Safety Considerations in the Family Studies Classroom (revised July 2006)

FOOD AND NUTRITION

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Nutrition Matters: Food Allergies... 'What’s The Scoop?'

14. Posters:  
- Basic Hand Washing Personal Cleanliness Matters!
- Keep It Clean!
- Have You Washed Your Hands?
  - Version 1
  - Version 2

15. Additional Background Information:  
- FAQ’s About Food Safety Bacterial Foodborne Illness In Canada
- The Invisible Enemy: Bacteria
- What Are The Most Common Pathogens That Can Cause Foodborne Illness?
- Four Simple Steps To FightBAC!™

16. Ideas For Further Study/Enrichment

17. Food And Nutrition Resources

18. Appendices:
- Appendix A: ESAO Consumer Symbols of Household and Special Products
- Appendix B: Lysol Hand Washing Basics Poster
- Appendix C: Lysol Hand Washing Poster
- Appendix D: Internal TDSB memo regarding the use of bleach
- Appendix E: Time Temperature Zone poster
- Appendix F: Lavez vous les Mains (French hand washing reminder poster)
- Appendix G: Web-Nutrition matters: Food Allergies...What’s the Scoop (PDF on website)
1. Foods And Nutrition – Safety Issues And Concerns

Grade 9/10 HFN1/2O:
There is no prerequisite for Food and Nutrition (HFN1/2O) and only a few school boards have elementary Family Studies programs remaining. It must be assumed that students will have no exposure to a food lab setting, or to working with food in a safe manner. For student/teacher’s health and safety, it is recommended that all students receive several hours of instruction on how to work safely in the kitchens, and it be regularly reviewed throughout the course. The ministry course profile (Ministry of Education, 1999) recommends no more than four to five students per lab grouping to prevent accidents and for teacher monitoring and assessment. See unit 2, activity 1 of this document for additional teaching strategies and student activities.

The following are grade 9/10 expectations that pertain to safety in the lab environment:

**PR3.03X** - safely use, maintain, clean, and store tools and equipment used in food preparation;

**PR3.04X** - identify and demonstrate safe food-handling practices, including kitchen safety, sanitary methods, and proper food storage.

Grade 12 HFA4M:
Since the prerequisite for Food and Nutrition Sciences (HFA4M) is, “Any university, university/college, or college preparation course in Social sciences and humanities, English or Canadian and world studies,” it is likely that many students taking the course will not have received the necessary training to work in a safe and healthy manner in the family studies classroom. There are no expectations that refer to health and safety in the family studies classroom contained in the curriculum document but safety is implicit in many of the expectations. The curriculum policy document for *Social Sciences and Humanities, Grade 11 and 12* (2000, p.141) states:

> In family studies courses, teachers must take particular care to ensure that safety, requirements are met and safety procedures followed when students are involved in practical activities. Students must be made aware of any health or safety hazards that might be connected with the activities in which they are engaged and must be coached in the proper use of safety equipment, such as fire extinguishers. Schools must provide pre-placement health and safety instruction for students in work experience and cooperative education programs. Employers are expected to provide placement-specific health and safety training as part of a student’s learning plan.

HFA4M contains the following specific expectations that require an understanding and application of health and safety requirements in the family studies lab environment:

**SO1.05** – plan menus for, select, and prepare foods, taking into consideration economic, geographical, and seasonal factors that affect the availability of ingredients.

**SO2.03** – plan a menu for, select, and prepare foods that would meet selected dietary needs during the stages of life
**PR2.07** – use available resources, including computer technology, both to plan a menu consisting of foods that will maintain good health, and to select and prepare those foods

**PR1.05** – demonstrate how to use equipment correctly to prepare and store foods for maximum nutrient retention (e.g. steamer, pressure cooker, freezer).

**PR3.03** – design, cost, market, produce, and evaluate a food product (e.g. flavoured vinegar, sugared nutmeats, seasonal cookies).

**GC1.05** – demonstrate an understanding of the scientific principles of a variety of types of food preparation (e.g. starch cookery, gluten development, protein cookery).

**GC1.05** – plan, prepare, and serve (using available ingredients and technology) specific foods prepared in the style of a variety of ethnic and/or Native cuisines, and draw comparisons among them.

**SC1.06** – prepare a menu using some new food products or recipes, and evaluate the results

### 2. Potential Hazards In The Family Studies Kitchen

Most family studies kitchens are set up to resemble a home kitchen environment. Hazards that are present in the home may also be present in the family studies kitchen. Stoves, knives, small equipment, electrical appliances, kitchen cabinets and drawers all hold the potential for injury. Some hazards such as accidental ingestion of a poisonous cleanser may be not present as many boards prohibit the use of such products in schools. However, there are many opportunities for accidents to occur in the kitchen, and virtually all equipment used has the potential to contribute to an accident. Personal safety is a primary concern in the kitchen and must be addressed before students are allowed to cook. All students must be made aware of the potential hazards and what to do in case an accident occurs. It is important that students are not made anxious of working in the kitchen but that they understand that it is possible to prepare food in a safe manner. It should be stressed that accidents in the food lab are infrequent.

Since students are preparing and consuming food in the family studies kitchen, they must be aware of the potential for food borne illnesses and how to prevent these. Again, basic rules and their consistent application will ensure that the food prepared and eaten is safe. Media attention about food borne illnesses has raised the awareness of the general public. Students may need to be reassured that the preparation of healthy food is possible by following the basic procedures they have learned in class.

Safety is always of primary importance in a food lab situation. Hazards can be divided into two types; physical hazards and food safety.

**PHYSICAL HAZARDS**

- Cuts
- Burns
- Electrical shock
- Poisonings
- Choking
- Slips and Falls
- Fires
FOOD SAFETY

- Contaminants
- Personal cleanliness
- Kitchen cleanliness
- Storage of food
- Allergic reactions to food

➢ Refer to the Teacher Resource Section for overheads/student worksheet/teaching and learning strategies dealing with the above topics.

3. Priority List Of Resources

The following lists of resources are suggested reading for teachers new to Family Studies:

- This document from cover to cover. Many suggestions, checklists, and procedures for safe practices are available in this resource.
- First Aid Manual. It is highly recommended that one full-time staff in the department/areas be trained and maintain certification in First Aid (Red Cross and St. John Ambulance both offer courses to individuals and employers).
- The First Aid Protocol (this can be obtained from your board or federation health and safety rep on staff). Post any relevant information in the Family Studies office or near the phone/intercom of the Family Studies lab.
- WHMIS information data sheets for chemicals used in the Family Studies lab, such as laundry soap, acetic acid or “vinegar”, sodium bicarbonate or “baking soda”, sodium hypochlorite or “bleach”, cleansers (Ajax, Vim, Mr. Clean, Fantastic), ammonia (Windex), boric acid or sodium borate (Borax), lye or caustic soda (Draino), sodium hydroxide (in oven cleaner, such as Easy Off), and others. Locate these data sheets in your school. WHMIS training is mandated by the Ontario Ministry of Labour.
- Fire Safety Plan for your school or school board. This will indicate the levels of responsibility for protocols during a fire drill and actual response. Ask your principal for a copy of this, and request the material be reviewed at a staff meeting if this has not been done within the last calendar year.
- Ontario School Board Insurance Exchange (OSBIE) documentation relating to teacher responsibilities for filling out incident report forms. These forms are available through your principal and through your Health and Safety Rep at the school or board office, or online at; http://www.osbie.on.ca
- Your school health and safety representative. Identify who your representative is at your school and report any safety concerns.

4. Procedures For Leaving A Class With A Supply Teacher

- If at all possible, leave seat work for students to finish while you are away. You cannot assume the supply teacher you requested will be the teacher covering your class. It is best that students do not cook when you are not there to supervise. If students must be in the lab, provide precise and detailed instructions, enlist your colleagues assistance to check in
with the supply teacher to make certain students are not causing difficulty and ensure all manuals for equipment being used that day are available for his/her reference. You are ultimately responsible for the safety of your students, so be conservative when deciding the activities your students will be asked to do in your absence.

• In the event you are the supply teacher responsible to cover another teacher’s food lab, request information with other teachers in the department about students that may give you difficulty and strategies to deal with them most effectively. If at all possible, find other work for students to do than cooking. Unless you are fully qualified in family studies, know the students with whom you will be working, and are familiar with the room layout and the teacher’s expectations, you may be jeopardizing your own safety or that of a student’s. It is best to be safe than sorry.

• For teachers filling in for a long term occasional leave, ensure you are familiar with this document and those listed within. Make it mandatory that the students have passed at least one safety test before they engage in cooking within the lab setting. YOU need to take every precaution that you will not be held liable if something dangerous or tragic were to happen: Cover Your Back!

5. Priorities And Procedures For All Teachers In A Family Studies Foods Lab:

The following list has been divided into two subsets: extreme importance, where the neglect or abuse of the recommendation may cause critical injury; and moderate to high importance, where the lack of adherence to the recommendation will not likely cause critical injury, but may lead to abuse or loss of property or mild to moderate injury or illness.

A supervising teacher must ensure that:

• The working and teaching areas allow for effective supervision with good lighting and an unimpeded view of all the room and equipment.
• Equipment will be maintained in a safe condition and inspected regularly.
• You have expert knowledge and experience on all the specialized technology in the classroom; you are able to access the manufacturers' operating instructions. Personnel supervising any family studies classroom with students using the technology shall know how to operate it.
• Students shall be educated about fire prevention and what to do in case of fire. Students and teachers shall know how to use the fire equipment. Every family studies classroom shall be equipped with fire fighting equipment that is maintained, regularly checked, and in a state of readiness.
• Students shall be instructed in safe methods of using and handling all the technology in the classroom.
• All computer equipment shall be attached to electrical outlets with a surge control.
• In an emergency, the office must be called for assistance. In case of accidents, medical help shall be obtained. A report of the incident shall be filed at the office.
• In case of electric shock the main power switch is pulled, if not possible, the victim should be dislodged by pushing or knocking away with a broom handle or meter stick. Avoid personal contact. Contact the office for assistance.
• Detectable odors are traced; the cause of the odor ascertained and rectified. Combustible waste material shall not accumulate. Food waste should be removed daily.
• Poisonous and corrosive materials are well labeled and kept in suitable containers in locked cupboards. (WHMIS).
• Hot water is available at all times in the food preparation area. Thermostats on self-contained hot water tanks should be set to 45 - 50°C to prevent illness or scalding.
• The supervising teacher(s) are familiar with the students with severe allergies in the school and the protocol for anaphylaxis and be trained in the use of an Epi-Pen®.
• Public health regulations pertaining to food preparation are adhered to.
• Knives are properly used, stored and maintained.

Supervising teachers(s) shall encourage that:

• The use of rooms for PROGRAM/OPERATIONS other than for Family Studies is at the discretion of the principal. This refers as well to the possible use of this space by tenants and child care operators.
• Personal hygiene is stressed with students, and staff, especially as it relates to food preparation and storage. It is highly recommended that a dishwasher be installed to wash all dishes and cutlery used by staff and students.
• All food is properly stored; refrigerators and freezers are operating within safe temperature ranges.
• Potholders are visible near all cooking technology and not stored in a drawer or cupboard.
• Baking soda is stored near the cooking technology for added fire protection.
• Floors/counter tops in food preparation area shall be kept in a clean condition at all times.
• Electrical equipment is never handled with damp or wet hands.
• Use of pressure cookers, deep fat fryers, fondue pots and barbecues are to be carefully supervised.
• Microwave ovens shall be checked regularly to ensure that the door and latch systems are in good working order. An empty oven shall not be operated. A damaged microwave removed from use until repaired or replaced. Furthermore, only microwave safe cookware shall be used. The door seal and oven shall be cleaned regularly using detergent and water or microwave oven cleaner. A copy of the manufacturer’s operating instructions shall be readily available near the oven.

(Adapted from the Operating Procedures for Environmental Health and Safety as developed by the Peel District School Board)
Safety is an integral part of the family studies program. The physical appearance and organization of the lab should emphasize safety. Maintenance of all equipment must be done on a regular basis to ensure a safe working environment for all students and staff. Safety posters and other types of reminders should be evident throughout the classroom.

The following procedures are applicable to most family studies food labs. They will need to be adjusted to the particular classroom environments. All procedures should be discussed with students before the use of any equipment.

The following suggestions will ensure that students work efficiently and safely. Students should:

1. General Responsibility
   - Be familiar with the location and use of safety equipment.
   - Follow safety rules at all times; always follow the teacher's instructions; work efficiently, quietly and carefully.
   - Share responsibilities and work with others.
   - Keep work surfaces orderly; arrange utensils conveniently; crowding the work space causes confusion, spills and accidents; wipe up all spills immediately.
   - Practice good personal hygiene in the kitchen area; wash hands with warm water and liquid soap before working with food.
   - Wear low-heeled, closed-toed shoes in the family studies lab at all times.
   - Keep floor free from grease, flour and water.
   - Refrain from running in the family studies lab.
   - Use caution when reaching over or working beside an appliance that is in use.
   - Gather up broken glass immediately; put glass in a separate container beside the garbage pail.
   - Report all accidents to the teacher no matter how minor.
   - Take care when using cut tops of cans.
   - Remove loose fitting clothing, or secure in some way, especially sleeves.
   - Ask the teacher if you do not understand the safe procedure for using any electrical appliance or any other piece of equipment in the lab.

