**Nanotechnology Lesson 2: Surface Area to Volume Ratio**

**Essential Question:** How does surface area and volume ratio impact the way that materials react to their environment based on size?

**Unpacking the Standards:**

[Blank]

Surface Area related to the Chemical Reaction of Seltzer

**Make a Prediction:** Which cup will have the fastest reaction time, the crushed seltzer tablet or the whole?

[Blank]

**Cup 1- Full Seltzer Tablet Observation:**

**Time:**

[Blank]

**Cup 2- Crushed Seltzer Tablet Observation:**

**Time:**

[Blank]

**How did surface area make a difference in this experiment?**

[Blank]

**Reflection:**

How does this information help you understand how different materials function at the Nano scale?

[Blank]

As a particle gets smaller and smaller, what happens to its surface area to volume ratio?

[Blank]

What would happen if you took a Seltzer tablet and continued to break it into smaller pieces? How would the reaction with water change as the pieces got smaller and smaller?

[Blank]