

## NGSS Literature Lesson Plan

### Performance Expectation(s):

3 LS 1-1: 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.]

### Literature Connection

**Literature:** Cactus Hotel by Brenda Z Guiberson

Optional: [Ladybug by Gail Gibbons](#)

**Benchmark Connection:** No Benchmark connection available.

### Student Background Information

**Prior Student Knowledge:**\*Plant life cycles (almond blossom,

- Kindergarten butterfly life cycles
- Frog life cycle
- 4H Background and Pumpkin Life Cycle

**Student Misconceptions:**

- Timeline - flat? or cycle?

**Barriers:**

### Engage

Begin by showing students the traditional “life cycle” of a flower [HERE](#). Tell students that not all animal and plant life cycles follow this cycle. Show students [this phenomena video](#) on corn and ask them to record all of the questions they have about the corn life cycle.

As you can see, life cycles are not always predictable by looking at the plant or animal when it has matured. Tell students we will be reading the Cactus Hotel while completing the life cycle model to explore how Cactuses begin, grow, reproduce, and die. As you read the book Cactus Hotel you can complete [this chart](#) as a class, or have students complete it

### Materials/Resources

[Cactus Handout](#)

[Ladybug Handout](#)

individually.	
Explore	
<p>Tell the class both animals and plants have a life cycle. We will be spending the next few weeks studying the ladybug life cycle. Begin by having students predict the stages in the life cycle of a ladybug using drawings and labels in the ladybug hand out. Create a whole class anchor chart of the same handout to track the actual cycle as you watch the ladybugs over the next few weeks.</p> <p>After making a prediction on the entire life cycle of the ladybug, students will work on completing the first page of the Ladybug Observation Sheet. Begin by showing them this <a href="#">video</a> of a ladybug laying eggs, and pause so students can draw the eggs and add observations and descriptions. In your ladybug kit walk the larvae around the room so students can then draw and make observations and descriptions. Finish by having the students predict what the ladybug larvae will look like in one week.</p> <p>Everyday have students complete the ladybug tracking sheet after reviewing the ladybug habitat.</p> <p>Once the adults emerge from the pupa state, have students revisit their tracking sheet to create a model of the ladybug life cycle using play dough or modeling clay (optional). At this point you could use Gail Gibbons Ladybug to provide more evidence for their cycle. As a class, complete the ladybug life cycle anchor chart.</p>	<p><b>Materials/Resources</b>  <a href="#">Ladybug Observation Tool</a></p>
Explain	
<p>After the ladybugs have reached adulthood and you have completed the anchor charts, host a ladybug release party. Along with the party, combine a writing activity in which students will pretend they are a ladybug writing a letter to their friend the cactus. Have students explain to the cactus how their lives are similar and different. Have students combine information from direct observations, both life cycle charts, and any text necessary.</p> <p>Once the letters are complete, observe the adult ladybugs one final time. As a class discuss the needs of the ladybug, focusing on the idea that adults will not be able to stay in their habitats with appropriate food or a place to lay eggs. Revisit the book Ladybugs, with an emphasis on the final pages that discuss the use of ladybugs to control crop pests. Decide where to “release” your ladybugs with that information.</p>	<p><b>Materials/Resources</b></p>

