Let's move Europe:

School-based promotion of healthy lifestyles to prevent obesity

Learning units about healthy lifestyles promotion for secondary school

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1

LEARNING UNITS ABOUT HEALTHY LIFESTYLES PROMOTION

INTRODUCTION

In this document there are 54 learning units (LUs) focused on how to promote healthy lifestyles for primary and secondary school teachers. The learning units are divided into three main categories: 12 LUs related to healthy nutrition, 10 for physical activity and sedentary lifestyle and 5 for healthy sleep. All LUs have been divided for primary and secondary school, for this reason each teacher can find 27 LUs available for primary school and 27 for secondary school. The LUs can be used by all teachers of the school regardless of the subject they teach and obviously can be integrated, adapted and extended based on teacher's experience, also creating potential academic connections. Before exhaustively detailing the LUs proposed, a brief introduction on the importance of designing these actions to improve healthy nutrition, physical activity, healthy sleep and reduce sedentary behaviour in primary and secondary school is necessary. Physical activity (PA) combined with healthy eating and healthy sleeping habits are essential for many aspects of child health and development, including the prevention of chronic health conditions, such as overweight and obesity.

Physical activity during childhood and adolescence leads to many physical (i.e., improved physical fitness, bone health, cardiometabolic health) and psychosocial (i.e., psychological well-being, mood, cognitive functions) positive health outcomes[1,2]. In order to obtain these beneficial effects, children and adolescents should practice at least an average of 60 minutes per day of moderate-to-vigorous intensity PA (MVPA) during the week.

However despite these recommendations, most children and adolescents across the world do not reach these levels, resulting in a pandemic of physical inactivity1. Meanwhile, sedentary behaviours are more and more frequent both in children and adolescents1. Healthy nutrition is defined as the intake of an adequate, well-balanced diet and we know from scientific literature that good habits[3,4], for example the consumption of fruit and vegetables during childhood, are related to lower adiposity, lower cardiometabolic risk factors, and higher academic performance[5,6,7]. For this reason, it is essential to include these topics early in childhood education.

Finally, healthy sleep habits are essential for child and adolescent development[2]; longer sleep duration is associated with lower adiposity indicators, better emotional regulation, academic achievement, and quality of life, conversely a short sleep duration is related to adverse physical and mental health outcomes8. However, over the last decades, in these specific age groups, many children and adolescents do not comply with international physical activity[9], dietary[10] and sleep guidelines[11] showing how these are becoming a serious concern for public health.

In this frame, it is increasingly essential to promote healthy lifestyles initiatives, especially in the school setting. Children and adolescents spend a significant amount of time at school where they are exposed to supportive environments such as school health policies, physical and nutrition education, PA during school hours. Furthermore, most children's knowledge, skills, and habits for life-long health can be improved during school-days[12]. At the same time, it is becoming more and more evident that interventions not only focused on school but also targeted on family are likely to be more most effective[13,14].

With the goal to achieve long term and sustainable changes in lifestyles behaviour it becomes necessary the involvement of both family and extra school environment.

For this reason, school-based interventions with extracurricular activities and healthy homework components could maximise family engagement and potentially improve the success of the health promotion intervention. In light of this, the present document contains 27 LUs that starting from the school context are expanded using extracurricular activities and homework promoting health[15].

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Each Lus has a main objective, a key message, useful materials and methods, frequency, duration and potential teaching/curricular links. Obviously each LU is a starting point that can be expanded by the teacher of each subject. The links with the potential curricular aspects are not mandatory but are only suggestions. However, the Learning Units can be a good investment and an experiment to understand how movement is an excellent tool for learning. Each LU begins in the school setting with a brief teacher-led discussion that is preparatory to the work to be done in class. The various aspects that will be learned during the LU and the activities that can be managed in the class are highlighted. Subsequently, possible homework to manage in extra-school time and to test the acquired habits are presented. Finally, each LU ends with a time for discussion managed in class.

The innovative aspects of this proposal consist in the fact that such learnings take place in the school setting, but are also experimented and expanded in the extra-school context often with the involvement of families in homework and challenges, then be discussed back at school for final feedback.

2

LEARNING UNITS ABOUT HEALTHY NUTRITION FOR SECONDARY SHOOL

1° LU WEEK ONE: HOW TO BUILD A HEALTHY DIET

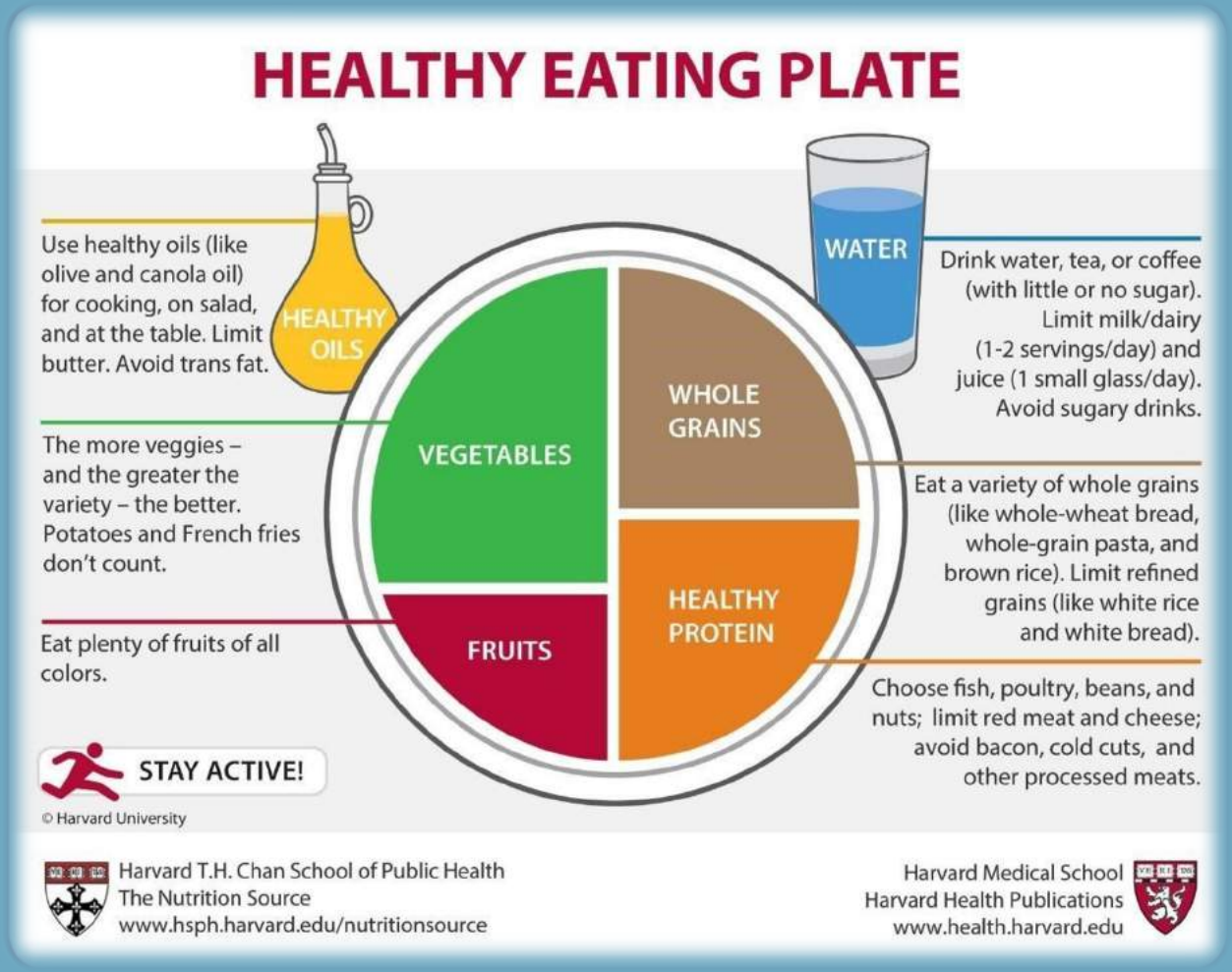
GOAL:

Knowledge about the proportions of nutrients needed to maintain a healthy diet and how to reach this goal through different foods

Key message:

Follow a balanced diet based on vegetables and fruit, legumes and grains. Different countries may have different cultures, including food habits. Understanding what people eat and why can enrich our personal knowledge and make us discover new flavours and healthy habits.

