Research Basic Food and Kitchen Safety

Description
In this activity, students will review and demonstrate the basic food and kitchen safety required for the completion of the activities in the baking module. Students will watch a short video, examine kitchen and food safety posters, and review food and kitchen safety terminology. After reviewing the information about food and kitchen safety, students will complete a quiz and reflect on their learning.

Lesson Objectives
Students will be able to review and demonstrate an understanding of basic food and kitchen safety requirements. This includes safe handling of food, safe storage of food, oven safety, kitchen communication, cleaning and sanitization, and personal hygiene.

Assumptions
Students are prepared to share, discuss, and brainstorm common sense awareness of safe and unsafe food handling, storage, and kitchen behaviour.

Terminology

**Bacteria**: A microorganism that can cause illness when present in food. Common bacteria associated with food include salmonella, E. coli, and listeria. Proper food handling procedures reduce the risk of foodborne illness related to bacteria.

**Control measures**: Systems that are in place and actions that are taken to maintain food safety and to prevent foodborne illness.

**Cross-contamination**: This occurs when bacteria, viruses, toxins, and/or pathogens are transferred between food or to food via un-sanitized utensils, hands, or surfaces. Contaminated food can cause foodborne illness.

**FIFO**: An acronym for a food rotation and storing system that applies to dry goods, frozen food, and refrigerated food. FIFO stands for “first in, first out.” This system, when used properly, helps prevent foodborne illness, ensures safe food for consumption, and reduces food waste.

**Foodborne illness**: This is also referred to as foodborne disease or food poisoning and is the result of food spoilage due to contamination, bacteria, pathogens, parasites, and/or toxins. Symptoms include vomiting, diarrhea, fever, aches, and sometimes death. This can be prevented by proper food handling and kitchen safety.

**Perishable food**: Food that is perishable is likely to decay or spoil quickly without proper food storage. Some foods will perish more quickly than others.

**Potable water**: Water that is safe to drink and free from contaminants that may cause illness.
Sanitization: To sanitize a kitchen is to remove dirt, germs, bacteria, disease, infection, and food from utensils, equipment, and surfaces. Detergent, disinfectant, and sanitizers are used to sanitize.

The World Health Organization’s Five Keys to Safer Food:
• keep clean
• separate raw and cooked food
• cook food thoroughly
• keep food at safe temperatures (hot at more than 60°C and cold at less than 5°C), and
• use safe (potable) water and safe raw materials. (See WHO video below for more details.)

Estimated Time
60–120 minutes

Recommended Number of Students
The brainstorm part of the activity can be done as a whole class or in small groups. Students will complete the quiz and written reflection independently.

Facilities
Internet-accessible computer, projector, and screen.

Resources
WHO Keys to Safer Food
https://www.youtube.com/watch?v=ONkKy68HEIM
Demonstrating Skills And Knowledge

Procedure

1. Begin the activity by brainstorming common sense food and kitchen safety. Ideas can be added to Padlet, Google doc, whiteboard, poster paper, etc.

2. Review video, terminology, and posters.

3. Students complete quiz.

4. Students reflect on the activity by writing one to two paragraphs. It is recommended to use word processing software or have students post in a portfolio or blog. See Create and Maintain a Journal or Portfolio for details. If students create a digital copy of their reflection, it can be added to the portfolio or blog later. Guiding questions include:
   a. “What surprised you most?”
   b. “What are the top 5 things to consider when it comes to kitchen and food safety?”
   c. “Why is basic food and kitchen safety important for bakers?”

Evaluation Guidelines

Consider co-creating the assessment criteria with your students at the beginning of the activity/project. You may want to include the following:

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<th>Emerging</th>
<th>Developing</th>
<th>Proficient</th>
<th>Extending</th>
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<tbody>
<tr>
<td>Able to identify ways to maintain basic food and kitchen safety.</td>
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<td>Understands food and kitchen safety terminology introduced in this activity.</td>
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<td>Wrote a reflection that demonstrates his/her understanding of the importance of basic food and kitchen safety.</td>
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Quiz

Answer the following questions.

