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| **MODULE: SAFETY AND SANITATION**  **Introduction** |  |

Food-borne illness is a serious problem in Canada.  Health Canada estimates that about two million Canadians suffer from a food-borne illness every year.  Approximately 30 of these victims will die from the illness.  Of the survivors, 2% to 3% will suffer chronic health problems.  The annual cost of food-borne illness in Canada is estimated to be over $1 billion (<http://www.canfightbac.org/english/mcentre/mkit/foodborne.shtml>).  Understanding and practicing safe food handling techniques will reduce the incidence of food-borne illness.

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|  | The objectives of the mini-course are for you and your classmates |
| - to understand food safety. |
| - to identify food-borne illnesses. |
| - to examine the conditions necessary for food-borne illness to occur. |
| - to learn how to prevent food poisoning. |

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| To achieve your objectives, you will | |
| 1. | Explain important terms, including:   1. food safety, 2. food-borne illness, 3. food poisoning, 4. contamination, 5. cross contamination, 6. bacteria, 7. Danger Zone, 8. sanitation, 9. personal hygiene.   Explain how each of the following can play a role in the prevention of food poisoning:   1. good sanitation, 2. proper food storage, 3. proper thawing and cooking of foods, 4. contamination and cross-contamination, 5. personal hygiene. |
| 2. | a) Describe how food can become contaminated and how you can tell if a food is spoiled.  b) Diagram the Danger Zone  c) Discuss the rule "When in doubt, throw it out!"  d) Explain the difference between a “best before date” and an “expiry date” (relate it to concerns with food poisoning.) |
| 3. | Some of the bacteria that may contaminate food include *Clostridium botulism*(botulism), *Staphylococcus aureaus* (staph), *Salmonella, Clostridium perfringens, Escherichia (E) coli 0157:H7, Camplobacter, and Listeria.* For each, identify foods typically involved, symptoms of the illness and the factors that contribute to the spread of the illness. |
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| 4. | a) Describe proper food storage principles and methods.  Explain the relationship between proper food storage and the prevention of food poisoning.  b) Explain how microbes can be controlled or destroyed by controlling certain conditions: temperature, acidity (pH), moisture, food, oxygen, cleanliness, sanitation. |

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| **Process** |  |

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| Your group will create and present a "mini-course" for your classmates to learn how to handle food safely.  The mini-course will be designed in **two** parts: | |
|  | **Information In**: providing information and learning activities to help your classmates to learn and understand content knowledge |
|  | **Information Out**: opportunities (oral, written, graphic or three dimensional constructions) for your classmates to show that they do understand the content knowledge |
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| **Information In**: | |
| 1. Create *a PowerPoint presentation* of relevant information. Make sure you are not repeating the same information in each group member’s slides. 2. Create *an activity* to accompany the presentations so that your classmates are actively involved in using the information. | |
| Suggestions for learning activities include | |
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|  | - completing fill-in-the-blank notes from the presentation information, |
|  | - answering questions, |
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|  | - completing a quiz or crossword puzzle. |

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| **Organizing the Task:** | |  |

1. Choose a group leader.
2. Divide the research among the members of your group.
3. On a sheet of looseleaf write each group members name and next to it the part of the assignment they will finish.
4. Make sure the leader checks on members each day to see if they are on track.
5. Report any concerns to me early.
6. Your mark is based primarily on “your portion” of the project.
7. When researching use the websites found on my teacher page under documents or use world book online. Wikipedia is not an acceptable source.
8. As you find info be sure to copy the website URL on the slide or into word so you do not plagiarize.
9. Note:  all sources used must be cited.
10. Information should be in your own words except for scientific terms (e.g. “clostridium” which cannot be changed.)
11. Read all slides to ensure they are not repetitive.
12. Keep font sizes large and easy to read. Make sure slides are attractive.
13. You can create notes, which have more information than the slide contains.
14. Total time for the presentation 6-8 minutes.
15. BEWARE OF INFORMATION OVERLOAD!