# Unit 4-Power of Flowers

Content Area: **Science**
Course(s): **Science 3**
Time Period: **Marking Period 4**
Length: **MP 4**
Status: **Published**

## Essential Questions

- What is a life cycle?
- What changes do organisms go through during their life cycle?
- Is a plant life cycle similar and different compared to an animal's life cycle?

## Big Ideas

- Reproduction is essential to every kind of organism.
- Organisms have unique and diverse life cycles.

## Diversity

Objective: SWBAT determine why apples can be different colors and how that relates to their taste.

Activity: During the Mystery Science activity "Why are some apples red and some are green?" students will look at different types of apples and observe their outside characteristics. Does the color or outside appearance of the apples affect the inside? Students will make a hypothesis then the teacher will cut the apples in half revealing their similar nature. Teacher will lead discussion on how although we may all look different on the outside, we all look the same on the inside. We should be accepting and appreciative of the uniqueness of the people around us and be glad to be who we are.

## Science and Engineering Practices

**Analyzing and Interpreting Data:**

- Compare and contrast data collected by different groups in order to discuss similarities and differences in their findings.

**Obtaining, Evaluating, and Communicating Information:**

- Read and comprehend grade-appropriate complex texts and/or other reliable media to summarize and obtain scientific and technical ideas and describe how they are supported by evidence.

- Communicate scientific and/or technical information orally and/or in written formats, including various forms of media and may include tables, diagrams, and charts.

## Science and Society

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## CSDT Technology Integration

● 8.1.5.DA.5: Propose cause and effect relationships, predict outcomes, or communicate ideas using data.

Activity:

Students will review the Mystery Science activity “What’s the Best Way to Get Rid of Mosquitoes?” Students will review each type of cause and effect relationship to get rid of the mosquitoes. As an extension activity after the mystery, students will look up one way to get rid of mosquitoes that was discussed in class. Students will predict which way is the most effective to get rid of mosquitoes. Then students will report back on what they learned from the data analysis.

## Enduring Understandings

Next Generation Science Standards

Heredity: Inheritance and Variation of Traits

● 3-LS3-1 Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exist in a group of similar organisms.

● 3-LS3-2 Use evidence to support the explanation that traits can be influenced by the environment

Biological Evolution: Unity and Diversity

● 3-LS4-4 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change

Growth and Development of Organisms

● 3-LS1.B Reproduction is essential to the continued existence of every kind of organism. Plants and animals

have unique and diverse life cycles

Student Learning Standards

Mathematics

As part of this work, teachers should give students opportunities to be quantitative in giving descriptions:

● 3.NF. Number and Operations—Fractions

● 3.NBT. Number and Operations in Base Ten Science example: Be quantitative when describing the life cycles of organisms, such as their varying lifespans (e.g., ranging from a fraction of a year up to thousands of years) and their varying reproduction (e.g., ranging from a handful of offspring to thousands).

Focus Areas

Knowledge

● The pattern of life cycles includes birth, growth, reproduction, and death. ● Plant life cycles start with a seed.

● Plants develop different parts as they grow.

● Plants and animals reproduce to create more plants and animals. ● Plants and animals die.

Skills

● Sort plants based on similar traits.

● Determine the sweetness of different apple varieties.

● Determine if a food is a science fruit or vegetable.

● Create a model of flowering plant life cycle.

Understandings

● Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.

## Climate Change

3-LS4-4: Make a claim about the merit of a solution to a problem cause when the environment changes and the types of plants and animals that live there may change.

- Activity: Students will be divided into pairs or small groups and each group will choose a specific environmental change scenario (e.g., climate change affecting polar bear habitats, deforestation impacting rainforest species). Students will research a proposed solution for their assigned scenario. They should find information on what the solution aims to do, how it works, and any evidence of its

effectiveness.

## Resources

Primary Resources

● Mystery Science

Supplemental Resources

● Flocabulary- Life Cycles, Parts of a Plant

● BrainPop Jr- Plant Life Cycle

Leveled Readers

● Plants and How They Grow

● Plants and Trees Growing

● Tree Life

Scientific Inquiry

Core

● Why do plants grow flowers?

● Why do plants give us fruit?

● Why are some apples red and some green? ● How could you make the biggest fruit in the world? ● Why are there so many different kinds of flowers?