Student NUTRITION
EAT. LEARN. SUCCEED. ONTARIO

SAFE FOOD HANDLING TRAINING PROGRAM

EAT. LEARN. SUCCEED.

TABLE OF CONTENTS

PART 1:

PURCHASE, TRANSPORTATION AND STORAGE

LEARNING OBJECTIVES:

You will work on developing the skills necessary to:

- Plan an efficient & effective shopping trip
- Accommodate special dietary restrictions
- Transport food safely to school
- Store foods properly
- Store chemicals safely

KEY TERMS

Food Premises: Schools that provide Breakfast Programs are considered "food premises" and are covered by food safety laws through the Ontario Food Regulation. This is one of the many reasons why it is critical to follow all the safe food handling steps throughout the food purchasing, prepping, delivery and clean up phases.

GAP Certified: Good Agricultural Practices (GAP) is a voluntary audit that verifies that fruits and vegetables are produced, packed, handled, and stored as safely as possible to minimize the risk of microbial food safety hazards. Farms must be Canada GAP certified or your Lead Agency will need to complete the farm checklist to ensure that the farm adheres to food safety standards before food is purchased or donated to the breakfast program.

To assist with safe food handling, there are three organizations responsible for ensuring food safety in Canada:

Health Canada

- Develops food safety and nutrition standards and policies.
- Assesses food safety risks.
- Promotes healthy eating through initiatives like Canada's Food Guide.

The Canadian Food Inspection Agency

- Sets standards to detect and prevent risks to Canada's food supply.
- Verifies that industry is meeting federal food safety and regulatory requirements.

The Public Health Agency of Canada

- Conducts food-related illness surveillance and outbreak investigations.
- Provides advice to Canadians on how to protect themselves during an outbreak.

SHOPPING

All food used in meal or snack programs in Ontario, must come from places that have been inspected. These could include:

- Grocery stores
- Restaurants
- Caterers
- Other food companies such as distributors

DID YOU KNOW:

You cannot accept food that has been prepared in a private home.

REFLECT ON IT ...

Where can you purchase foods locally?

_____

_____

Do you know of any farms in your area?

_____

_____

Programs are encouraged to make strong relationships with grocery stores in order to make the purchasing process as smooth as possible.

Quite often this is the best connection the program can make! Many grocers go above and beyond to support the Student Nutrition Programs with not only food but sometimes money and volunteers. Strong relationships with the grocer will make it easier on the volunteers as many will open accounts for the individual schools, relieving the stress of payment. Establishing strong partnerships within the food industry will create systems that make it easier to purchase food in a more competitive, convenient and sustainable way.

Prior to shopping for the required supplies, complete the menu planning process which will guide the shopping experience. Menu planning should be kept simple and follow the nutritional requirements developed by Ministry of Children, Community and Youth Services.

The following steps should be followed when shopping for supplies at the grocery store:

1. Ensure you have a menu that captures 3 food groups every day.
2. Avoid foods and beverages that are high in fat, including trans-fats, salt and/or added sugar, artificial sweeteners and low in nutrients.
3. Avoid processed or packaged foods.
4. Select products that are fresh, not wilted and/or overripe.
5. Always check the expiry/best before dates.
6. Ensure packaging is intact, cans are free of dents and all jars are sealed.
7. Keep raw and ready to eat foods separated to prevent cross-contamination.
8. Shop for cold foods last.

REMEMBER!

You cannot accept food from any emergency food source such as a food bank.
Always try to be environmentally aware and buy local foods when possible!

BE AWARE OF STUDENT FAITHS, CULTURES, ALLERGIES AND NEEDS WHEN CREATING THE MENU AND SHOPPING FOR FOODS.

Make sure to offer foods and beverages that appeal to all.

SPECIAL DIETARY REQUIREMENTS

REMEMBER!

As a volunteer you should always be aware of dietary requirements, allergies and culturally appropriate foods when providing foods to students.

You should always follow the School Board's anaphylaxis policy.
Anaphylaxis plans of children and youth with allergies should be shared with all volunteers.

In order to help keep students with food allergies safe and feeling well, use the following best practices:

1. Supervise young children when eating;
2. Have a "no sharing rule" while eating, especially in elementary schools;
3. Encourage all students to wash their hands before and after eating;
4. Ensure eating surfaces are cleaned before and after the program; and

NOTES: _____

ACTIVITY: Common Allergies

Based on your experience, what types of allergies are common?

Please list them below.

1	peanuts	12	
2		13	
3		14	
4		15	
5		16	
6		17	
7		18	
8		19	
9		20	
10		21	
11		22	

NOTES:

Vegetarian Diet:

There are different types of vegetarianism. Some vegetarians eat dairy products and eggs, some eat only dairy products, some eat only eggs and some eat fish. People following a vegan diet do not eat any foods derived from animals including eggs, dairy products, gelatin and honey. Vegetarians can eat a healthy diet by choosing fortified soy beverage as part of the Milk and Alternatives food group, and a variety of meat alternatives (Ex. beans, lentils, eggs, tofu, nuts, etc.) from the Meat and Alternatives food group.

Faith-Based Diet:

Given the variety of faith and cultural groups within Ontario, it is important that food and beverages provided to students are aligned with their faith, while still meeting the Nutritional Guidelines.

Culturally Appropriate Diet:

You should make an effort to offer culturally appropriate foods that also meet the Nutrition Guidelines.

VOLUNTEERS SHOULD ALWAYS BE AWARE OF ANY DIETARY CONCERNS WHEN SERVING FOOD TO CHILDREN AND YOUTH.

NOTES: _____

TRANSPORTATION

KEY TERMS

Temperature Danger Zone: Food reads between 4 degrees Celsius (39.2 degrees Fahrenheit) and 60 degrees Celsius (140 degrees Fahrenheit) and has been subject to these temperatures for longer than 2 hours. After this time, food can become unsafe and bacteria can rapidly contaminate the food.