Material: White paper plate (to divide into coloured wedges for different categories of food), coloured markers, poster, pc, *Eumove website-Application*	**Methods:** Initial discussion, laboratory-group activity, healthy homework	**Timing**: 60 minutes	**Frequency**: One lesson	**Potential Curricular Links:** Science, Math, Art, Foreign language (English, Spanish…), Civics



LET'S START PLAYING FOR HEALTH

Initial Discussion about Healthy eating

According to the Global Burden of Disease Project, overweight and obesity are the 4th risk factor for chronic diseases such as diabetes type 2, cardiovascular diseases and others. Notably, replacement of processed foods with a healthier diet has been linked to the reduction of the BMI and thus to the prevention of overweight associated diseases.

Why is a healthy diet important? During the daily meals, what and in what proportion should be eaten? Explain what food categories are necessary to maintain a healthy diet (vegetables, fruits, healthy protein and whole grain), and that the intake of all of them is important. Every food provides some macronutrients (carbohydrates, proteins, fats), but in different quantities/proportions.

Try to find out if different countries have different food habits and why (e.g.: climatic conditions do not let certain vegetables grow properly).

Do you think you may like trying new foods?

Learning points

Teacher starts explaining the recommendations about how different food differs in terms of nutrients and what is necessary to set a healthy and balanced diet:

- Olive oil (or sunflower, canola, soybean oils): is a good source of healthy fats, try to avoid/reduce butter or margarine.
- Vegetables: they should be the main component of our diet, the more various they are, the better it is. Remember: chips and French fries can NOT be accounted in the “vegetables” section from a nutritional point of view, since they are rich in fats.
- Fruits: pick fruits from each color.
- Whole grains: choose whole grains instead of processed rice and white bread.
- Healthy proteins: fish, legumes, white meat and nuts should be the main source of proteins. Limit/avoid red and processed meat.
- Water: drinking water is the best way to rehydrate. Limit the intake of milk and derived products, juices and sugared drinks.

Different countries developed different ways to meet these nutritional goals.

Varying our meals is the best way to introduce all the nutrients we need to stay healthy.

It is possible to build a proper Healthy eating Plate even using foods that are not usually included in our nutritional schedule: foods from different traditions can be mixed to meet the healthy nutritional goals.

Classroom Activity

- Talking with the class, try to explore some traditional foods from different countries and, if you can, their nutritional asset and which part of the plate they fill in.

- Using a paper plate divided into different coloured wedges, explain the suggested proportions of different food during the daily meals. You could try to fill the plate with elements taken from different countries.
- If possible, use the Eumove website/application to keep in contact with a class from a foreign country and ask them to explain how their meals are usually composed: you can exchange ideas and recipes and try to cook something new, then check the results and opinions from both your class and the other.

Healthy homework + Challenges

- Think about your favorite food/s and about foods you never tasted. Create a meal mixing foods you're used to with something new, keeping in mind the suggested proportions of different foods and the necessity to have a balanced meal.

Final Discussion after homework and challenges

Did you succeed in trying new foods? Which issues did you find (e.g. the foods you wished you could cook were not available at the supermarket)? Do you think you will enlarge your usual diet after this experience?

What have you learned from the foreign school class you worked with?

References

Harvard T.H. Chan School of Public Health. The healthy eating plate. Available at: https://www.hsph.harvard.edu/nutritionsource/healthy-eating-plate/
Food and Agriculture Organization of the United Nations. Food-based dietary guidelines. Available at: https://www.fao.org/nutrition/education/food-dietary-guidelines/home/en/

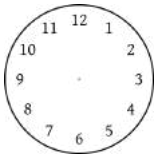
2° LU WEEK TWO: NUMBER OF MEALS PER DAY

Goal:

Knowledge about the number of meals, how they need to be distributed during the day and the nutrient proportions

Key message:

The recommended number of daily meals is five



Material: Paper/ 12 h clock drawing, markers	**Methods:** Initial discussion, laboratory, healthy homework	**Timing**: 60 minutes	**Frequency**: One lesson	**Potential Curricular Links:** Science, mathematics, english (or other languages)

LET'S START PLAYING FOR HEALTH

Initial Discussion

Daily repartition refers to the distribution of nutrients and energy over the different meals of the day, through different food choices and combinations.

Daily repartition of meals is important to provide to our body a constant flow of energy. It also avoids feeling too much hunger during the day.

Learning point

- how to divide the energy intake during the day:
  - Breakfast: 15-20%
  - Morning snack: 5%
  - Lunch: 35-40%
  - Afternoon snack 5%
  - Dinner 30-35%
- for lunch, dinner and breakfast and how they should be composed, see Learning Unit about it that will be taught further.
- For snacks, it is recommended to have a portion of fresh fruit/ a yogurt/ two biscuits (dry biscuits, not cookies).
- underline how meal schedule could differ from one person to another, depending on their daily need (e.g., sport, fixed school meal time)

Classroom activity

Draw a clock, colour, with different colours for each meal (breakfast, morning snack, lunch, afternoon snack, dinner) the wedge/time interval in which you usually have a meal. Any meals missing? At what hours you usually have meals?

Healthy homework + Challenges

Try eating 5 meals a day, following the instruction teacher gave you, and modifying them based on your needs (e.g. sports, family meals planned at certain times). In a week wrote down each day how many meals you had.

Final Discussion after homework and challenges

How did your meal schedule vary during the week? You were able to eat 5 meals every day or you skipped one/more? There were some differences between weekdays and weekends?

References

World Health Organization. Healthy Diet (2020). Available at: https://www.who.int/news-room/fact-sheets/detail/healthy-di

3° LU WEEK THREE: FRUIT AND VEGETABLE PORTIONS

Goal:

Knowledge about the correct portions of fruits and vegetables and their variety needed to build a balanced diet

Key message:

5 daily portions of fruits and vegetables

Material: --	**Methods:** Initial discussion, laboratory, healthy homework	**Timing**: 60 minutes	**Frequency**: One lesson	**Potential Curricular Links:** Art, Science

LET'S START PLAYING FOR HEALTH

Initial Discussion about Healthy eating:

Why is a healthy diet important? During the daily meals, what and in what proportion should be eaten? Explain the benefits of fruits' and vegetables' nutrients, based also on the fruit's colour.

Learning points

- The teacher starts to explain the recommendations about the portions of fruit and vegetables necessary (what is a portion, how many portions)
- 5 portions x day (of both fruit and vegetables)
- 5 fruit/vegetable colours: red, purple/blue, orange/yellow, green and white/brown: eating fruit and vegetables of different colours is not only visually more appealing but also useful to introduce a great variety of nutrients

Healthy homework + Challenges

- Try to eat 5 portions of vegetables and fruits every day for a week.
- Try to take a photo everyday of one of your meals, at the end of the week anything is missing? How could you add more colors to your plate?

Final Discussion after homework and challenges

Could you eat 5 portions of fruits/vegetables 5 x days? It was easy? How do you think you could improve the amount of fruits/vegetables eaten? Using the photos taken, if you feel comfortable, discuss if you noticed any color is missing and how you could add more colors to your plate.

References

World Health Organization. (2015). Promoting fruit and vegetable consumption. Available at: https://www.euro.who.int/en/health-topics/diseaseprevention/nutrition/activities/technical-support-to-member-states/promoting-fruit-and-vegetable-consumption

Harvard Health Blog. Phytonutrients: Paint your plate with the colors of the rainbow. Available at: https://www.health.harvard.edu/blog/phytonutrients-paint-your-plate-with-the-colors-of-the-rainbow-2019042516501#:~:text=Colorful%20fruits%20and%20vegetables%20can,strengthen%20a%20plant's%20immune%20system.

4° LU WEEK FOUR: HEALTHY BREAKFAST AND LABORATORY: BUILD THE BREAKFAST POSTER BOARD

Goal:

Knowledge about the healthy composition of a breakfast meal

Key message:

Breakfast is one of the most important meals of the day. People should focus on having a good breakfast in order to start the day properly

Material: Laptop, phone with a camera	**Methods:** Initial discussion, laboratory, healthy homework	**Timing**: 30 min (per day for a week, additional 30 min the first day), total 180 min	**Frequency**: One lesson	**Potential Curricular Links:** This learning unit is not linked to a particular school subject

LET'S START PLAYING FOR HEALTH

Initial Discussion about healthy breakfast:

- The teacher asks how many students have breakfast each morning to assess briefly how many skip it;
- The teacher shows a few examples of breakfasts through slides or posters and the students briefly vote (good/not good) to grade them in good and not a good following their personal knowledge/experience;
- The teacher explains what should be included in breakfast (water or tea, milk or yogurt, fresh fruits or vegetables, nuts, bread/granola/rice/pasta/cereals/.., honey/jam, eggs) and give a few good examples through slides or posters;
- The previous exercise is repeated: the teacher shows again a few examples of breakfasts (slides, posters,...) and students briefly vote (good/not good) to grade them in good and not good based on what the teacher explained and showed.

