Cooking Methods

Description
Students will analyze dry-heat, moist-heat, and combination cooking methods and the appropriate use and procedures for each. They will then prepare and compare foods that utilize both dry-heat and moist-heat cooking methods.

Lesson Objectives
Students will be able to:
• identify the differences between the dry-heat and moist-heat cooking methods
• compare the classifications of moist-heat and dry-heat cooking methods
• identify proper cooking methods that are best suited to different kinds of foods
• demonstrate techniques associated with the appropriate method of cooking relating to the recipe that will be prepared
• utilize dry-heat and moist-heat methods to prepare food, and
• demonstrate correct kitchen safety procedures and techniques.

Assumptions
• The teacher will be familiar with correct cooking method procedures and will use appropriate resources.
• Students have received orientation on the subject of kitchen and food safety.
• Workstation Set-up and Knife Skills Activity Plans have been successfully previously completed.
• The teacher will demonstrate the dish to be prepared and all students will have a copy of the recipe.
• The teacher will have the flexibility to choose the recipe based on available resources, time, and physical space.

Safety Considerations
• Students will practise proper use of personal protective equipment (PPE) at all times.
• Students have received orientation on the subject of kitchen and food safety.
• Workstation Set-up and Knife Skills Activity Plans have been successfully previously completed.
Terminology

Dry-Heat Method Terminology

bake: To bake is to cook in an oven without direct heat.
broil: To broil is to cook in an oven with direct high heat from the top.
carmelization: Carmelization is the process of sugar turning brown when heated. It is used in cookery to brown the outside of food and add a sweet, nutty flavour.
depth fry: To deep fry is to completely immerse foods in hot fat, typically a vegetable-based oil.
dry-heat method: The dry-heat method utilizes both air and fat to create rich flavours due to the carmelization and browning of foods.
fry: To fry is to cook in a pan using direct heat and enough fat to cover the bottom.
grill: To grill is to use direct heat to cook foods on a grill.
pan-fry: To pan-fry is to cook food in a pan using a moderate amount of fat.
roast: To roast is to use indirect heat to surround food with hot air so that it cooks evenly on all sides, typically at a higher temperature than baking.
sauté: To sauté is to quickly cook food in a hot pan using minimal amounts of fat.
sear: To sear refers to the process of caramelizing the outside of meats and poultry before the start of the cooking process.
stir-fry: Typically done in a wok, stir-frying is an Asian style of sautéing requiring a very hot pan in which food is constantly being moved or stirred.

Moist-Heat Method Terminology

moist-heat method: The moist-heat method involves cooking foods in various amounts and types of liquids.
poach: To poach is to submerge food into liquid and cook it at a very low temperature.
simmer: To simmer is to submerge foods into a liquid and cook at a high temperature, just under boiling.
steam: To steam is to cook foods indirectly using steam.
stew: To stew is to submerge foods in a stock or other liquid, and cook at a low heat. This will result in a tender dish that has also created a sauce. If proteins are browned first, then this will become a combination method of cooking.

Combination Methods Terminology

braise: Typically used for meats and poultry, to braise requires that foods are first seared, then placed in a cooking vessel along with liquid that only comes 2/3 to the top, covered, and cooked slowly at lower heat.
combination cooking: Combination cooking uses both dry and moist heat cooking methods. Typically, proteins are caramelized and then placed in a small amount of liquid to complete the cooking process.
Estimated Time
1–3 70-minute classes, depending on the amount of labs chosen for this lesson

Recommended Number of Students
Up to 24

Facilities
Home Economics teaching lab and/or Culinary Arts teaching kitchen

Resources


Demonstrating Skills And Knowledge

Procedure
Students will need to be introduced to the concept of cooking methods through demonstration or another format chosen by the teacher. This lesson may simply be one day of theory or may also used as a lab.

Day 1
The teacher will introduce the class to a number of moist and dry heat cooking methods. This may be done using teacher-led demonstrations in combination with another lesson or activity, or simply a teacher-led lesson.

Day 2 [If choosing to extend the lesson with a lab(s)]
1. Inexpensive ingredients may be chosen to carry out a cooking methods lab. There are many recipes for eggs or potatoes that use both dry and moist heat combinations. Dishes such as eggs benedict may be used to demonstrate the use of moist heat methods, while dry heat cooking methods using eggs could involve a frittata, quiche, or breakfast burrito. If using potatoes, students may make French fries (dry), mashed potatoes (moist) or Duchess potatoes (combination) and compare textures and flavours of the final products.