2. The Safe Use of Knives
   - Place knives in drawer or storage block/box with cutting edge down.
   - Make sure the knife handle is to the front of the drawer.
   - Always use a cutting board.
   - Choose the proper size and type of knife for the job.
   - Always cut away from the body.
   - Concentrate on the task at hand when handling a knife.
   - Curl fingers away from blade when holding food being cut.
   - Wash knives, one at a time, not with other tools and put them away as soon as you are finished.
   - Wipe knives by moving the cloth from dull edge to the sharp edge.
• Hand a knife to another person with the handle facing them; a knife or any sharp tool should never be tossed.
• Only use a knife for its intended purpose: not as a screwdriver, hammer or can opener.
• Use the correct knife for the correct job: be instructed in the proper use of boning, serrated, paring, cleaver and chef knives.
• Use only a steel with a guard when sharpening a knife. Keep the blade of the knife away from the hand holding the steel.
• Keep knives sharp; dull knives slip more easily than sharp ones.

3. Cookware
• Use cookware that is compatible with the size of the heating unit.
• Assume that every pot and pan is hot. Use caution and pot mitts to handle hot utensils and pots.
• Ensure that handles are turned away from the edge of the stove top.
• Never fill cookware more than two thirds full to minimize the chance of slopping or spilling that may cause burns.
• When using fat for frying, ensure food is dry before cooking. Wet food will spatter the fat and cause burns.
• Avoid steam burns by opening lids away from yourself.
• Keep handles of cookware turned inward on the range top.
• Always use oven mitts or pot holder on hot items – not aprons, dish towels or moist cloths.
• Put out grease fires by covering the pot with a lid or using baking soda or a fire extinguisher designed for grease fires.
• Stir hot foods with wooden or specially designed plastic spoons.
• Do not reach over boiling or steaming liquids.

4. Microwaves
• Do not use metal containers or dishes with metallic trim in the microwave.
• Remove metal twist ties and metal covers or plastic storage wrap before cooking or defrosting.
• Do not use paper towels or cloths with contain synthetic fibre.
• Use oven mitts when handling dishes. Assume all containers will be hot coming out of a microwave.
• Do not boil eggs in their shells.
• Do not allow the microwave to operate empty.
• Pierce all foods with nonporous skins before cooking (e.g., potatoes, sausages)
• Overcooking can cause dehydration and may lead to fire.
• Only use wraps (e.g., plastic) and containers intended for microwave use.

5. Appliances
• Keep electrical appliances and their cords away from water or sources of heat.
• Grasp plug (not cord) when removing from outlet.
• Turn off all electrical or gas appliances when finished using them.
• Always dry hands before plugging or unplugging an electrical appliance.
• Disconnect electric cords from the outlet, then from the appliance.
• Do not use frayed, cracked or torn electrical cords. Report these to the teacher for repair.
• Keep surfaces free of grease or dust, particularly around the oven and stovetop.
• Keep clothing and cloths away from the stove top.
• Do not store flammable objects near the stove.
• Do not overload electrical outlets.
• For food choppers, ensure all guards are in place before operating, and unplug before disassembly or cleaning.
• For mixers, never overload the mixer, ensure loose clothing is removed or tied back and keep hands well clear of moving parts when in operation.
• Keep oven and dishwasher doors closed when not in use.

6. Hazardous Materials
• Hazardous materials must be stored separate from foods. Examples permitted in the Family Studies lab are dishwasher detergents, bleach, laundry soap, and cleaning products.
• Place any chemicals in approved, labeled containers only.
• DO NOT use any chemical for any other purpose other than what it is designed for.
• DO NOT mix chemicals without prior knowledge of the consequences. Read labels.
• DO NOT decant chemicals into another container without an approved WHMIS label. The teacher will do this by consulting with the science or technology department in your school for a label and instructions for its use.
• DO NOT dispose of chemicals down drains. Ask your teacher for proper disposal methods and procedures.

7. Food Safety
• Hot foods must be kept hot.
• Cold foods must be kept cold.
• Protect food from cross-contamination.
• Use cutting boards when preparing food, wash thoroughly with soap and scrubbing.
• Check with the teacher for proper food storage requirements.
• Avoid coughing or sneezing on food or food preparation surfaces.
• Be instructed in and use proper hand washing techniques.

Jig-Saw Activity

The following seven sheets are the student information sheets explaining the same content as above. We recommend you create a jig-saw method of teaching this material. First, students in home/lab groups divide into heterogeneous “expert” groups to discuss and read through one or more information sheets, then bring this new knowledge back into their home/lab groups. Use a web-based quiz or paper quiz to test the whole group on this new learning, where everyone in the group must get a level 4 to proceed to the next activity.
STUDENT INFORMATION SHEET #1

For each of the following, discuss with your lab group the importance of each bullet and the reasons why this might be a rule or responsibility of students working in a Family Studies Lab:

**GENERAL RESPONSIBILITY**

- Be familiar with the location and use of safety equipment.
- Follow safety rules at all times; always follow the teacher's instructions; work efficiently, quietly and carefully.
- Share responsibilities and work with others.
- Keep work surfaces orderly; arrange utensils conveniently; crowding the workspace causes confusion, spills and accidents; wipe up all spills immediately.
- Practice good personal hygiene in the kitchen area; wash hands with warm water and liquid soap before working with food.
- Wear low-heeled, closed-toed shoes in the family studies lab at all times.
- Keep floor free from grease, flour and water.
- Refrain from running in the family studies lab.
- Use caution when reaching over or working beside an appliance that is in use.
- Gather up broken glass immediately; put glass in a separate container beside the garbage pail.
- Report all accidents to the teacher no matter how minor.
- Take care when using cut tops of cans.
- Remove loose fitting clothing, or secure in some way, especially sleeves.
- Ask the teacher if you do not understand the safe procedure for using any electrical appliance or any other piece of equipment in the lab.
THE SAFE USE OF KNIVES

- Place knives in drawer or storage block/box with cutting edge down.
- Make sure the knife handle is to the front of the drawer.
- Always use a cutting board.
- Choose the proper size and type of knife for the job.
- Always cut away from the body.
- Concentrate on the task at hand when handling a knife.
- Curl fingers away from blade when holding food being cut.
- Wash knives, one at a time, not with other tools and put them away as soon as you are finished.
- Wipe knives by moving the cloth from dull edge to the sharp edge.
- Hand a knife to another person with the handle facing them; a knife or any sharp tool should never be tossed.
- Only use a knife for its intended purpose: not as a screwdriver, hammer or can opener.
- Use the correct knife for the correct job: be instructed in the proper use of boning, serrated, paring, cleaver and chef knives.
- Use only a steel with a guard when sharpening a knife. Keep the blade of the knife away from the hand holding the steel.
- Keep knives sharp; dull knives slip more easily than sharp ones.
For each of the following, discuss with your lab group the importance of each bullet and the reasons why this might be a rule or responsibility of students working in a Family Studies Lab:

**Cookware**

- Use cookware that is compatible with the size of the heating unit.
- Assume that every pot and pan is hot. Use caution and pot mitts to handle hot utensils and pots.
- Ensure that handles are turned away from the edge of the stove top.
- Never fill cookware more than two thirds full to minimize the chance of slopping or spilling that may cause burns.
- When using fat for frying, ensure food is dry before cooking. Wet food will spatter the fat and cause burns.
- Avoid steam burns by opening lids away from yourself.
- Keep handles of cookware turned inward on the range top.
- Always use oven mitts or pot holder on hot items – not aprons, dish towels or moist cloths.
- Put out grease fires by covering the pot with a lid or using baking soda or a fire extinguisher designed for grease fires.
- Stir hot foods with wooden or specially designed plastic spoons.
- Do not reach over boiling or steaming liquids.
STUDENT INFORMATION SHEET #4

For each of the following, discuss with your lab group the importance of each bullet and the reasons why this might be a rule or responsibility of students working in a Family Studies Lab:

Microwaves

- Do not use metal containers or dishes with metallic trim in the microwave.
- Remove metal twist ties and metal covers or plastic storage wrap before cooking or defrosting.
- Do not use paper towels or cloths with contain synthetic fibre.
- Use oven mitts when handling dishes. Assume all containers will be hot coming out of a microwave.
- Do not boil eggs in their shells.
- Do not allow the microwave to operate empty.
- Pierce all foods with nonporous skins before cooking (e.g., potatoes, sausages)
- Overcooking can cause dehydration and may lead to fire.
- Only use wraps (e.g., plastic) and containers intended for microwave use.
STUDENT INFORMATION SHEET #5

For each of the following, discuss with your lab group the importance of each bullet and the reasons why this might be a rule or responsibility of students working in a Family Studies Lab:

Hazardous Materials

- Hazardous materials must be stored separate from foods. Examples permitted in the Family Studies lab are dishwasher detergents, bleach, laundry soap, and cleaning products.

- Place any chemicals in approved, labeled containers only.

- DO NOT use any chemical for any other purpose other than what it is designed for.

- DO NOT mix chemicals without prior knowledge of the consequences. Read labels.

- DO NOT decant chemicals into another container without an approved WHMIS label. The teacher will do this by consulting with the science or technology department in your school for a label and instructions for its use.

- DO NOT dispose of chemicals down drains. Ask your teacher for proper disposal methods and procedures.
STUDENT INFORMATION SHEET #6

For each of the following, discuss with your lab group the importance of each bullet and the reasons why this might be a rule or responsibility of students working in a Family Studies Lab:

APPLIANCES

- Keep electrical appliances and their cords away from water or sources of heat.
- Grasp plug (not cord) when removing from outlet.
- Turn off all electrical or gas appliances when finished using them.
- Always dry hands before plugging or unplugging an electrical appliance.
- Disconnect electric cords from the outlet, then from the appliance.
- Do not use frayed, cracked or torn electrical cords. Report these to the teacher for repair.
- Keep surfaces free of grease or dust, particularly around the oven and stovetop.
- Keep clothing and cloths away from the stove top.
- Do not store flammable objects near the stove.
- Do not overload electrical outlets.
- For food choppers, ensure all guards are in place before operating, and unplug before disassembly or cleaning.
- For mixers, never overload the mixer, ensure loose clothing is removed or tied back and keep hands well clear of moving parts when in operation.
- Keep oven and dishwasher doors closed when not in use.
For each of the following, discuss with your lab group the importance of each bullet and the reasons why this might be a rule or responsibility of students working in a Family Studies Lab:

**FOOD SAFETY**

- Cold foods must be kept cold.
- Hot foods must be kept hot.
- Protect food from cross-contamination.
- Use cutting boards when preparing food, wash thoroughly with soap and scrubbing.
- Check with the teacher for proper food storage requirements.
- Avoid coughing or sneezing on food or food preparation surfaces.
- Be instructed in and use proper hand washing techniques:
  - Use warm water and liquid soap (one squirt will do).
  - Lather and scrub creating bubbles for 20 or more seconds.
  - Pay attention to creases, nail beds and under your nails as well.
  - Rinse well under running water.
  - Dry hands on a clean towel or use disposable paper towels.
  - Turn off taps with towel, dispose of in the laundry basket or waste bin.
- Remember to wash your hands also:
  - After bathroom visits, sneezing, coughing, blowing your nose, touching your hair, face, or pets.
  - After handling raw meat, fish, poultry or eggs.
  - Before touching cooked foods.
7. Procedures To Use In The Event Of An Accident

Refer to your school’s procedures for specific instructions regarding the accident reporting procedure. School boards and schools will vary in the procedures they use; however the basic format includes:

- The office is called for assistance
- First aid treatment is administered by the designated, trained individual(s)
- Medical help is obtained or recommended
- A written report is filed with the office

A fully supplied first aid kit must be available in the family studies room in a prominent location. Consult with your principal to obtain the contents recommended by the Board.

The maintenance of safety equipment in the school is the responsibility of the principal, however it is advisable to ensure that fire extinguishers are checked regularly and the equipment is correctly located in the classroom.

8. Procedures To Use In The Event Of A Fire

Refer to your school’s procedure for specific instructions regarding the controlling and reporting of a fire. The general tips here are only a basic guideline. Please refer to the Fire Safety Plan policies and practices of your school before working in the Family Studies food lab:

Student safety is your first priority. Rescue those in immediate danger, and ensure all students safely vacate the danger area immediately.

In case of fire, do not panic. Follow proper procedures.

Use your judgment: if the fire is controllable, determine the class of fire and the most appropriate method of extinguishing:

- Class A fires include burning wood, paper, cloth, rubber, and plastic (water, smothering, fire extinguisher can all be used)
- Class B fires include grease, oil, gasoline, and solvents (smothering or a class AB fire extinguisher can be used)
- Class C fires include electrical wiring, fuse boxes and electrical equipment (use a class ABC fire extinguisher only).

Water will only work on Class A fires. It will make a grease or electrical fire worse, so ensure you are familiar with the location and use of other fire equipment in the room.

Use of a fire extinguisher:

- Pull the pin, Aim low at the base of the fire
- Squeeze handle, Sweep slowly at the base of the fire (P.A.S.S. to remember)
- Stay low to avoid heat and smoke

Use the fire extinguisher with you positioned between the fire and the exit. If it becomes too difficult to control, evacuate immediately and follow your school’s policies for informing others (pull alarm and evacuate building) and assist students’ safe egress. Immediately inform administration of the location and type of fire to assist the fire personnel in controlling and extinguishing the fire.
9. Inspection Checklists For Facilities, Procedures And Safety Resources

The examples outlined below do not list all the possible items for your Family Studies lab. The best checklist for your workplace is one that has been developed for your specific needs. Add or delete information as relevant. Ensure that there is space for the inspector’s signature and the date and provide a copy of the completed checklist for the principal or his/her designate.

