

Teacher's surname: Cutolo	Name: Marianna
Title : Be Happy and Healthy	Time : 45 minutes
Subjects : Physical Education	
<p>Aim: To empower students to make informed decisions about leading a healthy lifestyle by applying computational thinking principles.</p> <p>Learning Objectives:</p> <ul style="list-style-type: none"> ● Identify key components of a healthy lifestyle. ● Analyze factors that contribute to physical and mental well-being. ● Develop strategies for incorporating healthy habits into daily routines. ● Apply computational thinking to solve health-related problems and set achievable goals. 	
Key CS elements: Decomposition; Pattern Recognition; Abstraction; Algorithm Design.	
Age group: 12-14 years old students	
Learning situations: class, gym and computer room	Activity type : brainstorming, cooperative learning, pairs work, group work
<p>Materials:</p> <ul style="list-style-type: none"> ● Whiteboard and markers 	<p>Resources :</p> <ul style="list-style-type: none"> ● Worksheets or handouts on healthy lifestyle habits ● Access to reliable internet resources (optional)
Learning development	
<p>Problem definition This lesson plan focuses on promoting a healthy lifestyle through the lens of computational thinking. Students will break down the concept of health into smaller components, recognize patterns in healthy habits, abstract key principles, and design algorithms for achieving their health goals. The goal is to empower students to make informed choices about their health and well-being, and to use computational thinking to develop</p>	

sustainable lifestyle changes.

Introduction (10 minutes)

Begin by discussing the importance of leading a healthy lifestyle and its impact on overall well-being. Explain the objectives of the lesson and how computational thinking principles can be applied to promote health.

Pre - Assessment Test (optional):

1. DECOMPOSITION (10 minutes)

Break down the concept of a healthy lifestyle into smaller, manageable components, such as:

- Nutrition and diet
- Physical activity and exercise
- Sleep and relaxation
- Mental health and stress management in maintaining a healthy lifestyle.

2. PATTERN RECOGNITION (10 minutes)

identifying patterns or commonalities among healthy habits.

- Encourage discussion on recurring themes such as:
- Balancing nutritious food choices with physical activity
- Establishing regular sleep patterns for optimal rest and recovery
- Practicing mindfulness techniques for stress reduction
- Help students recognize how these patterns contribute to overall health and well-being.

3. ABSTRACTION (10 minutes)

Abstract the key principles of a healthy lifestyle by focusing on essential habits and behaviors.

- Guide students to prioritize the following core principles:
- Eat a balanced diet with plenty of fruits, vegetables, and whole grains.
- Engage in regular physical activity for at least 60 minutes per day.
- Get adequate sleep and establish a consistent sleep schedule.
- Practice stress management techniques such as deep breathing or meditation.
- Emphasize the importance of setting achievable goals and making sustainable lifestyle changes.

4. ALGORITHM DESIGN (5 minutes)

Algorithm for Planning a Healthy Lifestyle:

- **Step 1: Assess Current Habits and Health Status**

Evaluate current eating, exercise, sleep, and stress management habits.

Consider overall health status and any specific health goals or concerns.

- **Step 2: Set Clear and Achievable Goals**

Define specific, measurable goals for improving health and well-being.

Ensure goals are realistic and achievable within a reasonable timeframe.

- **Step 3: Identify Areas for Improvement**

Identify areas of your lifestyle that may need adjustment to support your health goals.

Consider factors such as diet quality, physical activity levels, sleep duration and quality, and stress management practices.

- **Step 4: Develop a Balanced Meal Plan**

Plan meals that include a variety of nutrient-dense foods from all food groups.

Incorporate fruits, vegetables, lean proteins, whole grains, and healthy fats into your daily diet.

Aim for balanced portions and avoid excessive consumption of processed foods, sugary beverages, and high-fat snacks.

- **Step 5: Create a Weekly Exercise Schedule**

Schedule regular physical activity sessions throughout the week.

Choose activities you enjoy and that align with your fitness goals and preferences.

Include a mix of cardiovascular exercise, strength training, and flexibility exercises for overall fitness.

- **Step 6: Establish a Consistent Sleep Routine**

Set a regular bedtime and wake-up time to promote a consistent sleep schedule.

Create a relaxing pre-sleep routine to signal to your body that it's time to wind down.

Minimize exposure to screens and bright lights before bedtime to improve sleep quality.

- **Step 7: Implement Stress-Relief Strategies**

Incorporate stress-relief techniques into your daily routine, such as deep breathing exercises, meditation, or yoga.

Identify sources of stress and develop coping strategies to manage them effectively.

Prioritize self-care activities and make time for relaxation and leisure activities.

- **Step 8:** Monitor Progress and Adjust as Needed

Track your progress towards your health goals and adjust your plan as necessary.

Stay mindful of your habits and behaviors, and make changes to support your overall health and well-being.

Seek support from healthcare professionals or a support network if needed to stay on track with your goals.

Assessment:

1. Health-Related Project

- Students will work in groups to create a health-related project, such as a brochure, poster, video, or presentation.
- The project should:
 - Focus on a specific health topic (e.g., nutrition, exercise, mental health, substance abuse)
 - Provide accurate and up-to-date information
 - Use creative and engaging visuals
 - Persuade the audience to adopt healthy habits
- The project will be evaluated based on its content accuracy, creativity, presentation skills, and overall effectiveness.

2. Class Participation and Engagement

- Students will be assessed on their active participation in class discussions, group activities, and presentations.
- They will be evaluated on their ability to ask thoughtful questions, share ideas, and provide constructive feedback.

Post - Assessment Test (optional):

Expected results:

By the end of this lesson, students should be able to:

- **Identify key components of a healthy lifestyle:** Students will understand the importance of balanced nutrition, regular physical activity, adequate sleep, and stress management.
- **Develop strategies for incorporating healthy habits into daily routines:** Students will be able to set realistic goals, create action plans, and monitor their progress towards a healthier lifestyle.
- **Apply computational thinking to solve health-related problems:** They will be able to break down complex health issues into smaller, manageable steps, recognize patterns in health data, abstract key principles, and design algorithms for improving their health.

Notes: The idea of this topic was born from the necessity to give pupils a useful instrument to understand and approach a better mental and physical healthy way of life; students can create a personal action plan for improving their lifestyle based on the principles discussed in class