

Dandelions Everywhere

4th Grade

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References:

- “It’s the Pits” CPS curriculum guide

Benchmarks & Objective:

LS-1: Compare the life cycles of different plants including germination, maturity, reproduction and death.

LS-2: Relate plant structures to their specific functions (e.g., growth, survival and reproduction)

SI-5: Record and organize observations (e.g., journals, charts and tables).

Objective:

Students will learn how important seeds are to the future of plants. Students will examine how some seeds are blown in the wind spreading them across the landscape. Other plants have seeds that are surrounded by fruit that provide water or entice animals to eat them and spread them as they digest.

Materials:

- Dandelions (outside the schoolyard)
(These should be yellow flowers and at the seed stage).
- Other seeds to examine (especially if they have not previously examined seeds)

Target Concept:

- Students know that seeds contain the material for a new plant, but are going to learn that each seeding plant has a unique packaging for its seeds.
- Some seeds are built to be carried by the wind, whereas others will be transported by water or birds and animals.

Initial Introduction:

Ask the students where they have seen dandelions? (They will name a lot of places). Ask them why dandelions are found in so many places? Then ask the students if dandelions always look the same? Are they always yellow? What happens as a dandelion gets older? (Remind the kids that they turn white)

Procedure:

- 1) Take the kids outside and have them observe dandelions and record observations in their journals.
- 2) They should draw the yellow flowering dandelion and label its major parts (flowers, leaves, roots, stem).

- 3) Kids will have a tough time getting roots out, encourage them to be creative, we were able to pull dandelions out of the ground by putting a spoon underneath them. (make sure that all of the kids are noticing that the leaves are at the bottom of the plant and that the roots are very hard to get out of the ground)
- 4) Kids should also draw and inspect the mature white dandelions. What is at the base of the white fuzz? (They should guess seeds from previous activities growing seeds, or it can be pointed out.

- 5) The kids should answer the following questions:
 - What happens to the white fuzz carrying the seeds?
 - Why are dandelions found everywhere?

- 6) Back inside or in a quiet discussion area, ask the kids:
 - Do all plants spread their seed in the same way?
 - How does an apple tree spread its seeds? (You can prompt the kids by asking them where in the apple tree are its seeds found- they will know that an apple has seeds in its core. Why would an apple tree go through the effort of making an apple to surround its seeds? What happens to apple seeds when they are eaten? They are not digested and may be found in the animals waste and spread to new locations to grow new trees).

- 7) Draw some different seeds on the board. The kids should learn some vocabulary (embryo, seed coat (surrounds the embryo), they should learn

Target Observations:

- The students should understand the parts of a plant (roots, stems, flower, leaves)
- The students should understand how wind and animals spreading seeds and why that is important to plants.
- The students should understand that seeds are required for new plants to germinate.

Extensions (Optional):

- Kids can examine additional seeds and hypothesize how those plants grow in new places. (are they transported by the wind, water or animals).
- Students can make different seed shapes and see how well they are transported by the wind. (They can make maple helicopters, etc.)
- Students can examine the reproduction of flowering plants in more detail and contrast this with plants that reproduce with tubers and grafts.