(Adapted from Halton Catholic District School Board’s Safety Guideline for Hospitality/Food Services Facilities Procedure Document 2005):

<table>
<thead>
<tr>
<th>Inspector(s):</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes/No</td>
</tr>
</tbody>
</table>

**INSTRUCTION:**

Do students always get adequate instruction and supervision prior to using a new technique, tool or appliance?

Is training for the use of emergency equipment provided?

**ENVIRONMENT:**

Is ventilation (fume hoods, working windows) suitable without having to resort to propping open doors?

Are work surfaces (floors, counters) safe when wet?

Are safety posters in a visible location?

Are safety shut-off buttons known to all teachers in the area?

Are safety shut-off buttons in working condition?

Is lighting adequate above all work surfaces?

Is there emergency lighting, in the event of a power failure?
<table>
<thead>
<tr>
<th><strong>FIRE EMERGENCY PROCEDURES:</strong></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Is there a clear fire response plan posted for each work area and by each exit?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do students know the plan?</td>
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<tr>
<td>Are drills held regularly?</td>
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<td></td>
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<tr>
<td>Are fire extinguishers chosen for the type of fire most likely in that area?</td>
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<tr>
<td>Are there enough extinguishers present to do the job?</td>
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<tr>
<td>Are the extinguishers properly mounted and easily accessible?</td>
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<tr>
<td>Are all extinguishers fully charged and operable/have they been recently inspected?</td>
<td></td>
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<tr>
<td>Are the fire blanket, baking soda, and properly sized pot lids accessible and their locations known to teachers and all students working in this area?</td>
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<tr>
<td><strong>MEANS OF EXIT:</strong></td>
<td>Yes/No</td>
<td>Condition</td>
<td>Comments</td>
</tr>
<tr>
<td>Are there enough exits to allow prompt escape?</td>
<td></td>
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<tr>
<td>Do staff and students have easy access to exits?</td>
<td></td>
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<tr>
<td>Are exits clearly marked?</td>
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<tr>
<td>Are exit routes equipped with emergency lighting?</td>
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<td></td>
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<tr>
<td><strong>FACILITY:</strong></td>
<td></td>
<td></td>
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<tr>
<td>Are stairs and steps in good condition?</td>
<td></td>
<td></td>
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<tr>
<td>Are light switches/fixtures adequate, and in good condition?</td>
<td></td>
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<tr>
<td>Are light levels adequate for safe and comfortable performance of work?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Are all work areas clean and free of debris?</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Are stored materials properly stacked and spaced?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Are tools kept in their proper place?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Yes/No</td>
<td>Condition</td>
<td>Comments</td>
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<tr>
<td>--------------------------------------------------------------------------</td>
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<tr>
<td>Are floors free of oil spillage or leakage?</td>
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<td></td>
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<tr>
<td>Are aisles and passageways kept clear of obstructions?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are floors free from protruding nails, splinters, holes, loose tiles or uneven surfaces?</td>
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<tr>
<td><strong>ELECTRICAL:</strong></td>
<td></td>
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<tr>
<td>Is the Canadian Electrical Code adhered to in operation, use, repair and maintenance?</td>
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<tr>
<td>Are all appliances properly grounded? (widened right prong or rounded third prong present and in good working order)</td>
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<tr>
<td>Are extension cords out of the aisles where they can cause a tripping hazard or be abraded by foot traffic?</td>
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<tr>
<td>Are extension cords being used as permanent wiring?</td>
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<tr>
<td>Are sockets near water sources equipped with GFI, or Ground-Fault Interrupters?</td>
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<tr>
<td>Are GFIs tested and reset regularly?</td>
<td></td>
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<tr>
<td>Is there adequate number of electrical sockets present?</td>
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<tr>
<td>Are sockets/circuits free from overloading or use of power bars for appliance use?</td>
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<tr>
<td><strong>MEDICAL AND FIRST AID:</strong></td>
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<tr>
<td>Is there a hospital or clinic nearby?</td>
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<tr>
<td>Are approved first-aid supplies available and replenished as used?</td>
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<tr>
<td>Are the emergency numbers posted by the nearest phone?</td>
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<tr>
<td><strong>MATERIALS AND STORAGE:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are stored materials stable and secure?</td>
<td></td>
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<tr>
<td>Are storage areas free from tripping hazards?</td>
<td></td>
<td></td>
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<tr>
<td>Is charging of electrical batteries performed only in designated areas?</td>
<td></td>
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<tr>
<td>Are racks, shelves and cupboards loaded only within the limits of their capacity?</td>
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<td></td>
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<tr>
<td>Question</td>
<td>Yes/No</td>
<td>Condition</td>
<td>Comments</td>
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<tr>
<td>--------------------------------------------------------------------------</td>
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<tr>
<td>Do teachers and students use proper lifting techniques?</td>
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<tr>
<td>Is there an adequate step-stool available for use by teachers and students in this area?</td>
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<tr>
<td>Are open spaces above kitchen cabinets kept clean and clear of clutter?</td>
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<tr>
<td>Are posters laminated for permanence and ease of cleaning?</td>
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<tr>
<td>Is there adequate storage for tools and appliances so they can be out of the way when not in use?</td>
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<tr>
<td>Do cupboard doors have suitable catches so that the doors will remain closed?</td>
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<tr>
<td>Do drawers have working glides/slides so that they easily close?</td>
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<tr>
<td>Are work surfaces (counters, table tops) in good condition: free of chips, loose grout, mold, cuts, holes, burns, or stains?</td>
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</tbody>
</table>

**SPECIFIC APPLIANCE CHECKLIST:**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes/No</th>
<th>Condition</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do all stove elements work properly?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do all oven elements (bottom, top) work properly?</td>
<td></td>
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<tr>
<td>Are all stove tops/ovens properly maintained and cleaned regularly?</td>
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<tr>
<td>Do ventilation hoods work properly?</td>
<td></td>
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<tr>
<td>Are all appliances used in good working order, with suitably sharp blades, guarded heating elements, intact appliance housing, well fitting parts or free of adaptations (tape, glue, guards disabled)</td>
<td></td>
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<tr>
<td>Are fridges and freezers set within adequate temperatures for safe food storage? (recommend a thermometer be permanently placed in these appliances for this purpose)</td>
<td></td>
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<tr>
<td>Are fridges kept clean: internal spills wiped up, spoiled food removed, expiration dates regularly checked?</td>
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<td></td>
<td></td>
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<tr>
<td>Are freezers kept locked if lock is available?</td>
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<tr>
<td>Are fridge and freezer doors adequately balanced to ensure they automatically close</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Yes</td>
<td>No</td>
<td>Unclear</td>
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<tr>
<td>-------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Does dishwasher door spring closed when racks are returned to their internal position?</td>
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<tr>
<td>Is there a heat-booster setting for the dishwasher, for sanitation purposes?</td>
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<tr>
<td>Does the washing machine stop automatically if the lid/door is opened during the spin cycle?</td>
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<tr>
<td>Are there both hot and cold water taps hooked up for the washing machine?</td>
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<tr>
<td>Does the dryer have an adequately hooked up ventilation system, with lint trap both in the machine and within the ventilation tubing?</td>
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</tr>
<tr>
<td>Does the dryer shut off automatically when the door is opened?</td>
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<tr>
<td>Are cleaning chemicals adequately and safely stored away from food or student areas?</td>
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</tr>
<tr>
<td>Is hot tap water set at an adequate temperature for safe use?</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Are sinks and taps in adequate condition, free of dripping, leaking, rust or corrosion?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Are garbage, composting and recycling facilities adequate, emptied and cleaned regularly?</td>
<td></td>
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<tr>
<td>Is there a working clock visible from most areas in the lab?</td>
<td></td>
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<tr>
<td>Is there a working intercom/telephone in the lab area?</td>
<td></td>
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<tr>
<td>Are there brooms, mops, buckets and dustpans available for student and teacher use?</td>
<td></td>
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<tr>
<td>Are knives professionally sharpened once a year, to maintain their edge?</td>
<td></td>
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</tbody>
</table>
10. Teachers’ Responsibilities And The Law

IMPORTANT: Be sure to check with your school board representative and your administration as to your accountability and responsibilities with regard to a letter home informing parents/guardians of the potential risks of taking your courses. If a potentially preventable accident were to happen, the liability may still rest with the supervising teacher. In the past, teachers have been held accountable in spite of the fact that the student was at fault. It therefore is in your best interests to keep close record of attendance during safety lessons, and ensure those with incomplete attendance be caught up with the class as comprehensively as possible.

In the Family Studies setting, teachers should act as a careful and prudent parent. In this way, a teacher should be much less inclined to attempt to supervise a large group of students in the area of assorted/potentially dangerous equipment than to supervise a smaller group over which he or she could be assured greater control. Also, the need for close supervision of any group of students increases with the complexity of both the task and the equipment employed to complete the task. In this regard, safety should be the joint responsibility of the educator, the principal and the school board. The Lead Counsel for the Ontario School Boards’ Insurance Exchange in 1992 stated that, “periods of fiscal restraint which inevitably give rise to pressure for larger class sizes and reduced equipment expenditures will not justify an increased risk to the health and safety of the student population…considerations of class size and available quality supervision are two very important factors in making the determination of the types of … activities which could be reasonably, safely and/or prudently undertaken.

As far as what the “caps” are for class sizes that have a lab component, this depends on your board’s collective bargaining committee within your federation and your board arrangement. Following is a Toronto District School Board list of cap sizes, and the “wiggle room” each TDSB guidance and administrative team can exercise based on their enrolment. Find out your own board’s agreements and use this when discussing the safety concerns you have for your room and your students.

---

1. In 1990, the Supreme Court of Ontario found a teacher and the school board negligent when a student received serious injury to the right eye during a sewing activity. The Judge determined this was a foreseeable accident and should have sufficiently trained the student. The school board and teacher were fined $56, 000.

2. In 1981, the Supreme Court of Canada deemed the Peel County Board of Education liable for failing to provide adequate supervision of a student in a gymnastic manoeuvre, even though the student was acting recklessly. Thus, argument has been made that recommend teachers act as a “Prudent Parent” during all activities to all students.

3. “School Board Liability for Industrial Arts Accidents” (1992) by Jeffrey Wm. Strype of Thompson, Rogers Barristers and Solicitors, 390 Bay Street, Toronto, ON, acting as Lead Counsel for the Ontario Boards’ Insurance Exchange.
11. An Example Of Class Size Considerations Based On Course Destination

“TDSB Class Size Targets 2006-07”

(OSSTF District 12 bargaining committee)

<table>
<thead>
<tr>
<th>Category</th>
<th>2006-07 Targets</th>
<th>10% Flex in up to 10% of classes per school</th>
</tr>
</thead>
<tbody>
<tr>
<td>University</td>
<td>Up to 33</td>
<td>Up to 36</td>
</tr>
<tr>
<td>Academic</td>
<td>Up to 31</td>
<td>Up to 34</td>
</tr>
<tr>
<td>Applied</td>
<td>Up to 24</td>
<td>Up to 26</td>
</tr>
<tr>
<td>College</td>
<td>Up to 26</td>
<td>Up to 29</td>
</tr>
<tr>
<td>M designation U/C</td>
<td>Up to 32</td>
<td>Up to 35</td>
</tr>
<tr>
<td>Essentials</td>
<td>Up to 14</td>
<td>Up to 15</td>
</tr>
<tr>
<td>Phys ed</td>
<td>Up to 34</td>
<td>Up to 37</td>
</tr>
<tr>
<td>ESL credit</td>
<td>Up to 20</td>
<td>Up to 22</td>
</tr>
<tr>
<td>Computer</td>
<td>Number of work stations Or category level if greater number of machines in instructional areas</td>
<td>Number of work stations Or category level if greater number of machines in instructional areas</td>
</tr>
<tr>
<td>Workplace</td>
<td>Up to 18</td>
<td>Up to 20</td>
</tr>
<tr>
<td>Open</td>
<td>Up to school divisor +18% (refer to your staff allocation sheet)</td>
<td>Add 10% flex factor to actual open number</td>
</tr>
<tr>
<td>Tech (excluding computer tech courses such as BTT, TIK, CAD, etc)</td>
<td>Up to 22</td>
<td>Up to 24</td>
</tr>
<tr>
<td>GLE</td>
<td>Up to 16</td>
<td>Up to 18</td>
</tr>
<tr>
<td>Co-Op</td>
<td>Up to 36</td>
<td>Up to 39</td>
</tr>
<tr>
<td>Alternative Ed Programs</td>
<td>Up to 19</td>
<td>Up to 21</td>
</tr>
</tbody>
</table>

Class Size maxima do not apply to Alternative Education Schools. They are governed by the rules on maximum PTC (pupil teacher contacts).
12. TEACHING AND ASSESSMENT TOOLS

The following resources will be helpful for teaching and assessing student work in kitchen safety and food safety protocols.

Also, check out the resource list at the end of this document for websites, articles, links to interactive quizzes and games for learning food safety concepts.

Notes to teacher:

The diagnostic test on the next page should be administered before the first food lab with enough class time to review safety and hygiene procedures. Following the diagnostic test is the teacher answer key with suggested reasons for the answers. Ensure students know the correct answers to their test as part of the formative learning of the safety lessons you provide.

In the next section of this document, you will find two letters to go home describing classroom activities and the responsibilities of students in a foods classroom. After completing the necessary lessons on safe procedures within the food lab, send one letter home along with the Safety Contract. Each student and parent/guardian is expected to sign the safety contract stating that they are aware of the safety procedures in the food lab.

