

Grow Carrot Tops

TIME ESTIMATE

30
min

SHORT ON TIME?

Prepare the bowls with water and carrots for the children ahead of time. Instead of giving each group individual bowls of carrots to observe, provide one bowl of carrot tops to measure as a class.



POSSIBLE MATERIALS

- ☐ carrot tops
- ☐ a bowl
- ☐ water
- ☐ small paper clips

PREPARATION

Plan to have children observe and record the growth of the carrot tops every other day over a nine-day period. In advance, prepare two carrots for each group by cutting off the tops of the carrots, leaving about half an inch of the orange portion with the green stems still attached. Make sure children have access to a sunny windowsill or a light source under which they can place their bowls.

INVESTIGATIVE PHENOMENON

Plants of the same kind can look alike and different.

Phenomenon Explained Children explore the **investigative phenomenon** by observing the growth of two carrot plants.

Ask a Question After observing the photograph, children should ask a question about how plants of the same kind can be different. If children struggle to ask a question, review the properties that plants of the same kind have in common, such as size and color. Have children list characteristics that the plants in the photograph do not share. **Sample question:** Can plants of the same kind be different sizes?

Everyday Phenomenon When you see cats that have different colors and markings, you observe how living things of the same kind can look alike and different. Ask children to suggest other examples of animals of the same kind that look alike but different and discuss these variations.

STEPS 1 AND 2 Children should fill their bowls so that the carrot tops are covered to the halfway point with water. Assist children with placing their bowls in a sunny location, such as a windowsill. Steps 1 and 2 should be completed on the first day.

STEP 3 Children should use paper clips to record the length of their carrot tops every other day over a nine-day period, starting on Day 3 (two days after the carrot tops are first placed in the bowl of water). Refill the water as needed so the tops do not dry out.

STEP 4 Children should use their observation chart to look for patterns and explain how the plants changed over time. For example, they may notice that the carrots did not grow at the same rate but that they had the same kind of parts.



- **Make a Claim** Children's claims should identify how plants of the same kind can look alike and different.
- **Evidence** Children should cite as evidence the observations they recorded in their charts regarding how the carrot tops changed in size and appearance.
- **Reasoning** Children should explain their reasoning that plants of the same kind look similar but have some differences.

FORMATIVE ASSESSMENT

MAKING SENSE OF PHENOMENA

Children gain understanding that plants of the same kind look similar but can have some differences as they explore the **investigative phenomenon**. They should connect this to the **anchoring phenomenon** that plants of the same kind can vary in size.

REMEDIATION If children struggle to connect the **investigative phenomenon** back to the **anchoring phenomenon**, have them discuss how the adult tulips differed from each other.

Activity Outcome

Children should record observations of the growth of two carrot plants.

Performance Indicators

	observe, measure, and record the growth of carrot-top plants
	analyze data to explain how the plants are alike and different
	make a claim about how plants of the same kind can be alike and different and support the claim with evidence