Learning points

- Learn that breakfast is as important as the other meals and should not be skipped;
- Learn what should be included for breakfast (almost all aforementioned nutrients);
- Learn that there can be multiple options and combinations for breakfast;
- Train to compose different types of breakfast and learn from others' inputs.

Classroom activities

Each morning (Monday to Friday)

- Each morning the students upload the picture of their breakfast on the drive folder created by the teacher (no named pictures)
- Each morning the teachers pick a few examples (if possible, positive ones) among the pictures and discuss them with the students.

Healthy homework + Challenge

For one week:

- Based on what learnt at school, try to compose your breakfast meal using some of the suggested ingredients;
- Take a mental picture of the final breakfast meal;
- Try each day to change the colours of your breakfast as suggested in LU n3 and use the advice given in class by the other classmates.

Learning points

- Learn that breakfast is as important as the other meals and should not be skipped;
- Learn what should be included for breakfast (almost all aforementioned nutrients);
- Learn that there can be multiple options and combinations for breakfast;

- Train to compose different types of breakfast and learn from others' inputs.

Final Discussion after homework and challenges

Did you succeed in varying the ingredients of your breakfast? Do you think your breakfast this week has been healthier than usual? Which issues did you notice about having a proper breakfast (e.g. not knowing how to choose the right food)?

References

Healthy Breakfast: Food Fact Sheet. Available at: https://www.bda.uk.com/resource/healthy-breakfast.ht

5° LU WEEK FIVE:

HEALTHY BREAKFAST AND LABORATORY: WHAT ARE THE TYPES OF BREAKFAST? LEARN FROM OTHERS

Goal:

Knowledge about the healthy composition of a breakfast meal

Key message:

Different people may have different habits, including those about food. We can learn from each other through sharing knowledge about food and improving our good habits

Material: Laptop, smartphone with a camera, food paper/ 12 h clock drawing , markers	**Methods:** Initial discussion, laboratory	**Timing**: 60 minutes	**Frequency**: One lesson	**Potential Curricular Links:** This learning unit is not specific to a particular school subject

LET'S START PLAYING FOR HEALTH

Initial Discussion about healthy breakfast:

- The teacher asks how many students have breakfast each morning and how is traditionally prepared in their family
- Students explain how breakfast is prepared in their family during the week and the weekends if differences are present

Learning points

- Learn that breakfast can be different in different traditions and cultures, as food is an important part of each culture
- Learn that there can be multiple options and combinations for breakfast
- Train to compose different types of breakfast and learn from others' traditions
- Exchange ideas and learn from other traditions/cultures

Classroom activities

- Students can share a picture of the breakfast their family usually has; they can share multiple pictures if breakfasts differ, especially between weekdays and weekends
- Upload the pictures into a shared drive folder
- The teachers pick a few examples (if possible, positive ones) among the pictures and discuss them with the students, and students can give inputs and discuss each option based on what just learnt
- If students want, they can explain why they have that traditional breakfast at home; if they don't know, they can ask and then let their classmates know another day

Healthy homework + Challenges

- Try a different breakfast: get inspired from other classmates and buy some new ingredients to prepare a breakfast for you and your family
- Try to differentiate and change the ingredients you normally use
- If you have any doubt, ask the classmates whose breakfast inspired you and consider asking them for a recipe or for help in preparing the meal
- Take pictures of the traditional breakfast of your family during the week and weekend and upload them into the shared folder

Final Discussion after homework and challenges

Did you enjoy changing your habits for a while? What have you learnt from this experience?

References

Healthy Breakfast: Food Fact Sheet https://www.bda.uk.com/resource/healthy-breakfast.html

6° LU WEEK SIX: HOW MUCH WATER SHOULD I DRINK?

Goal:

Knowledge about the correct amount of water that should be drunk every day

Key message:

It's important to drink the appropriate amount of water during the day on the basis of age and PA, preferring water to other types of drinks

Material: Water bottle, various dimensions, other sodas, energy drinks, etc.	**Methods:** Initial discussion, laboratory, healthy homework	**Timing**: 30 minutes	**Frequency**: One lesson	**Potential Curricular Links:** Math, Science

LET'S START PLAYING FOR HEALTH

Initial Discussion about Water Intake:

Why is drinking water important? Explain the average percentage of water in a person's body is around 60%. Where water can be found in drinks and food?

Learning point

The teacher starts to explain the recommended levels of water intake per day

- Hints about different types of drinks and their nutritional profile
- Give tips to drink more during the day
- Teach about tap water and the importance of recyclable water bottles
- Teach about different intake of water needed based on age and PA

Classroom activities

- Discussion about the different types of drinks and their nutritional profile (i.e. coke, tè, fruit juice, energy drink,...) → ranking from best to worse?
- Discuss also: nutritional value and advised amount of alcohol and coffee?

Healthy homework + Challenges

- Use Watson formula to calculate the water amount in each students' body
- Add to the diary also the amount of other drinks intake during the week (i.e. energy drinks, alcohol, coke, etc.)

Final Discussion after homework and challenges

Was I able to increase the daily amount of water to drink? If not, why?

References

Watson, P. E., Watson, I. D., & Batt, R. D. (1980). Total body water volumes for adult males and females estimated from simple anthropometric measurements. *The American journal of clinical nutrition*, *33*(1), 27–39. https://doi.org/10.1093/ajcn/33.1.27

7° LU WEEK SEVEN:
LIMITING SUGAR-SWEETENED BEVERAGE AND FOOD CONSUMPTION

Goal:

Knowledge about the amount of sugar in daily beverages and food, the types of sugar and the consequences they have on health. Develop critical awareness and learn about alternatives to sugary foods and beverages

Key message:

Choose beverages and food that contain the lower quantity of sugar

Material: Various types of sugar-sweetened beverage and food, sugar cubes/ sachets of sugar/spoons of sugar. Table and Cards of beverages and food	**Methods:** Initial discussion, laboratory, healthy homework, challenge	**Timing**: 60 minutes	**Frequency**: Two lessons	**Potential Curricular Links:** Science

LET'S START PLAYING FOR HEALTH

Initial Discussion about sugar-sweetened beverage:

Very limited consumption of foods high in fat, sugar or salt and low in micronutrients e.g. crisps, confectionery, sugary drinks.

What are the different types of sugar-sweetened beverages and foods that are consumed during the day (water, the, chocolate, cola, sparkled drinks, fruit juices etc.)

Learning point

- The objective of this action is to make students aware of the types of sugar that exist and also of the amount of extrinsic sugar present in certain beverages and foods that they consume regularly.
- Recommended Consumption: no more than 25 grams of free sugars per day (or 5% of total energy intake) (Guideline: Sugars Intake for Adults and Children. (2015). World Health Organization.)

Classroom activity

- The teacher starts the lesson explaining what is the quantity of sugar contained in different types of sugar-sweetened beverages and food; then a round of questions.
- For Example: How much sugar do you think Cola contains? How much sugar biscuit contain?
- Explain how the consumption of beverages and food with high contents of sugar may affect health.
- Talking about the importance of the “healthy way” to consume sugar-sweetened beverages and food during the day? (how often do you drink beverages that contain a high quantity of sugar)
- Which kind of beverage do you think is better when you are thirsty?
- Once this reflection on the questions asked is complete, the tutor can explain the types of sugar that exist: free sugar and intrinsic sugar. It is also important for students to know the recommended intake of free sugar: 25 grams of free sugar per day
- Put on the main table of the room the beverages and food brought from home for that day and try to categorize them based on their sugar content. The teacher puts for every beverage and food the matching quantity of sugar cubes/sachets of sugar/spoons of sugar.
- Discuss which ones are better to be drunk often and which ones sometimes.
- Look at the beverages and food’ machine/coffee shop that you have at school: which kinds of beverages are there inside? Analyze and compare them about how much sugar they contain.

Final Discussion after homework and challenges

Was I able to consume sugar sweetened beverages in a healthy way? If not, why not?

References

World Health Organization (2015). Guideline: Sugars intake for adults and children. Geneva: World Health Organization. Retrieved from https://www.who.int/publications/i/item/9789241549028.