Either letter could easily be adapted for any course in which students participate in food labs. This entire document has been left in “word” format so that you will be able to personalize and modify its contents to suit your needs most effectively.

After the sample contract, there is a final observation and written test to be administered to students after the lessons on safety have occurred. Use this as an assessment of your teaching and their learning: students who do not receive exemplary marks should be provided further remediation or accommodations such as the test being given orally or reinforcement through independent study online or in another language. (Some WHMIS and Government food safety materials are available in other languages—see the reference list for their website). The safety of all students and the teacher requires that all students working in the food lab have knowledge of safety practices, and conduct themselves safely at all times.
‘Getting Ready to Cook’

Name: __________________

Diagnostic Test

This test is for diagnostic purposes only. The teacher will review your answers to determine at what level to start the health and safety instruction for the course. Don’t worry if you don’t know the answers to some of the questions. We will cover the information in the next few days in class.

Answer all questions on the paper.

True or False – Read the statement carefully. If the statement is true, write T on the blank. If the statement is false, write F on the blank.

1. You cannot get food poisoning in the family studies kitchen at school. ______

2. Eggs are a potential source of salmonella bacteria. ______

3. Hamburgers must be cooked until 74°C in the centre. ______

4. It is OK to defrost frozen chicken on the kitchen counter ______

5. When purchasing groceries buy perishables last (e.g., milk, butter, meat). ______

6. It is safe to leave your kettle and toaster plugged in all day. ______

7. The best place to store cleaning products is under the sink. ______

8. Potatoes and onions should be stored under the sink ______

9. It is fine to use a folded dishtowel to remove a hot dish from the oven. ______

10. Burns should be treated with butter. ______

11. There are no pieces of equipment in this kitchen that could harm me. ______

12. Hands should be washed only at the start of the food lab. ______
13. When removing a pot lid, tilt the cover away from you. 

14. Use water to put out a grease fire.

15. If you smell gas, turn off the oven and stove controls, wait one minute and turn on again.

16. Always close cabinet doors and drawers.

17. Allow knives to soak in hot, soapy water to ensure that they are cleaned satisfactorily.

18. Never use metal cookware or aluminum foil in the microwave.

19. To unplug an appliance I should pull the cord.

20. Dishes should not be left to air dry. A dish towel is the most sanitary way of drying dishes.

21. List five (5) safety rules that should be followed when working in the food lab:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

22. Read the following case study and list the health and safety errors that Preeti made in her food preparation. Give suggestions to correct her mistakes so that the dinner would be prepared in a safe manner and would be safe for her family to eat:
Preeti was making a chicken stir-fry for her family supper. She rushed into the kitchen and started to work. The chicken had been defrosting on the counter for three hours but it was still partly frozen. Her parents were expecting dinner in just over 1/2 hour so Preeti decided to cut the chicken up, add some marinade and use it, as it would defrost while being cooked. Preeti took the vegetables from the fridge, and as they looked nice and clean cut them into neat pieces for her stir-fry. In order to save time and dishes she used the same cutting board and knife that she used for the chicken. Time was running out so Preeti took the rice out of the cupboard under the sink and put some on the stove to cook. She had just started to cook the chicken in the wok when the phone rang. When she returned from the phone the chicken was a little brown and the oil had started to burn. Preeti grabbed the dishtowel and a fork and removed the chicken from the pan. She tipped the hot oil down the sink and ran some water in the pan to clean it. She stir-fried the vegetables quickly, added the chicken and some of the marinade the chicken had been sitting in. She served the family dinner in record time!

<table>
<thead>
<tr>
<th>Health and Safety Error</th>
<th>Correct Procedure to follow</th>
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</thead>
<tbody>
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</table>
‘GETTING READY TO COOK’ Teacher Answer Key:

1. F. Food poisoning can occur anywhere food is prepared or eaten.
2. T. Egg shells can be contaminated with salmonella that will transfer to the egg upon cracking.
3. T. Use an instant-read thermometer to test meat’s internal temperature. Absence of pink is not a sufficient indicator of safe temperature.
4. F. The chicken’s outer surface may allow bacteria to multiply before the core has thawed, particularly in thicker cuts of meat.
5. T. Purchase high moisture, protein foods last and ensure immediate transportation home into refrigeration, or take a cooler to protect perishables.
6. F. It is best to unplug portable appliances and store in a safe place to prevent accidents.
7. F. Under the sink area should be used for draining racks and draining boards. Powder cleansers if exposed to moisture will corrode their own containers, causing contamination and caustic burn hazards.
8. F. Moisture found under most sinks may cause mold growth or cause these root vegetables to sprout.
9. F. Dishcloths can be thin and/or wet and thus will transfer heat rapidly, so are insufficient protection when handling hot food containers.
10. F. Butter as a burn treatment has been proven ineffective and potentially hazardous if the skin has an open wound. Use cold running water for 10 minutes and refer to a first aid manual for treatment.
11. F. Many pieces of equipment in the kitchen contain sharp blades, fast moving parts or heating elements that can cause injury. Read appliance manuals before operating, and instruct students in their proper use every time.
12. F. Hands should be washed at the beginning of a food lab, after sneezing, coughing, or visiting the washroom, and after working with protein foods. Train students to wash their hands correctly and frequently during a lab activity.
13. T. Steam escaping will be vented away from the cook’s face and arm.
14. F. Water will only spread a grease fire. Use baking soda or a pot lid to smother the flames. Train yourself and the students in the proper use of the fire extinguisher.
15. F. In the event a student smells gas, instruct them to turn off the oven and stove controls and call the teacher. If possible, ventilate the room and vacate the area if needed. You (teacher) should relight the stove after air has cleared a minimum of five minutes later.
16. T. Cabinet doors and drawers are potentially an impact hazard particularly in crowded lab spaces.
17. F. Knives should never be left in soapy water. The dishwasher or another student may be cut reaching into the soapy water unknowingly. Knives should be wiped with a soapy cloth from the handle to the tip, being mindful that the blade is wiped crosswise, not down its length.
18. T. Arching by the radiation coming in contact with metal can cause a fire within the microwave which may damage its interior. If this occurs, inspect the appliance carefully before using again.
19. F. Always unplug an appliance by holding firmly to the plug, not the cord. If you suspect a break between a cord and plug, do not use until fully inspected and replaced.
20. F. Dishes wiped with a damp dishcloth can be a potential cause of cross contamination. It is best to air dry if time permits.
21. For safety rules see the following letter to parents.
22. Possible answers for the case study:

<table>
<thead>
<tr>
<th>Health and Safety Error</th>
<th>Correct Procedure to follow</th>
</tr>
</thead>
<tbody>
<tr>
<td>“She rushed into the kitchen and started to work” (did not wash her hands)</td>
<td>Wash hands with warm water and soap, lathering for a minimum of 20 seconds, scrub under nails and around cuticles and in creases.</td>
</tr>
<tr>
<td>“the chicken had been defrosting on the counter for three hours but it was still partly frozen” (food should not be thawed at room temperature)</td>
<td>Thaw meat on a wrapped plate in the bottom shelf of the fridge, or quick thaw in a zip-top bag in a sink of running water. She could have used the defrost setting on the microwave, too.</td>
</tr>
<tr>
<td>“Preeti took the vegetables from the fridge…cut them into neat pieces for her stir-fry” (did not wash the vegetables)</td>
<td>Wash/scrub all vegetables and fruits to remove pesticides, dirt or fertilizer residue. Some produce may harbour pathogenic bacteria so all should be carefully rinsed under cold running water.</td>
</tr>
<tr>
<td>“Preeti took the rice out of the cupboard under the sink” (food should not be stored under the sink)</td>
<td>Rice and other staples (potatoes, onions) should be stored in a cool dry place. Under the sink has the potential for warmth and moisture which may lead to mold and possible illness.</td>
</tr>
<tr>
<td>“She had just started to cook the chicken in the wok when the phone rang…when she returned…” (left cooking foods unattended)</td>
<td>Oil and food in a hot wok can smoke and catch fire very quickly. Never leave a pot/pan on the stove unattended. Let the answering machine get the call!</td>
</tr>
<tr>
<td>“…grabbed the dishtowel and a fork and removed the chicken from the pan” (burn hazard with hands insufficiently protected)</td>
<td>She should use a protective pot mitt and tongs or a slotted spoon with a long handle to prevent burns from the pan or spattering oil in the wok.</td>
</tr>
<tr>
<td>“she tipped the hot oil down the sink and ran water into the pan to clean it” (burn hazard due to spattering. Pouring fat in drain can clog pipes which can lead to sink back-ups and sewage smells over time)</td>
<td>Allow pan to cool before wiping out excess oil with a paper towel then rinsing with warm water. Use a recycled can for hot oil; store in fridge until solid. Dispose of with other kitchen waste.</td>
</tr>
<tr>
<td>“…added the chicken and some of the marinade the chicken had been sitting in” (food safety hazard: raw chicken juices can grow pathogenic bacteria very quickly)</td>
<td>Never use the marinade raw meat has sat in, unless it is thoroughly cooked, and only if it has never sat out at room temperature while marinating, as the toxins from some bacteria are also illness causing.</td>
</tr>
</tbody>
</table>
“Food Lab Safety & Sanitation” Letter to Parents

With your parent(s) or legal guardian, read the following safety and sanitation procedures for working in the kitchen. Then have one of your parents or your legal guardian sign on the next page, stating that you have read the procedures. Return the signed portion to your teacher by the following date: ______________

Safety Procedures

To prevent falls…
1. Wipe up all spills at once.
2. To reach items stored in high places, use a sturdy step stool or ladder. Don’t use a chair, box, or counter.
3. Close cabinet doors and drawers after opening them.

To prevent cuts…
4. Keep sharp knives sharp. They are less likely to cause an accident than dull ones.
5. Cut away from you with the knife blade slanted.
6. For peeling vegetables such as carrots or potatoes, use a peeler instead of a knife.
7. Cut, chop, and dice foods on a cutting board.
8. If a knife, kitchen scissors, or an ice pick starts to fall, get out of the way. Do not try to catch it in mid-air.
9. Wash, dry, and store knives separately from other dishes and utensils.
10. Keep your fingers away from the beaters in mixers and away from the blades in other appliances.
11. Use knives and other sharp tools only for their intended purpose
12. Wash knives one at a time immediately after use, never soak in wash water.
13. Sweep up broken glass immediately, use a damp paper towel to pick up tiny pieces.
14. Wrap your hand in a towel to pick up broken glass.
15. When opening cans, make sure the lids are completely off; rinse empty cans, insert lids and pinch rims closed before recycling.

To prevent fires and burns…
15. Use baking soda, not water, to put out a flare-up.
16. Keep flammable materials away from the top of the stove and away from portable appliances that heat up.
17. Use a dry potholder or oven mitts, not a towel or the corner of an apron, to remove pans from the stove.
18. Store flammable substances such as cleaning fluid or aerosol sprays away from heat sources.
19. Use a metal trash can when disposing of hot or smoldering items.
20. Keep the stove exhaust hood and ducts clean.
21. Keep pan handles turned towards the centre of the stove.
22. When removing a pan lid, tilt the lid away from you and do not have your face directly over the pan.
23. When removing a pan from the oven, pull the oven rack out. Don’t reach into a hot oven.
24. Wear an oven mitt on each hand and use both hands to remove pans from the oven.
25. Check to be sure the stove and all appliances are turned off when you are finished with them.
26. Use a spoon or tongs, not your fingers, to remove food from hot liquids.
27. If you smell gas, turn off all stove and oven controls and tell your teacher.

To prevent electric shock…
29. Keep electrical cords away from water and hot objects.
30. Do not plug several cords into an electrical outlet at one time.
31. Unplug portable appliances after you have used them.
32. Disconnect appliances before cleaning them. Do not put them in water unless the appliance is labeled “immersible.”
33. Before using an appliance, make sure your hands are dry and that you are standing on a dry surface.
34. Unplug appliances before bringing metal objects in contact with any working parts.

To prevent microwave accidents…
35. Never use a microwave if the door appears damaged.
36. Never turn on the microwave if there is no food inside.
37. Do not heat sealed jars, cans, or bottles in the microwave.
38. Do not heat home-canned foods in the microwave. Use a conventional stove.
39. Use potholders to remove food containers from the microwave.
40. Remove lids and plastic wrap carefully to avoid steam burns.
41. Stir foods prepared in the microwave before serving them to distribute the heat.

Sanitation Procedures
42. Place books, purses, and other personal items in an area of the classroom not used for food preparation.
43. Wear appropriate, clean clothing on lab days. Avoid long, loose sleeves, sashes, and dangling jewellery. Tie religious head scarves behind neck if ends are loose.
44. Wear a clean apron during food preparation and cleanup.
45. Pull hair back and secure it so that it stays away from your face and shoulders.
46. Avoid working with food if you have an open cut, sore, or other wound on your hands.
47. Wash your hands with soap before beginning the lab. Dry your hands on paper towels or on cloth towels not used for drying dishes.
48. While working with food, avoid touching your hair, skin, face, or any unclean objects.
49. Repeat hand washing when necessary, especially after coughing, sneezing, or using the restroom.
50. Be sure you have clean dishtowels, dishcloths, potholders, and oven mitts before beginning the lab. Obtain additional clean items as they are needed.
51. Wipe all countertops and tables at the beginning and end of each lab. Use hot water for washing dishes.
52. Fill the sink with hot, soapy water at the beginning of the lab. Soak dirty dishes, pots, and pans in the water as you finish with them. (Don’t leave sharp knives in the water)
53. Wash dishes, pans, and utensils as you use them, allowing them to dry on the drain board when possible.
54. When tasting foods, use a spoon other than the one used for stirring. Use a clean spoon for each person tasting and for each time food is tasted.
55. After working with raw animal foods, scrub all areas and utensils used with hot soapy water.
56. When possible, use a kitchen tool, not your hands, to complete tasks.
57. Thoroughly cook foods to be served hot. Keep them hot until they are served.
58. Foods to be served cold should be kept cold until serving time.
59. Cover leftover foods and store them in the refrigerator immediately.

