SCHOOL FRUIT AND VEGETABLE NUTRITIONAL PROGRAM

FRESH STORY | CARROTS

PRIMARY

EAT YOUR ROOTS AND VEGETABLES

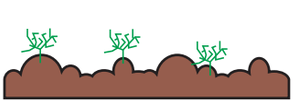
Different plants have different edible parts. We eat the stems of celery, the flowers of cauliflower, and the leaves of lettuce. When we eat a carrot, we eat the main root called a taproot. Carrots, turnips, and beets are all root vegetables. When these vegetables are growing, you'll see leafy green tops above the soil. Hidden below and covered by dirt, the taproot is hard at work, pulling nutrients and water from the soil to help the plant grow.

CARROTS COME IN COLOURFUL SHAPES AND SIZES

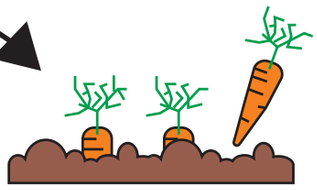
Although BC farmers mainly grow orange carrots, many come in a rainbow of colours, like purple, red, green, white, and even black. You can also find carrots in a lot of different sizes. Large carrots are grown for juicing and cooking … and for making smaller carrots! Tiny baby-cut carrots (no bigger than your pinkie finger) are made from a special variety of sweet long carrots that are peeled, cut into even pieces using automated cutters, and then rounded off using special machines. Any leftover bits are used for animal feed, juice, or compost.

FOLLOW THE COMPOST PATH

Because root vegetables grow underground, they absorb a large amount of nutrients from the soil, so farmers need to feed their crop. One way they do this is to add nutrient-rich compost to the soil. Compost is made from decomposed (rotted) plants, animal manure, food scraps, and other ingredients. It is full of the energy and minerals that plants like carrots need to grow.



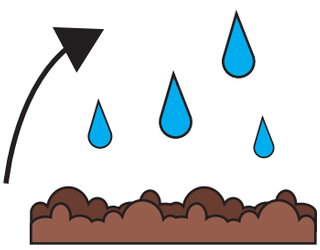
Carrots grow by taking nutrients and water from the soil.



Grab hold of a green top and pull. A carrot slides out of the soil, fresh and ready to wash and eat.

Mix the green tops with other "green" ingredients (food scraps, garden waste, manure) and "brown" ingredients (leaves, straw, woodchips) in a big box or pile.

Wait, and over time, worms, bugs, fungus, and bacteria help turn the ingredients into rich, dark earth called humus.



Spread a thin layer of humus over a field and mix it into the ground to give the soil nutrients. This will make it a better home for good bugs and bacteria and to help the ground hold more water.

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TEACHER ACTIVITIES

Composting food scraps and organic waste is one way of reducing our landfills and taking an active part in creating a cleaner future. Use the following activities to engage students and help them develop a greater understanding of their actions.

ACTIVITY: LEARNING ABOUT TAPROOTS

Curriculum Connection: Science - grades 1 to 3: Identify questions about familiar objects and events that can be investigated scientifically. Experience and interpret the local environment.

Divide your class into partners and ask students to use a K-W-L chart to list information about different parts of a plant. Show students an image of a carrot growing in the ground. Can they see all the different plant parts? What can't they see? Explain that the main root of the plant that grows underground is called a taproot, which takes water and nutrients from the soil to help the plant grow. Tell students that they are eating a taproot every time they enjoy a carrot!

K-W-L Chart

Topic: _____

What I Know	What I Want to Know	What I Learned

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ACTIVITY: MAKE A COMPOST STEW

Curriculum Connection: Language Arts - grades 1 to 3: Use personal experience and knowledge to connect to text and make meaning.

Have students put small pieces of dead plants, leaves, and soil on the bottom of a clear plastic container with a lid. Add a little moisture to dampen, then put in a few fruit or vegetable scraps as the next layer, then more dead plants, leaves, and soil. Continue to layer two-thirds "brown" ingredients and one-third "green" ingredients to the top. Remind students that smaller pieces will result in faster composting. If there is too much moisture, open the lid, or if it is too dry, spray it with water. Mix the "stew" every five to seven days.

For the next six to eight weeks, ask students to make weekly journal observations about the changes in the composting process, including temperature readings, smells, and illustrations. Discuss with the students how, just like farmers, we can use compost to feed the soil in our own gardens at school and at home.

MATH QUESTION

Curriculum Connection: Mathematics - grades 1 to 3: Represent mathematical ideas in concrete, pictorial, and symbolic forms. Art Education - grades 1 to 3: Create artistic works collaboratively and as an individual, using ideas inspired by imagination, inquiry, experimentation, and purposeful play.

Have students break down 20 Unifix Cubes (or 65 cm) into the number of carrots they would like in a bunch. Then, ask them to draw the same amount of carrot shapes on orange, purple, red, green, white, or black construction paper and cut them out. Glue the carrot bunch to another piece of paper and label how long each carrot is. Students could then write an equation to indicate the total length of all the carrots if they were placed end to end:

5 + 4 + 5 + 6 = 20 Unifix Cubes long — This student would have 4 carrots in their picture.
20 + 18 + 27 = 65 cm — This student would have 3 carrots in their picture.

CRUNCHY CARROT VOCABULARY

Compost: a mixture of rotted organic material, such as leaves, vegetables, kelp, and manure, that is added to soil to make it richer.

Humus: rich, dark earth made from fully decomposed compost.

Taproot: the main root of a plant that grows underground.

FAMILY CONNECTION

Ask students to plan where they could place a compost bin at home. What types of food scraps and "brown" ingredients could they add, and where would they spread the compost soil (or "humus") in the future?

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