

Design a Healthy Diet Menu for a School Lunch Box Supplier

Key Stage: 3

Key Learning Areas: Science, Technology and Mathematics Education KLA

Learning elements:

KLA	Learning Elements
Science Education	<ul style="list-style-type: none">• Common food substance• Function of food substance• Food pyramids• Balanced diet• Healthy lifestyles
Technology Education	<ul style="list-style-type: none">• Food groups, dietary goals and eating habits• Meal planning• Principles and skills, hygienic and safe practices in food preparation• Food product development – using a design cycle to create and develop food products to meet the design specifications of a task e.g. address the health concerns of teenagers and sensory requirements of the products• Health lifestyle / sedentary lifestyle / unhealthy lifestyle
Mathematics Education	<ul style="list-style-type: none">• Approximation and estimation• Collect and organise data• Construction and interpretation of statistical graphs• Measures of central tendency

Objectives: To integrate and apply knowledge and skills in Science, Technology and Mathematics Education KLAs to solve real-life problems

Description of the Activity:

In this activity, teacher adopts a cross-disciplinary approach to integrate the learning of Science, Technology and Mathematics Education KLA. The project itself is arranged as an independent activity. Learning elements from different KLAs would be drawn in by the students themselves or by the teachers during the course of the project learning activity.

- In the beginning, the teacher chooses an authentic problem which most students would be concerned. Quite often, there are students complaining about the taste, quality and quantity of the lunch boxes provided by the school canteen. On the other hand, the nutritional values of the lunch boxes are also an issue related to the health of teenagers. Teachers can ask students to conduct a project work to design a healthy diet menu for the lunch box supplier, to meet with the needs of healthy and quality food in school.
- Starting from the essential question, plenty of learning opportunities can be provided for the students to construct, integrate and apply knowledge and skills from different KLA. Students can use IT skills to search information about food and diet, including the functions of food substances, nutritional values, recommended daily intake, etc. Students can apply mathematical skills to calculate and analyse the nutritional values of different food. Students could collect data on food preference of their fellow students, and prepare food for tasting. After proper analysis, student can submit the healthy diet menu to the school lunch box provider for reference.
- During the progress of the project, teachers can provide proper guidance and provide feedback, resources and assistance to their students when needed.

This example mainly involves the following generic skills:

1. Collaboration Skills
 - Share responsibilities and understand the role of each member in the project
 - Agree on suitable strategies for carrying out the project through discussion
2. Creativity
 - Under the constraints in the aspects of nutrition and proportion of ingredients, students designed their menu by applying their creativity.
3. Problem solving Skills
 - Identify the problems associated with the project
 - Make use of data collected to design the menu