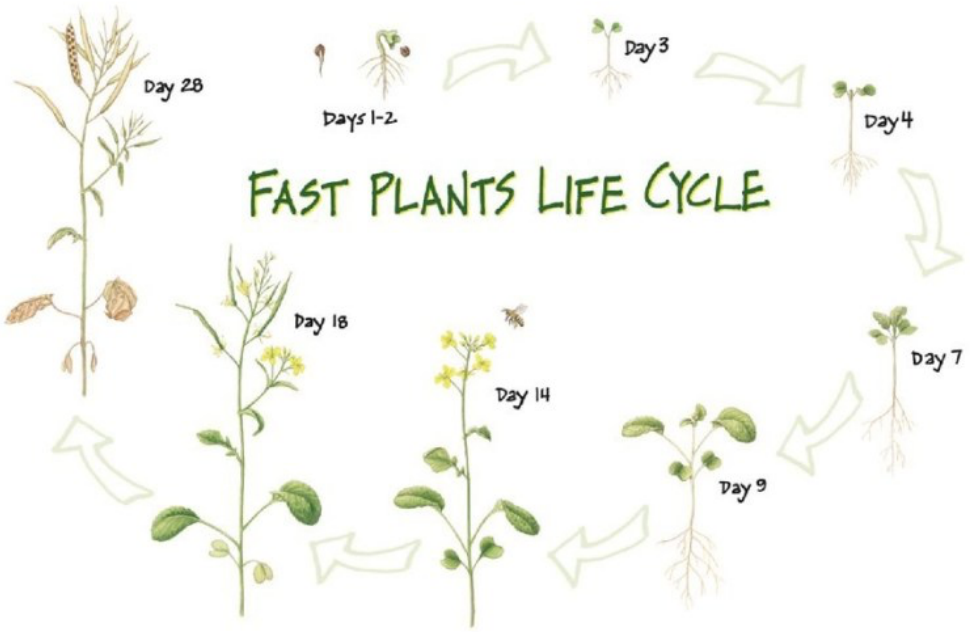
Wisconsin Fast Plant Time-Lapse Activity
FYE STEAM- Fall 2022

Description: For this activity, you will learn about the genetically bred Wisconsin-Fast plants and use time-lapse photography to visualize their growth over their life cycle in less than 3 minutes. Fast plants were first "created" at the University of Wisconsin-Madison from the turnip/canola plant *Brassica napa* (also called napa cabbage). There are many varieties of this plant, including the tiny plants that you will be working with. Fast plants were bred (meaning, each generation of plants that grew quickly were cross-pollinated) to be fast-growing, fast germinating, quick-pollinating, and rapid at seed dispersal. They require 24-hour light, temperatures of about 76°F or 25°C, a source of minerals (fertilizer), adequate moisture, and a pollinator (usually a bee, but in this case…YOU) to produce seeds.

https://knowledge.carolina.com/life-science/ap-biology/the-fast-plant-life-cycle/



This is an exercise in keeping a lab notebook or log of events that will be helpful in many of your other classes. You will use the back of this sheet to write down the dates and times that you interact with your fast plants. Take notes that are relevant to how the plants look, what the growth chamber readings are (and if it seems like it is working ok), when the plants are watered or fertilized or when we experiment with them. Some dates include:

Thursday, Oct. 13, you will be worker bees in class (literally). Each of you will use a paint brush to transfer pollen from your flowers to another person's flowers in the class. Fast plants do not self-pollinate and require a pollinator to undergo fertilization.

Thursday, Oct. 27, we will have a "time lapse photography film festival". We will watch the video our of plants and discuss our plant life cycles compared to those in the book.

Each of you will be responsible for watering plants before/ after class at least once.

DATE	EVENT	Instructions, observations and notes
T 9/27/22	Potting	Fill up a small pot with potting soil and water thoroughly. Using a plastic pipette, carefully, drop a few droplets/seeds onto the top of your soil in a circle pattern. Put your pot back into the tray. Write any other notes or observations here:
T 9/27/22	Set up growth chamber	Place the tray in a growth chamber under 24hour light and 25°C. Be sure that the tray is between 5-10 cm from a light source. How did we do this?
T 9/27/22	Set up time lapse camera	Set up the time lapse camera in the growth chamber and place into a position that can capture all the plants. Write below what settings you choose for the camera.