

## Grade 3: Exploring Food: Changes with Cooking, Freezing, and Drying



Developed by AHS, Nutrition Services in consultation with the Body Image Research Lab at the University of Calgary's Werklund School of Education – May 2025



### Teacher Background:

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### References for this presentation:

Health Canada. Cooking methods. Canada's food guide kids. Toolkit for educators. 2024 Apr 29 [cited 2025 March 14]. Available from:

[https://food-guide.canada.ca/sites/default/files/artifact-pdf/Cooking%20methods\\_ENG.pdf](https://food-guide.canada.ca/sites/default/files/artifact-pdf/Cooking%20methods_ENG.pdf)

Government of Canada. Healthy Cooking Methods. 2025-03-13.

Available from: <https://food-guide.canada.ca/en/tips-for-healthy-eating/healthy-cooking-methods/>

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How does food change?

## cooking



### **Cooking**

- Cooking is how we change food to make it safe, tasty, and easy to eat.
- When we cook, we use heat to turn raw ingredients like vegetables, meat, and grains into meals we can enjoy. For example, when we bake bread, the dough starts soft but the heat from the oven makes it fluffy and firm.
- Cooking also helps bring out flavors and makes some foods, like carrots or potatoes softer to chew.
- There are many ways to cook, like baking, boiling, frying, and grilling. Each one makes food taste a bit different.

Let's explore!

Ways to cook food

## bake or roast



oven

### Baking

- Baking and roasting are a type of cooking that uses hot air to heat the ingredients.
- At home, this is what we use an oven for. Heat from the element in the oven heats the pan and moves the air around (circulates) to heat the top and the sides of the food. As food cooks it becomes more flavourful and releases delicious smells into the air.
- We can normally tell that food is cooked when it is heated all the way through and there is some light or dark browning on the surface of the food.
- Some foods cook for longer times at a lower temperature, others cook for shorter times at a higher temperature, and some cook for a mix of both.

When cooking foods in the oven like breads, cakes, and cookies, we call it baking. If we are cooking foods in the oven like vegetables, meat, or dishes with a mix of these foods, we call it roasting.

### Image source:

Squash – Microsoft 365 Stock Images

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## Ways to cook food

### slow cook



slow cooker

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#### Slow Cooking

- An alternative to baking and roasting in the oven is to use a tool (appliance) like a slow cooker.
- A slow cooker is used to cook food over a long period of time using low heat, so the food doesn't burn. This low heat often helps to make food more tender and easier to chew.
- It is used to cook food like soups, stews, and meats over a longer time.

#### Image source:

Soup - Microsoft 365 Stock Images

## Ways to cook food grill or broil



barbecue  
griddle  
oven

### Grilling and Broiling

- These both use very high heat for a short amount of time to crisp and brown the top or bottom of the food.
- Grilling heats the bottom and broiling heats the top. These are often used to cook fish, meat, vegetables, and some fruit.
- Broiling can be a good way to get a crispy, crunchy top on food that has already been cooked through.
- Because broiling uses very high heat, you need to keep a close eye on the food so it doesn't burn and may need to be flipped to cook both sides.
- Also, you need to be careful about the type of cookware you use. Glassware can shatter at these high heats, so it is best to use a metal pan or one specially made for broiling.

### Image source:

Person with oven and grilled kabobs - Microsoft 365 Stock Images

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## Ways to cook food

### sauté or pan fry



frying pan

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#### **Sauté or pan fry**

- These methods both are done using a frying pan on top of the stove.
- Sautéing uses higher heat with very little oil. It typically is used for vegetables and results in a crisp outside with the vegetable holding its original shape and the texture has more of a bite.
- Pan frying typically uses medium heat with more oil than used in sautéing. All sorts of foods can be pan fried and the final result is a softer texture.

#### **Image source:**

Woman with frying pan – Microsoft 365 Stock Images

## Ways to cook food

### boil or poach



stove

#### Boil and Poach

- Boiling is a way to cook with wet heat. You can tell if a liquid is boiling when you see lots of big bubbles forming quickly in the liquid.
- You can boil foods like dried pasta, rice and soup.
- After bringing the liquid to a boil, it is common to turn the heat down until gentle bubbles form at the surface. This is known as simmering.

Another cooking technique is to poach food. This uses simmering water to cook foods like eggs and fish. If you have ever had Eggs Benedict, the type of eggs usually served with this are poached.

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## Ways to cook food steam



stove  
pressure cooker

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### Steaming

- Steaming is another way to cook with wet heat. Steaming uses moisture from boiling water but the foods are not directly in the water.
- Steaming keeps the food's shape and texture better than boiling and is used to cook foods like broccoli, carrots, green beans, and fish.
- A common way to steam food is with an insert (like a tray or basket) in a pot on the stove.

Pressure cookers also use steam to cook foods in a faster time than they would cook in a regular pot on the stove. Some pressure cookers are used on the stove, while other models can be used on the countertop. As the name suggests, high pressure steam builds up and users have to know how to safely release this steam before opening the cooker. Always ask an adult before trying to use a pressure cooker and have them help.



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## Ways to cook food magnetrons



microwave

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### **Microwave**

- Microwaving uses a type of energy called “microwaves” to make the water in food move around quickly which energizes, or heats, the food.
- Microwaves are used to cook, reheat, and defrost food.

Did you know? A magnetron is the part of a microwave that creates the microwaves!

### **Image source:**

Woman in kitchen and children – Microsoft 365 Stock Images

## How does food change? **freezing**



**freezer**

### **Freezing**

- Freezing is a way to keep food safe for a long period of time.
- At freezing temperature everything stops moving – including the germs that make food go bad and that can make you sick.
- Fresh vegetables and fruit that companies freeze for the grocery store are picked when they are perfectly ripe, which means that when you eat them you are getting the same nutrition as the fresh version.
- When frozen food thaws it sometimes becomes a softer, mushier texture due to the freezing action.

Did you know? We often talk about “below 0” as being freezing, but freezers are set at -18°C or lower to make sure food stays properly frozen.

### **References:**

Government of Canada. Storing Vegetables and Fruit. 2025-03-31. Available from: <https://food-guide.canada.ca/en/cooking-skills/storing-vegetables-fruits#freezer>

## How does food change? drying



dehydrator

### Drying

- Drying food is a way to make it last a long time by removing the water inside it. Germs (like bacteria, yeast, and mold) need moisture to grow which make food spoil.
- Foods can be dried by keeping them in an area with low humidity, a source of low heat (to help moisture evaporate), and with good air circulation. This can be done in a special machine called a dehydrator. It can also be done at low temperatures in the oven, in the sun, or over a fire, although it takes longer time than compared to using a dehydrator.

Some examples would be dried fruit such as raisins, fruit leather, or banana chips. We can also dry meat to make things like meat or salmon jerky. A traditional Indigenous food is pemmican which was made from dried meat, melted fat, and berries such as saskatoon, blueberries, or cranberries.

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## What did we learn?

Which of these cooking methods makes the best food?

Which of these cooking methods have you tried before?



### Discussion:

What did we learn?

Which of these cooking methods makes the best food?

Which of these cooking methods have you tried before?