



## **Cover Crop in the Garden**

**Grade Level:** 7<sup>th</sup>

**Season:** Fall

**Larger IGS Unit:** Gardens

**Essential Question:** How can we build soil?

**Objective:**

- Knowledge: Students understand the role of plant matter and microorganisms in building healthy soil.
- Skill: Students are able to plant a cover crop.

**Materials:** legume plant with roots and nodes, cover crop seed, cover crop PowerPoint

**Introduction:** You guys are newly in charge of a bed in our garden. The bed has been harvested and today we have to figure out what to do with it to prepare it for the spring. Use PowerPoint to talk through cover cropping...

- Raise your hand if you've heard of a cover crop.
- Think – Pair – Share: from the sound of the words, what could it be?
- Discuss why/how cover crops: fix nitrogen, protect soil from rain/runoff, add organic matter to the soil, and suppress weeds
  - When discussing how cover crops fix nitrogen, show students (and let students touch) an example of a legume with a node for bacteria. If possible, put it under a microscope connected to a screen in the classroom to enlarge it.
- Show map of dead zone in Gulf of Mexico:
  - Ask: Where in the world is this map? What is this river? What do you think gets into this river other than water? (hint: there is a lot of farm land surrounding this river) Think – Pair – Share response.
- Watch video about how the dead zone works
- Cover cropping is a healthier way to keep nitrogen in the soil. Synthetic nitrogen can easily wash away with the rain because it's not held in place. Bacteria and other life in the soil as well as the plant roots hold this nitrogen in place and increase infiltration in the soil, so it can't run off.
- Go over plan and rules for the garden today

**Activity:**

- Plant Cover Crop



**Wrap up:**

- Draw a picture of the legume with roots and nodes. Describe is happening in that node. Why is this process important?