Damaged Foods: Products that are broken, cracked, or scratched and can not be consumed.

Food Contamination: Food that has been corrupted with another substance – either physical, biological or chemical.

Perishable Foods: Foods that have a limited shelf life if not refrigerated.

Pasteurization: The process of heat processing a liquid or a food to kill pathogenic bacteria to make the food safe to eat.

Transporting food from the grocery store to the program premises safely is very important as food can become damaged, contaminated or enter the **"temperature danger zone."**

Prior to receiving the foods, make sure to organize the freezer, refrigerator and dry storage areas to allow for new supplies to be accommodated.

NOTES: _____

REFLECT ON IT ...

What areas in your school must you organize?

_____

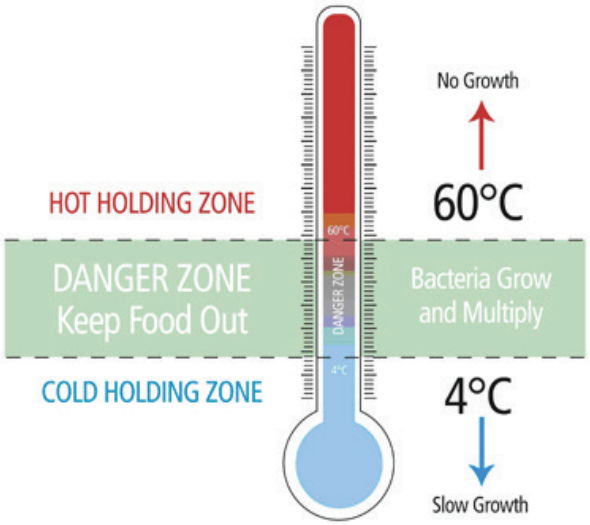
_____

How often do you organize these areas?

_____

Do you make sure all areas are always clean?

_____



Temperature Danger Zone:

Food reads between 4 degrees Celsius (39.2 degrees Fahrenheit) and 60 degrees Celsius (140 degrees Fahrenheit) and has been subject to these temperatures for longer than 2 hours.

After this time, food can become unsafe and bacteria can rapidly contaminate the food.

NOTES: _____

_____

_____

Make sure you follow the guidelines below when transporting food to allow for safe transportation:

1. Keep reusable shopping bags **clean.**
2. Raw and ready to eat foods must be **bagged separately.**
3. Ensure that all food is transported in a **clean vehicle,** pet free and separate from containers such as washer fluid. It should also be **out of direct sunlight.**
4. Food must be transported **directly** to the Program site after purchase.
5. Keep perishable foods **cold** during transport. This can be done by utilizing a cooler and thermometer to ensure proper temperature is maintained.
6. Make sure to **refrigerate** perishable foods immediately.

When arriving at the school make sure the steps listed below, are followed when receiving the deliveries:

1. Before accepting the delivery, check the temperature of foods (cold foods at 4 degrees Celsius/39.2 degrees Fahrenheit or lower and frozen products at -18 degrees Celsius/-0.4 degrees Fahrenheit or lower.)
2. Compare delivery invoice against products ordered and products delivered. Also, review your receipt to ensure all products purchased are accounted for.
3. Check frozen foods to ensure that they are all frozen solid and show no signs of thawing and refreezing. Look for large ice crystals or liquids on the bottom of foods.
4. Label food products with the date of delivery upon receipt.
5. Check best before/expiry dates.
6. All milk and dairy products must be pasteurized.
7. Accept only Grade A eggs.
8. Check for government inspected tags/stamps on meat products.

COLD FOODS	FROZEN FOODS
4° C **39.2° F** or lower	**-18° C** **-0.4° F** or lower

REMEMBER!

Always check all products to ensure they meet nutritional and allergen concerns.

NOTES: _____

REFLECT ON IT ...

Have you ever thrown out food because it was unsafe?

_____

What signs did you look for?

_____

_____

You should always REJECT the following items:

- Frozen foods with signs of previous thawing.
- Cans that have signs of deterioration, such as swollen sides or ends, flawed seals or seams, dents, or rust.
- Punctured packages.
- Foods with outdated expiration or best before dates.
- Foods that are in the temperature danger zone.
- Food transported in unsanitary vehicles or containers.
- Grade A eggs are dirty or broken.
- Unpasteurized liquid eggs.
- Fresh produce that is wilted or overripe, bruising or mold present.
- Unpasteurized milk or uninspected meats.

DID YOU KNOW:

You can not offer wild game as a meat product.

STORAGE

KEY TERMS

Thermometer: An instrument for measuring and indicating temperature, typically one consisting of a narrow sealed glass tube marked with graduations.

Food Grade Containers: Food grade plastic must meet certain standards of purity. It cannot contain dyes, other additives or recycled plastic products deemed harmful to humans.

Cross-contamination: Indirect bacterial contamination (infection) of food, caused by contact with an infected raw food or non-food source such as clothes, cutting boards, knives.

Always **prepare, store and serve** foods in accordance with the provincial regulations. Storing foods in the correct places and temperatures is critical in ensuring the food is safe from bacteria, rodents and other sources that can damage the foods.

When storing foods, ensure the following regulations are followed:

- ☐ Food is to be stored a minimum of 6 inches (15cm) off the floor.
- ☐ Refrigeration is at or below **4 degrees Celsius (39.2 degrees Fahrenheit).**
- ☐ Allow enough room in the refrigerator to allow the air to circulate around the food. This will assist in keeping the correct temperature at all times.
- ☐ Make sure reliable thermometers are present and easy to see. This will assist you when you regularly monitor and record temperatures in the Refrigerator Temperature Log.
- ☐ Placing thermometers in the **middle** of the refrigerator helps you receive an accurate read of the actual temperature.
- ☐ Freezer space is at or below **-18 degrees Celsius (-0.4 degrees Fahrenheit).**
- ☐ All food is to be covered in order to avoid contamination.
- ☐ Raw meat has to be stored below all other food products.