2. This Activity Plan includes two recipes: chow mein and perogies.

3. The teacher will provide students with the recipes they will be expected to reproduce in the following class.

4. Students will use their recipes and create the demonstrated dish(es), highlighting a specific cooking method as per the instructions of the teacher. Students may all make the same dish(es) or the teacher may assign various methods to different groups.

5. After cooking is complete, students will have the opportunity to compare final products, their textures, and their flavours.

6. At the end of the class, students will present to the teacher the finished product for visual and tasting assessment.

Day 3 +
If only one cooking method was highlighted in the first demo/lab, proceed with another demonstration and lab until all cooking methods have been demonstrated and/or (where applicable) practised.
Evaluation Guidelines

If only introducing the cooking methods as theory, a summative and/or formative assessment may be used.

For the lab, students will receive a formative evaluation on:

- positive participation in cooking labs
- observational assessment during the lab, and
- final product meets outlined and demonstrated standards.

The rubric attached to this Activity Plan may be filled in, or students may be asked to complete self- and group evaluations set up by the teacher.

Extension Activities

This Activity Plan can be adapted in the following ways:

- international cooking
- Aboriginal cooking—example: wild rice served with buffalo meatballs or salmon
- identify local agriculture—perogies
- can be added to other Activity Plans to complete or complement their results
- nutritional information
**Chow Mein**

**Ingredients:**
- 25 mL oil
- 125 mL meat (chicken, beef, pork, tofu, egg)
- 1 egg
- 1 garlic clove
- ¼ onion (diced)
- 1 carrot, peeled (cut on diagonal)
- 1 celery stalk (cut on the diagonal)
- Optional: ginger, mini-corns, water chestnuts, broccoli

**Method:**

1. On a cutting board cut all the vegetables before preheating the oil. Cut the carrots and celery on the diagonal to increase the surface area. Peel and crush the garlic clove. Slice the peppers into julienne.
2. Cut the meat into bite-sized pieces, or crack and mix the egg in a small glass bowl.
3. Mix 80 mL water (from the 200 mL), soya sauce, salt, and cornstarch in a small glass bowl with a fork to stir out all lumps.
4. Preheat the oil in the wok to 175°C. Be careful: if you see smoke at any time during the cooking, turn the heat down, as the next step is fire. If there is a fire, smother with the lid. Add the protein (meat or egg) into the hot oil and fry until done. Remove and place on a plate.
5. Check that there is some oil remaining to stir-fry the vegetables. Add the hard vegetables first, as they need longer to cook. Stir-fry carrots, celery, and onions. Add crushed garlic and peppers. Add 120 mL water and cover to steam. Cook 4 minutes, then add noodles, stir, and cover. Make sure to check that the noodles do not dry out and stick to the bottom. Add meat and egg. Then add the cornstarch and soya sauce mixture. Stir-fry until noodles are soft.

**Rice**
- 125 mL rice
- 250 mL water
- 2 mL salt

**Method:**
Add all ingredients and cover with a tight-fitting lid. Cook on high until water boils. Turn the heat down to low and cook for 14 minutes. Remove from heat and, without peeking, let the pot sit for 5 minutes before serving. For fried rice, make the rice ahead of time, allow it to cool, and then fry in oil.
Ukrainian Perogies Using BC Local Ingredients

