

HEALTHY SNACKS



The Very Hungry Caterpillar by Eric Carle is a classic in children's literature. The story is entertaining but, at the same time, educational. Given that the caterpillar eats both nutritious foods *and* treats, the book is an excellent introduction to the theme of healthy snacks.

Note: Unless students are familiar with *Canada's Food Guide*, it is highly recommended that you cover the Balanced Lunch Box theme before starting this one.

Curriculum links

- Health and Physical Education: Healthy Living
- Language: Oral Communication
- Language: Writing
- Science and Technology: Living Systems
- Science and Technology: Earth and Space Systems
- Mathematics: Measurement

Learning objectives

- understand that some foods are less nutritious than others and should be eaten in moderation
- learn how to use *Canada's Food Guide* to make healthy food choices
- discover the life cycle of an insect that undergoes a complete metamorphosis
- learn to recognize the days of the week



CANADA AGRICULTURE
AND FOOD MUSEUM

A FASCINATING WORLD



Canada

Learning methods

- listening to the story of *The Very Hungry Caterpillar* and classifying the foods the caterpillar eats based on their nutritional value (healthy snacks or treats)
- classifying snacks (as healthy snacks or treats) based on their nutritional value
- writing a healthier version of *The Very Hungry Caterpillar*

Materials

- *The Very Hungry Caterpillar* by Eric Carle
- *Canada's Food Guide*

Instructions

Introduction

1. Read *The Very Hungry Caterpillar* to your class. If your school's library does not have a copy of the book, there is a free video version online: <http://www.youtube.com/watch?v=vkYmvxPOAJI>.
2. Ask students whether they think the very hungry caterpillar eats nutritious foods.
3. If you have not already done so, post *Canada's Food Guide* where students can access it easily. On the board, draw four columns. At the top of each column, write the title of one of the four food groups. Add one more column and write Other above it.
4. Slowly re-read the story. Ask students to identify in which group each food the caterpillar eats belongs. List the foods in the appropriate columns. If a food does not belong in any of the food groups, include it in the Other column.
5. Talk about the foods in the Other column. Why are these foods not found in any of the four food groups? Explain that these foods are very rich in sugar, salt and/or fat. They do not belong in a food group because they contain too few nutrients (vitamins, minerals, fibre, protein and energy) to keep our bodies healthy. On the board, draw a line through Other and write Treats instead. Treats are less nutritious than the foods found in the four food groups. They can still be part of a healthy diet when we choose to eat them in moderation, which means once in a while, or on special occasions.
6. Explain to students that, to be healthy and to grow, it is important to eat nutritious foods. We should aim to eat nutritious foods at breakfast, lunch, snack time and supper. How can we tell if a food is nutritious? *Canada's Food Guide* can help us make healthy food choices. The foods that belong in the food groups are nutritious foods.
7. Ask students to replace foods in the Treats column with healthier alternatives. Draw a line through each treat and list a more nutritious option beside it.



CANADA AGRICULTURE
AND FOOD MUSEUM



Canada

8. Read the story again to your students, replacing the treats with the healthier food.

Healthy snacks challenge

1. Introduce the next challenge: healthy snacks. What are healthy snacks? Healthy snacks are made with foods that belong in at least one of the four food groups.
2. Make two columns on the board and write Healthy Snacks above one and Treats above the other. Ask students to name some of their favourite snacks. As a group, determine if each snack is healthy (it belongs in one of the four food groups) or if it is considered a treat (it does not belong in any of the food groups and it should be eaten in moderation, meaning only sometimes). List the snacks in the appropriate columns on the board. To help determine whether a food is considered a healthy snack or a treat, use the Healthy Snack or Treat? chart below as a guide. As a general rule, *Canada's Food Guide* recommends limiting foods and beverages that are high in calories, fat, sugar or salt (sodium).
3. Discuss the results of the lists compiled with students. Overall, are their favourite snacks healthy ones or are they considered treats? Why is it important to eat healthy snacks? Our bodies need nutrients (vitamins, minerals, fibre, protein and energy) to stay healthy, so that our brains can concentrate, stay alert and learn new things, and so that we have energy to play, jump, run around and have fun. Why are the foods in the Treats column considered treats? They are often rich in sugar, fat or salt. For example, fruit roll-ups and fruit jellies have a high sugar content. They can stick to our teeth and cause dental cavities. Choose a food from the Treats column. What healthier snack could replace this treat? Repeat once or twice.
4. Ask students, as a group, to set themselves a healthy snacks challenge for the next four weeks. Here are some sample challenges for this theme:
 - On [day of the week], I will bring two healthy snacks in my lunch box.
 - On [day of the week], I will bring three healthy snacks in my lunch box.