Plates, pyramids, planet. Developments in national healthy and sustainable dietary guidelines: a state of play assessment. Food and Agricultural Organizations of the United Nation Avaiable on https://www.fao.org/documents/card/en/c/d8dfeaf1-f859-4191-954f-e8e1388cd0b7/

Drink (12-ounce serving)	Teaspoons of Sugar	Calories
Tap or Bottled Water	0 teaspoons	0
Unsweetened Tea	0 teaspoons	0
Sports Drinks	2 teaspoons	75
Lemonade	6 ¼ teaspoons	105
Sweet Tea	8 ½ teaspoons	120
Cola	10 ¼ teaspoons	150
Fruit Punch	11 ½ teaspoons	195
Root Beer	11 ½ teaspoons	170
Orange Soda	13 teaspoons	210

https://www.cdc.gov/healthyweight/healthy_eating/drinks.html

https://www.hsph.harvard.edu/nutritionsource/healthy-drinks/beverages-public-health-concerns/

8° LU WEEK EIGHT: SEASONALITY OF FOODS

Goal:

Knowledge about the seasonality of different foods across the year and building a healthy diet using locally sourced produces

Key message:

Consume locally sourced foods

Material: Grocery flyers, scissors, white poster (x4)	**Methods:** Initial discussion, laboratory, healthy homework	**Timing**: 60 min (1º lessons) - 30 min (2º, 3º and 4º lessons)	**Frequency**: 4 per year (possibly at the beginning of each season)	**Potential Curricular Links:** Geography, Science, Art, History

LET'S START PLAYING FOR HEALTH

Initial Discussion about Healthy eating

First lesson: talking about the importance of consuming locally sourced foods, in order to:

- reduce the amount of processed goods and increase the fresh produce intake
- reduce the impact of our diet on carbon footprint and plastic usage (packaging) (see also LU 9)
- consume fresher and more nutritious food compared to food consumed out of season.

Local food is also generally better tasting, due to its harvesting closer to the peak of ripeness (especially for vegetables and fruits).

Learning point (x4) (spring, summer, autumn, winter)

- what fruits and vegetables are in season in your country right now (Due to different geographical locations, teachers should see reference 2 for suggestion about seasonal fruits/vegetables)
- Try to give some examples of culturally typical recipes from where you live that use seasonal food.

Classroom activities

- build with the help of the teacher a poster with seasonal food, using images cut out from the grocery flyers and integrate if anything is missing. Hang the poster in the classroom to remind what should be eaten during the season

Healthy homework + Challenges

- try to eat at least one meal a day with only seasonal and local sourced foods, using the appropriate food categories proportions as shown in LU1

Final Discussion after homework and challenges

Compare what food you ate during the week with what is on the poster you did with your teacher. Is there something you didn't eat or never tried?

References

Food and Agriculture Organization of the United Nations. Plates, pyramids, planet. Developments in national healthy and sustainable dietary guidelines: a state of play assessment (2016). Retrieved from: https://www.fao.org/documents/card/en/c/d8dfeaf1-f859-4191-954f-e8e1388cd0b7/

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9° LU WEEK NINE: FOOD SUSTAINABILITY

Goal:

Knowledge about the food sustainability

Key message:

Prefer sustainable food

Material: Various types of grocery flyers	**Methods:** Initial discussion, laboratory, healthy homework, challenge	**Timing**: 60 minutes	**Frequency**: One lesson	**Potential Curricular Links:** Geography, Science

LET'S START PLAYING FOR HEALTH

Initial Discussion about sustainable food:

What does sustainability mean? “The use of resources at rates that do not exceed the capacity of the Earth to replace them”. One way to reduce the use of resources and also eat more nutrient dense food is to eat locally and seasonally (see LU 2A6)

Which kind of Packaging is sustainable? Eating locally reduces the distance food needs to travel and also the packaging needed.

Learning point

- What does sustainable food mean?
- The foods we eat not only affect our health, but also the health of the environment
- A lot of resources are needed to produce food (water, energy for transportation, CO2 production, land usage, fertilizers etc)
- Which kinds of food do you think are more sustainable? Differences between different classes of food: fortunately, a low-impact diet can be achieved by following the approximate food proportions of the food pyramids: consume little meat (especially processed meat), cheese, fish, dairy products while eat plenty of fruit, vegetables, legumes and vegetables.

Classroom activities

- Global sustainability: Discuss which kinds of food are sustainable? (meat, fish, bread, fruit, vegetable?)
- Local sustainability: Take from a supermarket flyers and check out where food comes from? Try to check on a map, how many kilometers (CO2 consumption) far was the production of that food? Are their packaging sustainable?

Healthy homework + Challenges

During the shopping at the supermarket look at the tags. Where does food come from? Is it far from your home? (CO2 consumption). Try To choose foods that are produced both locally and seasonally.

Final Discussion after homework and challenges

Was I able to choose food produced locally and seasonally? If not why no?

References

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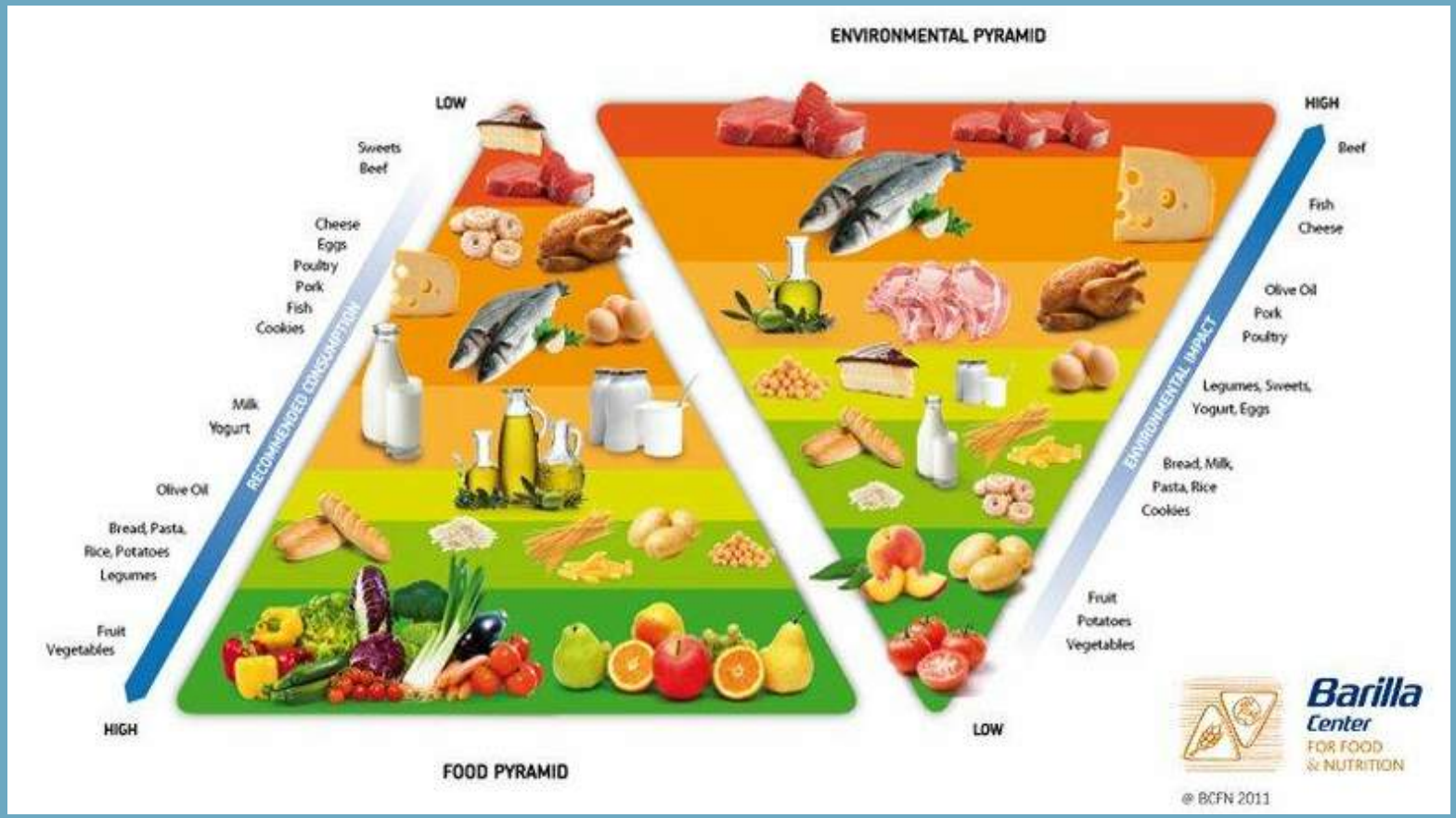

Talk about the importance of reducing food waste.

(Note: the image is probably not copiright free, it whould be possible to create a similar one)

Healthy food is sustainable food: recommendations for healthy eating.