Signature of Parent or Legal Guardian: _____________________________________________

Date signed: ___________________________________________________________________

Please return this signed letter for your child to keep in the front of his or her subject notebook.

Thank you!

(Teacher signature or typed name here)
To: The Parents/Guardian of ____________________,

This semester/year _________________ (student name) is taking the family studies course, ____________________ (course name) as part of his/her Grade _____ (9-12) studies. We are pleased to be able to provide students with opportunities for hands-on activities that develop their skills and understanding of course material. In these activities students will be using a variety of machines and equipment that have the potential to cause injury. The safety of our students is extremely important to us and we at _________________ (School) are proud of our safety record in the Family Studies department.

All students will be completing a series of activities concerning safety in the foods classroom before being allowed to work in the food lab. Students enrolled in Food courses will learn about safe food handling practices as well as the correct and safe use of all equipment in the food lab.

Our aim is to provide ______________ (student name) with a safe and enjoyable practical experience that will enhance his/her learning. All students will sign a safety contract that outlines the safety rules and appropriate behaviour in the lab situations. Please review this contract with your daughter/son and sign in the appropriate place. If you have any questions please do not hesitate to call me at _____________________ (school number and office extension). Thank you for your attention to this matter.

Yours truly,

Family Studies Teacher
SAFETY CONTRACT

As a student enrolled in _________________________

/course name/

at     ________________________________________

/school name/

I understand the classroom safety instructions given to me and realize that I have the responsibly to prevent accidents in the classroom.

_______________________________________________    ____________________

(student’s signature)                   date)

_______________________________________________    ____________________

(parent’s signature)                           (date)

_______________________________________________    ____________________

(teacher’s signature)                       (date)
SAFETY CONTRACT

As a student enrolled in ________________________________________
\[(course \ name)\]

at _________________________________________________________
\[(school \ name)\]

I understand the classroom safety instructions given to me and realize that I have the responsibly to prevent accidents in the classroom.

\[(student’s signature)\] \[(date)\]

\[(parent’s signature)\] \[(date)\]

\[(teacher’s signature)\] \[(date)\]

FOOD ALLERGIES/CONSIDERATIONS

It is extremely important to discover if any students in your class have allergies or intolerances to certain foods and the degree of reaction to those foods. Students with severe or fatal allergies are
usually pro-active and may provide an **Epi-pen** in case of anaphylactic shock. However there may be students with less severe reactions that will not be so forthcoming that must be identified. Care must be taken to ensure the kitchen does not pose a threat to students with food allergies. If the room is shared with other teachers they must be made aware of the need to prohibit certain foods.

Consideration must also be given to students who for religious, cultural or ethical reasons do not eat particular foods.

Have all students with allergies/food considerations complete the form below. The teacher will retain the form for the duration of the course.

**FOOD ALLERGIES/CONSIDERATIONS**  
**Student Recording Sheet**

<table>
<thead>
<tr>
<th>NAME: ______________________</th>
<th>Class: ____________________</th>
<th>Period: ______</th>
</tr>
</thead>
</table>

The following is a list of foods that I may not eat and the reason why:

<table>
<thead>
<tr>
<th>Food</th>
<th>Reason</th>
<th>Degree of Reaction</th>
<th>Treatment</th>
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<tbody>
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This test is final evaluation of your work on Kitchen Safety and Hygiene. In order to work in the food labs you must achieve a grade of 80% or higher.

**Part A - Identification of Hazards in the Kitchen**

A kitchen has been set up with a series of potential hazards. Identify all the hazards and suggest the correct procedure to avoid an accident or health risk. You will get one mark for identifying the hazard, and 2 marks for identifying the correct procedure. Total marks will depend on your kitchen and the way in which the teacher has set up the space (teachers, see note following test)

<table>
<thead>
<tr>
<th>HAZARD</th>
<th>CORRECT PROCEDURE</th>
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</table>
Part B - Short answer

Answer the following questions as fully as possible:

1. a) Number in correct order the steps for proper hand washing method using #1 as the 1st step to #6 as the last step. You will need to eliminate 3 steps. (6 marks K/U)

____ use bar soap and a washcloth
____ clean finger nails
____ rinse
____ add liquid soap and scrub
____ dry with paper towels
____ wash at least 20 seconds
____ wash and count to 10 while you scrub
____ wet hands with warm water
____ dry with a cloth hand towel

b) Give an example of a situation where improper hand washing could result in illness, describing clearly both the problem and consequence/result. (2 marks C, A)

2. A student is cooking apple fritters using a pan of deep fat. You hear a scream and see that the oil is on fire and the student has burnt their hand. List five steps you would take (in chronological order) to deal with the situation. (5 marks T/I, C)

3. Your father has been grocery shopping and asks for your help in storing the groceries. He has purchased the following items: Flour, salt, sugar, whole wheat bread, frozen orange juice, tofu, fresh fish, apples, oranges, potatoes, lettuce, carrots, onions, ice-cream and frozen corn.

a) List the foods you would store first and why. (1 mark T/I, A)

b) Group the foods into the three main storage areas using the chart below: (3 marks A)

<table>
<thead>
<tr>
<th>Storage Areas</th>
<th>Foods in this group</th>
<th>Temperature for Storage</th>
<th>Storage Tips</th>
</tr>
</thead>
<tbody>
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</table>

c) State the correct temperature range for each of the three storage areas, and two (2) storage tips for each area. (9 marks K/U, A)
4a) Match the 5 personal hygiene practices that should be used when working in the kitchen with the most logical explanation as to why it is important. (5 marks K/U)

<table>
<thead>
<tr>
<th>Practice</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tie back hair and scarves</td>
<td>prevents bacteria from clothes getting into the food</td>
</tr>
<tr>
<td>Wash hands after handling meat, Going to washroom, sneezing…</td>
<td>slips and falls can occur to you or others</td>
</tr>
<tr>
<td>Wear an apron</td>
<td>hair in food is unappealing and unsanitary</td>
</tr>
<tr>
<td>Use a clean spoon to taste test</td>
<td>harmful food illness causing bacteria can be transmitted on your hands from your body to the food</td>
</tr>
<tr>
<td>Clean up spills immediately</td>
<td>saliva can carry bacteria and enzymes that will spoil food and may cause illness to others</td>
</tr>
</tbody>
</table>

5. If you were preparing grilled chicken for supper, how would you avoid cross-contamination? (2 marks T/I)

6. You have invited some friends over for a barbecue. You have decided to prepare grilled hamburgers. You prepare the burgers, put them on a plate and carry them outside. To ensure that the food you have prepared for your friends is safe what do you need to do next? State three procedures you need to practice to help ensure that the food you serve it safe. (3 marks T/I, C, A)

7. List the order in which dirty dishes should be washed and explain why it is important that this order be followed. (5 marks T/I, A)

Notes to teacher for Safety Hazards Identification Test:

Set up two or three kitchens with a series of potential hazards, for example:

- Several appliances plugged into an extension cord.
- Appliance cord draped over the sink
- Knives in the sink
- Cleaning products in the cupboard next to food products
- Dish towel hanging over the oven door.
- Oven gloves on the burner
- Pan on incorrect size burner
- Pan handles sticking out
- A spill of some kind on the floor
- ‘Meat’ (could be a picture) left out on the counter
- Bugs (plastic) on the counter
- Cupboard door open
- Drawer left open
Students can observe the kitchen from a pre-marked distance to record the problems on their test sheet. You may want to allow only one group at a time to do this depending on the numbers in your class.

SHORT QUESTION ANSWER KEY:

1a) Describe the correct hand washing procedure in detail. (4 marks)

See page 19 of this document, or the Student Information sheet #7. The proper hand washing technique could be something like this:

- Use warm water and liquid soap (one squirt will do).
- Lather and scrub creating bubbles for 20 or more seconds.
- Pay attention to creases, nail beds and under your nails as well.
- Rinse well under running water.
- Dry hands on a clean towel or use disposable paper towels.
- Turn off taps with towel, dispose of in the laundry basket or waste bin.

b) Explain the importance of hand washing in preventing food-borne illness. (2 marks)

- Hand washing prevents cross-contamination and the introduction of toxic bacteria to food from washroom visits, sneezing or touching pets, or from handling raw meat.

c) Give an example of a situation where improper hand washing could result in illness. (2 marks)

- Many possible answers may include washroom visits, sneezing or coughing, touching pets or not washing hands after touching protein foods. A suitable answer would have a probable situation clearly explained with problem and consequence/result illustrated.

2. A student is cooking apple fritters using a pan of deep fat. You hear a scream and see that the oil is on fire and the student has burnt their hand. List five steps you would take (in chronological order) to deal with the situation. (5 marks)

- Rescue those in immediate danger first
- Clear the area of students
- Turn off element if safely possible
- Smother the flames either with a pot lid if possible or more likely, a fire extinguisher
- Use the PASS method of pulling pin, aiming low, squeeze & sweep and stay low
- Ensure the door is to your back so escape is possible
- Administer first aid to the student who is burned

3. Your father has been grocery shopping and asks for your help in storing the groceries. He has purchased the following items: Flour, salt, sugar, whole wheat bread, frozen orange juice, tofu, fresh fish, apples, oranges, potatoes, lettuce, carrots, onions, ice-cream and frozen corn.

a. List the foods you would store first and why. (1 mark)

- Perishables such as frozen foods, dairy, meat/fish/chicken because they will spoil fastest

b. Group the foods into the three main storage areas (3 marks)

- Dry goods: flour, salt, sugar, onions, potatoes, bread (or fridge)
- Fridge items: fresh fish, lettuce, orange juice, carrots, tofu, apples.
- Frozen items: frozen juice, corn, ice-cream and the fresh fish if it will not be eaten right away

c. State the correct temperature range for each of the three storage areas, and two (2) storage tips for each area. (9 marks)

See Teacher Overheads #2 and #3 for information:
Cupboards: room temperature 29°C or cooler (dark, dry; potatoes and onions in an area 10-20°C ideally)

Fridge: 4°C (store raw meat/fish/chicken on a plate on bottom shelf to prevent dripping/cross contamination; check package labels for instruction on storage, leave room between foods to allow for cold air to circulate, store foods that aren’t highly perishable (e.g., condiments) on the door of the refrigerator)

Freezer: -18°C (wrap foods properly to avoid freezer burns, label foods with name of food and date frozen, rotate foods as you store them)

4a) State 5 personal hygiene practices that you should be used when working in the kitchen. For each practice explain why it is important. (5 marks practices + 5 marks explanation = 10 marks)
- Practice good personal hygiene in the kitchen area; wash hands with warm water and liquid soap before working with food to prevent bacteria transferring from you to the food or cooking surfaces
- Wear low-heeled, closed-toed shoes in the family studies lab at all times to prevent injury to your feet through fallen objects, heat sources such as water or oil.
- Tie back hair or wear a food service approved hat/hairnet to prevent hair from falling into the food
- Wear an apron to prevent contamination of food or clothing
- Remove loose clothes, long-sleeved jackets and tie loose ends of headscarf behind neck to avoid heat sources or trailing garments being the vehicle for cross-contamination

b) Pick one of these practices and explain what could happen if you failed to observe it. (2 marks)
- Answers will vary

5. If you were preparing grilled chicken for supper, how would you avoid cross-contamination? (2 marks)
- Students should mention procedures including keeping cutting board clean of meat juices, washing knife between uses, and/or not reusing the marinade or preparation platter for serving.

6. You have invited some friends over for a barbecue. You have decided to prepare grilled hamburgers. You prepare the burgers, put them on a plate and carry them outside. To ensure that the food you have prepared for your friends is safe what do you need to do next? State three procedures you need to practice to help ensure that the food you serve it safe. (3 marks)
- use a separate plate for raw and cooked food
- cook ground meat to the correct internal temperature to kill bacteria (a minimum of 160°)
- serve immediately, do not let cooked foods stay warm for more than 1 hour.

7. List the order in which dirty dishes should be washed and explain why it is important that this order be followed. (5 marks)
- glasses first; the fresh soapy water will not yet have grease that can deposit on the glass
- cutlery next
- plates, bowls and cups next
- serving and cooking tools, sharp knives separately
- greasy serving dishes or cooking pots last after having soaked while others were being washed
- Air dry if time allows: this prevents a previously dirty dish towel from making clean dishes dirty again!
A Laminated Kitchen Reminder above each sink:

Clean up - Do your share
Fill in your initials for all of the tasks that you completed.

_____ Washed dishes in hot soapy water
_____ Dried dishes
_____ Put dishes away in correct places
_____ Wiped table and counters
_____ Wiped stove top
_____ Cleaned out sinks after dishwashing
_____ Put away dish rack and dish soap in cupboard under sink
_____ Turned off oven
_____ Put away leftover ingredients in their proper place
_____ Put all dish towels and aprons in washing machine
_____ Disinfected counters and sinks
_____ Refilled dish soap and hand soap as required

Please write down any faulty or missing equipment below:

_______________________________________________________________

Don't leave your kitchen until your teacher has checked it!

