Activity to introduce Accuracy and Precision

1. ***Draw a target on your paper. You will need one target for each member of your group.***

  

  

1. ***Using a nerf gun each student will aim at the target and shoot at the target 3-4 times. Use expo markers to mark where the student has hit the target. Each student should be marked by the same color.***
2. ***Explain the difference between Accuracy and Precision***

***Accuracy***

**Definition:**

* Example:

***Precision***

**Definition:**

* Example:

***4. Discuss the following with the your group. Please put your group answers on the white board and be read to discuss with the entire class:***

a.) Which student(s) showed the most precision?

b.) Which student(s) show the most accuracy?

c.) Did any of the students show both accuracy and precision

***5. Exit Ticket: You will work on your own to explain which data table is more precise and which is more accurate.***

A graduated cylinder is precise. A beaker is not. If you need to know the volume of a liquid you would want to use the graduated cylinder. Three different lab groups used a graduated cylinder to measure out 4.3mL of HCl (Hydrochloric Acid). Below are the data for each group.

|  |  |  |
| --- | --- | --- |
| **Group 1** | **Group 2** | **Group 3** |
| 4.12 | 4.32 | 4.35 |
| 4.11 | 4.28 | 4.52 |
| 4.13 | 4.37 | 4.21 |
| 4.11 | 4.36 | 4.44 |
| 4.13 | 4.31 | 4.60 |