1. List five ways to maintain personal hygiene in a kitchen environment.

2. List three ways to be safe when using ovens.

3. Describe three characteristics of safe kitchen shoes.

4. List three ways in which you can avoid cross-contamination in your kitchen.

5. What is the danger zone and what happens to food in the danger zone?

6. What does FIFO stand for and what is its purpose?
7. At what temperature should the fridge be kept?

8. At what temperature should hot food be kept?

9. Why is food safety important in the baking industry?

10. What are the World Health Organization's Five Keys to Safer Food?

11. List three ways that this photograph demonstrates kitchen safety.

Figure 1
12. List three ways that this photograph demonstrates kitchen safety.
Match Terms With Definitions

1. a microorganism that can cause illness when present in food. Common bacteria associated with food include salmonella, E. coli, and listeria. Proper food handling procedures reduce the risk of foodborne illness related to bacteria.

2. systems that are in place and actions that are taken to maintain food safety and to prevent foodborne illness.

3. this occurs when bacteria, viruses, toxins, and/or pathogens are transferred between food or to food via un-sanitized utensils, hands, or surfaces. Contaminated food can cause foodborne illness.

4. an acronym for a food rotation and storing system that applies to dry goods, frozen food, and refrigerated food. FIFO stands for “first in, first out.” This system, when used properly, helps prevent foodborne illness, ensures safe food for consumption, and reduces food waste.

5. this is also referred to as foodborne disease or food poisoning and is the result of food spoilage due to contamination, bacteria, pathogens, parasites, and/or toxins. Symptoms include vomiting, diarrhea, fever, aches, and sometimes death. This can be prevented by proper food handling and kitchen safety.

6. food that is perishable is likely to decay or spoil quickly without proper food storage. Some foods will perish more quickly than others.

7. water that is safe to drink and free from contaminates that may cause illness.

8. to sanitize a kitchen is to remove dirt, germs, bacteria, disease, infection, and food from utensils, equipment, and surfaces. Detergent, disinfectant, and sanitizers are used to sanitize.

___ Potable water
___ Perishable food
___ Foodborne illness
___ Sanitization
___ Cross-contamination
___ Control measures
___ FIFO
___ Bacteria
Answer Key

1. Hat/cap/net covering hair; No dangling jewelry; Wear clean clothing; Cover all wounds; Keep nails trimmed and clean; Wear shoes that cover the entire foot.

2. Always use oven mitts when handling hot trays; open the oven all the way when inserting or removing trays; turn off the oven when not in use; communicate by saying “hot” when moving hot trays.

3. Non-flammable; shoelaces are tied and tucked in (or no laces); full foot covered; non-slip.

4. Wash knives and other equipment regularly; keep raw and cooked foods separate; keep tools separated between raw/cooked, meat/non-meat, etc.; wash hands regularly; wipe surfaces as soon as highly perishable food such as eggs, cream and milk are present.

5. The danger zone is between 4°C (40°F) and 60°C (140°F). This is where bacteria can grow rapidly and cause foodborne illness.

6. FIFO is an acronym for a food rotation and storing system and applies to dry goods, frozen food and fresh food in the refrigerator. FIFO stands for “first in, first out.” This system, when used properly, helps to prevent foodborne illness, ensures safe food for consumption, and reduces food waste.

7. Refrigerate food at or below 4°C (40°F).

8. Hot food should be kept at 60°C (140°F) and cooked or reheated to 74°C (165°F).

9. To prevent illness; be aware of potential kitchen hazards; and to make sure food tastes delicious and fresh.

10. Keep clean; separate raw and cooked food; cook food thoroughly; keep food at safe temperatures; use safe water and safe raw materials.

11. Handwashing station with reminder; fingernail scrub; eye wash station; paper towel; hot and cold water; soap.

12. Hair covered; clean uniform; sleeves rolled up; oven mitts on; no dangling jewellery; proper footwear.

Match Terms With Definitions

1  Bacteria
2  Control measures
3  Cross-contamination
4  FIFO
5  Foodborne illness
6  Perishable food
7  Potable water
8  Sanitization