



Title

Energy of Serbian salad

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Table of activities

School subject	<i>Physic</i>
Topic	<i>Energy</i>
Age	<i>15 years</i>
Required time fo the acitivity	<i>90 minutes</i>
Required materials	<i>Computers, paper, the Internet</i>
Cultural concept	<i>Healthy eating and national cuisine</i>



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Supported by:



Education Resilience in Europe is funded by the Grant Agreement signed on 21 September 2022 with Cisco Foundation and supported in promotional activities by Scientix 4 (Grant agreement N. 10100063). The content of the document is the sole responsibility of the organizer, and it does not represent the opinion of the European Commission (EC), and the EC is not responsible for any use that might be made of information contained.



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Teaching concept

This activity is designed to teach students about healthy eating habits, calorie counting, and nutrition. Through this activity, students will learn how to make informed choices about what foods are healthy for our bodies and how to maintain a healthy lifestyle. By researching the concepts of energy, calories, and nutrition, students will not only connect physics and biology content, but also gain a deeper understanding of the importance of physical activity in maintaining good health.

Cultural concept

The Latin proverb 'Mens sana in corpore sano' (trans. A healthy mind in a healthy body) is still used today as a recommendation for maintaining good health, as a healthy body leads to a healthy spirit. This idea is also connected with the ancient Greek principle of kalokagathia, which emphasizes the ideal of harmonious development of a person's physical and spiritual abilities.

In this activity, students will acquire and connect knowledge from science and everyday life through the concept of Serbian national cuisine, with a focus on the famous Serbian salad. By exploring the nutritional value and benefits of the ingredients used in this salad, students will gain a deeper understanding of how food impacts our physical and mental health. This activity promotes the idea of a healthy mind and body, and encourages students to make informed choices about their diets and lifestyles.

Physic concept

According to the Law of Conservation of Energy, we cannot create or destroy energy in nature. Instead, energy can only change its form or be transferred to another body. This means that the total amount of energy in a closed system remains constant, even as it undergoes various transformations. In other words, energy is always conserved, and cannot simply disappear or be created out of nothing.

Aim of activity

The goal of this activity is to help students understand the importance of healthy nutrition and develop an awareness of the impact of the energy they consume on their bodies.

By learning about the nutritional value of different foods and the ways in which our bodies use energy, students will gain a better understanding of how to prevent diseases caused by improper nutrition, such as obesity. This activity aims to promote healthy eating habits and empower students to make informed choices about their diets and lifestyles.

Activities

This activity is designed to teach students about healthy nutrition, the concept of calories, and the importance of balancing diet with physical activity. The activity consists of four segments.

First, students will make a list of the foods and drinks they consumed in the previous day, and analyze them through the concept of a healthy food pyramid. This will lead to a discussion about the good and bad aspects of their diet, and identify areas for improvement.

Next, students will be introduced to the concept of calories and how to count them. They will learn that everything they consume turns into energy that the body needs to function, and that it is important to balance diet with physical activity. Students will also learn about the BMR, the minimum amount of energy that the body needs to perform basic functions, and how to calculate their daily calorie needs based on various factors.

In the third part of the activity, students will devise a calculation task that involves potential and kinetic energy, and relates to energy consumption generated by burning calories. For example, they could calculate the distance they would need to run or swim to burn off the calories in a serving of Serbian salad.

Finally, the students will engage in a physical activity of their choice, such as walking or running, which they can measure using mobile phone applications. They will record the distance and time of the activity to calculate the energy used.

Overall, this activity is designed to teach students about the importance of healthy nutrition, balancing diet with physical activity, and understanding the concept of calories. By the end of the activity, students will have a better understanding of how to maintain a healthy lifestyle.