Introduction to Grains

Barley

Intro:
- Share one seed with each student. What do you think this is? Is it alive? What can you do with it?
- What is a grain? Why should you care?
- Grains are the seeds of the grass family: wheat, barley, oats, corn, millet, rice
- Grains that are human foods are defined as “cereal” grains
- Amaranth and quinoa (amaranthacae) are seeds but not grains because they are in a different family that has big leaves.

History:
- Where was barley first grown? Why?
  - Wild barley was harvested for at least 10,000 years before it was domesticated
  - Unclear where domesticated barley was first grown – eastern Asia (Tibet) or Middle East or Mediterranean – but definitely a staple food in both ancient Egypt and Sumerian civilizations
  - Barley was the chief bread plant of the Hebrews, Greeks, Romans, and much of Europe through the 16th century. (gladiators were known as “eaters of barley)
  - People ate barley as a boiled porridge, in soup, in bread, or in beer.
  - The stalks dried into straw that you could weave into mats to sleep on, give to animals to sleep on, or make shoes or baskets out of, or tie into bunches to thatch your house.
  - Barley can grow with less water than wheat and more salt than wheat. It also doesn’t rise like wheat, so poor people usually ate more barley, and rich people ate more wheat.
- All of the early civilizations (China, the Americas, Egypyt) had grain dependent agriculture. Why might grains have been an important crop for early civilizations?
- Where does barley grow now? Here, Australia, Canada, Germany, Russia, Ukraine. 4th largest grain crop, after wheat, corn, rice

Planting:
- Barley is shallow-rooted so needs compost in upper layers
- Spacing = 1”
- Plant in garden!
Rice

Materials: Bring rice (seeds or hulled) into classroom

Intro:
- Can you imagine going hungry if the seed you plant in the ground doesn’t make more seeds? Can you imagine talking to a plant as you place it respectfully into your garden? Can you imagine dancing after harvesting your plants?
- This is the way that people in Southeast Asia have been treating the rice plant for centuries. Just like barley supported the rice of civilization in Mesopotamia, and corn supported the rise of civilization in Mexico, rice supported the rise of civilizations throughout Asia.
- Still today, more than 50% of the world’s people depend on rice as a staple food.
- Who likes rice? Share with a partner about your favorite rice dish.
- Where does rice grow now?

Activity 1: Read out rice growing regions in Asia and mark
- Why do you think rice was part of language and celebration in these cultures?

Activity 2: How can we grow rice here? How do you IMAGINE rice being grown? How does it all start?
- Rice starts as a seed (hey look we have some right here! Grown in our school garden last year! – open it up
- Soak the seed
- Grows into a seedling
- Transplant outside (often into paddies) into turned soil
- Rice grows flowers and seeds
- Farmers bring ducks through the paddies – why? Pest control and manure!

Activity 3: Let’s go outside and plant! (In garden bed, or in 5 gallon bucket – see planting rice instructions)