**Ingredients:**
- 250 mL flour
- 125 mL sour cream
- 5 mL salt

**Fillings:**
- 1 large or 2 small potatoes
- 5 mL margarine
- 60 mL grated cheddar cheese

**Optional:** You may fry perogies once boiled with margarine and diced onion.

**Method:**
1. Peel and cube potatoes so they cook faster and place in medium-sized saucepan half full of water. Boil until fork tender.
2. Sift flour and salt into a large mixing bowl. Add half the sour cream. Mix with a fork until it forms together, and then add the remainder of the sour cream and stir until the dough forms a ball. You may use your hands and knead it until you have a soft dough consistency.
3. Roll the dough out on a lightly floured surface until fairly thin: just enough to hold together when it is cooked and thin enough so it is not doughy when you eat it.
4. Use a glass or biscuit cutter to cut circles. Put a clean towel over them while you prepare the filling so they don’t dry out.
5. When the potatoes are fork tender, drain them, being careful not to burn yourself on the steam. Add the margarine and cheese and mash together until creamy.
6. Fill a large saucepan half-full of water and bring to a boil over high heat.
7. Filling procedure: holding one of the dough circles in your hand, put approximately 5 mL of filling on one half of the dough circle. Fold the other half over and pinch the edges together so they will not open up when you boil them. After you have prepared 6, add them to the boiling water. Put in only enough to cover the bottom of the saucepan. Continue to fill the remaining dough circles.
8. If you would like to fry the perogies, while they are boiling dice onions and add them to 5 mL of melted margarine in a frying pan. When all the perogies are cooked, mix them in with the onions and fry them lightly on medium heat. Fry until they are the desired texture and serve with a garnish. If there are bits and pieces of dough left over, boil them with the rest of the perogies, as the dough itself is very good.
9. **Other variations for fillings:** mushrooms, cottage cheese, applesauce, hamburger, bacon, yams with blue cheese.
### Rubric for Marking Practical Assignments

<table>
<thead>
<tr>
<th>Learning outcome</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use of correct techniques</strong></td>
<td>B2  Able to explain the cooking technique</td>
<td>B3  Able to use the technique with confidence</td>
<td>B4  Lacks basic understanding of the technique</td>
<td>B5  Unable to use the technique</td>
</tr>
<tr>
<td>A3  Able to summarize the recipe with understanding</td>
<td>A4  Able to summarize the recipe</td>
<td>A5  Understands some aspects of the recipe</td>
<td>A6  Lacks understanding</td>
<td>A7  Requires more than one trip to get necessary ingredients</td>
</tr>
<tr>
<td><strong>Work/organization</strong></td>
<td>A1  Explain cross-contamination and select ingredients in the correct manner</td>
<td>A2  Select ingredients without cross-contamination</td>
<td>A3  Random collection of ingredients</td>
<td>A4  Requires more than one trip to get necessary ingredients</td>
</tr>
<tr>
<td>A5  Actively engaged at all times (no leaning or sitting)</td>
<td>A6  Engaged but not productive</td>
<td>A7  Intermittently engaged</td>
<td>A8  Failure to contribute, resulting in additional work for others</td>
<td>A9</td>
</tr>
<tr>
<td><strong>Managing time and equipment</strong></td>
<td>A5  Lab finished with lab check prior to the bell</td>
<td>A6  Rushed to complete lab check by the bell</td>
<td>A7  Unable to complete by the bell</td>
<td>A8  Late for next class</td>
</tr>
<tr>
<td>A4  Demonstrates correct understanding of equipment</td>
<td>A5  Identifies equipment but use is improper</td>
<td>A6  No knowledge of equipment</td>
<td>A7</td>
<td></td>
</tr>
<tr>
<td>A3  Able to interpret and execute recipe</td>
<td>A4  Able to execute recipe</td>
<td>A5  Cannot demonstrate execution of recipe without some assistance</td>
<td>A6  Needs assistance to execute</td>
<td>A7</td>
</tr>
<tr>
<td><strong>Product appearance and nutritive value</strong></td>
<td>A6  Outcome resembles demonstration product</td>
<td>A5  Resembles demonstration product</td>
<td>A4  Product is edible</td>
<td>A3  Product is not edible</td>
</tr>
<tr>
<td>C1  Can identify a nutrient from the product and explain its function</td>
<td>C2  Can identify a nutrient</td>
<td>C3  Requires assistance to identify a nutrient</td>
<td>C4  Unable to identify a nutrient</td>
<td>C5</td>
</tr>
<tr>
<td>C4  Can give several alternatives to increase the nutritive value of the recipe</td>
<td>C3  Can explain one alternative for a healthier choice</td>
<td>C2  Requires assistance to identify a healthy alternative</td>
<td>C1  Unable to identify a healthy alternative</td>
<td>C0</td>
</tr>
<tr>
<td><strong>Product</strong></td>
<td>B1  Original presentation and appropriate table setting</td>
<td>B2  Plated as discussed or demonstrated in demonstration</td>
<td>B3  Plating is less than appealing</td>
<td>B4  Plating is unacceptably poor</td>
</tr>
</tbody>
</table>