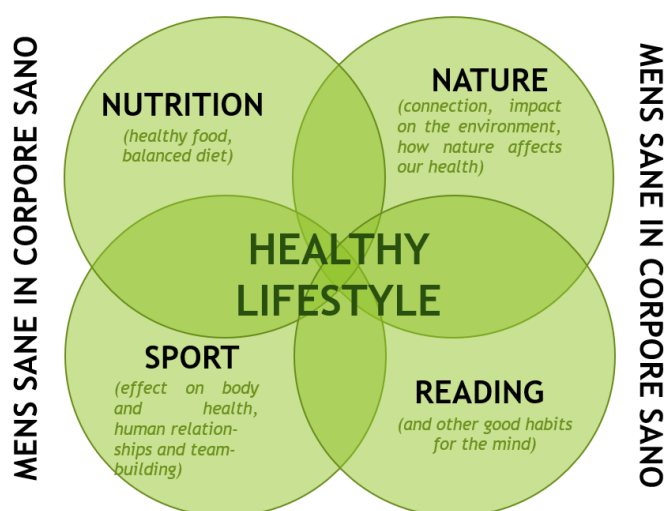




ACTIVITY TO INCREASE STUDENTS SKILLS AND KNOWLEDGE ABOUT HEALTHY LIFESTYLE



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1. COURSE TIME, TARGET AND TOPIC

- **Age of target students:** 13-14
- **Teaching time:** 1 hour
- **Topic:** Nutrition
- **Title:** Metabolism and balanced diet.

2. COURSE OBJECTIVES

Skills promoted in this lesson:

- Know the essential elements for the body (carbohydrates, lipids, proteins, micronutrients) and their function.
- Explain the functioning of energy metabolism (basal metabolism, activity metabolism, energy, energy balance).
- Know what kind of essential elements can be found in what kind of aliments.

3. LEARNING – TEACHING PROCESSES

1. Watch the video

(follow the link below or flash the QR code)

https://www.youtube.com/watch?v=NqV1Iq4_nfl



2. Read the text:

The metabolism

To ensure vital functions (functioning of vital organs: brain, heart, lungs, etc.), the body has a minimum energy requirement: this is the basal metabolic rate.

This varies from person to person. As the body performs additional functions, energy requirements increase. Each person therefore has different energy needs, which depend on a number of factors.



Scientists have calculated these needs and grouped them together in nutritional references, under the term "average nutritional requirement". It is measured in kilojoules or kilocalories (1 kcal = 4.18 kJ). Energy is produced in the mitochondria, at cell level, from three dietary components: lipids, carbohydrates and proteins. 1 g of protein or carbohydrate provides 17 kJ, while 1 g of lipid produces 38 kJ.

Carbohydrates are rapidly mobilized for energy production, followed by lipids and, lastly, proteins. The body has energy reserves: carbohydrates, stored as glycogen in the liver and muscles, and lipids, stored as adipose tissue (fat). The energy produced by our cells is used in a multitude of activities: in the construction or repair of our tissues, in muscle contraction, in the production of hormones, proteins (including antibodies) and thermoregulation.

3. Create a poster showing examples of foods and nutrients for each food group.

4. EVALUATION

Questions: true or false?

- | | |
|---|--------------|
| 1. There are 8 major foodgroups. | FALSE |
| 2. Proteins are found in meat and fish. | TRUE |
| 3. Everyone has the same energy needs. | FALSE |
| 4. 1 g of lipid produces 38 kJ. | TRUE |