© Heather Walters, TDSB
Food Storage and Safety

At the Store
• check best before dates
• choose cans that are free of dents, bulges, rust or leaks
• place raw meats, poultry and fish in plastic bags to prevent dripping on other foods
• make sure packages are closed – no holes, tears, broken seals
• make sure cold foods are cold and frozen foods are solid
• select foods requiring refrigeration or those that need to be kept hot last
Transporting Foods
• make the grocery store the last trip before you head home
• bring a cooler and ice packs if you are going to be longer than 30 minutes

At Home
• have three food storage areas – dry, refrigerator, freezer
• check the food label for instructions on storage
• use a refrigerator/freezer thermometer
<table>
<thead>
<tr>
<th>Storage Area</th>
<th>Temperature</th>
<th>Storage Tips</th>
</tr>
</thead>
</table>
| Dry          | • clean, dry, dark and cool  
• below 29°C | • check to see what needs to be refrigerated after opening  
• rotate cans and packaged foods  
• don’t store foods under the sink or near heat-producing appliances  
• store foods separately from household cleaning products or trash |
| Refrigerator | • between 0°C & 4°C | • check package labels for instruction on storage  
• leave room between foods to allow for cold air to circulate  
• store foods that aren’t highly perishable (e.g., condiments) on the door of the refrigerator |
| Freezer      | • -18°C or less | • wrap foods properly to avoid freezer burns  
• label foods with name of food and date frozen  
• rotate foods as you store them |
WASHING HANDS MIX-UP

Use only 6 of the following 10 choices, and number them in the correct order:

_____ wash at least 20 seconds
_____ wet hands with warm water
_____ rinse
_____ wet hands with hot water
_____ add liquid soap and scrub
_____ dry with paper towels
_____ clean fingernails
_____ dry with a cloth hand towel
_____ wash and count to 10 while you scrub
_____ use bar soap and a washcloth
_____ use paper towels to turn off taps
HAZARDOUS FOODS

Potentially hazardous foods tend to be high in **protein**, **neutral acidity**, and **moist**. They need to be kept out of the “Danger Zone” [between 4ºC (40ºF) and 60ºC (140ºF)].

Which of the following are potentially hazardous? Copy the word into the correct boxes to the right.

Milk
Apple
Peanut butter & jelly sandwich
Hamburger, raw
Lemon
Pickled beets
Scallops (seafood)
Carrot sticks
Chicken salad sandwich
Eggs
French fries
Fruit salad
Yogurt cup
Muffins
Soda crackers
Dried milk powder
Beef jerky (dried meat strips)
Cola beverage
Sugar
Ham salad
Honey

How should potentially unsafe foods be stored until they are eaten?

How should potentially unsafe foods be held once they are cooked before they are eaten?

Suggest guidelines for choosing foods for a brown-bag lunch:

- 
- 
- 
- 

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CONTROL THE GROWTH OF MICROORGANISMS:

There are several methods, which are used to control the growth of microorganisms. Give one example for each of the following methods used for controlling the growth of microorganisms.

Explain your example:

1. **Make the food more acidic:**
   
   Example:

2. **Change the moisture content:**
   
   Example:

3. **Raise the temperature:**
   
   Example:

4. **Lower the temperature:**
   
   Example:

5. **Reduce the time in the “Danger Zone”:**
   
   Example:
BINGO GAME: FOOD SAFETY TERMS

Having a thorough understanding of food safety terms can make food safety concepts much easier for you to work safely in the kitchen. Many of the food safety terms used here may be new for you, or they may have been used in a different context.

1. Work in small groups to define your group of the following terms, and provide an example for each term if applicable.

2. Design a bingo (Safe-O) card using the terms and definitions you were assigned.

3. Exchange your card with another student’s card

4. To play: listen to the definitions…if you know it, put your hand up and respond. If correct, all students who have that term can mark their cards. Continue to play this way until there is a winner. The winner calls out “Safe-O!”

TERMS:
Allergies Food borne Illness pH
Anaphylactic shock Food borne infection Personal hygiene
Bacteria Fungi Physical hazard
Biological hazards HACCP Protein foods
Botulism Hazards Raw
Chemical hazards High risk Salmonella
Cross contamination Host Sanitation
Danger Zone Immune system Time-temperature abuse
Dormant Micro organisms Toxins
E-coli Mold Virus
FAT TOM Pathogen
FIFO Pesticides

Your assigned terms:

<table>
<thead>
<tr>
<th>Food safety term:</th>
<th>Definition:</th>
<th>Example:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
“SAFE-O” CARD

FREE SAFETY SPACE

DESIGNED BY ___________________________
Cook It Safely Crossword

- Keep food safe from bacteria. You can't see, smell, or taste bacteria, but they can be on and in your food and make you sick.

- Cooking your food destroys the bacteria. Bacteria grows rapidly in the "Danger Zone", the temperatures between 4ºC (40ºF) and 60ºC (140ºF)].

- Take your food's temperature by using a food thermometer. Make sure your thermometer is clean. Wash it after every time you take a temperature. A hamburger's temperature should be 160 °F.

- Make sure your leftovers are safe. Reheat them to 165 °F. Be sure sauces, soups, and gravies come to a boil. Let food sit for a few minutes after cooking in a microwave.

- For food safety, keep hot foods hot.

DOWN
1. Keep food _ _ _ _ from bacteria.
2. Keep hot foods _ _ _.
3. _ _ _ _ your food to destroy bacteria.
4. Use a food thermometer to take your food's _ _ _ _ _ _ _ _ _ _ _ _ _ _ _.
5. Cook a _ _ _ _ _ _ _ _ _ _ _ _ to 160 °F.
6. You can't see, smell, or taste them.
7. Not cooking food thoroughly can make you _ _ _ _.
8. The temperatures between 40 °F and 140 °F are in the _ _ _ _ _ _ zone.

ACROSS
5. Make sure you clean it after every time you use it.
9. Sauces and soups need to come to a _ _ _ _ to be safe.
11. After being cooked in a _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _, allow food to sit for several minutes.

This may be used to assess the performance of students in a food lab situation. The rubric covers all aspects of the lab and allows teachers to assess learning skills and health and safety skills within the food lab. It is suggested that students receive a copy of the rubric to complete and compare with the teachers assessment.

There are a number of expectations within the Food and Nutrition Sciences 12 course that deal with planning, preparing and serving meals:

SO1.05 – plan menus for, select, and prepare foods, taking into consideration economic, geographical, and seasonal factors that affect the availability of ingredients.
SO2.03 – plan a menu for, select, and prepare foods that would meet selected dietary needs during the stages of life
PR2.07 – use available resources, including computer technology, both to plan a menu consisting of foods that will maintain good health, and to select and prepare those foods
PR1.05 – demonstrate how to use equipment correctly to prepare and store foods for maximum nutrient retention (e.g. steamer, pressure cooker, freezer).
GC1.05 – plan, prepare, and serve (using available ingredients and technology) specific foods prepared in the style of a variety of ethnic and/or Native cuisines, and draw comparisons among them.
SC1.06 – prepare a menu using some new food products or recipes, and evaluate the results

There also expectations within the Food & Nutrition 9-10 course that deal with planning, preparing and serving meals:

Planning:
SS3.03X - demonstrate collaborative problem solving, conflict resolution, and planning skills (e.g., division of labour, time management, equal participation, taking responsibility for one’s component of the group’s activity), and be able to explain the need for these skills by referring to organizational theory.
PR3.07X - use mathematical skills accurately in meal planning and recipe changes, employing both SI metric units and imperial measures;
SO1.O3X - demonstrate creativity in planning, preparing, and serving a meal that meets the specifically defined needs and budget of a particular family or individual;
DI1.03X - plan and prepare food products, using a variety of cultural traditions.

Preparing:
PR3.02X - identify, select, and effectively use appropriate kitchen tools to plan and prepare interesting and appealing meals in co-operation with others;
PR3.05X - demonstrate accurate measuring skills and appropriate food-preparation techniques (e.g., stirring, beating, whipping, chopping, broiling, frying);
SOV.03X - analyse the importance of each member’s contribution to the selection, preparation, and serving of food;
SO1.O3X - demonstrate creativity in planning, preparing, and serving a meal that meets the specifically defined needs and budget of a particular family or individual;

DI1.03X - plan and prepare food products, using a variety of cultural traditions.

**Serving:**
SOV.03X - analyse the importance of each member’s contribution to the selection, preparation, and serving of food;

SO1.O3X - demonstrate creativity in planning, preparing, and serving a meal that meets the specifically defined needs and budget of a particular family or individual;

**Clean-up from labs:**
PR3.03X - safely use, maintain, clean and store tools and equipment used in food preparation;

This rubric could be adapted to include the achievement chart categories and become a tool to evaluate student performance in the food lab.

**NOTE:**
Many board’s interpretations of assessment guidelines (and the ministry of Education’s ‘Program Planning and Assessment 2000’) as well as the Council of Directors’ of Education (CODE) in their new document http://www.ontariodirectors.ca do not permit that group marks are assigned to individuals, or that self-assessments can be used in final marks. When evaluating food labs, be careful that students are permitted to improve on their skills individually (use formative grades to inform students of progress, not necessarily for a final mark) and that group performance is only recorded under work skills, not within an “averaged” mark. This might include feedback on behaviours such as working quietly, working well with others, shared work equally/fairly, or worked safely within the time allotted.
## Food Lab Diagnostic Rubric

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Level One</th>
<th>Level Two</th>
<th>Level Three</th>
<th>Level Four</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>• menu selected with limited effectiveness</td>
<td>• menu selected with some effectiveness</td>
<td>• menu selected with considerable effectiveness</td>
<td>• menu selected with a high degree of effectiveness</td>
</tr>
<tr>
<td>• appropriate menu selected</td>
<td>• grocery list prepared with limited effectiveness</td>
<td>• grocery list prepared with some effectiveness</td>
<td>• grocery list prepared with considerable effectiveness</td>
<td>• grocery list prepared with a high degree of effectiveness</td>
</tr>
<tr>
<td>• grocery list created</td>
<td>• tasks assigned with limited effectiveness</td>
<td>• tasks assigned with some effectiveness</td>
<td>• tasks assigned with considerable effectiveness</td>
<td>• tasks assigned with a high degree of effectiveness</td>
</tr>
<tr>
<td>• work plan created/tasks assigned</td>
<td>• few ingredients/equipment gathered prior to lab</td>
<td>• some ingredients/equipment gathered prior to lab</td>
<td>• most ingredients/equipment gathered prior to lab</td>
<td>• all ingredients/equipment gathered prior to lab</td>
</tr>
<tr>
<td>• gathering of ingredients / equipment</td>
<td>• recipe followed with limited effectiveness</td>
<td>• recipe followed with some effectiveness</td>
<td>• recipe followed with considerable effectiveness</td>
<td>• recipe followed with a high degree of effectiveness</td>
</tr>
<tr>
<td>Food Preparation Skills</td>
<td>• recipe followed with limited effectiveness</td>
<td>• recipe followed with some effectiveness</td>
<td>• recipe followed with considerable effectiveness</td>
<td>• recipe followed with a high degree of effectiveness</td>
</tr>
<tr>
<td>• follows recipe</td>
<td>• limited accurate measuring techniques demonstrated</td>
<td>• some accurate measuring techniques demonstrated</td>
<td>• considerable accurate measuring techniques demonstrated</td>
<td>• all or almost all accurate measuring techniques demonstrated</td>
</tr>
<tr>
<td>• uses correct measuring techniques</td>
<td>• utensils and equipment used with limited effectiveness</td>
<td>• utensils and equipment used with some effectiveness</td>
<td>• utensils and equipment used with considerable effectiveness</td>
<td>• utensils and equipment used with a high degree of effectiveness</td>
</tr>
<tr>
<td>• uses utensils/equipment correctly</td>
<td>• follows limited lab safety and sanitation procedures</td>
<td>• follows some lab safety and sanitation procedures</td>
<td>• follows most lab safety and sanitation procedures</td>
<td>• follows all or almost all lab safety and sanitation procedures</td>
</tr>
<tr>
<td>• follows sanitation and safety procedures</td>
<td>• time managed with limited effectiveness</td>
<td>• time managed with some effectiveness</td>
<td>• time managed with considerable effectiveness</td>
<td>• time managed with a high degree of effectiveness</td>
</tr>
<tr>
<td>• time management</td>
<td>• time managed with limited effectiveness</td>
<td>• time managed with some effectiveness</td>
<td>• time managed with considerable effectiveness</td>
<td>• time managed with a high degree of effectiveness</td>
</tr>
<tr>
<td>Final Product</td>
<td>• quality of product</td>
<td>• presentation of product</td>
<td>• table setting techniques</td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------</td>
<td>--------------------------</td>
<td>---------------------------</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>• food items prepared as instructed with limited effectiveness</td>
<td>• food items prepared as instructed with some effectiveness</td>
<td>• food items prepared as instructed with considerable effectiveness</td>
<td>• food items prepared as instructed with a high degree of effectiveness</td>
</tr>
<tr>
<td></td>
<td>• demonstrates limited command of product presentation</td>
<td>• demonstrates some command of product presentation</td>
<td>• demonstrates considerable command of product presentation</td>
<td>• demonstrates extensive command of product presentation</td>
</tr>
<tr>
<td></td>
<td>• table is set with limited effectiveness</td>
<td>• table is set with some effectiveness</td>
<td>• table is set with considerable effectiveness</td>
<td>• table is set with a high degree of effectiveness</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clean Up</th>
<th>• clean up duties completed</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• clean up duties completed in a limited manner</td>
<td>• clean up duties completed somewhat</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group Work Skills</th>
<th>• on task</th>
<th>• co-operation/ collaboration skills</th>
<th>• sharing of tasks</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• group stays on task with limited effectiveness</td>
<td>• group demonstrates collaboration skills with limited effectiveness</td>
<td>• group members share lab tasks with limited effectiveness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• group stays on task with some effectiveness</td>
<td>• group demonstrates collaboration skills with some effectiveness</td>
<td>• group members share lab tasks with some effectiveness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• group stays on task with considerable effectiveness</td>
<td>• group demonstrates collaboration skills with considerable effectiveness</td>
<td>• group members share lab tasks with considerable effectiveness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• group stays on task with a high degree of effectiveness</td>
<td>• group demonstrates collaboration skills with a high degree of effectiveness</td>
<td>• group members share lab tasks with a high degree of effectiveness</td>
<td></td>
</tr>
</tbody>
</table>