Suggestions

Days of the week

Talk about the days of the week and the seasons of the year. On which day of the week will the healthy snacks challenge take place?



CANADA AGRICULTURE
AND FOOD MUSEUM



Canada

Insects

1. Talk about insects. Explain that some insects, like butterflies, have a life cycle with four separate stages: egg, caterpillar or larva, pupa or chrysalis (with or without a cocoon) and adult.
2. Go over butterflies' habitat, needs (food and water), growth (egg, caterpillar, pupa and adult stages), diet (most caterpillars eat leaves, while most adult butterflies live on nectar from flowers) and physical characteristics (insects have bodies divided into three segments, six feet, two pairs of wings, an exoskeleton and one pair of antennae).
3. Talk about what the very hungry caterpillar in the story eats. Does it eat caterpillar food? What food should the caterpillar eat? Mostly leaves. What food should the butterfly eat? Mostly nectar or fruit juice (sugary juices produced when a fruit decays).

Writing a new, healthy version of *The Very Hungry Caterpillar*

1. Explain to students that their task is to write a new version of *The Very Hungry Caterpillar*, in which the caterpillar eats a well-balanced diet that includes nutritious foods.
2. Give each student a blank booklet (a few sheets of paper, folded in two and stapled together along the fold). On the board, write some key words from the story (including caterpillar, days of the week, cocoon and butterfly) as a reference for students.
3. Encourage students to organize their ideas using conceptualization tools, such as an idea diagram, or text development tools, such as a storyboard.
4. Once the stories have been written, students can illustrate them.
5. In class, read out one or two of the students' versions of *The Very Hungry Caterpillar*. Talk to them about the caterpillar's food choices. On the board, list the caterpillar's new foods in the appropriate food group columns. Do all the new foods belong in a food group (that is, are they all nutritious foods) or are some of the caterpillar's new foods treats?



CANADA AGRICULTURE
AND FOOD MUSEUM



Canada

HEALTHY SNACK OR TREAT?

	Healthy Snacks	Treats
Vegetables and Fruit	<ul style="list-style-type: none"> ▪ Fresh vegetables or fruit (whole or sliced) ▪ Vegetables or fruit with dip (hummus, tzatziki, baba ghanouj, low-fat ranch dressing or yogurt dip, etc.) ▪ Canned fruit or fruit salad in light syrup or water ▪ Fruit purée with no added sugar ▪ Dried vegetables (okra, spinach and/or kale chips, seaweed, etc.) ▪ Dried fruits ▪ Pickled vegetables (if low in sodium) ▪ 100% fruit juice and/or low-sodium vegetable juice (limit to 125 ml per day) ▪ Guacamole (with vegetables or whole grain crackers) 	<ul style="list-style-type: none"> ▪ Fruit leathers or chewy, gummy fruit snacks (high sugar content and can stick to teeth) ▪ Vitamin C-enriched fruit snacks (high sugar content and can stick to teeth) ▪ Sweetened fruit purées (regular applesauce) ▪ Cheesy, creamy vegetable dips ▪ Fried vegetables or fruits (potato chips, banana chips, etc.) ▪ Fruit drinks (high sugar content, other ingredients than fruits) ▪ Vegetable juice (if high in sodium) ▪ Fruit and vegetable chips
Milk and Alternatives	<ul style="list-style-type: none"> ▪ Yogurt (milk- or soy-based) and kefir ▪ Greek yogurt ▪ Cheese (milk-based or made with soy) ▪ Milk or soy beverage ▪ Flavoured milk or soy beverage (250 ml or less) ▪ Cottage cheese ▪ Puddings with no added sugar 	<ul style="list-style-type: none"> ▪ Flavoured milk or soy beverages <ul style="list-style-type: none"> ○ high sugar content ○ milkshake-like or confectionary brand ○ more than 250 ml ▪ High-fat pudding
Meat and Alternatives	<ul style="list-style-type: none"> ▪ Hard-boiled eggs ▪ Canned tuna/salmon ▪ Steamed soybeans (edamame) ▪ Cooked tofu or other meat substitutes (tofu burger, etc.) ▪ Hummus ▪ Soy or sunflower seed butter (WOWBUTTER® or SunButter®) ▪ Roasted soybeans, chickpeas or other legumes ▪ Dried squid or shrimp 	<ul style="list-style-type: none"> ▪ High-fat, processed luncheon meat (pepperoni, kielbasa, prosciutto, salami, etc.) ▪ Canned wieners and other highly processed canned meats (high in fat and sodium) ▪ Jerky or game meat (high in sodium)

