

## Overview

Students will explore how plants and insects found in the garden change over time. Students will create a timeline of a garden plant.

## Engage & Explore

Using magnifying glasses, allow the students to explore the garden in search of insects. Have the students draw pictures of what they find or take pictures using an iPad.

## Activity

1. Ask students what it means to be alive. What are some characteristics of living things? Make a chart of the characteristics. Do you look the same as you did when you were born? How do living things change over time? Introduce the concept of life cycles.

Using the pictures from their Engage & Explore time, have students predict what came before and what will come after the insects they saw in the garden.

2. Prepare a cash register tape or sentence strip for each student or group of students.

Draw a straight line near the bottom leaving enough space to label below the line. Measure and make a mark every inch, up to 30 inches. Beginning with zero, label each mark. Each inch will represent one day.

3. Depending on the time of year, plant some seeds in the garden or under the light bank. (Radish seeds grow quickly and can be planted most anytime of the year. Radishes mature in approximately 28 days.)

Have students first observe the seeds. Do they have any of the characteristics of living things?

Have the students draw a picture of or tape a seed above the zero mark.

**Grade Level:** 2

**Subject Area:** IB Integrated Unit

**Materials:**

Cash register tape or sentence strip  
Seeds  
Light bank (if planting indoors)  
Life Cycles in the Garden worksheet

**Concepts:**

Causation  
Form  
Connection

**Line of Inquiry:**

How living things change over time (Form)

**Resources:**

*In the Garden: Who's Been Here?* by  
Lindsay Barrett  
3D life cycles of: cabbage butterfly,  
butterfly, honey bee

**Standards:**

2.L.1.1  
2.L.1.2  
2.M.D.1  
2.H.1.1  
2.G.2.2

4. Observe the seeds at least twice a week and allow students time to draw what they see on their timelines. Remember, each inch on the timeline represents one day.

If your school has a root box, this is a great time to use it. Students will be able to see how plants change above the soil and underground.

5. When it is time to harvest (a great time to host a tasting) or you think students have seen enough, have them use their timeline to write a paragraph summarizing the life cycle of their plant. Focus on sequencing and transition words. First my seed..., then my plant..., next I saw..., last my plant...

6. As students observe their plants, allow them to continue looking for insects.

Common insects that can be found in the garden:

- Cabbage worms: small green worm found on plants in the cabbage family (broccoli, cauliflower, kohlrabi, boc choy, collards, cabbage, etc.). They like to “hide” along the mid-rib and often lay eggs on the top or the underside of the leaves. They turn into white moths that are often seen flying around the pollinator garden. Look for holes in the leaves of the crops. Where there are holes, there will be cabbage worms.
- Bees
- Butterflies
- Ladybugs

Each time students find an insect, have them look up the life cycle and complete the Life Cycles in the Garden worksheet found in this Lesson Plan. Compare the life cycles of all insects found in the garden. Discuss with students if this insect is helpful or harmful to the garden.



## Extension/Curriculum Ideas

Take pictures of the garden weekly or monthly and observe the change over time.

Create a timeline of the garden over a school year.

Maintain a scrapbook of garden photos, observe changes over multiple years in the garden.

Look for patterns during the seasons in the garden by looking back through the scrapbook.

## Your Notes & Ideas

# Life Cycles in the Garden

Name: \_\_\_\_\_ Life cycle of: \_\_\_\_\_

|                 |                |
|-----------------|----------------|
| <b>First...</b> | <b>Next...</b> |
| <b>Then...</b>  | <b>Last...</b> |