|---------------------------|-----------------|---|----|----|---|----|
| Proton #                  | 2               |   |    |    |   |    |
| Electron #                | 2               |   |    |    |   |    |
| # of energy levels        | 1               |   |    |    |   |    |
| # of valence<br>electrons | 2               |   |    |    |   |    |
| Electron<br>Configuration | 15 <sup>2</sup> |   |    |    |   |    |
| Atomic symbol             | He              |   |    |    |   |    |
| Element name              | Helium          |   |    |    |   |    |

Order the atoms above from smallest to largest atomic radii by placing atomic symbols on the lines below.





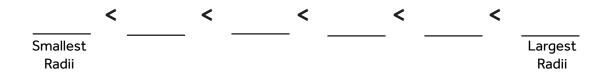
Name: \_\_\_\_\_

## Analysis Activity **ATOM FORMATION**



| Atomic Number             | 20 | 10 | 30 | 5 | 26 | 35 |
|---------------------------|----|----|----|---|----|----|
| Proton #                  |    |    |    |   |    |    |
| Electron #                |    |    |    |   |    |    |
| # of energy levels        |    |    |    |   |    |    |
| # of valence<br>electrons |    |    |    |   |    |    |
| Electron<br>configuration |    |    |    |   |    |    |
| Atomic symbol             |    |    |    |   |    |    |
| Element name              |    |    |    |   |    |    |

Order the atoms above from smallest to largest atomic radii by placing atomic symbols on the lines below.



## **Summary Questions:**

1. Using a periodic table and the information collected above , describe the trend in atomic size across a row.

2. Using a periodic table and the information collected above, describe the trend in atomic size down a period.