What you did well:

Areas to improve:
## FOOD LAB COMPLETION CHECKLIST

At the end of each food lab the assigned person must complete this checklist and attach to the food lab report.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oven is turned off. All stove burners are off.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All equipment and utensils are washed in hot, soapy water.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All dishes are clean, dried and put away.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knives are returned clean and dry to the knife drawer/container</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The sink is free from food particles and is clean and dry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dish racks, drainers, dishpans are washed, dried and stored under the sink</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dish soap and hand soap are stored under the sink</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dishtowels, dishcloths, sponges and aprons are in the laundry basket</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any leftover food is stored correctly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tables and placemats are wiped clean and dried</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All work surfaces are free of food, wiped and dried</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other task as assigned by the teacher completed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Nutrition Matters --- Food Allergies….What’s The Scoop?
(Toronto Public Health- included as a PDF with this document)

1. Read the article titled “Nutrition Matters: Food Allergies … What’s The Scoop?”

2. Choose one of the following methods to summarize the information found in the article:
   • a concept map
   • an annotated bibliography
   • a brief summary
   • other method approved by the teacher

3. Find another student who has done a different way of summarizing this same article and share your findings.

4. Discuss one thing each that you found different from one another’s summaries. Write your discussion down and submit to your teacher along with your original summaries.

5. Go over the following checklist and determine if you feel you have done level 1, 2, 3, or 4 quality work. Provide this sheet along with your submissions.

<table>
<thead>
<tr>
<th>Checklist</th>
<th>Student √</th>
<th>Teacher √</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original summary included</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparison with another student’s summary (1-3 sentences) included</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Key/Main Points all included</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supporting Evidence (examples, illustrations, Included</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other features of the work I’d like to tell you about:

Things I’ll do better next time:
BASIC HAND WASHING

Washing your hands is the single most important measure you can take to prevent transmission of harmful bacteria.

Wash your hands following the correct procedure:

- after bathroom visits, sneezing, coughing, blowing your nose, touching your hair, face, or pets

- after handling raw meat, fish, poultry or eggs

- before touching cooked foods
PERSONAL CLEANLINESS MATTERS!

- Keep long hair tied back
- Roll up long sleeves
- Wear a clean apron
- Wear clean clothes
- No hats (unless specially designed for food use)
- Cover cuts, sores on your hands with a band-aid and gloves before handling food
- Use separate spoons for tasting and stirring. Pour a little food from the stirring spoon onto the tasting spoon
- Do not lick your fingers (even if it is delicious!)
KEEP IT CLEAN!

- A clean kitchen can help prevent cross-contamination
- Clean as you go along
- Use paper towels to wipe up spills promptly
- Use clean dishtowels and cloths each lab
- Use hot soapy water to wash equipment
- Wash glasses, plates and cutlery using hot soapy water
- Wash dishes in this order: glasses, cutlery, dishes, pots and pans, greasy utensils (cleanest first)
- Rinse with hot water
- Dry with a clean, dry dish towel
- Scrub chopping boards with a mild bleach solution to kill bacteria, rinse and air dry if possible
- Do not store dishtowels, sponges, or dishcloths under the sink!

"Graphics used with permission from The Canadian Partnership for Consumer and Food Safety Education."
Have you washed your hands?
Have you washed your hands?
15. Additional Background Information

FAQ’s ABOUT FOOD SAFETY

What is foodborne illness?

Foodborne illness, often called "food poisoning", occurs when a person gets sick by eating food that has been contaminated with bacteria, parasites or viruses, also known as ‘microbes' and ‘pathogens'. Foodborne illness is the largest class of emerging infectious diseases. This is due to changing population demographics, changing patterns of food production and consumption and new, re-emerging or drug resistant disease agents.

Who is responsible for ensuring that the food we eat is safe?

Everyone involved in the food chain, from the primary producer to the consumer has a role to play in ensuring the safety of the food we eat. The food industry and government work together to deliver food that is safe to consumers. The important, and sometimes forgotten, role of the consumer is to maintain the safety of that food by using safe food handling practices.

How many cases of foodborne illness occur in Canada each year?

The most recent estimate is approximately 1 million cases each year. However, there are as many as 96 to 99 percent of foodborne illness and deaths due to foodborne illness are not reported. This is due to the fact that people often mistake foodborne illness for the flu since many symptoms are similar: stomach pain, diarrhea, nausea, chills, fever, and headache. Symptoms of foodborne illness can appear anywhere from thirty minutes to two weeks after an individual has come in contact with foodborne bacteria, although it usually happens in the first 4-48 hours. This delay makes it difficult to link an illness with a food-related cause.

Who can I contact for more information on foodborne illness?

Visit the Health Canada web site at www.hc-sc.gc.ca

Used with permission from the Canadian Partnership for Food Safety Education
Health Canada estimates that every year approximately two million Canadians suffer from illnesses caused by foodborne bacteria and about 30 of them die. Control of this problem is made difficult because bacteria may survive food processing, or foods may become contaminated during preparation, cooking and storage. Techniques, which will minimize the number of bacteria on food, are being employed at all levels of processing from the farm to the grocery stores. Consumers also have a role to play in practicing safe food handling techniques in the home.

**Foodborne Illnesses and Their Causes**

The nature and extent of foodborne diseases are changing. With food being produced and processed at a higher volume than in the past, there is a greater chance of foodborne bacteria being spread to a large number of people. The food supply is now global, with many different countries supplying foods to Canada. Many bacteria, including *Salmonella* species, *Campylobacter* species and *Yersinia enterocolitica*, can reside in healthy animals without them showing any signs of illness. These animals can then spread the bacteria to other healthy animals at the farm level. During processing the bacteria may contaminate other foods also being processed at the same location if cross contamination occurs. Consumers should also be alert to the potential for cross contamination. For example, during the past year, people became ill after handling the pig’s ear treats which had several species of *Salmonella* present on these pet treats. This problem could have been avoided if the pet owners had washed their hands after handling the treats and after playing with their pet.

In addition to traditional foodborne diseases, newly-emerged foodborne bacteria such as *Escherichia coli* O157:H7 and *Listeria monocytogenes* have been identified worldwide. These bacteria are also appearing on foods where they had not previously caused problems. Some of the recent foodborne outbreaks have been traced to non-commercial custom-pressed unpasteurized apple juice contaminated with *E. coli* O157:H7 in 1996. The parasite *Cyclospora* was linked to imported berries during the spring months of 1996 to 1999 and in 1996, alfalfa sprouts were responsible for an outbreak of Salmonellosis. In this last example, investigation showed that the seeds themselves, which were imported into Canada for sprouting here, were contaminated.

Everyone in the food system can make their contribution to controlling foodborne bacteria. For example, consumers can reduce the risk of bacterial illness by always washing their hands thoroughly, using separate cutting boards and utensils for meat, poultry, fish and produce, cooking foods to the appropriate temperature and refrigerating foods promptly. The Canadian food industry continues to commit itself to produce a safe food supply for consumers.

**The Impact of Foodborne Illness**

Although most individuals recover, foodborne illnesses can result in chronic health problems in 2 to 3% of cases. Illnesses such as chronic arthritis, and hemolytic uremic syndrome
(HUS) leading to kidney failure, have long-term consequences for the individuals affected and for society and the economy as a whole. Health Canada also estimates that the annual costs related to these illnesses and deaths exceed $1 billion.

The continuing work of the Canadian Partnership for Consumer Food Safety Education will augment the food safety initiatives on the farm, at processing plants, in retail stores, in restaurants and in the home.

**THE INVISIBLE ENEMY: BACTERIA**

Despite the fact that Canada's food supply is among the safest in the world, sometimes the food we eat can make us sick. Under the right conditions, an invisible enemy called "BAC" (bacteria) may be present on foods.

Scientists have learned these important facts about bacteria:

- Bacteria are an integral part of our environment and play many beneficial, but sometimes harmful roles. They are found on all raw agricultural products.

- Harmful bacteria can be transferred from food to people, people to food, or from one food to another.

- Bacteria can grow rapidly at room temperature.

- Growth of harmful bacteria in food may be slowed or stopped by refrigerating or freezing.

- Foodborne illness can produce symptoms from mild to very serious. Illness can occur 30 minutes to two weeks after eating food containing harmful bacteria.

- People who are most likely to become sick from food-related illness are infants and young children, senior citizens and people with weakened immune systems.

Used with permission from the Canadian Partnership for Food Safety Education
WHAT ARE THE MOST COMMON PATHOGENS THAT CAN CAUSE FOODBORNE ILLNESS?

**Clostridium botulinum**
- In adults, *Clostridium botulinum* (*C. botulinum*) itself does not make people ill, but the poisons produced by the pathogen do.
- Canned (especially home canned) low acid foods may contain *C. botulinum*, however some cases occur from eating raw or parboiled meats from marine mammals.
- Symptoms can include double vision, nausea, vomiting, fatigue, dizziness, headache and dryness in the throat and nose. In extreme cases, symptoms may progress to respiratory failure.

**Campylobacter**
- *Campylobacter* is a bacteria commonly found in the intestines of poultry, cattle, swine, rodents, wild birds and such household pets as cats and dogs. It can also be found in untreated water.
- People may develop a *Campylobacter* infection when they eat undercooked poultry or drink raw milk, or non-chlorinated water.
- Symptoms of *Campylobacter* can include fever, headache and muscle pain, followed by diarrhea, stomach pain, nausea, and Guillain-Barré Syndrome.

**Cyclospora**
- *Cyclospora* is a microscopic parasite that infects the small intestine of humans.
- *Cyclospora* is transmitted through food or water contaminated by infected feces. Although *Cyclospora* is not naturally found on fresh fruits and vegetables, contamination may occur during cultivation, harvest, packaging or transportation through contact with contaminated water or workers.
- Symptoms of *Cyclospora* may include diarrhea, loss of appetite, weight loss, nausea, gas, stomach cramps, muscle ache, vomiting, and low-grade fever.

**Escherichia coli 0157:H7**
- *Escherichia coli* (*E. coli*) bacteria live in the intestines of animals such as cattle, pigs, sheep and poultry. When these animals are butchered, the bacteria can spread to the outer surfaces of the meat.
- *E. coli* can be spread by hand-to-hand contact with an infected person or surfaces he or she may have touched. It may also be found in undercooked meat and poultry, non-chlorinated water and unpasteurized apple juice.
- Symptoms of *E. coli* include minor flu-like symptoms to more severe stomach cramps, vomiting and fever, and even kidney failure.

**Listeria**
- *Listeria* is a bacteria often found in soil, vegetation, fodder, and humans and animals feces.
- *Listeria* can be contracted by eating or even touching dairy products, vegetables, and fish and meat products that are contaminated with the bacteria.
Symptoms can start with flu-like nausea, vomiting, cramps, and fever, however the most severe symptoms can result in a brain or blood infection.

**Clostridium perfringens**

- *Clostridium perfringens* (*C. perfringens*) is a spore-forming bacteria that produces a toxin in the intestinal tract of people who have eaten food containing many of the bacteria.
- This organism can be found in high protein or starch-like foods such as cooked beans and gravies, and are especially likely to be a problem in improperly handled leftovers.
- Symptoms consist of very gassy diarrhea, cramps and headache.

**Salmonella**

- *Salmonella* is a bacterium found in the intestines of animals. Foods or environments contaminated with animal waste may contain *Salmonella* bacteria. It has also been found in a low percentage of unbroken raw eggs.
- Raw poultry is the most common food that may contain *Salmonella*. Other foods include raw and undercooked meats, unpasteurized milk and eggs. Fruits and vegetables may also contain the bacteria if they have been in soil contaminated with animal waste.
- Symptoms may range from mild diarrhea, abdominal cramps, vomiting and fever to severe dehydration.

**Toxoplasma**

- *Toxoplasma* is a microscopic parasite that may infect a wide variety of birds and mammals, including humans. Infection occurs when there is contact with the *Toxoplasma* parasitic egg.
- Improperly handling meat and eating undercooked meat may cause illness. Fruits and vegetables from gardens contaminated with cat feces may also result in the illness.
- Symptoms can include slight fever, enlarged lymph nodes and other flu-like symptoms. People with weak immune systems may develop more severe symptoms such as pneumonia.

For more information on foodborne illness and steps you can take to reduce the risk of foodborne illness, visit the Canadian Food Inspection Agency web site.

This fact sheet was prepared by the Canadian Food Inspection Agency.

Used with permission from the Canadian Partnership for Food Safety Education
FOUR SIMPLE STEPS TO
FightBAC!™

SEPARATE
Keep certain foods, like meats and their juices, separated from others during storage and preparation. Keep separate cutting boards for raw meats and vegetables. Always keep foods covered.