At present, few food guidelines take sustainability issues into account. However, there is growing evidence that a win-win situation for human health and the environment is possible, and some common messages are emerging to promote human and environmental well-being (15):

- Eat a wide variety of foods from different food groups, with an emphasis on plant-based foods.
- Consume only the calories you need to meet your energy needs. Overeating is bad for human and global health.
- Choose fresh, locally grown and home-prepared foods. Avoid highly processed foods, especially those that are high in fat, sugar or salt and/or low in vitamins, minerals and fibre. It is important to check food labels.
- Eat at least two to three servings of fruit per day, preferably fresh, seasonal and locally produced. The WHO recommends a combined consumption of more than five servings (400 grams) of fruit and vegetables per day (10).
- Eat at least two to three servings of vegetables a day. Choose vegetables grown in the field rather than in greenhouses, or vegetables that are preserved using sustainable methods (such as fermentation) and do not require fast, energy-consuming transport. Reduce food waste by also eating "ugly" vegetables and fruit: aesthetic imperfections do not mean that the produce is less nutritious.
- Potatoes, sweet potatoes, cassava and other starchy roots do not count as vegetable servings, but are present in a healthy diet, preferably in minimally processed forms.
- Cereals should be consumed primarily as whole grains - such as maize, oats, wheat or unprocessed brown rice - rather than in refined form (e.g. white rice, bread or pasta).
- Consume moderate amounts of milk and milk products (or milk substitutes) and choose low-fat, low-salt and low-sugar versions.
- Limit consumption of red meat and processed meat products (10) - some international national bodies suggest limiting consumption to about 500 grams of cooked meat per week, with very small amounts, if any, of processed meat products (21,22,23,24).
- Eat fish and seafood about twice a week, preferably from certified/recognised sustainable sources.
- Eat pulses regularly. Dried beans, peas and lentils are excellent sources of protein, fibre and other nutrients, and are naturally low in fat. Pulses are a good alternative to meat and can play a key role in the healthy, sustainable diets of the future.
- Include modest amounts of fats and oils, mainly of vegetable origin, and preferably containing unsaturated fats. Avoid industrially produced trans fats (e.g. partially hydrogenated oils) found in processed foods, fast food, snack foods and fried foods. Use healthier cooking methods, use vegetable oils, boil, steam or bake instead of frying.
- Drink tap water (or other improved sources such as boreholes and protected wells) in preference to other beverages, especially sweetened beverages. Consumption of fruit juices should also be limited as they contribute to the presence of free sugars; for example, a 150 ml glass of unsweetened orange juice contains about 15 g of free sugars (3).
- Prepare food according to hygienic practices: wash hands before handling food and after using the toilet, disinfect surfaces and protect them from insects, pests and animals, separate raw and cooked food, cook food thoroughly and store it at safe temperatures, and use clean water to wash raw food (25).

10° LU WEEK TEN:
LABEL OF MY SNACKS, WHICH IS THE BEST FOR MY HEALTH?

Goal:

- How to read nutrition labels information.
- Know if foods are more or less healthy based on their ingredients listed on the label.

Key message:

Education which helps comprehension and use of nutrition labels have the potential to improve the impact of this information on dietary health. Education helps in a correct selection of products. Students will be more aware of their daily food choices based on nutritional labels, based on the composition of macronutrients, the salt content and the quantity of each ingredient that determines the quality of the product.

Material: Pre-packaged snacks (crackers, bars, chips, biscuits, etc.) and cans of fizzy drinks	**Methods:** Initial discussion, laboratory, healthy homework, challenge	**Timing**: 60 minutes	**Frequency**: One lesson	**Potential Curricular Links:** Science, Math, English

LET'S START PLAYING FOR HEALTH

Initial discussion about nutrition labels

Teacher asks the children: do you usually read the nutrition labels? Do you know how to read the nutrition labels? Do you know why is it important to read the nutrition labels?

Learning point

- Teacher explains why it is important to read the nutrition labels of food and drink.
- Teacher explains how to read the nutrition labels.
- Teacher explains the fundamental concepts for a balanced diet and lists the most harmful ingredients to pay attention to.

Classroom activity

- Divide the class into groups, give each group the same set of similar pre-packaged snacks or cans, ask the children to read the nutrition labels and decide what is the healthy choice.
- Teacher chooses some food items (i.e. biscuits, crackers, cereals, yogurt) or drinks (i.e. fruit juice, coke, tea) and gives them to each group. The group, without looking at any label, try to come to a consensus on the items they think has the highest content of: salt, sugar, fat, carbohydrate, protein, minerals/nutrients, calcium.
- Together with your classmates, analyze the nutrition labels of the food and drinks found in the vending machines inside the school. Based on what you learned in class, how do the foods and drinks you find in vending machines look like? Propose changes with your classmates to make the foods in the school healthier.

Healthy homework + Challenge

- Go to the supermarket with your classmates, choose a food from your favorites (i.e. yogurt, snacks, biscuits, etc.), select two or more similar items, read the nutritional label and decide which is the healthy choice.
- Choose a food that you usually eat at home for breakfast or for snack and analyze its nutrition label based on what you learned in class. Is it healthy food or not?
- Try to read the salt content of snacks and the sugar content of chocolate as much as you can.
- Try to think about a healthy and balanced snack according to the indications received in class about nutrition labels to propose for the home break.

Final discussion after homework and challenges

I read food labels of pre-packaged foods/I did not. If no, why not?

How to read the nutrition label step by step:

1. Start by checking how the information is reported. The ingredients are listed in a precise order: from the most present to the least present in quantity. Another important thing is to check if the information given is based on standard weights of 100 grams or on a single portion or other.
2. Check the weight of the portions/rations and compare it with what you are actually eating.
3. Check the calories that the portion of food you are about to eat will provide you, to compare them with the total calories which, on average, must not be exceeded.
4. Monitor the amount of nutrients you should limit. Some labels highlight the percentage of the daily nutrient requirement provided by each serving.
5. Make sure your food provides you with a sufficient amount of essential nutrients such as vitamins, calcium, iron and fiber.

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11° LU WEEK ELEVEN:

EATING HEALTHY SNACKS

Goal:

Knowledge about the nutritional component of snacks and proper consumption of them

Key message:

Having a good and healthy snack could be tasty, funny, and environmentally friendly

Material: Various types of snacks	**Methods:** Initial discussion, laboratory, healthy homework	**Timing**: 30 minutes	**Frequency**: One lesson	**Potential Curricular Links:** This learning unit is not specific to a particular school subject

LET'S START PLAYING FOR HEALTH

Initial Discussion about Snacks Intake

- What are the different types of snacks that are eaten during the day (fruits, sandwiches, chocolates, chips, yogurts)?
- Which snacks do students prefer?
- What do students consider to be a healthy snack?

Learning point

- What are the different types of healthy snacks that could be eaten during the day (fruits, sandwiches, chocolates, chips, yogurts)?
- Which are the snacks with more and less nutritional components?
- How much is on average a portion of food for a snack (hand size)?
- According to WHO, sugars intake can be reduced by limiting the consumption of foods and drinks containing high amounts of sugars, such as sugary snacks, candies and sugar-sweetened beverages (i.e. all types of beverages containing free sugars – these include carbonated or non-carbonated soft drinks, fruit or vegetable juices and drinks, liquid and powder concentrates, flavoured water, energy and sports drinks, ready-to-drink tea, ready-to-drink coffee and flavoured milk drinks); and eating fresh fruit and raw vegetables as snacks instead of sugary snacks.
- According to WHO, fat intake, especially saturated fat and industrially-produced trans-fat intake, can be reduced by limiting the consumption of pre-packaged snacks (e.g. doughnuts, cakes, pies, cookies, biscuits and wafers) that contain industrially-produced trans-fats.
- According to WHO, salt intake can be reduced by limiting the consumption of salty snacks.

Classroom activities

- Students put on the main table of the room the snacks brought from home for that day and try to categorize them based on their nutritional components (see also LU n. 1 on Nutrition The Food Pyramid).
- Discuss which snacks are better to be eaten often and which ones only once in a while.
- Students try to draw a table about the amount of sugar and fat contained in the snack analyzed.

Healthy homework + Challenges

- Prepare and eat snacks with better nutritional components each day, following the nutritional indication learned.
- Keep a diary of your snacks: try to draw the snack and note the amount of sugar and fat contained.

Final Discussion after homework and challenges

- Was I able to eat healthy snacks during the day or not? If no, why not?
- Report the results of the challenge. Did you succeed in eating healthy snacks? Which difficulties did you have? Try to compare the amount of sugar and fat contained in the first snack you analyzed in class (before doing the healthy homework) with those of the snacks you eat during this week: how different are they?

Tips: to make it easier to compare the snacks, create a table reporting “fat” and “sugar” as columns and stick on the side of the lines the label of the snacks. If there is no label, draw what you eat.

