Name: _____ Date: _____ Class: _____

Backgrounder Assignment Topic 4: Public Safety and Regulations

Use the websites below to research food irradiation, food safety and food-borne illnesses. Your group will pay special attention to the **public safety and regulatory aspects** of these three topics. Based on your research, your group is to work together to create a single-page (maximum of 250 words) backgrounder which will be used to help your classmates understand this aspect of this issue (see the **Food Irradiation Individual Writing Assignment BLM** for more information).

Below are some questions to help guide your research.

- Which international agencies have reviewed data from research into food irradiation?
- How does the study and testing of food irradiation compare to the testing of other methods of food preparation?
- Which agencies are responsible for food irradiation in Canada?
- Which Act regulates irradiated food in Canada?
- How long has food irradiation been regulated in Canada?
- What is the process by which approval is given to using irradiation on a food product?
- What is the internationally approved maximum level of radiation that foods may be exposed to and still be considered safe?
- Must irradiated foods be labeled?
- Has the irradiation of meat been approved for regulation?
- Do regulations guarantee the safety of the public from food-borne illnesses?

Web links
(Retrieved Aug. 1, 2019)

- **Food Irradiation – Canadian Nuclear Association**
  A look at how food irradiation works, it's benefits, safety practices and where it's happening around the world.

- **Causes of Food Poisoning – Canadian Food Inspection Agency, Government of Canada**
  Links to information about common causes of food poisoning, including listeria.

- **Food Irradiation – Canadian Food Inspection Agency, Government of Canada**
  Food irradiation, labelling, types of foods irradiated in Canada and food safety.

- **Irradiated foods – Canadian Food Inspection Agency, Government of Canada**
  Requirements and controls for handling and labelling irradiated foods in Canada.

- **Food Irradiation – Health Canada, Government of Canada**
  Information on foods that are currently irradiated in Canada and answers to frequently asked questions.

- **Food-Related Illnesses – Health Canada, Government of Canada**
  A look at common causes of food-related illnesses including infant botulism, listeriosis and salmonellosis.

- **Policy on Listeria monocytogenes in Ready-to-Eat Foods – Health Canada, Government of Canada**
  This policy outlines the roles and responsibilities of government, industry and consumers in regard to listeria and food safety.

- **Listeriosis (Listeria) – Health Canada, Government of Canada**
  Causes, symptoms, risks, treatment, prevention, surveillance information and guidance for health professionals.

- **Lessons Learned: Public Health Agency of Canada's Response to the 2008 Listeriosis Outbreak – Public Health Agency of Canada, Government of Canada**
  Release of the Lessons Learned Report in the 2008 listeriosis outbreak (archived).

Backgrounder Assignment Topic 4: Public Safety and Regulations – Suggested Responses

Below are suggested answers for the guiding questions.

- Which international agencies have reviewed data from research into food irradiation?
  - *The World Health Organization, the United Nations Food and Agricultural Organization and the International Atomic Energy Agency have reviewed accumulated data from more than 40 years of research.*

- How does the study and testing of food irradiation compare to the testing of other methods of food preparation?
  - *Food irradiation has been studied and tested more extensively than any other food preparation or preservation process. Decades of testing have proven that foods treated with appropriate levels of ionizing radiation do not have adverse effects on the consumer.*

- Which agencies are responsible for food irradiation in Canada?
  - *Health Canada (Health Products and Food Branch, Radiation Protection Bureau), the Canadian Food Inspection Agency and the Canadian Nuclear Safety Commission all play a role in regulating aspects of food irradiation.*

- Which Act regulates irradiated food in Canada?
  - *In Canada, food irradiation is regulated by the **Food and Drugs Act**.*

- How long has food irradiation been regulated in Canada?
  - *Food irradiation has been regulated in Canada for more than 40 years. Initially, it was considered to be a food additive, but since 1989 has been recognized as a process.*

- What is the process by which approval is given to using irradiation on a food product?
  - *Prior to using irradiation on a food product, approval must be granted by a regulatory body (in Canada, this body is Health Canada). Interested groups must provide reasons for using the irradiation process and demonstrate the safety of the irradiated product.*

- What is the internationally approved maximum level of radiation that foods may be exposed to and still be considered safe?
  - *Foods irradiated below 10 kiloGrays (kGy) are believed to present no toxicological hazard. 10 kGy is equivalent to about 100 million times the dose received during a hospital chest x-ray.*

- Must irradiated foods be labeled?
  - *The Canadian Food Inspection Agency requires that irradiated foods be clearly marked with the international symbol for food irradiation and that they carry a statement indicating that the food has been irradiated.*

- Has the irradiation of meat been approved for regulation in Canada?
  - *Yes, meat irradiation was approved by Health Canada in 2017. Approval is being sought for chicken, shrimp and prawns.*

- Do regulations guarantee the safety of the public from food-borne illnesses?
  - *Regulations can help to ensure that procedures such as food radiation are safe scientifically, but that does not prevent contamination during food processing and packaging.*