DID YOU KNOW:

Most food borne illnesses occur because temperatures were not monitored or followed during the storage process.

Ensure storage areas such as the refrigerator and freezer are monitored and the temperatures are correct for safe food. **Remember to keep food out of the temperature danger zone which is between 4 degrees Celsius (39.2 degrees Fahrenheit) and 60 degrees Celsius (140 degrees Fahrenheit).** Bacteria will multiply quickly if it's within the temperature danger zone for more than 2 hours. Bacteria grows extremely well at body temperature which is usually 37.1 degrees Celsius (98.78 degrees Fahrenheit).

REMEMBER!

It is important to check the temperatures within the refrigerator and freezer on a daily basis to ensure that the food being prepared and delivered to the students is safe!

REFLECT ON IT ...

How often do you check the thermometers?

_____

Do you check them daily?

_____

Do you have thermometers easily accessible in the fridge & freezer?

_____

When repackaging foods, follow these steps to ensure the foods are safe and free of contaminants and bacteria:

1. Always date and label the items before putting them away.
2. Only use food grade containers that are in good shape. Do not re-use disposable containers for other food purposes. Never use garbage bags as they contain toxic residues, which should not come into contact with food.
3. Aluminum cans cannot be re-used. Place foods into a clean storage container and discard the can.
4. Do not re-use cardboard boxes.

REMEMBER!

Always rotate the stock and use the "first one in, first one out" concept. Do not use products that are beyond the 'best before' or expiry date to ensure the food is safe to eat.

"WHEN IN DOUBT, THROW IT OUT!"

Cleaning products and chemicals must be stored **separately** from any food products to ensure cross contamination doesn't occur. Ensure all chemicals are labelled to avoid any confusion and misuse of the product.

When storing chemicals or cleaning products AVOID the following:

- Storing chemicals above eye level.
- Storing chemicals in aisle ways.
- Over stocking shelves, making them heavy and prone to breaking.
- Storing heavy containers above shoulder level. This could lead to personal health and safety issues as well as spilling the products when trying to retrieve them.
- Storing chemicals in fume hoods or on counter tops as food could be present.
- Storing chemicals near sources of near or in direct sunshine.

REFLECT ON IT ...

Where do you store your chemicals?

Do you keep them separate from food?

Can students access them?

REMEMBER!

Consult with your local health unit or your school board's health department if you have any questions or concerns about safety regulations!

NOTES:

PART 2:

HAND WASHING AND SANITIZATION

LEARNING OBJECTIVES:

You will work on developing the skills necessary to:

- Understand what bacteria is
- Wash your hands using the proper technique
- Determine when to wash your hands
- Recognize the importance of personal hygiene
- Spot the difference between cleaning & sanitizing
- Operate a mechanical dishwasher

BACTERIA

KEY TERMS

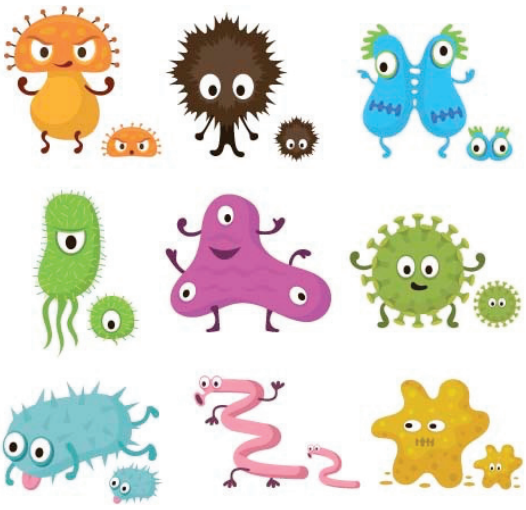
Bacteria: Microscopic living organisms, usually one-celled, that can be found everywhere. They can be dangerous, such as when they cause infection, or beneficial, as in the process of fermentation, and that of decomposition. Bacteria is the most common cause of food borne illnesses.

Raw Agricultural Products: Any food in its raw or natural state, including all fruits that are washed, colored, or otherwise treated in the unpeeled natural form prior to marketing.

Food Borne Illnesses: Any illness resulting from the food spoilage of contaminated food, pathogenic bacteria, viruses, or parasites that contaminate food, as well as toxins.

Perishable: Food that is likely to decay or go bad quickly. These foods have a short "shelf life".

Ontario Ministry of Health and Long-Term Care: The Ministry of Health and Long-Term Care is working to establish a patient-focused, results-driven, integrated and sustainable publicly funded health system.



Canada's food supply is one of the safest in the world, however, food that is consumed can still make people sick. Under the right conditions, an invisible enemy named bacteria may be present on all types of food without us knowing it.

Bacteria and viruses are the most common causes of food borne illnesses. The types of bacteria that cause the most illnesses, hospitalizations and deaths are :

- Salmonella
- Norovirus
- Campylobacter
- E.Coli
- Listeria
- Clostridium Perfringens

DID YOU KNOW:

Every year, more than 4 million Canadians get sick with a food borne illness with symptoms including nausea, vomiting, diarrhea, stomach pain and fever.

Facts about bacteria:

- Bacteria is an integral part of the environment and have both beneficial and harmful traits.
- Bacteria can be found on ALL raw agricultural products, which is why washing these products is extremely important.
- Harmful bacteria can be transferred from food to people, people to food, or from one food product to another through various handling processes.
- Bacteria can grow rapidly at room temperature, especially when food is within the temperature danger zone.
- Harmful bacteria growth can be slowed or stopped when products are refrigerated or frozen.
- Food borne illnesses can produce symptoms from mild to very severe. Illnesses can occur as soon as 30 minutes to up to two weeks after ingesting food containing harmful bacteria.
- Infants, young children, senior citizens and people with weakened immune systems are most likely to become sick from harmful bacteria.