12° LU WEEK TWELVE:

EAT HEALTHY TO SLEEP WELL

Goal:

Understanding the relationship between good sleep quality and healthy nutrition

Key message:

Breakfast is one of the most important meals of the day. People should focus on having a good breakfast in order to start the day properly

Material: Personal cookbook	**Methods:** Initial discussion, Content of guidelines on healthy nutrition and sleep hygiene, Group activity, Healthy homework and challenge.	**Timing**: 60 minutes	**Frequency**: One lesson	**Potential Curricular Links:** This learning unit is not specific for a particular school subject.

LET'S START PLAYING FOR HEALTH

Initial Discussion about Nutrition

- Discussion between students about their usual dinner.
- Discussion between students about nutrition habits related to a good rest. Focus on the link between nutritional habits and sleep quality. A healthy diet may improve the quality of your sleep; on the other hand, people who don't get enough sleep are more likely to increase their food consumption. In fact, sleep deprivation seems to provoke a tendency to select high-calorie foods with less nutritional benefit and create a greater risk of weight gain.
- Discussion between students about habits related to stimulating drinks, caffeine and alcohol.

Learning points

- Prefer nutritious but light meals instead of large meals before bedtime. Eat a light, healthy snack if you get hungry at night.
- Avoid, in particular before bedtime:
    - alcohol (it promotes sleep onset but causes early awakening and sleep disturbances).
    - sugars (both in foods or drinks) and substances like theine, ginseng, caffeine or chocolate (contains stimulating substances).

  These foods have an exciting effect that may keep you up at night since they drop serotonin and melatonin production, which guarantee the correct sleep-wake rhythm. Also tyramine, a molecule contained in aged cheese, is known to have an exciting effect. In general, you should avoid consuming really fatty, salted, spicy foods or meals containing a large amount of proteins before dinner: these foods take a very long time to be digested and gastric acid production.
- Reduce your fluid intake several hours before sleep. Herbal teas can help you relax and fall asleep, but it's better to drink them far from bedtime, otherwise you could have to wake up to go to the toilet.
- Try not to skip dinner: hypoglycemia-related hunger could make it difficult to fall asleep.

Classroom activity

- Make different students' groups. Each group should write down in a "Personal Cookbook" one or more examples of healthy dinner based on their preferences but following at the same time the teacher's tips.

Healthy homework + Challenges

- Following your "Personal Cookbook" decide the menu of your dinner. Cook dinner with your family.
- Try to avoid coffee, tea, coke and energy drinks especially in the afternoon and the evening for 1 week (see also Learning Unit on Sleep Habits n. 2).
- Did you manage to follow the directions? If not, why? Have you noticed any change in the quality of your sleep?

Final Discussion after homework and challenges

Was I able to follow the teacher's tips about the ideal dinner? If not, why not?

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Centers for Disease Control and Prevention (CDC) (available at: https://www.cdc.gov/)

3

LEARNING UNITS ABOUT PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR FOR SECONDARY SCHOOL

1° LU WEEK ONE:

HOW TO BUILD A HEALTHY DIET

Goal:

Knowledge about WHO recommendation toward PA in adolescents

Key Message:

WHO recommends to perform at least 60 minute of PA

Material: Happy feet log Daily journal for children and parents. Collect each experience, feeling, describing the activity. Using smartwatch to monitor the steps counts and physical activity	**Methods:** Initial discussion, content of WHO guidelines, Group activity, healthy homework	**Frequency**: Two lessons	**Timing**: 60 minutes	**Potential Curricular Links:** Science

LET'S START PLAYING FOR HEALTH

Initial Discussion about Physical activity

Talking about what is Physical activity? How much time does everyone spend in physical activity during the day? (Raise your hand) But how many minutes of PA every day?

Learning points

- Teacher start to explain the recommended levels of PA necessary for each age groups (children, adolescents, adult)
- Explain that every move counts for health
- 60 minute every day of PA are recommended for children and adolescent from 5 to 17 aged ref
- Unstructured PA (e.g., active commuting to school, walking, riding, active play with friends)
- Talking about timing, frequency and duration for PA.

Classroom activities

- Let's choose one physical activity and share it with the class.
- Create/understand how to fill the happy feet log day by day for two weeks

Healthy homework + Challenges

- Doing 15 minutes of daily extra-school walking (examples: walk to the supermarket, get off the bus first and walk the last few stops, do not use the elevator, ...)
- Try to do as much PA during extra school as you can. After two weeks teacher nominates the most active children

Final Discussion after homeworks and challenges

I was able to increase the PA levels/I was not. If no, why not?

References

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Happy Feet Log

Example of the structure

Daily Reports

- How many feet did I walk today?
- At what pace did I walk?
- Look at that pictures!

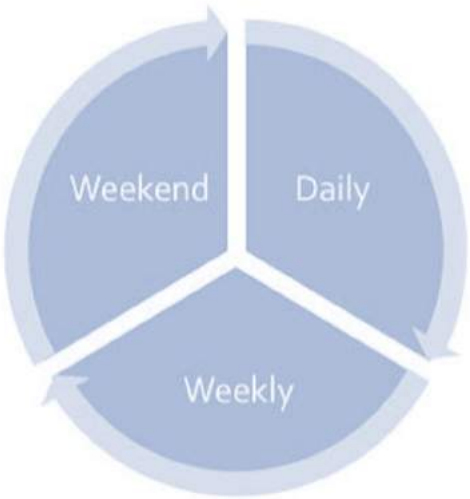
Weekly Reports

- How many feet did I walk this first week?
- At what pace did I walk?
- Look at that pictures!

Weekend Reports

- How many feet did I walk on Saturday - Sunday?
- At what pace did I walk?
- Look at that pictures!

Results shared with the class



2° LU WEEK TWO: LET'S TALK ABOUT INTENSITY

Goal:

Knowledge about the Mechanism of Heart Beat during different PA intensities

Key message:

WHO recommends for children and adolescents to perform at least 60 minute of Moderate to Vigorous PA

Material: Diary; smartwatch; Jar; Balloons; Straws	**Methods:** Initial discussion, laboratory, healthy homework	**Frequency**: One lesson	**Timing**: 60 minutes	**Potential Curricular Links:** Science, Math

LET'S START PLAYING FOR HEALTH

Initial Discussion about Intensity

Talking about what is the intensity? How many intensities do you know? (Raise your hand) Which intensities are you able to reach? (Examples)

Learning points

- Explain the heart beat using a jar
- Explain the intensity using the Talk-Sing Test.

Classroom Activities

- All the children bring to school a jar, some water balloons, some drinking straws. A heart pump is built and its operation explained.
- The heart pump is activated during PA differently based on intensity but what is the intensity of PA?
- Laboratory: Light-walking (singing); Moderate-running (talking); Vigorous-jumping (breathing).

Healthy homework + Challenges

- Write a report/Drawing indicating the day, the time, the type of activity performed, its duration and intensity.
- Try to do as much PA during extra school as you can. After a week teacher nominates the most active children

Final Discussion after homeworks and challenges

I was able to break my sedentary time/I was not. If no, why not?

References:

World Health Organization (2020). *WHO guidelines on physical activity and sedentary behaviour*. Geneva: World Health Organization. Retrieved from https://www.who.int/publications/i/item/9789240015128.

3° LU WEEK THREE: WHAT IS SEDENTARY BEHAVIOR?

Goal:

Knowledge about WHO recommendation toward PA in children regarding limit the amount of time spent being sedentary

Key message:

It is recommended that:

› Children and adolescents should limit the amount of time spent being sedentary, particularly the amount of recreational screen time.

Strong recommendation, low certainty evidence

Material: Active breaks Experience active breaks that can literally break the lesson/any kind of sedentary time. Collect each experience, feeling, describing the activity	**Methods:** Initial discussion, content of WHO guidelines, Group activity, healthy homework	**Frequency**: Two lessons	**Timing**: 60 minutes	**Potential Curricular Links:** Science

LET'S START PLAYING FOR HEALTH

Initial Discussion about Physical activity

Talking about what is Sedentary behaviour? How much time does everyone usually spend in sedentary behaviour during the day? (Raise your hand) What do you usually do in your sedentary time (tv, gaming)?

Learning points

- Teacher starts to explain that every move counts for health!
- Explain the risk related to sedentary behaviour
- Talking about the balance between sedentary and active spent time (timing, frequency and duration for PA to break sedentary time).

Classroom activities

- Understand how to do an active break (try to sit up and jump)
- Let's invent an active break, and share it with the class.

Healthy homework + Challenges

- Each time you spent 1h in sedentary behavior (sitting at the pc), try to do an active break (examples: sit up and jump for 30 seconds)
- Write notes about the numbers and type of chosen active breaks
- Use the social networks to share active breaks created and done during extracurricular time

References

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3° LU WEEK THREE: WHAT IS SEDENTARY BEHAVIOR?

