# TECH QUEST

## ACTIVITY: FOOD IS MEDICINE

**For Grades 3-9**

Challenge Based Learning, or CBL, is a flexible framework that empowers learners to co-own and co-author learning experiences. CBL provides a simple way for anyone to address personal, community, and global challenges while acquiring content knowledge in areas such as literacy, math, science, technology, and the arts.

These resources are designed as a “quick start” for out-of-school time educators looking to bring CBL into their learning environment through a health & life sciences lens. Through these activities, youth develop foundational STEM and durable skills while building career awareness in the health and life sciences. All activities are suitable for grades 3-9.



STEM NEXT
OPPORTUNITY FUND

# Activity: Food is Medicine

**In this activity, youth will be able to:**

- Identify major nutrients found in foods and describe how they help the body.
- Use informed choices to design a meal.
- Communicate to others the need to make good food choices.



**Big Idea: Health and Nutrition**
**Essential Question:** How can we use food to improve health? How can we make healthier food choices?

## Preparation

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| **Materials** | • Food Cards<br>• Sticky Notes<br>• Menu Scenarios<br>• Digital device with internet access (1 device per youth group) |
| **Setup** | • Copy and cut Food Cards (1 set per youth group)<br>• Copy and cut Menu Scenarios |
| **Presentation** | Slides Keynote |

## Facilitation

**Overview:**

In this challenge based learning activity, youth are introduced to the connection between nutrition, food choices, and human health through a menu design challenge. Youth explore how different foods provide nutrients and use that information to communicate healthy food choices to their community.

**Engage:**

1. Divide youth into groups of 3-4. Give each group a collection of everyday objects representing foods. You may choose to copy the food cards

provided or you may opt to simply write the foods on post-it notes for each group.

2. Have each group sort their foods into one of these 5 groups: **Fruits, Vegetables, Grains, Protein, Dairy**. Allow groups time to sort before giving a correct arrangement. Discuss the benefit to the body of each food group. (Slide 2-3)

3. Tell students: *Imagine you are a food scientist and nutrition expert. Your job is to create a meal that helps a person accomplish a specific goal. But there's a problem—you can't simply choose your favorite foods. You have to use science to decide what the body needs (Slide 4).*

4. Have each group select one of the meal scenarios. They should use 4-5 of the food choices to create a meal that is specific to their scenario. After meal creation, have each group share their scenario, their meal and their reason for choosing that food. After each group has presented, ask: *Does every food fit into only one category? Does your meal provide a variety of nutrients? How do you know? What information would you need to make a better decision? Is it always easy to make healthy food choices?*

5. Write this question on the board: How can we use what we know about food and nutrition to help people be healthier? Distribute a sticky note to each youth. Have them generate an "I wonder" question. For example, I wonder what protein does for the body? I wonder how many carbohydrates I need? Have youth put their questions on the board (Slide 5).

**Investigate:**

1. Allow time for youth to work in their groups to find answers to their I wonder questions. Place the answers and the questions back on the board for all to see.

2. Summarize information into a chart or use Freeform to organize the gathered information. Note: At this point youth may have other questions that arise. Have them share these questions and find the answers.

**Act:**

1. Have groups create a weekly snack menu for the program that meets nutrition requirements and fits within the program budget (Slide 6).

2. Have the group decide the format of the final product. Some suggestions may include:

    a. Create a calendar with the snack, nutritional information, and cost listed on each day.

b. Slide presentation using Keynote or other tools.

c. “Recipe” cards for each snack including nutritional information and cost

## Implementation

**Career Connection:**

- Nutrition Scientist:
    - Evidence-Based Nutritionist and Accessibility Advocate, Stephanie Edwards
    - Nutritionist, USDA
- Microbiologist
    - I am a Scientist, Leah Guthrie
    - Investigating a Bacterial Infection (Simulation): In this virtual career simulation, step into the role of a medical microbiologist as you investigate a bacterial infection and explore the skills these scientists use to guide life-saving diagnoses and treatment.
- Space Food Scientist: Surprisingly STEM: NASA space food scientist Xulei Wu discusses what considerations go into preparing food for the astronauts on the International Space Station. Learn how Wu trains astronauts for dining in space and how she has met the challenges of eating in a microgravity environment.
- Thinking Beyond
    - Engage youth to consider other careers or skills that would be valuable in this challenge. Have them explain why they chose those careers and/or skills. *These conversations may incite ideas on careers that are yet to exist in the health and life sciences industry!*