	Healthy Snacks	Treats
Grain Products	<p><i>Try to make sure at least half your daily grain products are whole grain</i></p> <ul style="list-style-type: none"> ▪ Whole wheat or whole grain bread, English muffins, pita or tortillas (with cheese, hummus, tabbouleh, WOWBUTTER®, etc.) ▪ Whole grain bagel (½ a bagel) ▪ Whole grain crackers ▪ Brown rice cakes or other whole grain cakes ▪ Oatmeal, quinoa, barley or brown rice ▪ Whole grain cereal (with milk and fruit) ▪ Popcorn (low-fat microwavable or homemade air-popped) ▪ Granola bars if they <ul style="list-style-type: none"> ○ contain whole grains ○ contain dried fruit and/or seeds ▪ Muffins if they <ul style="list-style-type: none"> ○ are made with whole grain (whole grain flour, oats, buckwheat, bran, quinoa, etc.) ○ contain seeds (flaxseeds, chia, sesame, hemp, etc.) ○ are made with quinoa, sorghum or brown rice flour, etc. ○ contain fruits or vegetables (carrots, zucchini, banana, etc.) ○ are small in size (no bigger than a regular muffin tin) 	<ul style="list-style-type: none"> ▪ Granola bars if they <ul style="list-style-type: none"> ○ contain ingredients such as marshmallows, fudge, caramel ○ have a chocolate or yogurt coating ▪ Cookies if they <ul style="list-style-type: none"> ○ are highly processed ○ are covered or dipped in layers of chocolate ○ contain marshmallows, fudge, caramel, jellies and/or cream ▪ Muffins if they <ul style="list-style-type: none"> ○ are made with white flour ○ are from fast-food restaurants (typically too large) ○ contain chocolate chips or treat-like items ▪ Bagels (if made with white flour, large size) ▪ Pretzels (refined flour and high in sodium) ▪ Nachos (high in fat and sodium) ▪ Pastries (croissants, Danish, cinnamon buns, doughnuts, etc.) ▪ Corn nuts (high in fat and sodium) ▪ Flavoured popcorn (butter, caramel, etc.)

**Please note that this list is meant to be a guide to assist with the activity and is not a definitive list of healthy snacks and treats.*



CANADA AGRICULTURE
AND FOOD MUSEUM



Canada



HEALTHY SNACKS RECIPE BOOK



Students like to talk about how they make their favourite snacks. Compiling a healthy snacks recipe book gives them an opportunity to share recipes for their favourite snacks and discover new ones they can prepare with their families.

Curriculum links

- Health and Physical Education: Healthy Living
- Language: Writing

Learning objectives

- discover new healthy snacks
- learn how to write a recipe (title, list of ingredients, instructions on preparation)

Learning method

- participating in the compilation of a students' favourite healthy snacks recipe book

Instructions

1. After students have been following the Healthy Kids Quest for a few weeks, ask them to name their favourite healthy snacks.
2. Suggest that they create a favourite healthy snacks recipe book.



3. Describe the format to use in writing a recipe. Explain that a recipe includes a title (or name), a list of ingredients and step-by-step instructions on preparation. Given this information, readers can prepare any kind of dish, even ones they may not have tried before.
4. Send a note to parents explaining the project. Use the instructions provided below if needed.
5. Once the recipes have been written out and brought back to class, make copies, put into binders and distribute them to the students. Ask students to prepare the snacks with their parents.



CANADA AGRICULTURE
AND FOOD MUSEUM



Canada



HEALTHY SNACKS RECIPE BOOK

Dear parents and guardians,

As you know, your child's class has been participating in the Healthy Kids Quest for the last few weeks. The program is designed to empower and educate students to make healthy lifestyle choices. Your support and participation continue to contribute to the success of your child meeting the challenges the students have set for themselves.

