Biology | 120 min | Educator's Guide

Healthy Diet for All

Summary: Learners will explore the impact of malnutrition and make use of Python and Jupyter Notebook to perform statistical analysis to understand and address the problem of malnutrition in a community.

Key Concepts

Nutrition

Statistics

Software

Jupyter Notebook

Python

Instructional Objectives

Learners will be able to:

1. Explain the impact of nutrition and malnutrition on the health of individuals and society
2. Use statistical analysis to evaluate the reasons that prevent access to good nutrition

Learning Outcomes

- Use Python and Jupyter Notebook to generate data on malnutrition in a population segment
- Analyze and evaluate data with statistical analysis

Real World Application

Computer-generated statistical analysis can help derive more targeted approaches to tackling health and social problems by identifying the needs of specific population segments.

Healthy Diet for All

1. Lesson Overview

	Activity	Innovation Skill
Introduction (15 min) **Slides 1 – 6**	Discuss the health status of a malnourished person and how this will affect them as an individual, their family, and work. Extend the discussion of the impact of malnutrition on national health and society as a whole.	Design Thinking (Empathize)
Development (90 min) **Slides 7 – 18**	Discussion and explanation on the terms used in basic statistics: mean, median, mode, box plots.	Data Science (Statistical Analysis)
	Use Python and Jupyter Notebook to analyze the statistical dataset of a case study and extract the mean, median, and box plots.	Computational Thinking (Decomposition)
	Discuss the observations of the analysis, identify the problems and suggest solutions.	Design Thinking (Define)
Conclusion (15 min) **Slides 19 – 22**	Find out about programs run by various US government or state agencies or communities to address malnutrition.	Social-Emotional Skills