Goal:

Knowledge about recommendation toward in children regarding limit the amount of time being sedentary particularly the amount of recreational screen time

Key message:

SIT

SEDENTARY BEHAVIOUR

No more than two hours per day of free time spent using electronic devices.

Material: Diary, Smartphone to calculate the time spent on instagram, tiktok and facebook	**Methods:** Initial discussion, content of the guidelines, healthy homework and challange	**Frequency**: One lesson	**Timing**: 30 minutes	**Potential Curricular Links:** Science

LET'S START PLAYING FOR HEALTH

Initial Discussion about Physical activity

Talking about the time spent using electronic devices, pc or watching tv. How much time does everyone usually spend sitting using electronic devices, pc or watching tv (Raise your hand).

Learning points

- Teacher starts to explain that every move counts for health!
- Explain the risks related to screen time sedentary behavior.

Classroom activities

- Try to limit the time spent using social network.

Healthy homework + Challenges

- Reported in the diary the numbers of hours spent using electronic devices in a week.
- School Contest: less hours of the use of electronic devices, more healthy points for alternative proposals for reduction. We calculated the healthier class.

Final Discussion after homeworks and challenges

I was able to reduce my sedentary time/I was not. If no, why not?
Collection of suggestions for alternatives to electronic gaming while sitting - create a collection of games (interviews with grandparents, parents: what did they play where and with whom).

References

Chaput, J. P., Willumsen, J., Bull, F., Chou, R., Ekelund, U., Firth, J., Jago, R., Ortega, F. B., & Katzmarzyk, P. T. (2020). 2020 WHO guidelines on physical activity and sedentary behaviour for children and adolescents aged 5-17 years: summary of the evidence. *The international journal of behavioral nutrition and physical activity, 17*(1), 141. https://doi.org/10.1186/s12966-020-01037-z

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5° LU WEEK FIVE: LET'S TALK ABOUT WALKING

GOAL:

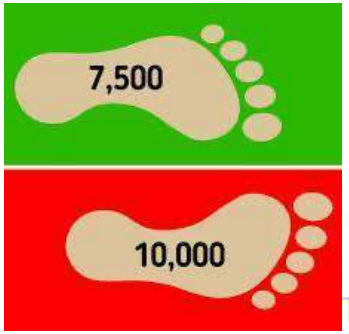
a) Knowledge of the use of Active Commuting, around the city, as a healthy lifestyle (Walking, Running, Cycling).

b) Getting around on foot (walking and running) with different intensity and in safety condition (walkway lane, respect of traffic rules).

c) Getting around by bike in safety condition (wearing a helmet, on bike lane, respect of traffic rules)

Key message:

Active Commuting is easy and sustainable, one of the ways to achieve WHO PA recommendations for children and adolescents to perform at least 60 minutes of Moderate to Vigorous PA or 7000 to 10000 daily steps.



Material: Happy feet log, Borg Scale	**Methods:** Group work on the topic of ACtive Commuting; applied group work in the gym; group work in the home challenges, recording of personal data in the diary.	**Frequency**: Two lessons	**Timing**: 60 minutes	**Potential Curricular Links:** Science: Cardiovascular system; Physical Education: walking/running/cycling, correct posture, different applications and intensity; Mats: space-time-velocity; Geography: study of city maps.

NB. Group work assumes that groups are formed in relation to the fact that the student) can also work together extracurricular on home challenge tasks.

LET'S START PLAYING FOR HEALTH

Initial Discussion about Active Commuting as Physical activity
Discussion about walking/running/cycling at various intensities and its contribution to cardiovascular health. Reflection on the sustainability of walking/running/Cycling in all environments, spaces, time and conditions.

Learning points
What is the meaning of Active Commuting?
- Teacher start to explain what is active commuting, why it is important for children
- How many steps children have to do in a day (running/walking)
- How many Chilometres hate to do in a day (cycling)

Classroom activities
- Group work on the functions and modifications of the cardio-circulatory and respiratory system in function of different intensities of physical-motor engagement. Production of a short manual, deduced from all the group work, to be delivered to each student/vault
- Group work: organising active commuting activities at different speeds (recreational activities, games, other). Each group presents and has everyone try their work (including measuring heart rates and applying the fatigue self-perception tool.
- Group work: calculating the different speeds of movement of different athletics disciplines (running,walking, Cycling) and comparing them with each other (based on national or Olympic records).
- Group work: research of tools for self-assessment of fatigue. At the end of the group work, the tool considered easiest and most usable for the self-evaluation of fatigue is chosen. Creation of the personal diary (what data to introduce, what kind of recording).
- Group work: studying street maps or city parks and calculating routes of equal or variable distance from home.

Healthy homework + Challenges
- During the week and on the weekend, together with the companions of the group working in class, calculate and realise together, giving appointment in an appropriate place, at least three paths: Groups A: three routes of equal distance, on the city map or on the map of a public park, to be carried out at low-medium-high intensity. Pulse calculation, individual speed calculation, differences, self-evaluation of fatigue perception with the chosen instrument. Group B: three routes of different lengths, on the city map or on the map of a public park, to be carried out at the highest possible speed. Pulse calculation, individual speed calculation, differences, self-evaluation of fatigue perception with the chosen instrument. Realise with the partners of the group the situations a) and b), in three different days of two different weeks.
- Record in the personal diary, chosen by the class through group work the elements chosen as data to be recorded.

Final Discussion after homework and challenges
Circle time about the home challenges, is it feasible? Do you enjoy homeworks?
I was able to increase the number of steps in a day? If no, why not?

ATTACHMENTS: EXAMPLE OF A DIARY PAGE

NAME SURNAME	FEMALE MALE	AGE	CLASS

QUESTIONS BEFORE THE ACTIVITIES

Are you aware of how important is the active commuting?	1	2	3	4	5	6	7	8	9	10
Can you control walking/running/cycling better or worse than other skills?	1	2	3	4	5	6	7	8	9	10
Can walking/running/cycling affect your heart?	1	2	3	4	5	6	7	8	9	10

ACTIVITIES

Day and place	1 Gentle run	2 Medium run	3 Intense run	Borg Correspondence
	1 route	2 route	2 route	Borg corrispondence
	BPM at start	BPM at start	BPM at start	1: ; 2: ; 3:
	BPM andata	BPM andata	BPM andata	1: ; 2: ; 3:
	BPM return	BPM return	BPM return	1: ; 2: ; 3:
	Velocity	Velocity	Velocity	
With parent	Vel.1	Vel.1	Vel.1	Borg average
With parent	Average bpm	Average bpm	Average bpm	1: ; 2: ; 3:

QUESTIONS AFTER THE ACTIVITIES (1=low, 10=high)

Do you understand the importance of active commuting?	1	2	3	4	5	6	7	8	9	10
Do you feel more in control on walking/running/cycling?	1	2	3	4	5	6	7	8	9	10
At what maximum speed can you walk/run and with how many heartbeats per minute?	1	2	3	4	5	6	7	8	9	10

Impressions and personal sensations on the three routes

With the group partners Description:

HOW DO YOU FEEL, COMPARED TO WAKLING AFTER THIS EXPERIENCE?

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6° LU WEEK SIX: LET'S TRY TO HOPPING

GOAL:

● Objectives: - self-awareness and the implications that rhythm implies on a sense-motor level - know the rhythmic variables related to rhythmic exercise; awareness of rhythmic control of jumping in relation to speed, number of repetitions or application time.

● Skills: learning the technique of jumping with the tightrope - control of rhythmic variables related to jumping with the tightrope - respiratory control and fatigue.

● Competence: regulation of physical effort according to stress level (mild - medium intense - intense)

Key message:

Hopping is easy and sustainable activity, activity that can be done anywhere, even at home in a small space and can also be done by dancing.

Material: Happy feet log, Borg Scale	**Methods:** Participatory lectures on the topic of hopping; applied lessons in the gym; home challenges and recording of personal data in the diary	**Frequency**: One lesson	**Timing**: 60 minutes	**Potential Curricular Links:** Sciences: time and rhythm in nature and in humans; Music: binary and ternary rhythm. Strong and weak times. Rhythmic cadences. Art: the use of the hop in tribal and modern dances, folk and traditional dances based on the hop (e.g., the Tarantella or Pizzica)

LET'S START PLAYING FOR HEALTH

Initial Discussion about Hopping
Discussion about hopping with different modes and different rhythms, the pleasure of free dancing expression, the pleasure of moving while having fun, keeping fit without mental fatigue.

Learning point

- Hopping is one of the movements included in dance with other types of movement such as jumping, bouncing, sidestepping, squatting, stomping, arm swings, twirls, and turns.
- In different cultural and ethnic groups, hopping is used inside typical dance for entertaining, reflecting on spirituality, telling stories, and for enjoyment.

