



FUEL THE FEET

Overview

Book: *The Maze Runner* by James Dashner

Grades 6-12

In this science and health PBL, students will show how food affects running performance and develop a diet to “fuel the feet” of a runner.

Standards

MS-LS1-7	Develop a model to describe how food is rearranged through chemical reactions forming new molecules that support growth and/or release energy as this matter move through an organism.
Physical Development and Health 23.A.3a	Explain how body systems interact with each other.
RST.9-12.1	Cite specific textual evidence to support analysis of science and technical texts.

Objectives

Students will research to find out foods that running athletes use to improve performance.

Students will create a model to show how the intake of food is changed into energy for muscular performance.

Students will develop a weekly menu that would be beneficial to a running athlete.

Materials Required

Paper
Pencils
markers

Procedure

1. Tell students the project is to design a menu that will be beneficial to a running athlete.
2. Students first need to research to determine how food fuels the body.
3. Direct students to create a poster that displays how food nutrients are chemically changed, travel throughout the body and affect muscular strength/endurance.
4. Have students research how foods affect athletic performance. Be sure students note the number of calories, protein grams and other nutrition requirements to optimize athletic abilities.
5. Have students create a weekly menu for a running athlete. Students should document calories, protein grams, and other nutrients in the food selections.

Extensions

W.7-12.3	Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
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1. Have students write a narrative about what happens to a bite of protein bar as it travels through the body.
2. Challenge students to begin a running program.
3. Have students keep a log of what they have eaten for a week. Ask them to analyze the calorie intake and whether those calories were beneficial to the function of the body.
4. Read about famous runners at <https://www.biography.com/people/groups/track-and-field-athletes>

Rubric

RUBRIC	Exceeds (3)	Meets (2)	Partially Meets (1)	Does Not Meet (0)
Research	Student cites 5 or more resources used in research	Student cites 3-4 resources used in research	Student cites 1-2 resources used in research	No resources are cited
Poster	Poster is very well done, labelling is complete, and nutrition process is correctly depicted.	Poster neat, most labelling is complete, and the nutrition process is correctly depicted.	Poster is unclear, labelling is poor and the process is partially depicted.	Poster is incomplete or non-existent.
Menu	Nutritional facts are carefully noted and menu well balanced and is realistic and beneficial to a running athlete	Some nutritional facts are noted, menu is realistic and beneficial to a running athlete.	Nutritional facts are missing, menu is somewhat realistic and beneficial to a running athlete.	The menu selections have no relationship to the needs of a running athlete.
Total n/9				

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