MASTER CHEF: MARS

FITNESS AND NUTRITION

MISSION DESCRIPTION

In this activity, participants work in groups. Each group designs a food item, aligned with Canada's Food Guide, to send on a Mars mission. The food item can be a snack or part of a breakfast, lunch or dinner. When put together, the various food items designed by the groups could represent a day or more of eating for astronauts on Mars.

TIMELINE

Breakdown	Duration
Explanation of activity	15 minutes
Walkthrough of participant handout	15 minutes
Assignment of groups	5 minutes
Phase 1: Initial Planning	60 minutes
Phase 2: Food Design (if feasible, groups could make their item during this phase)	60 minutes
Phase 3: Presentation Planning	60 minutes
Presentations and wrap-up	60 minutes
Total	**Approximately 4.5 hours**

Difficulty: **MODERATE**

Duration: **4.5 HOURS**

Materials: **MODERATE**

GOALS

To use creativity and innovation in order to design a food item for a Mars mission that is aligned with Canada's Food Guide and that appeals to the senses of taste, texture, and smell.

OBJECTIVES

By the end of this activity, participants will:

- Be familiar with the contents of Canada's Food Guide
- Know what types of food are consumed during long-duration space missions

MATERIALS

- Participant handout
- Canada's Food Guide, accessible at food-guide.canada.ca

Participants can use the following Junior Astronaut activities as resources:

- Trading Spaces: Living and Eating Off Earth
- Close Encounters of the Tasty Kind
- ISS Ingredients: Reading Food Labels
- Healthy Meals in Microgravity
- O Canada! Food on the International Space Station

Each group will create a presentation to identify:

1. The name and type of food item
2. How it contributes to a healthy eating pattern
3. How it will be processed and packaged

If it is feasible, participants can make the actual food item.

PARTICIPANT HANDOUT

BACKGROUND

Astronauts need nutritious foods with a long shelf life to keep them healthy during a space mission. That is where you come in—you will create a tasty new food item for Mars which is aligned with Canada's Food Guide. To help you do that, you can use the information about space food from the following Junior Astronaut activities (ask your educator to get them for you):

- Trading Spaces: Living and Eating Off Earth
- Close Encounters of the Tasty Kind
- ISS Ingredients: Reading Food Labels
- Healthy Meals in Microgravity
- O Canada! Food on the International Space Station

If a kitchen and ingredients are available to you, you can actually make the food item your team has designed.

REQUIREMENTS

Design a food item for space and present it to your fellow space chefs. Your presentation should include the following information:

- Name and type of food item
- How the food contributes to an astronaut's healthy eating pattern
- Shelf life (this can be estimated based on the shelf life of similar products)
- How to make the food item
- How the food could be packaged to make it suitable for space
- Why this food item should be taken on a Mars mission

PHASE 1: INITIAL PLANNING

Use the guiding questions and box below to take notes or write down discussions about your food item.

Guiding questions

1. What type of food item are you designing?
2. How will the food contribute to an astronaut's healthy eating pattern?
3. How will you make the item tasty for the astronaut?
4. How would you package the item so it lasts a long time in space?

PHASE 2: FOOD DESIGN

Use the guiding questions and box below to design the food item.

Guiding questions

1. What will the food item look, taste, and smell like?
2. What texture will it have?
3. What are the ingredients of the food item?
4. What are the steps from beginning to end for making this food item?

PHASE 3: PRESENTATION PLANNING

Your presentation should identify and explain:

1. The name and type of food item
2. The shelf life of the food item
3. How the food item contributes to an astronaut's healthy eating pattern
4. How it will be processed and packaged
5. Why this food is good for a mission to Mars
6. Your experience with this activity

Plan with your group and write notes and ideas below.