

**Anchor Phenomenon:** A grown tree has tremendous mass compared to the seed from which it came.  
**Explanatory Question:** Where did the mass come from? How could that happen?

**DCI:**  
**Life Science**  
**Major Ideas:**  
 1. LSI. 2 Interdependence of Ecosystems

**Student Challenges**  
 • Light isn't needed to germinate. It can sleep it! it will grow.  
 • Understand plants need water, but don't understand how.

What do you know about plants and how they grow?  
 How nutrients flow in a plant?

Students will identify parts of a plant and the path of nutrients in the plant.

**Investigation**  
 Observe / Illustrate / Journal  
 Colony "color walk"  
 Student "growing from"

**CCC's**  
 Energy & Matter  
**SEP's**  
 Planning & carrying out controlled investigations.

**Literary Connections**  
 • A Tree is a Plant  
 • Our Tree Named Steve  
 • A Tree Grows Up

**Assessment**  
 journal entry  
 with labeled illustration

**ELA/Math Stds:**

**RT.13** Making a collection  
**W.1.8** Gather information from journals to answer questions

**MDM /**  
**MS.A.2** Measurement  
**2.MD.9**

**I.W.TTP.2**  
 Write informative text

**I.RL.KID.1**  
 Ask and answer questions

**I.SL.CC.1**  
 Collaborative

Does the mass of the tree correlate with the growth rings of the tree?  
 Growth of tree rings  
 Students will determine the correlation between the mass of the tree and the growth of the tree rings.

**Journal/Collected** guess  
 count of the growth rings  
 Measure and count the growth rings  
 Correlate growth rings to the students to make a visual connection  
 • Tree rubbings - write about what correlations they discovered  
 • Make a tree ring to show student's age.

**SEP's** L.S.  
 Patterns  
 Cause/Effect  
 Scale/Proportion/Quantity  
 • Systems / System Models  
 • Energy / Matter  
 • Structure & Function  
 • Stability & Change

**Assessment Tools**  
 • Writing Rubric  
 • Reflection of Lesson level questions  
 • Rubric for the model  
 • Read Alouds  
 • Journal Writing

**Phenomenon:** How can a seed be so small and grow so big?  
**Explanatory Question:** How do you get from a seed to a tree? What plant?

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