

Class: Grade 1 Science

Lesson Title: Seeds, Plants, and Flowers (How things grow)

Class Size: 20
Time: 50 mins

Curriculum Outcomes:

1.2.1 describe how plants and animals meet their needs in a given environment

Learning Objective:

1. Students will be able to demonstrate an understanding of the stages of plant growth from seed to flower adult.
2. Students will have an understanding of what is necessary for plants to grow (water, soil, light, air).

Materials:

- 'One Bean' storybook (or other book about the development of some plant from a seed to full grown)
- *Optional:* Students may wish to create flower/leaf headbands ahead of time or flowers (pom-poms); some students may wish to make bee/bird costumes instead
- *Optional:* green pinnies for all students
- Resources: <https://www.youtube.com/watch?v=iZMjBO6A7AE> https://youtu.be/eu_l80m7K2o?t=77

Preparation beforehand:

- Make sure there is enough space for students to move around (possibly on the floor) within the classroom
- Have students create their costumes if you are planning on doing so (some students may wish to make bee/bird costumes instead)

Introduction:

1. Start off the day with a story about the life of a bean seed. This will set the activity up by giving students an introduction to the stages of growth for a typical bean plant.
2. Show students one or two YouTube videos of bean plants growing over a time-lapsed 5-6 day span (see video resources above for suitable candidates). This will give students first-hand knowledge of what it looks like for a seed to grow into a plant.
3. Explain what a kinulation is (broken up into kinesthetic and simulation). Tell them that these are used to help students learn difficult concepts that are otherwise difficult to picture. It allows students to become part of the demonstration, and therefore easier to remember and learn. Ask students if they would like to try one.

Activity: The Growth of a Seed into a Plant

1. Ask students what they think would be the best way to represent a seed (tucked into a ball on the floor).
2. Give students green pinnies and instruct them all (other than those who are going to be bees/birds) to go onto the floor and become seeds.
3. Ask students what comes next:
 - a. If they get some "water" their "roots" will start to grow out and downward.
 - b. When you are ready, let students know that there is water being poured on them, and they can extend a root (leg) out from their seed when they wish.
4. Once students have a root growing outward, you can start to add other features in like soaking up nutrients through the roots that are allowing you to grow more and start making a stem and leaves that will shoot upward.
 - a. Students can begin slowly emerging from their seed and kneeling on the floor with their arms tucked in and one leg sticking out.
 - b. Continue this process while adding in more sunlight, heat, air, etc. while the "plants" grow.
5. Eventually when the plants are completely grown up as tall as they can be, the students can extend their arms to show they are fully grown, and may wish to open up their flowers (possible pom-poms; jazz-hands).
6. At this time, the bees and birds can fly around the room visiting the flowers and plants (this will simulate the interaction between animals and plant-life).
7. Sit down with the students and discuss the process and the different experiences they had.

Conclusion – Possible wrap-up questions:

1. What types of things do seeds need in order to grow into plants?
2. If plants start as seeds, where do seeds come from?

