

Our School Lunch

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Topic: Our School Lunch

Subjects: Cooking, mathematics, informatics, biology, chemistry.

Age: 8th grade (14-15 years), groupwork.

Duration: 12 academic hours

Keywords: groupwork, healthy eating, calculating calorie intake, planning menu, information search

Summary (-200 words):

Pupils are divided into groups and tasked with compiling a school lunch menu, ensuring that costs do not exceed € 1.47 per pupil (around 800 pupils). The second condition is the weight of the food portion. Third, the amount of energy a student needs to get from school lunch must be considered. The fourth condition is the correct distribution of nutrients. In order for the body to function successfully, it is necessary that the diet contains fats, proteins and carbohydrates. The amount of essential vitamins and minerals in the diet is also important.

Soup is served twice a week and steak three times a week. Soup days also include dessert or fruit. A drink is served next to the meal. The milk is provided under the European Union's School Scheme and does not have to be budgeted.

List of materials, environments and tools:

You can check the menu of selected recipes in the recipe section of the Myfitnespal website you are already familiar with. You can also find additional information about foods on the website <https://www.fao.org/nutrition/education/food-dietary-guidelines/regions/europe/en/> or any other nationally recognised nutrition information website.

The student chooses the materials according to his / her choice.

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A detailed description of the activities for the students, covering both teaching and learning activities

1. One of the groups creates a spreadsheet file in the Microsoft Office environment, writes the names of the team members to the file (see sample file). Then share it with your team and email :.....
2. Each team member comes up with their own meal they would like to eat at school lunch. In a communication environment suitable for your group members (eg Teams), you will discuss whether the selected foods are suitable for the menu.
3. You create a page for each day of the file created in the first step, and each team member writes down their school lunch recipes as described in the sample file (see sample file).
4. Each team member finds the prices of raw materials for the preparation of their chosen recipes (for example, on the kaupmees.ee website) and calculates the cost of the school lunch recipe proposed by them. Using Table 1.

Tabel 1. Average quantities of food groups by school level

Meal	I level [g]	II level [g]	III level [g]
Warm additions (potato, rice, buckwheat etc)	150	170	200
Souce	70	80	90
Food by pieces (stakes, fish fingers etc)	70	80	90
meat or fish souce	120	140	160
Dessert	80	90	100
Dessert (liquid)	120	140	150
Casserole	150	180	250
Bread/whitebread	30 / 30	30 / 30	30 / 40
Drinks	150	150	200
Salads	50	60	70

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Fruits and vegetables	100	100	100
Soups	220	240	260

5. You calculate the cost of lunch for one person per week and check that the menu for the week is within the allowed budget (+/- 10%).
6. Calculate the average number of calories in a week's diet and check that it is within the desired range. If necessary, adjust the menu.
7. Each team member prepares lunch at home according to a recipe of their choice and takes a photo (mother-father guidance can be used to prepare the food).
8. Make a document from the recipes of the weekly menu, where you can find the quantities of raw materials, instructions for cooking, the amount of energy and nutrients per serving (proteins, fats, carbohydrates)

Learning objectives:

1. The student is able to prepare a weekly school lunch menu
2. The student is able to create a menu within the budget
3. The student is able to calculate the energy content of food per serving.

Assessment guide:

Grade "5" if all 8 task points are completed and the task is submitted on time

Grade "4" if all 8 task points are completed but there are errors in the task, the task is submitted on time

Grade "3" if 1-2 of the tasks are unsolved and the work is submitted on time

Grade "2" if half of the problems are unsolvable

Grade "1" if the work is not submitted

For late works, the grade is considered 1 point lower if the work is submitted after the deadline.

Reflection and recommendations for the person carrying out the activity:

Students need to be instructed how to use Excel or Google Sheets, and how to cite sources.

Additional information and materials: to help the menu creator

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