NOTES:

REFLECT ON IT ...

Have you or someone you know experienced a food borne illness?

_____

How could it have been prevented?

_____

_____

REMEMBER!

Student Nutrition Programs offers food to young children, which is noted as a vulnerable group when ingesting harmful bacteria. This is why safe food handling is crucial when delivering foods to the students!

Following these four simple principles when handling food can reduce the risk of food borne illnesses:

CLEAN:

- Always wash your hands, utensils and cooking surfaces with soap and hot water before you handle food.
- Remember to constantly clean hands, utensils and surfaces during the preparation and when you have finished preparing the foods.
- Sanitize countertops, cutting boards and utensils with a board approved sanitizer. Please check with your local health unit or school board health department to gather information on the correct sanitizer to use.
- All produce should be washed under cool, running water prior to eating or cooking to reduce the risk of bacterial contamination.

SEPARATE:

- It is important to keep food groups separated to avoid cross-contamination. You should **NEVER** mix raw meat products with any other food, including ready-to-eat foods. Review the storage section for more information.
- Keep certain foods separated from others during storage and preparation.
- Have multiple cutting boards which can be used for one type of food.
  For example: One for meat, one for vegetables and one for dairy products.
- Always keep food covered, including when in storage.

ACTIVITY: **Food Separation**

What foods should you always make sure are separated?

1. Ready to eat foods away from raw foods
2. _____
3. _____
4. _____
5. _____

NOTES: _____

COOK:

- Prepare foods quickly, cook them thoroughly, and serve them immediately after preparation.
- Don't let foods sit within the temperature danger zone as bacteria can grow rapidly.

REMEMBER!

The temperature danger zone is between 4 degrees Celsius (39.2 degrees Fahrenheit) and 60 degrees Celsius (140 degrees Fahrenheit).

CHILL:

- Refrigerate or freeze perishables, prepared foods and leftovers within 2 hours.
- Ensure the refrigerator and freezer are at the appropriate temperatures.
- The temperature of the refrigerator should be 4 degrees Celsius (39.2 degrees Fahrenheit) or colder and the freezer should always be -18 degrees Celsius (-0.4 degrees Fahrenheit) or colder at all times!

NOTES: _____

REFLECT ON IT ...

How should food be stored?

What should you write on the packaging?

What should you look for on packaged foods?

NOTES:

WASHING YOUR HANDS

KEY TERMS

Pathogens: A bacterium, virus, or other microorganism that can cause disease.

Lather: A frothy white mass of bubbles produced by soap or a similar cleansing substance when mixed with water.

Hygiene: Conditions or practices conducive to maintaining health and preventing disease, especially through cleanliness.

To reduce food contamination and food borne illnesses there is a proper technique to washing your hands. You should use regular liquid hand soap when washing your hands, however, if soap and warm running water is not available, use an alcohol-based hand rub.

Many pathogens are passed between people through improper handwashing when handling food.

REMEMBER!

Handwashing is the best way to prevent the spread of disease.

Below outlines the correct steps for washing your hands:

Step 1: Wet your hands with clean, warm running water.

Step 2: Place liquid soap onto your hands.

Step 3: Lather your hands by rubbing them together with soap. Be sure to lather the backs of your hands, between your fingers, and under your nails. Be sure to scrub your hands for 20 seconds.

HINT: Not sure how long 20 seconds is?
Hum the "Happy Birthday" song from beginning to end twice.

Step 4: Rinse off your hands well under clean, warm running water for 10 seconds.

Step 5: Dry your hands with a paper towel.

Step 6: Turn off the tap with the paper towel, not your hands!

REFLECT ON IT ...

Did you know there was a proper technique to wash your hands before taking this course?

_____

What steps were you not familiar with before?

_____

_____

DID YOU KNOW:

Washing your hands frequently can reduce your chances of catching a cold or flu by 80% during the winter months!

ACTIVITY: Hand Washing

If you are close to a sink, practice this handwashing technique.
If you are not near a sink, please go through the motions to ensure you are following the proper steps.

HANDWASHING SINKS SHOULD BE EASY TO GET TO SO VOLUNTEERS CAN WASH THEIR HANDS OFTEN.

The sinks used for handwashing **CAN NOT** be used for food preparation or dishwashing. Make sure your sink has hot and cold water available as well as paper towels and soap available within reach.

Always wash your hands BEFORE doing the following:

- Handling ready-to-eat foods;
- Starting work;
- Preparing foods;
- Eating; and
- Handling clean utensils, silverware and plates.

NOTES: _____

Always wash your hands AFTER doing the following:

- Handling raw foods, especially meat and poultry;
- Eating;
- Smoking;
- Taking out the garbage;
- Cleaning food preparation areas which include surfaces, equipment, utensils and plates;
- Cleaning washrooms;
- Sneezing, coughing, or blowing your nose;
- Going to the washroom;
- Touching your hair, face or body; and
- Touching anything else that may contaminate your hands (ex. money).

REMEMBER!

Wearing gloves does not replace the need to wash your hands on a regular basis.

Wearing gloves while handling food is not encouraged in the Province of Ontario except in the following circumstances:

- Having a bandage covering a cut finger to prevent the bandage from entering the food being prepared.
- When there are rings on your fingers that can't be taken off.

DID YOU KNOW:

Bare hands is the desirable best practice compared to wearing gloves.

