

Biodiversity Project  
Lesson Title: Pollinators

Teacher: Eleanor Allen-Henderson and Michael Roberta

Grade Level: Kindergarten

<p><b>Common Core Standard:</b></p>	<p><i>Life Science Standards K.L1U1.7</i></p> <ul style="list-style-type: none"> <li>● <i>Observe, ask questions, and explain how specialized structures found on a variety of plants and animals (including humans) help them sense and respond to their environment</i> <ul style="list-style-type: none"> <li>○ <i>“Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive, grow, and produce more plants”</i></li> </ul> </li> </ul>
<p><b>Content Objective:</b> Math, Reading, Science, Writing, Other:</p>	<ul style="list-style-type: none"> <li>● <i>Students will be able to identify the key parts of the flower in the reproduction process.</i></li> <li>● <i>Students will be able to identify the distinct parts of a flower (stems, leaves, flowers, fruits, pollen.</i></li> </ul>
<p><b>Language Objective:</b> (Optional)</p>	<p><i>N/A</i></p>

Vocabulary	Materials
<ul style="list-style-type: none"> <li>● Flower parts (<i>stems, leaves, flowers, fruits, pollen</i>)</li> <li>● Biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>● 5 lily flowers</li> <li>● Hand lenses</li> <li>● Handouts with flower parts pointed out but unlabeled</li> <li>● Science notebooks</li> <li>● Colored pencils</li> <li>● Apple</li> </ul>

**Seasonality:** (If more specificity is required, please note date/time range under the season)

*N/A*

<i>Monsoons</i> July-Sept.	<i>Autumn</i> Oct.-Nov.	<i>Winter</i> Dec.- Feb.	<i>Spring</i> Mar.-Apr.	<i>Dry Summer</i> May-June
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**Guiding Questions:**

- How do scientists use their senses to observe the world around them?
- What is pollen? What is a pollinator?
- Can you name any types of pollinators?
- What parts of the flower are needed for a flower to grow? What parts of the flower are needed for reproduction?

**Scientist of the Week:**

- Dr. Jane Goodall
- Biologist who studies primates
- Dr. Jane Goodall's discovery in 1960 that chimpanzees make and use tools is considered one of the greatest achievements of twentieth-century scholarship.

**Engagement/Introductory Activity:**

- Standing in a circle, begin a call and response, "who here is a scientist?," students responding with "I am."
- Expand on this call and response by asking students to say their name and to the animals/plants they would study if they were a biologist.
- Ask the students: "what senses do scientists use when they observe?"
- Review the five senses: touch, taste, smell, listen, hear

**Exploratory**

- Hand each student a handout with a cross-section of a flower (parts unlabeled), matching a poster at the front of the room.
- Ask students if they know any of the parts. This will be used as mini-engagement exercise to determine what level of knowledge students have of plants. The parts unknown will be left unmarked on student handouts.
- Begin the dissection exercise.
- Referencing a powerpoint slide with a picture of the materials, explain that students will look at the individual parts of the flower, drawing the best as they can in their notebooks their observations.
- Divide students into five different stations. At each station students will be asked to draw different parts of the flower corresponding to every station, students switching every five

minutes. In order to ensure sure that students know the part of the flower their table is assigned to, there will be printouts with the relevant plant part highlighted.

- Remind students to use all five senses when observing the parts of the flower.
- Divide the stations into the following groups: petals, stamens, ovaries, stems, and leaves.
- Walk around the room asking students about what they are doing and noting questions or common misconceptions that come up during group work.
- In order to keep students engaged, and to carry through elements of fun, during student transitions between stations, they will be asked to move from one station to another, imitating a kind of animal. For example, “students, I want you to go to your next station, flying like butterflies.”

**Explain:**

- Now that students have completed their observations, ask students to meet on the class rug.
- Ask the students what they observed about their flowers. What was their favorite “sense” they used? What was it like to touch the stamen, versus the petals? “how do you think they work together to reproduce (make more flowers)? are animals involved?”
- Prepare students for the topic of pollination by asking the following questions: “how do you think the parts of the flower work together to reproduce (make more flowers)? Could animals be involved?”
- Provide a brief definition of pollination.

