

Lesson plan



2023-1-SK01-KA220-SCH-00015112

Topic	Nutrition	
Block name	Healthy diet	
Age category 13 – 15	Duration 135 minutes	Number of teaching hours 3
Student-centered educational goals (content and performance standards) Content standard: <ul style="list-style-type: none">• Nutrition,• food ingredients,• food pyramid,• eating habits. Performance standard: <ul style="list-style-type: none">• to navigate information related to a healthy lifestyle and health protection,• plan and carry out a project related to health or a healthy lifestyle Veda: <ul style="list-style-type: none">• Biology,• chemistry,• mathematics,• informatics,		

- technique,
- physics

Mathematics:

- calorie calculation as part of memory game,
- conversion of units from kJ to kcal

Technika/INF:

- working with Canva,
- Micro:bit

Art, design:

- Canva

21st century skills:

- Critical thinking
- problem solving,
- digital literacy,
- creativity
- innovation

Didactic aids and teaching techniques:

- a computer with internet access (Canva, information on the energy values of foods),
- micro:bits,
- calculator

References / Resources (videos, methodologies):

- <https://www.youtube.com/watch?v=6oQFWCDI4EM>
- <https://www.growmarket.sk/a/ktere-ziviny-rastlinam-nejcastejsie-chybaju-a-jako-sa-tomu-da-predist>

Motivational phase:

- A video comparing what we can eat as a healthier alternative to snacks.
<https://www.youtube.com/watch?v=6oQFWCDI4EM>
- Images that would lead to a discussion about what a healthy diet is (different nutritional value, not just calories)

Duration (min): 1:01 (video) + 5 minutes (interview) + 35-40 minutes (memory game creation)

Objective (for the student): To reflect on the fact that not all foods have the same nutritional value, despite the same number of calories. That nutrition should be varied.

Introductory activity – motivation: memory game

Students work with Canva to create a memory game where one card shows a less suitable food and its kcal value, and the other shows a healthy alternative with a similar kcal value. They looked for information in tables on the internet and converted the data using a calculator.

Introduction to the issue (keywords): calories, nutritional value, nutrients, energy value, sugars, fats, proteins, minerals, vitamins

Interactive questions and answers (teacher, student):

- What are kJ and kcal? Have you noticed that food products have these numbers on their packaging?
- How many kilocalories should an 11-14 year old girl consume per day (2390kcal and boys 2510kcal)?

Source:

- Explanation of the purpose of the activity: To make students aware of the importance of paying attention to the nutritional and energy value of food. Creating good eating habits.
- Setting expectations: We expect the topic to be attractive to students, especially girls.

Exposure phase (discovery):

Duration (min): 45 minutes

Objective: Students program yes/no quiz questions on the micro:bit that focus on comparing foods.

Science Integration (Major Subject): Biology and Chemistry

Activities: Creates a quiz with a micro:bit focused on the nutritional values of foods.

Informatics integration: micro:bit integration

Activities:

We will divide the class into groups. In the groups, they will program the micro:bit to function as a quiz. So, the students will enter yes/no questions into the micro:bit, which are focused on comparing foods. The micro:bit will evaluate how many students gave the correct and how many

gave the wrong answer. Then the groups present their quiz questions to the other groups.

Group discussion:

After the question with the highest rate of incorrect answers, we will explain why this is the case, why they thought it was different. Finally, they will evaluate what new things they learned, which values surprised them, what they got wrong the most...

Review and evaluation of the exposure phase (from the student's perspective):

It would be beneficial and motivating for the students, and since it is an experiential form of learning and working in teams, they enjoyed it, were not afraid of programming, and shared information and experiences about healthy eating. Many girls at this age also deal with their figure and resort to inappropriate diets, so these classes can guide them in the right direction.

Fixation phase (fixing and deepening):

Duration (min): 45 minutes

Objective: Create an ideal meal plan (breakfast, snack, lunch, afternoon snack, and dinner) that is nutritionally and energy-balanced using Canva.

Activities:

Students create an ideal meal plan (breakfast, snack, lunch, afternoon snack, and dinner) in Canva to ensure that it is nutritionally and energetically complete. They work with food data from the Internet and base their work on the fact that an 11-14 year old girl should consume 2,390 kcal per day and a boy 2,510 kcal. They can compare each other's created meals and create a joint portfolio of them, creating several ideal menus that they can use as inspiration.

Student evaluation:

They share their experiences, they know how to apply the acquired knowledge, skills and abilities in real life, as evidenced by the portfolio of ideal menus. The sample menus that the students created will be bound (portfolio) and left in a visible place so that the students can view and be inspired by it.

Attachments: <https://www.youtube.com/watch?v=6oQFWCDI4EM>



37,5g= 181kcal



247g=181kcal



150g=828kcal



207g=828kcal



100ml=45kcal



108ml=45kcal



100ml=42kcal



185ml=42kcal



41,5g=213kcal



365g=213kcal



150g=412kcal



256g=412kcal

