Pollinators

Grade Level(s)

1st grade

Estimated Time

30 minutes

Purpose

Students will begin to understand the importance of pollination.

Materials

Links:

- Website with virtual resources: www.linncoag.com – 2020/21 virtual learning drop down- April
- Instructional video: Pollinator Tube - YouTube
- Books: Achoo
  https://drive.google.com/drive/folders/1tTpEXhw66l0mFOzQqIeEVrRXjNmBPKN_?usp=sharing
  Optional: All about Bees
  https://drive.google.com/drive/folders/1tTpEXhw66l0mFOzQqIeEVrRXjNmBPKN_?usp=sharing

Worksheets:

- Butterfly cut out
- Pollinator pictures
- Pollinator review questions

Other:

- Markers
- Glue or tape
- Construction paper cut in half (1 half sheet per student)
- Popsicle sticks

Vocabulary

- **Pollination:** the transfer of pollen from the anther to the stigma of a plant
- **Pollen:** a fine, powder-like material produced by flowering plants
- **Nectar:** A sweet liquid secreted by flowers
- **Hive:** a home to a colony of bees

Background

Pollinators are a very important part of agriculture. Some studies say that pollinators are responsible for one out of every three bites of food taken. Pollinators are especially important for pollinating plants that produce fruits that we eat, such as cucumbers, tomatoes, and watermelons. There are a variety of different animals and insects that carry pollen, which is necessary for flowers to fruit. Bats, honeybees, butterflies, ladybugs, hummingbirds, and flower flies are all responsible for pollinating. Many of these pollinators drink the nectar from the flowers, and pollen from the stamens of those flowers attach to the fine hairs on the legs, body, and wings of the pollinators.

- 75% of flowers are pollinated by animals.
- Bees must visit 2 million flowers to make a gallon of honey
- Iowa's number one crop (corn) and number two crop (soybeans) do not require pollinators to produce fruit. Corn is pollinated by the wind and soybeans self-pollinate.

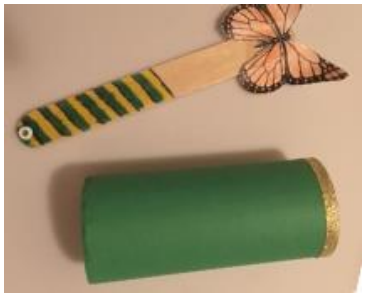
For more information about pollination visit Iowa Ag Literacy Foundation. Pollination Simulation (iowaagliteracy.org)

Interest Approach – Engagement

- Read the book Achoo and All about Bees- links above
    - What pollinators did you learn about?
    - Why is pollen important?
    - What would happen if we didn't have pollinators?
    - Should we be afraid of pollinators?
    - What are some ways we can stay safe around pollinators?

Procedures

- Watch the instructional video- link above
- Show students the pollinator pictures
    - first showing the pollinators and then showing the foods.
    - Now take away the pollinators. Ask the students what happens to the food pictures. They also go away.
    - Explain to the students how important pollinators are in agriculture.



- Explain to the class that today they will be making a pollinator tube.
- Hold up butterfly life-cycle cards.
    - Stage 1: egg
    - Stage 2: caterpillar
    - Stage 3: chrysalis
    - Stage 4: butterfly
- Pass out craft materials and explain how the caterpillar transitions to the chrysalis stage where they transform into a beautiful butterfly. Students will roll the

construction paper and tape the two ends. Color a caterpillar on one end of the popsicle stick. Color and glue the butterfly to the other end.
    - Popsicle stick
    - Butterfly cut out
    - Construction paper (chrysalis)
    - And piece of tape.
- Review with the pollinator questions. Some of the questions might be new to the students. Hold a classroom discussion.
    - Ask the students to name other crops that need help from pollinators to produce fruits and vegetables.

Organization Affiliation

Morgan Hibbs, Linn County Farm Bureau

Pollination facts: Iowa Ag Literacy Foundation lesson

Agriculture Literacy Outcomes

T1. K-2.c. Identify natural resources.

T2.K-2.a. Explain how farmers work with the lifecycle of plants and animals to harvest a crop.

Iowa/ Common Core Standards

K-LS1-1. Use observations to describe patterns of what plants and animals need to survive.

1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.