Lesson Plan

2023-1-SK01-KA220-SCH-00015112

Topic	Nutrition and Digital Education	
Block Title	**Smart Nutrition: Exploring Food and Technology through Digital Education**	
Age category 8-15	**Duration (min)** 180 min	**Number of teaching hours** 3

Student-oriented educational goals (content and performance standards)

The goal of the lesson plan is for students to understand the Intersection of Nutrition and Technology and learn how digital tools and online platforms are transforming the way we understand and manage nutrition.Another objective is for students to be able to analyze nutritional concepts, food choices, and dietary health. Students will creatively apply technology to design solutions that promote healthy eating and nutrition education.

Didactic materials and didactic techniques

- internet access
- 3D Game Environment

References/Sources (videos, methodologies

Motivational phase

Duiring this phase, students should be introduced to the concept of nutrition and how digital tools

can enhance our understanding of food and health. For this purpose the Virtual World can be prepared in a way so students can sign in and take a quick Tour, exploring different digital environments representing various global cuisines, virtual grocery stores, and food preparation settings. Students will be guided through these virtual environments and asked to observe different types of foods, healthy meal preparations, and how digital tools (like calorie counters or nutrition apps) are incorporated into daily food decisions.

Finally, each student can prepare a short essay (at least one page) about what foods they recognized and try to answer how technology is changing the way we learn about food and make dietary choices.

Exploratory phase

Duration (min): 60 min

During the phase, students will explore nutrition-related challenges and discover how technology can help address them. Students should create a personalized digital meal planner using virtual tools. The planner should promote healthy eating, keeping dietary needs and balance in mind.

Using the 3D virtual world or an online simulation, students will design an interactive meal planner that helps users make healthier food choices. They can add features like daily meal suggestions, recipe recommendations, or even a calorie tracker. They basic should take into account nutritional concepts, such as the food pyramid, balanced diets, calorie intake, and how to meet dietary needs for different ages and lifestyles. They can simulate how different meal choices affect health outcomes over time. At the end, students should reflect on how their digital meal planner promotes healthy eating and how technology can make a positive impact on nutrition and write a short essay (at least one page).

It is important in this phase to include some STEAM related concepts. For example, Mathematics are used for calculations such as calorie counting and nutrient ratios in the meal planner and Science is covered through the presentation of the different food groups, nutrition, and how the body uses nutrients.

Fixation phase (consolidation and deepening)

Duration (min): 90min

During this Phase, students should apply their understanding of nutrition and technology to solve a real-world problem. Students will develop a digital prototype of an app or virtual tool that addresses a specific nutrition-related issue.

Students should be free to come up with their own ideas but a couple of scenarios can be provided as examples to help. For example:

- Design a virtual coach or app for children that educates them on healthy eating through fun, interactive activities and games. The coach could provide daily meal suggestions and gamify healthy eating with rewards for making balanced choices.
- Create a digital tool that helps families plan grocery lists based on their dietary preferences (e.g., vegetarian, gluten-free, etc.). The app could recommend healthier alternatives and track nutritional intake over time.
- Design a simulation game where users must manage the nutrition of a virtual family by planning meals and making smart food choices. The game would provide feedback on the health of the virtual family members based on their diet.
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Students can be split into groups and each one will choose a nutrition challenge, such as promoting healthy eating in schools or reducing food waste at home, and determine how digital tools can help solve it. They can brainstorm potential features and design a digital app, game, or virtual coach that addresses their chosen problem. Using a 3D virtual world or simulation platform, teams will build a prototype. For example, they could create a virtual kitchen where users can drag and drop food items to build balanced meals, or a game where users navigate food choices for health. Each team should make a presentation in the classroom and collect feedback.

Finally each team should prepare a report about their work, including among else answers for the following questions:

- What specific nutrition issue are you addressing (e.g., poor meal planning, lack of education on balanced diets)?
- How can technology solve or improve this nutrition issue?
- What will your digital nutrition solution look like, and how will it work?
- Does your prototype effectively address the problem? How will it engage users?
- Based on feedback, what changes can you make to improve your digital tool?

Student Assessment

Assessment will take place after each phase. For the first two phases the students will be evaluated based on their surveys. For the third phase the evaluation will be equally split between the implemented prototype, the presentation and the final report.

Annexes:

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