



[▶ Link to Video](#)

LESSON PLAN

LIFE CYCLES GRADES 3-5

SUMMARY

All plants and animals are born, grow, change, reproduce, and die over time. Together all these stages form a life cycle. In this lesson students study the life cycles of several different plants and animals.



3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. [Clarification Statement: Changes organisms go through during their life form a pattern.] [Assessment Boundary: Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction.]

Science & Engineering Practices	Connections to Classroom Activity
<p>Developing and Using Models Develop models to describe phenomena.</p> <p>Connections to Nature of Science Scientific Knowledge is Based on Empirical Evidence Science findings are based on recognizing patterns</p>	<ul style="list-style-type: none"> • Students study and then create life cycle diagrams modeling the life stages of different plants and animals. • Students compare life cycles of several different plants and animals to identify patterns of similarities and differences.
Disciplinary Core Ideas	Connections to Classroom Activity
<p>LS1.B: Growth and Development of Organisms Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles.</p>	<ul style="list-style-type: none"> • Students recognize that as life cycles, new plants and animals are produced and life continues into the future.

**Additional DCIs addressed by this lesson:
PS3.D: Energy in Chemical Processes and
Everyday Life**

The energy released [from] food was once energy from the sun that was captured by plants in the chemical process that forms plant matter (from air and water). (5-PS3-1)

- Students study different types of life cycles for different types of plants and animals.
- Students observe an avocado plant growing using only water and sunlight to produce energy. (DIY)

Crosscutting Concepts

Patterns

Patterns of change can be used to make predictions.

Connections to Classroom Activity

- Students observe patterns related to life cycles.

DURATION

One to two 45-minute classroom periods

PRE-ASSESSMENT QUESTIONS

Please see Discussion Questions located under the video. These can be discussed as a group or answered individually in student science notebooks.



ENGAGE



**WATCH THE GENERATION GENIUS
LIFE CYCLES VIDEO AS A GROUP**

Then facilitate a conversation using the Discussion Questions.



EXPLORE

Divide students into small groups of up to four. Give each group a set of copies of all the different life cycles explored in the video (chicken, butterfly, frog, plant, and avocado).

Students will explore the question: how are animal and plant life cycles similar? How are they different? In their science notebooks, students should create a page called “Animal and Plant Life Cycles.” On that page they should create a “T” chart. They should label on side “similarities” and the other “differences.” Students should now work together in their groups to list as many similarities and differences between the different animal and plant life cycles as possible.

MATERIALS

- Life Cycle Diagrams (attached)
- Science notebooks & pencils
- Markers or colored pencils (optional)
- Internet or library for research (optional)

DIY Activity

- A ripe avocado
- Cutting board & Knife (Adult help)
- Bowl of water
- Clear plastic cup
- Toothpicks
- Water
- Flower pot
- Soil

For example:

Similarities	Differences
<p><i>The life cycles of butterflies, frogs and chickens all start out as eggs.</i></p> <p><i>Both plants start out as seeds.</i></p> <p><i>Frogs and butterflies look very different from their young stage to their adult stage.</i></p> <p><i>All these living things go through different stages of life.</i></p>	<p><i>The life cycles of plants do not start out as eggs, they start out as seeds.</i></p> <p><i>Chickens change somewhat, but always look like birds from their young stage to their adult stage.</i></p>



EXPLAIN

Gather all the students back together. Facilitate a discussion about life cycles with student input. Work towards the understanding that:

- The life cycles of all plants and animals include the stages of birth, growth, reproduction, and death.
- Some plant and animal life cycles are shorter or longer than others.
- Some plant and animal life cycles include dramatic changes (metamorphosis).
- Understanding life cycles can help us predict patterns in the lives of animals and plants.



ELABORATE

Using their knowledge of life cycles, students can create life cycle models (diagrams) for other animals from the video (gorillas, penguins, dogs), or they may research an animal or flowering plant of their choosing and create a life cycle diagram based on what they learn.



EVALUATE

Evaluate student understanding by assessing the life cycle diagrams they create during the Elaborate portion of the activity.



EXTENSIONS

As a class or individually, grow avocado plants using the DIY Activity.