GLOVES ARE ONLY A TOOL AND MUST BE USED PROPERLY FOR FOOD SAFETY, THIS INCLUDES WASHING YOUR HANDS THOROUGHLY BEFORE AND AFTER WEARING GLOVES.

Ensure you wash your hands and change gloves between tasks.

REFLECT ON IT ...

Did you know that gloves are not preferred?

_____

How many times have you worn gloves thinking that it was a safer alternative?

_____

NOTES: _____

PERSONAL HYGIENE

Your own hygiene is critical when working with food. Always have your **hair tied back or wear headgear** that confines the hair. This will prevent it from falling into the food and stopping you from touching your hair, such as moving it out of your face. Hairnets and clean hats are known as acceptable versions of headgear when preparing food.

You should always wear clean clothing and aprons when preparing foods and ensure you do not touch your clothes or aprons during the preparation phase, as cross contamination can occur. Make sure to change your apron as often as necessary to reduce the risk of contamination.

IF YOU ARE ILL AND EXPERIENCING DIARRHEA, COUGHING OR SNEEZING YOU SHOULD NOT BE HANDLING OR DELIVERING FOOD TO THE STUDENTS.

DID YOU KNOW:

Hair has been known to cross contaminate food!

NOTES: _____

DISHWASHING

DID YOU KNOW:

There is a difference between cleaning & sanitizing kitchen wares.

KEY TERMS

Cleaning: Completed by removing the physical dirt and stains from an item. This is done by using hot water and detergent during the process.

Sanitizing: Process of removing or destroying living organisms that can remain after cleaning and can be completed through various methods.

SANITIZING USING HOT WATER:

- Dishes must be submerged in hot water for 45 seconds.

Hot water is classified at 77 degrees Celsius (170.6 degrees Fahrenheit) or above.

SANITIZING USING CHEMICAL SANITIZERS:

- Water temperature for chemical sanitizing must be at 24 degrees Celsius (75.2 degrees Fahrenheit).
- Sanitize all items for 45 seconds.
- **NEVER** mix chemicals. Combining them could be toxic.
- Use one of the mentioned chemical sanitizers and make sure to measure it correctly.

The following chemical sanitizers are all acceptable for use:

- Chlorine: ('bleach'): 100 parts per million (1 oz per gallon of water)
- Iodine: 25 parts per million (0.25 oz per gallon of water)
- Quaternary Ammonium ('Quarts'): 200 parts per million (2 oz per gallon of water)

TEST STRIPS

When selecting a sanitizer, make sure you also get a test reagent or test strips to measure the solutions strength. Special test strips are available from your chemical or restaurant supplier. Where hot water is used to sanitize, an accurate thermometer must be used to check the water temperature.

Chlorine-Based Products:

Strength - 100 parts per million (ppm)

There are many chlorine-based chemicals. The most common one is household bleach. Ensure the strength used is 100 mg per litre. To make l00ppm chlorine sanitizer, mix 2 ml of (5 per cent strength) bleach per litre of water.

Quaternary Ammonium-Based Products:

Strength - 200ppm

Measure according to the manufacturer's label to make a 200 mg per litre concentration. You may need to rinse any food contact surface after sanitizing with ammonium. Follow the manufacturer's label instructions. These quarternary ammonium-based cleaning compounds are also referred to as "Quats" or "quat sanitizers".

Iodine-Based Products :

Strength - 25ppm

Mix according to the manufacturer's label instructions to make a 25 mg per litre con

Whichever one you choose to use, it's important to remember the three things that affect how well they work:

1. The first is contact. The solution must be in contact with the items you're sanitizing for at least 45 seconds for it to kill microorganisms.

2. The second is selectivity. Some products are more effective than others in killing certain types of microorganisms.

3. The final one is concentration. Solutions need to be mixed to the right strength. If the solution is too weak, it may not sanitize. If it's too strong, it may leave a taste or smell, damage metals, or be a health hazard. Its best to use a system that automatically dispenses sanitizer

REFLECT ON IT ...

What technique do you use to sanitize?

_____

Were you aware of all the different types of chemical sanitizers?

_____

Have you used any of the ones listed above?

_____

NOTES: _____

_____

_____

_____

_____

You should always wash, rinse and sanitize kitchenware and work surfaces after each use, when changing products, at the end of the day and as needed.

3 Compartment Sink Method - Use this when cleaning multi-service articles such as cutlery, plates, and cups.

2 Compartment Sink Method - Use this when cleaning pots, pans, and cooking utensils.

REMEMBER!

Air dry all items and avoid towel drying to eliminate contamination.

REFLECT ON IT ...

Take a moment to review the dishwashing image on the previous page.

USING A MECHANICAL DISHWASHER

Please check with your local health unit for specifics when using a mechanical dishwasher.

REFLECT ON IT ...

What are the specific details for using a mechanical dishwasher in your area?

_____

_____

The following steps should be followed when using a mechanical dishwasher:

1. Scrape and pre-rinse all items prior to placing them in the dishwasher.
2. Load the machine so all parts of the items can be sprayed during the cycle.
3. Run the machine following the manufacturer's instructions whilst using the sanitizing option.
4. Check temperature gauges to ensure temperatures are met during the cycle. For heat sanitizing the wash (detergent) water temperature must be between 60 degrees Celsius and 71 degrees Celsius (140 degrees Fahrenheit and 159.8 degrees Fahrenheit. This may differ within various regions, **ensure you check with your local Health Unit.**
5. For chemical sanitizing units, the chemical sanitizing cycle water temperatures must be at least 24 degrees Celsius (75.2 degrees Fahrenheit).
6. Air dry all items and always avoid towel drying to eliminate contamination.

NOTES: _____

_____

_____

_____

REMEMBER!

Do NOT over-fill the dishwasher, as all items may not get cleaned.

ACTIVITY: Local Health Unit

Search online for your local Health Unit and record their contact information for future use.