Here is an opportunity to share your child's favourite healthy snack with the rest of the class. The students are working to compile a recipe book containing recipes for all their favourite healthy snacks. Once complete, each student will bring a copy of the recipe book home. It may provide inspiration as you prepare your child's lunch box!

Instructions

1. With your child, identify his or her favourite homemade healthy snack (e.g., carrot muffins, banana bread, fruit salad).
2. Help your child type the recipe on the computer. Use one of the following software applications:

_____.

Please send the recipe to the following email address:

_____ or save a copy
of the recipe on a USB stick and have your child bring it to class.

3. The recipe should include:
 - a title
 - a list of the ingredients
 - the steps needed to prepare the snack
 - safety precautions

Thank you for your co-operation!



CANADA AGRICULTURE
AND FOOD MUSEUM



Canada

HEALTHY SNACKS

Does preparing healthy snacks seem time-consuming? A bit of planning — plus creativity — can speed things up! Healthy snacks provide children with energy in between meals, while giving them some of the nutrients they need to stay healthy and to grow. To help your child meet the healthy snacks challenge, here are some healthy snack suggestions, as well as some easy recipes you can follow with your child.

Healthy snack tips

- Try to include vegetables or fruit in snacks. Most of the time, children don't manage to eat the daily recommended number of servings from this food group.
- For a balanced snack, aim to include foods from two of the four food groups.

Home cooking tips

- Designate a day to wash and prepare a big supply of vegetables. Making lunches is easier and faster when the vegetables are already prepared. Store pre-cut vegetables in a resealable container in the refrigerator. To keep vegetables such as carrots or celery crispy, add water to the storage container.
- Serve vegetables as an after-school snack, or prepare a raw vegetable plate as a side dish at supper.
- Cook with your children. Try new healthy snack recipes. Children are more likely to try new foods if they have helped prepare them.

Tips for making home-baked products more nutritious

- Instead of chocolate chips, use the same quantity of dried fruit in a recipe, or a mixture of the two for those with a sweet tooth.
- The quantity of white or brown sugar in recipes can be reduced by up to one-half without affecting the texture or taste of the end product.
- In recipes calling for honey or molasses, use pineapple juice or apple juice for one-half the quantity, and add five minutes to the cooking time.
- The quantity of fat in recipes can be reduced by up to one-third without affecting the texture or taste of the end product.



HEALTHY SNACKS IDEAS

Vegetables and Fruit	Grain Products	Milk and Alternatives*	Meat and Alternatives
<ul style="list-style-type: none"> ▪ Fresh vegetables or fruit (whole or sliced) ▪ Precut vegetables or fruit with dip (hummus, guacamole, tzatziki, baba ghanouj, low-fat ranch dressing or yogurt dip, etc.) ▪ Fruit salad or canned fruit in light syrup or water ▪ Fruit purée with no added sugar ▪ Dried vegetables (okra, spinach and/or kale chips, seaweed, etc.) ▪ Dried fruits ▪ Pickled vegetables (low in sodium) ▪ 100% fruit juice and/or low-sodium vegetable juice (limit to 125 ml per day) ▪ Fruit (and vegetable) smoothies <p>Add some fun!</p> <ul style="list-style-type: none"> ✓ Make fruit and cheese kebabs ✓ Use cookie cutters to cut veggies and fruit ✓ Ants on celery: add nut-free butter and dried fruit to a celery stick 	<ul style="list-style-type: none"> ▪ Whole wheat or whole grain bread, English muffins, pita or tortillas (with cheese, hummus, tabbouleh, WOWBUTTER®, etc.) ▪ Whole grain bagel (½ a bagel) ▪ Whole grain crackers ▪ Brown rice cakes (or other whole grain cakes) ▪ Popcorn (low-fat microwavable or homemade air-popped) ▪ Whole grain granola bars: choose bars that are <ul style="list-style-type: none"> ○ low in sugar and fat ○ free of chocolate, caramel, marshmallow, etc. ▪ Muffins: choose muffins that are <ul style="list-style-type: none"> ○ made with whole grain (whole grain flour, oats, buckwheat, bran, quinoa, etc.) ○ contain seeds (flaxseeds, chia, sesame, hemp, etc.), fruits or vegetables (carrots, zucchini, banana, etc.) ○ small in size (no bigger than a regular muffin tin) <p>Serve whole grains for a snack. They are delicious, filling and nutritious!</p> <p>Mix a grain product and a protein source to create an energy-packed snack.</p>	<ul style="list-style-type: none"> ▪ Yogurt (milk- or soy-based) and kefir ▪ Greek yogurt ▪ Cheese (milk-based or made with soy cubes; slices or strings) ▪ Milk or soy beverage ▪ Flavoured milk or soy beverage (250 ml or less) ▪ Cottage cheese ▪ Puddings with no added sugar <p>* Choose low-fat options</p> <p>Add some fun!</p> <ul style="list-style-type: none"> ✓ Make a yogurt parfait: add dry cereal and fruit to yogurt. ✓ Create your own flavour. Add maple syrup, honey, fruit or jam to plain yogurt. 	<ul style="list-style-type: none"> ▪ Hard-boiled eggs ▪ Canned tuna/salmon ▪ Steamed soybeans (edamame) ▪ Cooked tofu ▪ Hummus ▪ Soy or sunflower seed butter (WOWBUTTER® or SunButter®) ▪ Roasted soybeans, chickpeas or other legumes ▪ Luncheon meats: choose meats that are <ul style="list-style-type: none"> ○ lower-fat, sodium-reduced <p>Meat and alternatives are a high source of protein. Try to pair them with grain products or vegetables and fruit.</p>