CLEAN
Always wash your hands, utensils and cooking surfaces with soap and hot water before you handle food, repeatedly while you prepare it, and again when you've finished. Sanitize countertops, cutting boards and utensils with a mild bleach and water solution. All produce should be washed under cool running water prior to eating or cooking.

SEPARATE
Keep certain foods, like meats and their juices, separated from others during storage and preparation. Keep separate cutting boards for raw meats and vegetables. Always keep foods covered.

COOK
Prepare foods quickly, cook them thoroughly, and serve them immediately. Don't let foods linger at temperatures where bacteria can grow. The danger zone is between 4°C (40°F) and 60°C (140°F).

CHILL
Refrigerate or freeze perishables, prepared food and leftovers within two hours. Make sure the refrigerator is set at a temperature of 4°C (40°F) or colder, and keep the freezer set at -18°C (0°F).

Everyone can prevent foodborne illness if they learn how to FightBAC!™
For more information, visit the Canadian Partnership for Consumer Food Safety Education web site at http://www.canfightbac.org/

Get It Straight - It's Safe to Separate!
Combat Cross-Contamination

"Graphics used with permission from The Canadian Partnership for Consumer and Food Safety Education."
Separate

Combat Cross-Contamination
Get It Straight - It's Safe to
Separate!

Cook

Keep it hot, hot, hot!

Remember you can't see, smell or
taste bacteria, so keep it
CLEAN!

Chill

Cold foods
should be kept at
4°C (40°F)

"Graphics used with permission from The Canadian Partnership for Consumer and Food Safety Education."
16. IDEAS FOR FURTHER STUDY/ENRICHMENT

1. **Glo-germ lab.** Students discover how poorly they wash their hands using the “Glo-germ” liquid. This really brings home the importance of thoroughly washing hands. Students write up their observation in a lab report format. Available from Directional Learning (519) 846-5397.

2. **Another Hand Washing activity** (ideal for J/I students) blindfold a student. Place liquid tempera paint in their palms and ask them to “rub it in”, then ask them to wash their hands as they normally would. Students are amazed at how much paint is missed with a normal scrubbing. Remove the blindfold and ask the student to wash with the proper technique this time to remove all evidence of paint. Ask them if they can guess what the paint and blindfold represent (bacteria that you can’t see).

3. Students who have a basic understanding of food safety investigate illnesses caused by food and present their findings to the class.

4. **Students create posters** to illustrate safety rules to display in the classroom. Posters should illustrate issues related to safe food, preparation and kitchen hazards.

5. Various activity sheets are found in the student workbooks for many of the commonly used Food and Nutrition textbooks. For example:
   - *Food for Today - Food Science Resources* pp 29-40
   - *Food for Today - Re-teaching Activities* pp 43-46
   - *Food for Today - Extending the Text* pp 39-44
   - *Food for Today - Foods Lab Resources* pp 7–8
   - *Nutrition and Fitness Student Activity Guide* p 143 – 147
   - *Nutrition and Wellness Food Lab Activities* pp 9–10
   - *Nutrition and Wellness Re-teaching Activities* pp 49–50
   - *Nutrition and Wellness Student Workbook* pp 137-140

*And finally,* many community resource people may be available to come into your classroom. Contact your local public health department. Food inspectors and public health nurses will have access to a wide variety of information.
17. FOOD AND NUTRITION RESOURCES

Resource documents
Ministry of Education. (1999). The Ontario Curriculum, Grades 9 and 10, Social Sciences and the Humanities
Ministry of Education. (2000). The Ontario Curriculum, Grades 11 and 12, Social Sciences and Humanities
Ministry of Education (1999). Course Profiles for Food and Nutrition Grade 9 or 10, Open by the Queens Printer of Ontario.
Toronto District School Board. (1999). Supplemental course profiles. Order through curriculumdocs@tdsb.on.ca

Texts
Websites:
Canadian Centre for Occupational Health and Safety www.ccohs.ca (foodservice workers resource available for purchase from this site: $10)
Canadian Food Inspection Agency www.cfia-acia.agr.ca
Canadian Health Network search A-Z food safety topics, such as: http://www.quantumlynx.com/water/vol10no2/story2.html (all about e. coli) http://www.inspection.gc.ca/english/fssa/concen/tipcon/barbece.shtml (BBQ food safety)
Canadian Partnership for Consumer Food Education www.canfightbac.org
Canadian Research Institute for Food Safety [CRIFS] – www.uoguelph.ca/cris/
Dietitians of Canada http://www.dietitians.ca/ (check out the virtual kitchen—it has integrated food safety topics when a storage area is clicked and a food chosen: http://www.dietitians.ca/public/content/eat_well_live_well/english/kitchen/index.asp
Education Safety Association of Ontario http://www.esao.on.ca/index.htm (posters, checklists)
Gateway to Government Food Safety Information http://www.foodsafety.gov/~fsg/fsgkids.html for Kids Teens and Educators. Excellent links to other food safety sites and classroom activities
In good hands http://www.ingoodhands.ca/ (food safety certification programs and downloadable PDF posters for classroom use)
The National Food Safety Database http://www.foodsafety.org/index.htm
North Carolina Department of Agriculture and Consumer Sciences: http://www.agr.state.nc.us/cyber/kidswrld/foodsafe/badbug/Badbug.htm
Ontario Council for technology education http://www.octe.on.ca/g11armdoc/g11armdoc.htm#safety
Partnership for Food Safety Education http://www.fightbac.org
Toronto Public Health www.city.toronto.on.ca
USDA/FDA Food-Borne Illness Educational Materials Database:
Online Quizzes and interactive games are often effective at reinforcing the learning that has occurred in the classroom. Try some of these websites for yourself first, and consider booking time in the computer lab for furthering student knowledge and understanding of the concepts of food and kitchen safety:

- [http://www.fda.gov/fdac/quiz/onlinequiz_js.html](http://www.fda.gov/fdac/quiz/onlinequiz_js.html) (simple quiz of 10 questions with an online assessment)
- New Mexico State University’s Food Detectives games for J/I students: [http://www.fooddetectives.org/](http://www.fooddetectives.org/)

**Journals**
Canadian Living Magazine. (August 2002). *Worry-free Summer Eating*. Also check their website and use “food safety” or “kitchen safety” in their search engine under cooking tips: [http://canadianliving.com](http://canadianliving.com)

**Pamphlets**
Government of Canada, *Food Safety and You* 1-800-622-6232
Fight Bac! Keep Food Safe from Bacteria: A National Public Education Campaign for Food Safety (The Canadian Partnership for Consumer Food Safety Education, Suite 1101-75 Albert St., Ottawa, ON K1P 5E7, Phone 613-798-3041, Fax: 613-852-6400) [www.canfightbac.org](http://www.canfightbac.org)
Teaching Kits
“Safety Posters.” J. Weston Walch., 1991 in Northwest Scientific Supply Ltd., P.O. Box 6100, LCD 1 Victoria, B.C. V8P 5L4, Phone 800-663-5890, e-mail nwscience@pin.com Glo-Germ Teaching/Learning Kit. From Directional Learning (519) 846-5397.

Videos
Food Safety – the Usual Suspects (1999) Classroom Video, #107 1500 Hartley Avenue, Coquitlam, B.C. V3K 7A1. (800) 665-4121

Food Safety. (1994) Learning Seed available from McIntyre Media. (800) 565-3036 www.mcintyre.ca Order #200085-61L1


Spoiled Rotten Food Safety. (2005) Learning ZoneXpress. Available from McIntyre Media in VHS or DVD. Order: Product #430001-61H6 $89.95 VHS, resource guide or Product #430001-77H6 $89.95 DVD, resource guide.

All About Meat. (2004) Meridian Education. Available from McIntyre Media in VHS or DVD. Order: Product #700567-61H6 $119 VHS, resource guide or Product #700567-77H6 $119 DVD, resource guide

New Fears for Food. (2004) Cambridge Educational Series: First in the series is “Old Foes, a New Threat” Available from McIntyre Media in VHS or DVD. Order Product #010289-61H6 VHS, resource guide or Product #010289-77H6 DVD, resource guide


18. Appendices

Appendix A: ESAO Consumer Symbols of Household and Special Products

Appendix B: Lysol Hand Washing Basics Poster

Appendix C: Lysol Hand Washing Poster

Appendix D: Internal TDSB memo regarding the use of bleach

Appendix E: Time Temperature Zone poster

Appendix F: Lavez vous les Mains (French hand washing reminder poster)
# Consumer Symbols

These warning labels are used for household and special products.

This revised labelling for Consumer Products is being phased in between October 2001 and October 2003.

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Precautions</th>
<th>Degrees of Hazard</th>
<th>Label Warning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOXIC PRODUCTS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poisonous</td>
<td>Do not get in eyes or on skin, Do not breathe fumes, Wear protective clothing and safety equipment as indicated on the label.</td>
<td>Very toxic</td>
<td>Extreme Danger - Sales Restricted</td>
</tr>
<tr>
<td>May be lethal, or</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May cause serious and irreversible effects.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CORROSIVE PRODUCT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Causes Burns</td>
<td>Do not mix with other chemicals. Do not get in eyes or on skin, Do not breathe fumes, Do not swallow. Wear protective clothing as indicated on the label.</td>
<td>Very Corrosive</td>
<td>Extreme Danger</td>
</tr>
<tr>
<td>Will cause chemical burns to the skin, eyes and lungs. May form dangerous fumes when mixed with other chemicals.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FLAMMABLE PRODUCT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire hazard</td>
<td>Read the specific instructions on the label. Use only in well ventilated areas. Keep away from flames and objects that spark. Store in a safe location.</td>
<td>Very Flammable</td>
<td>Extreme Danger</td>
</tr>
<tr>
<td>May ignite if exposed to a spark or flame, or</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May spontaneously ignite</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PRESSURIZED CONTAINER</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosion Hazard</td>
<td>Do not puncture. Do not burn. Store away from heat.</td>
<td>Very Flammable</td>
<td>Extreme Danger</td>
</tr>
<tr>
<td>Under Pressure may explode if heated. If ruptured, hazardous contents will be released</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>QUICK SKIN BONDING ADHESIVES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonds Skin Instantly</td>
<td>Do not get in mouth, eyes or on skin.</td>
<td>Very Flammable</td>
<td>Extreme Danger</td>
</tr>
</tbody>
</table>

People working safely in the safest and healthiest workplaces in the world.

---

For more information:

[ESAO](http://www.esao.ca)
Hand Washing Basics

- Wet your hands under warm running water.
- Apply a small amount of liquid soap.
- Cover all surfaces of your hands with soap and water, rubbing vigorously for 15-20 seconds.
- Rinse with clean running water.
- Dry hands thoroughly, using paper towels or a clean towel.

When to Hand Wash

- Before eating or preparing food.
- Immediately after handling raw foods, such as poultry.
- After visiting the toilet or changing a diaper.
- After contact with blood or body fluids (e.g., vomit, nasal secretions, saliva).
- After touching animals or their toys and leashes.
- After touching a contaminated area (e.g., trash can, cleaning cloth, drain, soil).
- Before dressing a wound, giving medicines, or inserting contact lenses.
- Whenever hands look dirty.

Provided in Partnership with Lysol Disinfecting and Cleaning Solutions
Wash your hands

WHY ... because during the day when you or stroke the or or go to the you can get and dirt has which are so small you can only see them under a . Your hand can transfer these germs to your body through your or your or your and they can make you very ill. Washing your will get rid of the germs and help keep you healthy.

WHEN ... should you wash your s? Always after using the , before you before you after you play with the after before and in the and whenever your hands look .

HOW ... Use lots of warm and a good cleanser , making sure to clean under your and wash up to your wrists too. Then dry your hands on a clean .

Washing your hands will help to keep you healthy and will help you to avoid all kinds of tummy aches , skin , eye , and mouth infections
To All TDSB Principals/Site Managers:

There is confusion within the system about the recent directive to all Caretakers from the Facilities Services Department which prohibits the use of any cleaning product containing sodium hypochlorite (bleach).

This directive applies only to Caretakers and does not extend to daycares and food preparation areas, which require the use of bleach as directed by Public Health. In addition, certain subject areas (Science) require bleach as part of the curriculum. Staff required to use these products, must ensure that it is acquired through the TDSB Purchasing Department. This will ensure that all WHMIS requirements are met. If you have any questions, please contact them directly.

For those staff required to use bleach, they must be reminded that bleach must never be mixed with other chemicals, and must never be disposed of in a toilet. This will eliminate the potential of bleach being accidentally mixed with a corrosive (i.e. toilet bowl cleaner), which can create a hazardous gas.

All staff should be reminded that under no circumstances are WHMIS-controlled products to be purchased by staff members and brought into the school. Proper purchasing procedures must be followed.

The TDSB is presently investigating environmentally friendly alternatives to bleach.

Your attention to this matter is greatly appreciated.

Any questions can be directed to the undersigned.

Sincerely,

Chris Broadbent
Manager, Health & Safety
TDSB
TIME/TEMPERATURE FACTOR
The longer that food is in the danger zone, the more bacteria will grow.

TEMPERATURE DANGER ZONE
4°C (40°F) and 60°C (140°F)

Micro-organisms grow quickly when the temperature is between 4°C (40°F) and 60°C (140°F). This range is called the temperature danger zone.
Un lavage correct des mains est le moyen le plus efficace pour diminuer la transmission des tétos infectieux d'origine alimentaire.
Protégez vos clients et vous-mêmes contre l'hépatite A, la salmonelle, l'E. Coli, le staphylocoque, la shigella etc.