



2 GREENHOUSE/HIGH TUNNELS

BIG IDEA: We can help plants thrive in a greenhouse.

OBJECTIVE: *Students will understand the advantages of starting seeds in a greenhouse.*

This lesson is adapted from the FoodPrints lesson, [A Recipe for Plant Survival](#). To learn more about the FoodPrints program and access the full curriculum, including instructional videos, visit freshfarm.org/foodprints.

VOCABULARY

- **GREENHOUSE** a building designed for the protection of young or tender plants
- **HIGH TUNNEL** temporary covered structures that extend the growing season
- **LIFECYCLE** the stages that a living thing passes, including reproduction
- **GERMINATION** the process of seeds developing into new plants
- **SEEDLING** a young plant, raised from seed

MATERIALS

- Plant Lifecycle Movements (attached)
- Plant Lifecycle Diagram (attached)
- Thermometers
- Seeds and containers for planting

ENGAGE: *The engage section is designed to activate students' prior knowledge and experiences, pique their interest, and build curiosity.*

Welcome students to the Greenhouse. Ask students to look around and share with a partner what they think are the advantages of starting seeds in a greenhouse.

Some of the reasons that JK Farms has a large greenhouse are:

- It is a controlled environment with the ideal conditions for plant growth;
- It extends the growing season and protects seedlings from harsh weather conditions to ensure they survive;
- Growing plants in a greenhouse helps minimize pests and plant diseases.

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EXPLORE: *These hands-on and minds-on investigations offer an opportunity for students to further explore the Big Idea of the lesson.*

INVESTIGATION 1:

BECOME A PLANT DETECTIVE! Encourage students to walk around the greenhouse and carefully observe the seedlings.

These are a few things to look for:

- Are any wilting (need water)?
- Do any look yellow or are losing color (need sunlight)?
- Is the soil sandy, cracked, or hard (need more nutrient rich soil)?
- How is the temperature of the greenhouse? Does it feel too hot or cold (air)?
- Do you spot any weeds (need more space)?

Students can also read the thermometers to compare the air temperature inside and outside the greenhouse. Does the greenhouse seem like a friendlier place for the seedlings?

INVESTIGATION 2:

PLANT LIFE CYCLE. Share with students that plants, just like humans, all have a lifecycle. You can guide students through the attached movement activity where they act out the different stages of a plant's life, growing from a seed to a seedling to a mature plant with flowers that then produce fruits whose seeds will become new plants.

Students can then each plant a seed in a cup to take home. Remind them that plants need air, water, sunlight and nutrients to survive. In order to thrive, they need to produce flowers (and fruits and seeds), space, pollinators and other creatures and, of course, love and attention.

EVALUATE AND CLOSE: *Before moving on to the next station, please take a few moments to have students reflect on what they have learned.*

- Ask students to explain the advantages of starting seeds in a greenhouse.
- Ask students to share how they will ensure that their plant survives and thrives.

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PLANT LIFE CYCLE – MOVEMENTS

Narrate the life cycle of a plant - move your bodies to represent the different stages.

Plants start life as a seed.

Encourage students to curl up in ball and become as small as possible.

When the seed sprouts, a seedling is formed.

Students raise up one of their hands to show the seedling.

As the plant grows, the roots dig into the ground.

Students stomp their feet twice (only twice) to show the roots diving into the soil

With sufficient sunlight, water, and nutrients, the seedling will grow into a mature plant with flowers.

Students should slowly stand up tall, raising their hands above their heads to show a healthy plant with flowers and fruit.

After the fruit is ripe, it breaks open, and the seeds from the fruit are ready to become new plants.

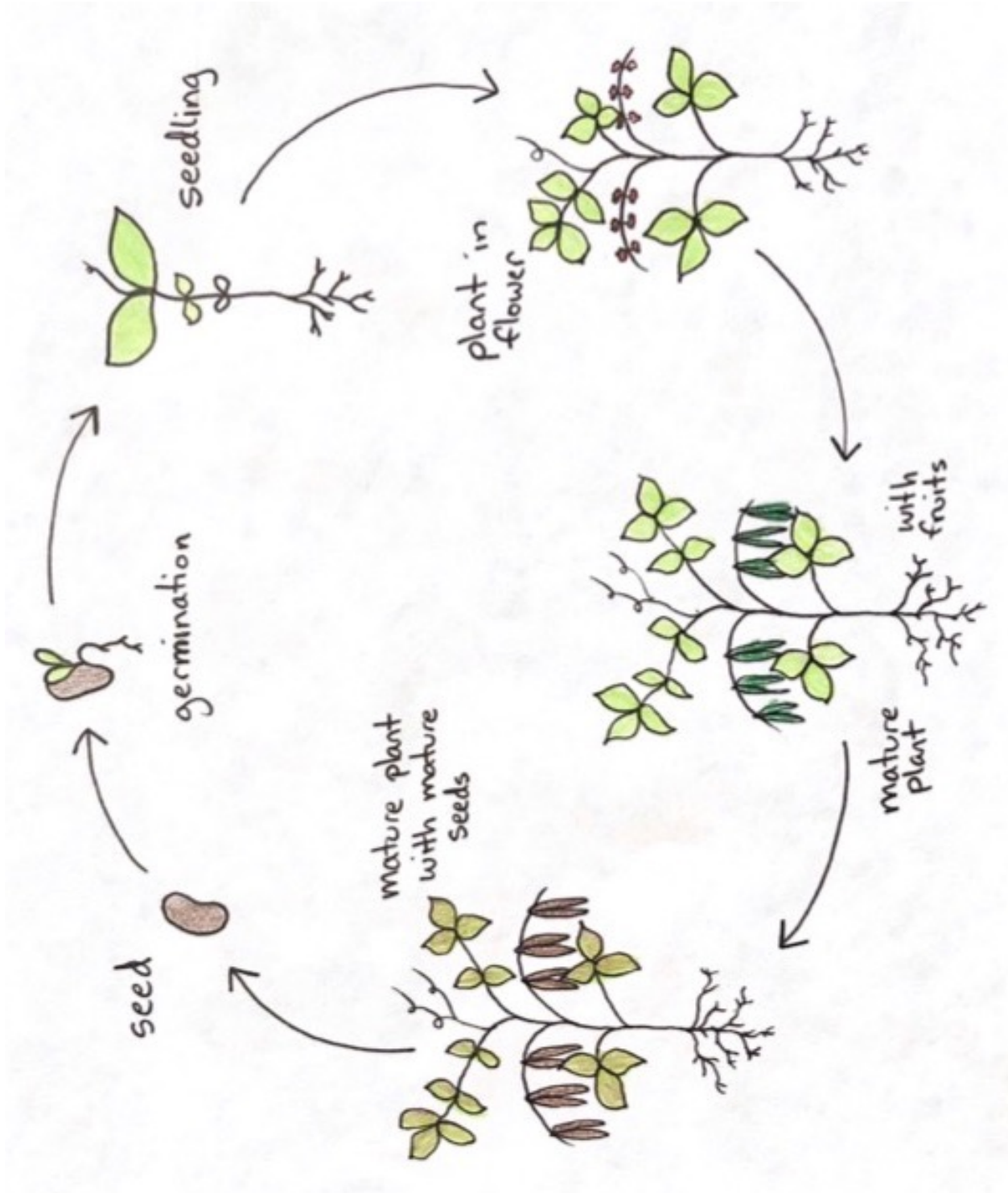
Students can pretend to take a seed out of their hands and toss it to the ground

Those seeds will become new plants.

Students return to their original curled up position.



PLANT LIFE CYCLE



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