**Lesson Title:**  Measuring branch angles

**Grade:\_4th\_**

**Objectives:**

-Students will identify the angle of various tree branches and the effect of apple production.

**Standards:**

MA.4.DA.1 Formulate questions that can be addressed with data. Use observations, surveys, and experiments to collect, represent, and interpret data.

MA.4.M.6 Measure angles in whole number degrees using appropriate tools.

**Materials/preparation:**

Tool to measure angles of branches. (Larger)

Observation sheet

**Sequence of activities/procedures:**

Lesson 1:

Measuring angles of branches to determine the baseline measurements for tree growth.

Lesson 2: Develop an understanding of the observations.

-Students will relate information between angle of the tree branch and production of apples. Students continue this process over multiple observation lesson. (April 2016-May 2016)

**Assessment/Closure:**

Drawing conclusions on the growth charts created by students.

Students will determine if there is a correlation between the angle of the branch from the trunk and the number of apples produced on the limb.

**Considerations:**

A short amount of time is available to notice the difference in growth and angles of the branch.