CONTACT

Organization Name: _____

Address: _____

Phone: _____ Email: _____

Website: _____

NOTES: _____

PART 3:

FOOD PREPARATION

LEARNING OBJECTIVES:

You will work on developing the skills necessary to:

- Prepare a clean environment
- Wash fruit & vegetables appropriately
- Ensure food is thawed safely
- Chill & reheat food correctly
- Handle contaminated foods safely
- Handle a food recall
- Clean up after the program

PREPARING A CLEAN ENVIRONMENT

KEY TERMS

Firm Fruits & Vegetables: A good quality fruit or vegetable should have a firm or unyielding surface texture. They should not be squishy to the touch.

Hand Washing Sink: A sink designed and placed specifically for hygienic practices and hand washing use.

Food Prep Sink: A separate sink designed and placed specifically for food prep. The activities that could occur using a food prep sink could include washing or trimming produce, soaking food, washing meat, thawing food under running water, etc.

Prior to preparing any foods, wash your hands and ensure all surfaces have been cleaned with soapy water or sanitization products (chlorine, quats or iodine) selected by your local health unit. After cleaning the surfaces and before touching any foods, make sure you have washed your hands thoroughly using the proper handwashing technique.

REMEMBER!

Always use paper towels to clean down the surfaces and allow time for the surfaces to air dry prior to preparing foods.

There are various types of food products that you may come into contact with, along with a variety of preparation methods.

REFLECT ON IT ...

Can you remember the proper handwashing technique?

What song helps you with timing?

WASHING FRUITS AND VEGETABLES

After washing your hands in the handwashing sink, move over to the food preparation sink to conduct the process of washing fruits and vegetables.

Wash all fruits and vegetables thoroughly under cold, running water and pat to dry before serving or combining with other ingredients.

- Make sure you wash unpeeled fresh fruit and vegetables that are to be served whole or cut into pieces.
- Clean vegetables and fruit that are peeled and cut to use in cooking or served ready to eat.
- Ensure you scrub the surface of firm fruits or vegetables (ex. apples and potatoes) with a clean and sanitized brush that has been designated for this purpose.

DID YOU KNOW:

You should NEVER use soapy water to wash any produce as this can contaminate foods. In addition, never wash fruit or vegetables in a sink full of water, as bacteria could be present in the sink which can be transferred to the food.

ACTIVITY: Washing Fruits & Vegetables

Make a list of potential fruits or vegetables that require you to scrub the surface with a clean and sanitized brush.

FRUITS

apples

VEGETABLES

potatoes

THAWING FOODS SAFELY

KEY TERMS

Thawing: The process of warming food that has been frozen so that the food can be eaten or prepared to be served

Room Temperature: A comfortable temperature range indoors, usually considered to be 20-25 degrees Celsius (68 to 77 degrees Fahrenheit).

REMEMBER!

Make sure to wash your hands and all surfaces before thawing any food.

THE SAFEST WAY TO THAW FOOD, ESPECIALLY RAW MEAT AND POULTRY IS IN THE REFRIGERATOR.

You can defrost food in the **refrigerator, in cold, running water or in the microwave.** When thawing food in the microwave, you must **cook it as soon as possible** after thawing.

NEVER THAW FOOD BY LEAVING IT AT ROOM TEMPERATURE AS THIS COULD LEAD TO BACTERIA GROWTH.

DID YOU KNOW:

You CAN NOT refreeze thawed foods!

You can safely cook food from frozen, however it can make the cooking process longer. Make sure the outside of the food is kept cool and out of the temperature danger zone!

REMEMBER!

The temperature danger zone is when food is at a temperature between 4 degrees Celsius (39.2 degrees Fahrenheit) and 60 degrees Celsius (140 degrees Fahrenheit) for longer than 2 hours.*

YOU SHOULD DEFROST AND CLEAN REFRIGERATORS REGULARLY TO ENSURE EFFICIENT OPERATION OF THE APPLIANCE.

Make sure you **clean and sanitize** all of the interior surfaces, racks, trays and the fan grill to prevent odours, contamination and maintain cleanliness. Remember to **wash your hands and clean and sanitize** the sink, utensils, surfaces and dishes used when thawing foods.

NOTES: _____

REFLECT ON IT ...

How do you normally thaw food?

Were you using any of these techniques?

CHILLING FOODS

KEY TERMS

Raw Meat: Generally refers to any type of uncooked muscle tissue of an animal used for food.

Poultry: Domesticated fowl collectively, especially those valued for their meat and eggs, as chickens, turkeys, ducks, geese, and guinea fowl.

NOTES:

IT IS IMPORTANT TO KEEP COLD FOOD COLD AND HOT FOOD HOT TO ENSURE THAT FOOD NEVER REACHES THE TEMPERATURE DANGER ZONE.

REMEMBER!

Always make sure your refrigerator is set to 4 degrees (39.2 degrees Fahrenheit) or lower and your freezer is set to -18 degrees Celsius (-0.4 degrees Fahrenheit) or lower.

Keep raw meat and poultry cold at all times. Refrigerate or freeze them as soon as possible and this **must be completed within 2 hours.**

When storing raw meat and poultry in the fridge before preparing them, they should be **stored separately from other foods** as well as **in their own containers** to ensure the juices do not come into contact within any other foods.

DID YOU KNOW:

Storing meat on the bottom shelf helps eliminate the problem of juices dripping onto other food items.

Cook raw meat or poultry within **2 to 3 days of purchasing,** otherwise place them in the freezer.

REFLECT ON IT ...

How is the fridge organized at your school?

_____

_____

Where do you store raw meat?

_____

COOKING FOODS

KEY TERMS

Thermometer Probe: A part of a thermometer that has a pointy metal stem that can be inserted into food. Use the thermometer probe to check internal food temperatures when you cook, re-heat, cool, thaw, and keep foods hot or cold.