CANADA AGRICULTURE
AND FOOD MUSEUM



Canada



JUICY STRAWBERRY JELLIES

Ingredients

90 ml	boiling water	6 tbsp
	1 package gelatin	
450 ml	berry juice	$\frac{3}{4}$ cup
	15 to 18 ripe strawberries	
	whipped cream as a garnish	

Instructions

1. Pour the boiling water into a pitcher. Sprinkle the gelatin on the surface of the water. Mix with a whisk until the gelatin has dissolved.
2. Add the berry juice to the gelatin mixture and blend well.
3. Hull the strawberries and cut them into pieces.
4. Put the strawberry pieces in individual serving dishes (glasses, small goblets or bowls). Do not overfill the dishes.
5. Pour the gelatin mixture over the strawberry pieces, filling the dishes to the brim. Refrigerate until the gelatin has set (approximately 4 hours).
6. Garnish with whipped cream and serve.

Yield: 6 servings

Nutrition Facts per serving		Calories 45
Fat 0 g	Fibre 2 g	Vitamin C 90% DV
Sodium 5 mg	Protein 2 g	Calcium 2% DV
Carbohydrate 10 g	Vitamin A 0% DV	Iron 2% DV

Recipe adapted from http://www.bbcgoodfood.com/recipes/531634/strawberry-jellies?beta=1&utm_expid=13353178-7



CANADA AGRICULTURE
AND FOOD MUSEUM



Canada



MAKE-AHEAD BERRY PARFAITS

Ingredients

250 ml	large-flake rolled oats	1 cup
50 ml	chopped almonds, pecans or walnuts (optional)	¼ cup
30 ml	ground flaxseeds	2 tbsp
750 ml	2% plain yogurt	3 cups
45 ml	granulated or packed brown sugar	3 tbsp
5 ml	vanilla extract	1 tsp
500 ml	blueberries, sliced strawberries and/or raspberries	2 cups

Instructions

1. In a non-stick skillet over medium heat, toast large-flake rolled oats and nuts (if using), stirring constantly for 2 to 3 minutes or until golden and fragrant. Immediately transfer to a bowl and let cool. Stir in flaxseeds.
2. In another bowl, whisk together yogurt, sugar and vanilla.
3. Alternate oat mixture, yogurt and berries, creating layers in 6 individual containers (375 ml/1½ cup size). Use reusable containers with lids, or tall glasses. Seal container lids or cover glasses with plastic wrap and refrigerate for least 8 hours or up to 2 days.

Tip

You can use fresh or frozen berries. If using frozen, do not let berries thaw before assembling the parfaits. They may tint the yogurt purple and red but the taste will still be delicious!

Yield: 6 servings

Nutrition Facts per serving		Calories 190
Fat 4.5 g	Fibre 4 g	Vitamin C 15% DV
Sodium 40 mg	Protein 12 g	Calcium 10% DV
Carbohydrate 27 g	Vitamin A 2% DV	Iron 4% DV

Recipe adapted from www.getenough.ca



CANADA AGRICULTURE
AND FOOD MUSEUM



Canada