New York Agriculture in the Classroom

Seed to Strawberry

Time:
40 minutes

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This activity was adapted from the American Farm Bureau Foundation for Agriculture activity *It's a Berry Sweet Life.*

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Agricultural Literacy Week 2024 celebrates strawberries, one of the sweetest fruits of summer! Ranking 8th in the nation in production, New York's strawberry crop is one of the first available local foods we see in markets and roadside stands. In the book, *I Love Strawberries*, young Jolie is determined to convince her parents to let her grow strawberries and she models the qualities of responsibility, creativity, and tenacity.

- Introduce yourself and your connection to agriculture. Read the book *I Love Strawberries.* (*15 minutes*)
- After reading the book, transition into the below activity.

Materials

- 1 strawberry lifecycle worksheet per student
- 1 of each of the 6 different stickers per student

Helpful Hint
Prior to the classroom visit, it is recommended to pre-cut the stickers. Either place each type of sticker in its own sandwich bag or create sets of the 6 stickers and keep the sets of stickers together with a paperclip to hand out to each student. (Make sure the stickers are in a random order when you clip them together!)

Activity Procedures

Interest Approach (5 minutes)

1. Ask students, "Are you like Jolie and love strawberries?!". Share with them that strawberries are a popular fruit, and they grow well in New York's climate. It is one of the first locally grown fruits we see each summer.

2. Share that an activity that people love to do in June and July is visit a farm and pick their own strawberries. Ask, "Have you ever gone strawberry picking?" and "What did you like about it?".

3. Ask the students to describe what a strawberry looks like. After hearing their descriptions, make a special point to share that strawberries are unique because their seeds are on the outside of the fruit, and the average strawberry has over 200 seeds.
    - Explain that seeds are the first step in the lifecycle of a strawberry plant, and that there are many important steps before we can eat the delicious fruit.

Lifecycle Sequencing Activity (15 minutes)

1. Explain to students that we are going to work together to put in order the steps from seed to strawberry.

2. Give each student one strawberry lifecycle worksheet and ask them to write their names in the top right corner. Also give each student one of each of the six provided stickers.

3. Ask students to recall the first step in the strawberry lifecycle. (*Seed*) Place the seed sticker on the number 1 box on their worksheet.
    - Explain that seeds are dormant, or in a deep sleep, until they are planted. What does a seed need to wake up? (Warmth and moisture.)

4. Investigating the remaining five stickers, what comes next in the strawberry lifecycle? (*Germination*) Place the germination sticker on the number 2 box.
    - Germination is when seeds begin to grow; roots and shoots appear.

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Lesson & Extension Activities

Activity Procedures, continued:

5. After germination, ask the students to identify the next step. (*Sprout*)
    - To continue growing out of the soil and for a strong root system that will firmly hold the plant in place, it is important that the sprout receives adequate water, light, nutrients, and air.

6. Identify the appropriate sticker for box 4. (*Seedling*)
    - Seedlings grow strong stems that are important for transporting water and nutrients to the fruit and supporting the weight of the growing plant. Seedlings also grow outstretching leaves to collect sunlight to transfer into food for the plant.

7. Find the sticker for the next step in the strawberry lifecycle, for box 5. (*Flowering and Young Fruit*)
    - What looks special about this image? The white flowers on the plant emerge first, and for each flower that is pollinated, strawberries will form. You will also see on the sticker that the plant has young, and unripe strawberries on the plant.

8. Students should have one remaining sticker for box 6. (*Mature Plant*)
    - Strawberries ready for harvest will usually be fully red. After picking, it is best to put your strawberries in refrigeration right away (those you don't eat, of course!).
    - Strawberries are only available for a short window in the growing season, but fresh strawberries can be frozen or preserved for a taste of sunshine any time of the year.

Conclusion (3 minutes)
Ask the students:

- What do strawberries need in their environment to grow? (*soil, water, warmth, and air*)
- What types of recipes can you make with strawberries?
- Would you like to try growing strawberries like Jolie?

Variations and Extensions

Upper Elementary Activity Variation

- Provide the students with the six stickers and challenge them to arrange the stickers, keeping the paper on the backs, in the order they believe is correct.
- Have students share out their proposed lifecycle order. Allow students to determine if they agree or disagree with their classmate, and why. If students are having a hard time, let them work in groups.
- Once the class agrees on the placements, have them stick their stickers to the worksheet.

Journaling Prompt

- Jolie avidly journaled her trials and triumphs throughout her strawberry journey. Ask the students to turn over their worksheet and write a journal-style entry for one of the below prompts.

    How would you convince a caring adult in your life to allow you to grow strawberries, or your favorite fruit?

    Imagine that you have your own strawberry patch, and like Jolie, you have more strawberries than you can eat yourself! Describe how would you share, sell, or distribute your strawberries and to who?

Strawberry Lifecycle Correct Sequence

Box 1

Box 2

Box 3

Box 4

Box 5

Box 6