Thermometer Dimple: Check the stem of the food thermometer for an indentation, or "dimple." This shows one end of the location of the sensing device

Boiling Water: Rapid vaporization of a liquid, which typically occurs when a liquid is heated to a temperature such that its vapor pressure is above that of the surroundings, such as air pressure.

Calibrated: When the readings of a thermometer have been correlated with those of a standard in order to check the thermometer's accuracy.

COOKING FOOD PROPERLY IS THE BEST WAY TO MAKE SURE IT IS SAFE TO EAT AND FREE OF BACTERIA.

Always cook food completely and **use a thermometer** to measure the internal temperature.

REMEMBER!

The colour of food does not tell you when it is correctly cooked!

NEVER PARTIALLY COOK FOODS WITH THE HOPES TO CONTINUE COOKING WHEN YOU'RE ABOUT TO USE IT.

DID YOU KNOW:

Bacteria such as E. coli, Salmonella and Listeria are killed by heat.

NOTES: _____

Make sure all hazardous food is cooked and reheated to the internal temperatures listed below:

HAZARDOUS FOOD ITEM	COOKING ˚C (˚F) FOR 15 SECONDS	REHEATING ˚C (˚F) FOR 15 SECONDS
Poultry: Whole	82˚C (180˚F)	74˚C (165˚F)
Poultry: • Other than whole • All parts of ground poultry • All parts of ground meats that contain poultry	74˚C (165˚F)	74˚C (165˚F)
A food mixture containing poultry, egg, meat, fish or another hazardous food	74˚C (165˚F)	74˚C (165˚F)
Pork or Pork Products: • All parts of ground meat, other than ground meat that contains poultry	71˚C (160˚F)	71˚C (160˚F)
Fish	70˚C (158˚F)	70˚C (158˚F)
Ground beef • Make sure the juices run clear and the meat is brown or grey	71˚C (160˚F)	71˚C (160˚F)

Follow these steps when using a thermometer:

1. Clean and sanitize the probe before and after inserting it into foods.
2. Insert the probe into the thickest part of the food to the dimple on the thermometer.
3. Make sure the probe does not touch the bone or the container/cooking device as this could affect the reading.
4. If your checking the temperature of a liquid, stir it first. Make sure you leave it in the mixture until the needle on the dial stops moving or once the digital thermometer readout stabilizes.

NOTES: _____

REFLECT ON IT ...

How do you usually use a thermometer?

_____

_____

Have you ever tried taking the temperature of liquid?

_____

There are three methods to cleaning or sanitizing the thermometer before and after use:

Wiping the probe with a 70% isopropyl alcoholic swab	Let the probe stand in 200 parts per million of quaternary ammonium for 45 seconds	Place the probe in boiling water for 45 seconds

THERMOMETERS MUST BE CALIBRATED WHEN THEY HAVE BEEN DROPPED ONTO A HARD SURFACE OR IF THEY HAVE BEEN USED IN VERY HOT OR COLD TEMPERATURES.

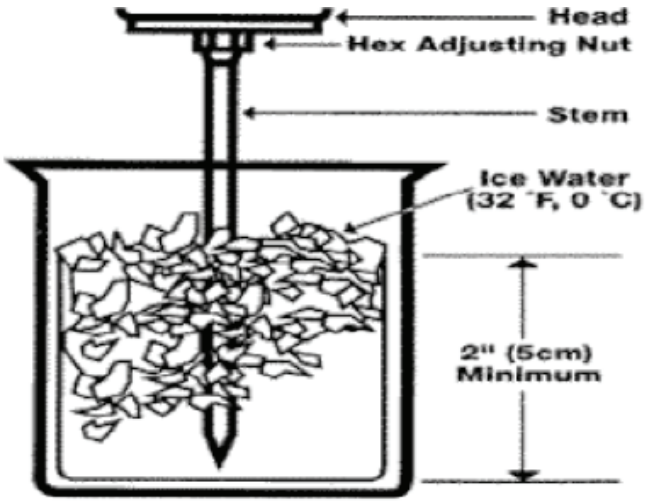
DID YOU KNOW:

Calibrating a thermometer could be done by completing the ice bath method.

Please see below for step-by-step instructions on how to calibrate a thermometer using the ice bath method:

1. Fill a large glass with finely crushed ice.
2. Add clean, cold tap water to the top of the ice and stir well.
3. Immerse the food thermometer stem up to the sensing point (if there is a dimple of the thermometer, this is the sensing point). Make sure it is not touching the bottom or sides of the glass.
4. Wait until the needle stops moving before adjusting.
5. For ease in handling, the stem of the thermometer can be placed through the clip section of the stem sheath and, holding the sheath horizontally, lowered into the water.
6. Without removing the stem from the ice, hold the adjusting nut under the head of the thermometer with a suitable tool and turn the head so the pointer reads 0 degrees Celsius (32 degrees Fahrenheit).

The below diagram represents what an ice bath would look like:



NOTES:

ACTIVITY: Thermometer Calibration

If possible, try to calibrate a thermometer using the ice bath method.

COOLING / REHEATING FOODS

FRESHLY COOKED FOODS, NOT FOR IMMEDIATE CONSUMPTION, MUST BE COOLED BELOW THE TEMPERATURE DANGER ZONE AS QUICKLY AS POSSIBLE.

You must quickly cool foods using **shallow pans or an ice bath** when required. Divide the food into **small shallow containers** and place them in the fridge, freezer or an ice bath as soon as the foods stop steaming.

DID YOU KNOW:

Foods must cool from 60 degrees Celsius (140 degrees Fahrenheit) to 20 degrees Celsius (68 degrees Fahrenheit) in 2 hours or less, then from 20 degrees Celsius (68 degrees Fahrenheit) to 4 degrees Celsius (39.2 degrees Fahrenheit) in 4 hours or less.

