

Engage

Ask students if they have ever told a fib or lie? Is a lie true or not true? Introduce the words fiction and nonfiction. Create an anchor chart for fiction and nonfiction.

Fiction	Nonfiction
Not Real	Real
Story talk	Fact talk
Entertaining / read to enjoy	Read to learn
Beginning / middle / end	Can be read out of order

Read each story aloud asking questions about key details. After each book, refer to the anchor chart and determine whether each book is fiction or nonfiction. Ask students, “how do you know?”

Look for other clues that indicate nonfiction such as a table of contents, glossary, index. Compare illustrations vs informative pictures.

Explore

Ask students, “Who likes carrots?” Follow up with: Where do carrots come from? Why don’t we see if we can grow our own carrots? What do we need to grow carrots? What do plants need to grow? Let’s investigate this by growing our own carrots and radishes.

Make [square foot seed mats](#) according to square foot planting guidelines. In order to demonstrate that plants need space, plant some squares with way too many seeds and see what happens. (This is a great time to practice partitioning rectangles into halves and fourths etc.)

Grade Level: 1

Anchor Texts:
Too Many Carrots by Katy Hudson
The Carrot Seed by Ruth Krauss
Carrots Grow Underground by Mari Schuh

Primary Standards:
ELA:
RL.1.5 Explain major differences between books that tell stories and books that give information.
RL. Ask and answer questions about key details in a text read aloud or information presented orally or through media.
Healthful Living:
1.NPA.1.2 Contrast more nutrient dense foods from those that are less nutrient dense.
Math:
NC.1.MD.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.
NC.1.MD.2 Measure lengths with non-standard units.
Science:
1.L.1.1 Recognize that plants and animals need air, water, light (plants only), space, food and shelter and that these may be found in their environment.

Plant square foot seed mats in the garden, be sure to water them in and keep seeds moist until they germinate because plants need water. You could also leave one planted square unwatered, or one square unplanted to compare. When you plant the seed mats use positional words to describe how you are planting them. Example: We are planting the mats **in** the garden bed, **under** the soil, be sure to keep your feet **out** of the bed by kneeling **behind** the bed.

While you are waiting for the carrots to reach maturity you can reread *The Carrot Seed*.

Most carrots can be harvested at 30-40 days for “baby” carrots and 55 + days for full size carrots.

To incorporate math into the lesson, use the harvested carrots to order objects by length, compare the lengths indirectly by comparing to a third object and measure with non-standard units such as snap cubes.

Extension

To observe what is happening underground, create a DIY root box inside using a deli container, clear cup or water bottle and plant the seeds against the inside of the container. Keep moist and observe as the seeds germinate and roots grow.

Conduct a carrot tasting experiment with the harvest; try raw, with a dip, roasted or baked into a mini-muffin.

* Carrots are slow to germinate (up to 14 days) Create a germination calendar and count off each day until you see the seedlings start to appear. You can also plant some radish seeds in addition to carrot seeds and observe them as well. Some plants–just like some people–need more time to mature.

Secondary Standards

ELA:

RL.1.1 Ask and answer questions about key details in a text.

RL.1.2 Retell stories, including key details, and demonstrate understanding of their central message or lesson.

RL.1.7 Use illustrations and details in a story to describe its characters, setting, or events.

Math:

NC.1.G.3 Partition circles and rectangles into two and four equal shares.

- Describe the shares as halves and fourths, as half of and fourth of.
- Describe the whole as two of, or four of the shares.
- Explain that decomposing into more equal shares creates smaller shares.

NC.1.MD.1 Compare lengths to determine which is longer, shorter, taller, and shorter.

Science:

1.L.2.1 Summarize the basic needs of a variety of different plants (including air, water, nutrients, and light) for energy and growth.

Social Studies:

EX.G.1.3 Use positional and directional words (e.g., in, on, out, under, off, beside, behind) to locate objects.