**Extension Activity/Questions:**

- Bringing in an apple, show the insides, noting how the flesh of the fruits protects seeds. So fruits are plant ovaries!
- Play the video of a bee extracting pollen from a plant: [https://youtu.be/zy3r1zIC\\_IU](https://youtu.be/zy3r1zIC_IU)
- Ask what animals students think are pollinators, as a way to introduce next week’s lesson.
- Give a couple of examples for students to think about for next week. (monarch butterfly, anna’s hummingbird, lesser long-nosed bat, cactus bee)

**Evaluation Activity:**

- Ask students to gather in a circle and share one thing they learned during their lesson.

Reference Picture:

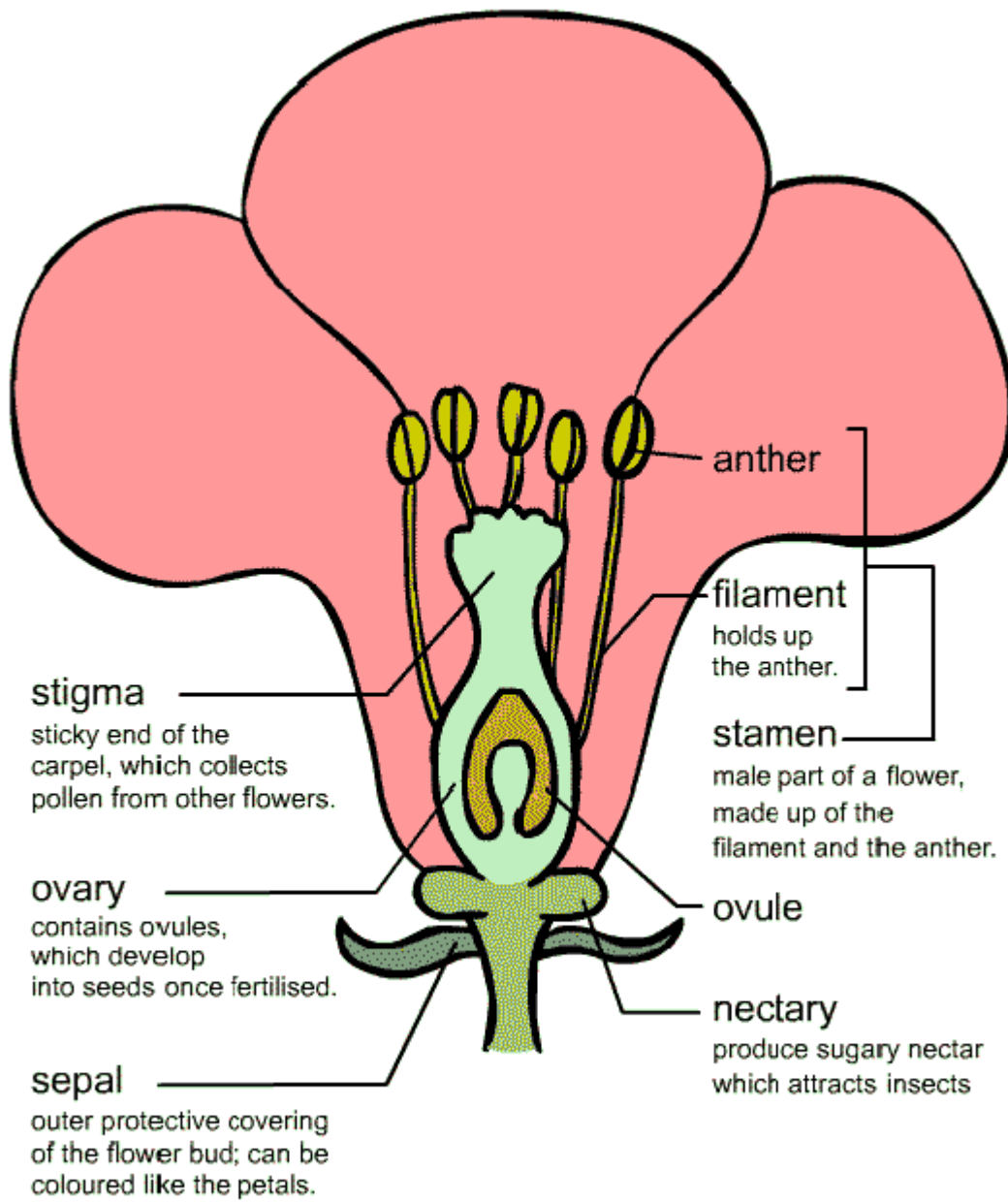


Image on Handout:

### Parts of a Flower

