

Focus on: Parent Plants

This lesson is meant to support the unit on Structures and Functions of Living Organisms. Most lessons support looking at the life cycles of animals, but this lesson will help touch on the objective 2.L.2.1 involving plants. If your school garden does not grow strawberries, consider asking your garden coordinator if strawberry plants can be added. They don't just have to grow in vegetable gardens - they are a great addition to any garden and a wonderful food for birds! You can also purchase a strawberry and grow it in a pot to use with this lesson. In any case, you will want to make sure your strawberry plants have runners before completing this lesson. (See the last page for an explanation of the parts of a strawberry plant including runners.)

Clarifying Objectives:

2.L.2.1 Identify ways in which many plants and animals closely resemble their parents in observed appearance and ways that they are different.

2.L.2.2 Recognize that there is variation among individuals that are related.

Key Vocabulary:

Definitions can be found at <http://learnersdictionary.com>

- Summarize
- Life Cycle
- Birth
- Developing
- Reproducing
- Aging
- Death
- Compare
- Plant Parents
- Observed
- Appearance
- Variation
- Individuals
- Related
- Runner
- Crown
- Node
- Clone
- Offspring

Focus Question(s):

How is the clone (baby) plant of a strawberry plant similar to or different from the "mother" plant?

Materials:

School Garden

Garden Gloves to wear while exploring the garden especially if touching plants, soil, lifting pots, etc.

Science Notebooks

Activities:

1. Ask students to give examples of things that have parents. (people, animals, etc.) If no one mentions it, ask students if they knew that plants have parents too.
2. Take students to the garden and have them search for “parent” plants that have “baby” plants. If they find them, ask them why they think the plants are related and how they are the same. It is not necessary for students to have noticed the strawberry plants at this time, but if they have, you can let them know that they are going to be investigating this plant further.
3. When you return to the room, show the following video:
https://www.youtube.com/watch?v=Zzofs0lc_Zc
4. After that video you can also show this 37 second video which shows an actual “mother” plant with a runner and several “baby” plants starting to grow.
<https://www.youtube.com/watch?v=9nNVPPOMK00>
5. Discuss the videos.
6. Return to the garden (this can be done on another day). Have students observe the parent strawberry plant and the runners. Have students sketch the plants, label them and record their findings in their science notebooks. Ask students Guiding Questions and encourage the use of the key vocabulary.
7. Once you return to the classroom, have tables of students work together to read and discuss the information from the following articles: <http://strawberryplants.org/2011/02/life-cycle-of-strawberry-plants> or <http://gardenpool.org/gardening-tips/cloning-aquaponic-or-hydroponic-strawberry-plants-by-runners>
8. Discuss the article and add new information or vocabulary to their science notebooks. Share the information that was learned.

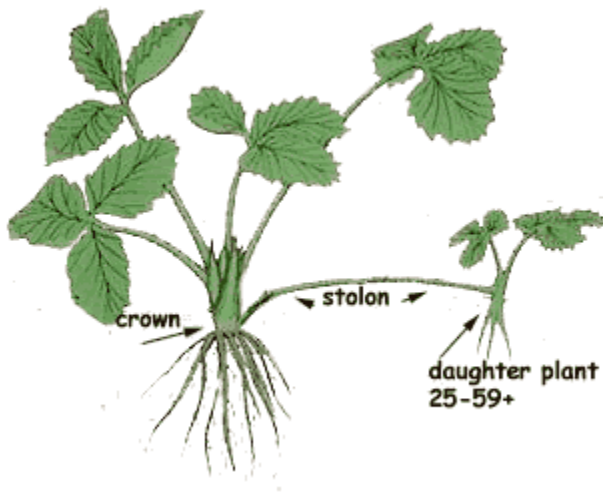
Guiding Questions:

- What are some ways human children are like their parents?
- What are some ways you can tell people are related?
- How are the “parent” plants similar to their “offspring”?
- What are some ways you can tell the plants are related?
- What other ways can you think of?
- How are they different?
- What other ways can you think of?

- If we took the seeds from a strawberry on this plant and planted it, would that “offspring” be similar to or different from the “parent” plant?
- Are all strawberry plants exactly the same?
- How are they the same?
- How are they different?
- Why do you think the new plant is so similar to the “parent” plant?

Website for Strawberry information:

<http://www2.mcdaniel.edu/Biology/botf99/stems%20leaves/modified%20stems.html>



Stolons or runners-are horizontally oriented stems that grow along the soil surface. Their function is vegetative production. Example: number of grasses have stolons. Spider also plant has many stolons, each with a plantlet forming at the end of the stolon. Strawberries are normally propagated asexually by two different methods: runners (stolons) and crown division.