**Inquiry Activity: Vectors vs Scalars**

* Separate the bag of arrows according to vectors and scalars.
* Use only the arrows that are vectors.
* It does not matter which arrow you start with.
* Arrange the arrows **head to tail** (See diagram on front board).
* Once arranged, create a **scaled** drawing in (cm) on the whiteboard using a marker. **Please label** all measurements in (cm). **(i.e. 20 m = 20 cm)**.
* Finally, measure and draw an arrow **from the starting point of your drawing to the end point of the drawing**. **Label** your measurement in (cm).

Please use a different color marker for this line.

* Once all groups have completed their drawings, there will be a 3 min gallery walk session to observe the drawings of other groups.

**Follow-Up Questions**

1. **Measurements/Calculations:**
   1. Total Distance traveled (add up the magnitude of all arrows used in the drawing)
   2. Total Displacement (Measured distance between start point and end point)
2. **In a well written paragraph, describe the observations you gathered about** 
   1. The arrows you used vs. those not used
   2. Your drawing compared to other drawings
   3. The displacement measurement of other groups compared to your groups
3. **In another well written paragraph**
   1. Clearly define magnitude as it relates to your arrows.
   2. Compare and contrast distance and displacement in terms of the arrows.
   3. Compare and contrast Scalar and Vector quantities in terms of arrows.

**Key Terms to Investigate**

* Magnitude
* Distance
* Displacement
* Vector quantity
* Scalar quantity