Quickly reheat food on the stove to **at least the original cooking temperature** before you transfer it to hot-holding equipment. If food is left at **room temperature for more than 2 hours**, the food must **NOT** be eaten and must be properly disposed of.

NOTES: _____

REFLECT ON IT ...

How do you reheat or cool foods?

_____

_____

Have you used the ice bath method before?

_____

Make sure all hazardous food is cooked and reheated to the internal temperatures listed below:

HAZARDOUS FOOD ITEM	COOKING °C (°F) FOR 15 SECONDS	REHEATING °C (°F) FOR 15 SECONDS
Poultry: Whole	82 °C (180 °F)	74 °C (165 °F)
Poultry: • Other than whole • All parts of ground poultry • All parts of ground meats that contain poultry	74 °C (165 °F)	74 °C (165 °F)
A food mixture containing poultry, egg, meat, fish or another hazardous food	74 °C (165 °F)	74 °C (165 °F)
Pork or Pork Products: • All parts of ground meat, other than ground meat that contains poultry	71 °C (160 °F)	71 °C (160 °F)
Fish	70 °C (158 °F)	70 °C (158 °F)
Ground beef • Make sure the juices run clear and the meat is brown or grey	71 °C (160 °F)	71 °C (160 °F)

NOTES: _____

_____

REMEMBER!

Check internal temperatures with a probe thermometer!

HANDLING SPOILED OR CONTAMINATED FOOD

KEY TERMS

Spoiled Food: When food deteriorates to the point in which it is not edible to humans or its quality of edibility becomes reduced. Various external forces are responsible for the spoilage of food. Food that is capable of spoiling is referred to as perishable food.

Contaminated Food: Food is considered contaminated when the presence of harmful chemicals and microorganisms which can cause consumer illness, are found in the food.

REMEMBER!

You should always dispose of spoiled or contaminated foods to prevent foodborne illnesses.

The following provides you with a step-by-step process of how to handle this situation if it occurs.

1. Determine the cause of the contamination if possible (equipment breakdown, improper food handling has been observed, product has been in the danger zone for 2 hours or the seal on the product has been breached, etc).

2. Check and record the expiry date, product identification code (if any), production date (if any) and date of delivery of the product to the school.

3. Communicate the food spoilage/contamination to feeding sites that may have the food at their site and verify that the food items bear the same product information.

4. Collect the product from all sites and:

   A) Physically segregate the product, including any open containers, leftover product and food items in current production that contain the spoiled/contaminated product.

   B) If an item is suspected to contain the same product, but label information is not available, discard the product.

5. If the product is contaminated and /or has expired and it has not been served, discard product.

6. If the product has spoiled before the expiry date, return product to the retail store where the product was purchased or inform the Distributor who delivered the product of the date of delivery, expiry date, product identification code (if any) and production code (if any) and verify quantity to be picked up or discarded and credited to the account.

7. Do not destroy any food without official notification from the retail store, distributor, or local Health Unit. Store product as you would normally. Refrigerate as required.

8. Account for all spoiled product by verifying inventory counts against records of food received at the feeding site.

9. If you suspect any staff or students have ingested any spoiled/contaminated product, immediately inform the Principal and the local health unit. Do not discard the product without official notification from the local Health Unit.

10. Inform your Student Nutrition Program Lead with the details of the product including the information from the Spoiled or Discarded Product Log (if applicable).

HANDLING A FOOD RECALL

The following provides you with a step-by-step process of how to handle a food recall.

REMEMBER!

It is strongly recommended that the Principal and the Program Lead subscribe to the CFIA website for daily Food Recall notices at www.inspection.gc.ca

1. Follow local health department public health unit requirements.
2. Review the food recall notice and specific instructions that have been identified in the notice.
3. Hold the recalled product using the following steps:

   Physically segregate the product, including any open containers, leftover product, and food items in current production that contain the recalled product.

   If an item is suspected to contain the recalled product, but label information is not available, discard the product.
4. Mark recalled product "Do Not Use" and "Do Not Discard." Inform all volunteers and staff not to use the product.
5. Do not destroy any food without official notification from the Distributor and the local public health unit health department.
6. Obtain accurate inventory counts of the recalled products from every school, including the amount in inventory and amount used.
7. Account for all recalled product by verifying inventory counts against records of food received.
8. If product was purchased at a grocery store, return product for store for credit.
9. Inform the Distributor that the product that has been recalled was purchased through his company and verify quantity to be picked up or discarded and credited to the account.

If you suspect any food that is recalled has been ingested by any student, contact your local public health unit.

CLEAN-UP

AFTER DELIVERING THE FOOD TO ALL STUDENTS IN YOUR CHOSEN METHOD, YOU MUST COMPLETE THE CLEAN-UP PROCESS.

It is critical to clean up each work station, all serving areas and equipment to ensure a safe environment for when food preparation begins again. Always make sure that all facilities are left clean and tidy prior to leaving.

The clean-up process could include:

- ☐ Washing dishes or loading the dishwasher.
- ☐ Cleaning all equipment, utensils and delivery bins/baskets.
- ☐ Washing and sanitizing counter tops.
- ☐ Cleaning tables and chairs .
- ☐ Storing all food properly .
- ☐ Placing leftovers in correct containers with labels marking the date and product.
- ☐ Putting away chairs and tables.
- ☐ Sweeping and mopping floors.
- ☐ Disposing of garbage.

REMEMBER!

Follow the correct steps in cleaning all equipment, surfaces and utensils.

NOTES: _____

Student NUTRITION ONTARIO

EAT. LEARN. SUCCEED.

EAT. LEARN. SUCCEED.

KAREN JONES CONSULTING

REGAN PICTURES