Classroom activities

Encourages the learning of the use of the rope combined with the jumps - Teaches the recovery time and the defatigue between a series of jumps.

- Group work: try at least three different ways of hopping with the rope and apply them to binary and ternary rhythms. After this work, all groups propose their three hopping modes to each other and everyone tries everyone's mode. Each group chooses three modes out of all those presented (the ones they like best and they mark them in their personal diary). Each group tries the three chosen modes.
- Group works about time and rhythm - physical characteristics - applications and tools
- Group Work about density - intensity - quantity of rhythmic activities and elementary calculations related to them

Healthy homework + Challenges

- During the week, practice jumping jacks at home, every day for at least 15 minutes a day. On three days of the week meet with the work group and perform the activities together.
- Perform three different ways of hopping: 1) Mild and low intensity, 2) Medium intense by varying speed, number of jumps or application time; 3) One intense by jumping at maximum speed.
- Note in personal diary: How long can you hop in situation 1? How much time in situation 2? How much time in situation 3)
- Note in the diary the differences, between the three jumping modes, with reference to the detected heart rates (aspect already addressed in the LUs 5-6) and note the level of self-perceived fatigue.

Final Discussion after homework and challenges
I was able to do hopping every day during my healthy homeworks? If no, why not?

References

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ATTACHMENTS: EXAMPLE OF A DIARY PAGE

NAME SURNAME	FEALE MALE	AGE	CLASS

QUESTIONS BEFORE THE ACTIVITIES

How tiring is skipping in your opinion?	1	2	3	4	5	6	7	8	9	10
Do you feel able to control various hopping rhythms?	1	2	3	4	5	6	7	8	9	10
How long do you think you can hop without stopping?	1	2	3	4	5	6	7	8	9	10

HOME CHALLENGES

Week day	1 slow hopping	2 medium hopping	3 fast hopping	Borg corrispondence
Mon	bpm_____T(s)____	bpm____T(s)____	bpm_____T(s)_____	1: ; 2: ; 3:
Tue	bpm_____T(s)____	bpm____T(s)____	bpm_____T(s)_____	1: ; 2: ; 3
Wed	bpm_____T(s)____	bpm____T(s)____	bpm_____T(s)_____	1: ; 2: ; 3
Thu	bpm_____T(s)____	bpm____T(s)____	bpm_____T(s)_____	1: ; 2: ; 3
Fri	bpm_____T(s)____	bpm____T(s)____	bpm_____T(s)_____	1: ; 2: ; 3
Sat	bpm_____T(s)____	bpm____T(s)____	bpm_____T(s)_____	1: ; 2: ; 3
Sun	bpm_____T(s)____	bpm____T(s)____	bpm_____T(s)_____	1: ; 2: ; 3

QUESTION AFTER THE ACTIVITIES

What awareness have you gained in controlling the tempo and rhythm applied to jumping?	1	2	3	4	5	6	7	8	9	10
Do you feel more in your motor control?	1	2	3	4	5	6	7	8	9	10
How long are you able to hop without stopping (mild resistant stimulus)?	1	2	3	4	5	6	7	8	9	10
How long are you able to hop at full speed (intense stimulus)?	1	2	3	4	5	6	7	8	9	10

IMPRESSIONS AND FEELINGS ABOUT THE EXPERIENCE CARRIED OUT THREE WAYS OF HOPPING

Describe (also with your group partners):

Happy Feet Log

Example of the structure

Daily Reports

- How many feet did I walk today?
- At what pace did I walk?
- Look at that pictures!

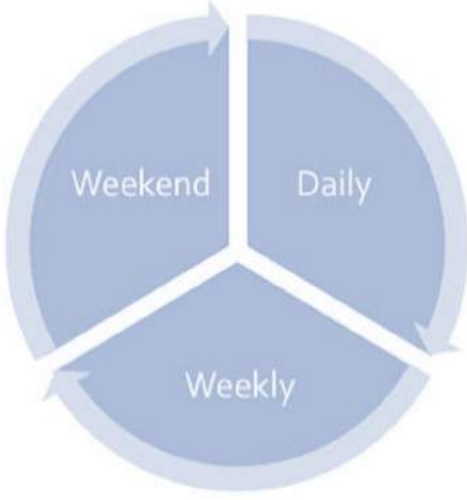
Weekly Reports

- How many feet did I walk this first week?
- At what pace did I walk?
- Look at that pictures!

Weekend Reports

- How many feet did I walk on Saturday - Sunday?
- At what pace did I walk?
- Look at that pictures!

Results shared with the class



7° LU WEEK SEVEN: HOW CAN I USE MY BODY IN MOTION?

Goal:

Measuring spaces with your body in motion, experimenting and knowing the relationship between movement and learning

Key message:

Coordination and body awareness

Material: Sheets, pens or pencils, metric distance wheel, excel sheet to report data on the measures taken	**Methods:** Initial discussion, laboratory, healthy homework, cross-subject-teaching	**Frequency**: Two lessons	**Timing**: 60 minutes	**Potential Curricular Links:** Math: movement and learning can be linked to numbers (count during movement) space and time Physical education: stimulate body control, balance, coordination, agility Physics: the movement of objects in space (uniform circular motion, angular motion)

LET'S START PLAYING FOR HEALTH

Learning point

- Lengths and measures; unit of measure; metric system; circumference and circle; time / distance calculation
- How can I move in space with different movements? (connection LU 7-8-9)

Classroom Activity

- Group activity: Choose the space to be measured: corridor, atrium, gym; yard measurements. Every group measures compared the distance of single student's steps using different style (normal step, long step, jump, sidestepping)
- A couple of students move in space with two different roles: one leads the other keeps his eyes closed
- Group activity: how much distance do you need to make 7000 to 10000 daily steps?

Healthy homework + Challenges

- Group activity walk for 10000 steps on an established path and recording the distance of the path x number of participants, three time per week
- Share collected data. Nomination of the winner group (the more members walk, the higher the distance traveled). (Linked with LU-7)

Final Discussion after homework and challenges

How do I feel after the activity? What difficulties did I encounter? What body parts did I use? Has my heart rate increased?

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Daily Steps and Health | Walking Your Way to Better Health. Available at https://www.acsm.org/blog-detail/acsm-certified-blog/2019/06/14/walking-10000-steps-a-day-physical-activity-guidelines

8° LU WEEK EIGHT: SPORT

Goal:

Knowledge about common SPORT for adolescents

https://www.nhs.uk/healthier-families/activities/

Key message:

Social and cultural factor related to SPORT

Material: Happy feet log Daily journal for children and parents. Collect each sport experience, feeling.	**Methods:** Initial discussion, group activity, healthy homework	**Frequency**: One lesson	**Timing**: 60 minutes	**Potential Curricular Links:** History: Identify how sport is influenced by culture and the environment, researched and recorded three facts about how a sport developed in another country.; Physical education: how sport has been adapted to disability

LET'S START PLAYING FOR HEALTH

Initial Discussion about physical activity

Talking about what is sport? How much time does everyone spend in practicing the sport during the week? (Raise your hand) Which type of sport?

Learning points

- Sport has the potential to contribute both positively and negatively to wellbeing
- The effective promotion of sport ensures all children have the opportunity to: Participate to the highest level of their interest and ability Practice fair play in all situations, Experience and manage competition
- Competition: Team sports provide opportunities for student to develop teamwork and cooperation skills, manage success and disappointment, and to respect officials, teammates, and the opposition.
- Leadership: Opportunities to acquire skills of coaching, officiating, and administrating are thought to support a child's understanding and knowledge of game play and help to develop leadership skills.
- Culture: Students who experience sporting activities, in which cultural practices are expressed through movement, develop skills to identify and discuss the social and cultural significance that sport has for individuals and for society.

Classroom activities

- Let's choose one group sport activity and single sport activity and share it with the class.
- Create/understand how to fill the happy feet log day by day for two weeks regarding sport practiced

Healthy homework + Challenges

- Try to find a new sport you've never played from different country. Learn the rules of the game and try it if you can and share with class in the following week
- Group activity: trying to do as much sport during extra school as you can. After two weeks teacher nominates the most active children

Final Discussion after homework and challenges

I was able to perform the PA new sport? I know the new rules? I was not able. If no, why not?

References

U.S. Department of Health and Human Services (2018). *Physical Activity Guidelines for Americans, 2nd edition*. Washington, DC: U.S. Department of Health and Human Services. Retrieved from https://health.gov/sites/default/files/2019-09/Physical_Activity_Guidelines_2nd_edition.pdf.

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Happy Feet Log

Example of the structure

Daily Reports

- How many feet did I walk today?
- At what pace did I walk?
- Look at that pictures!

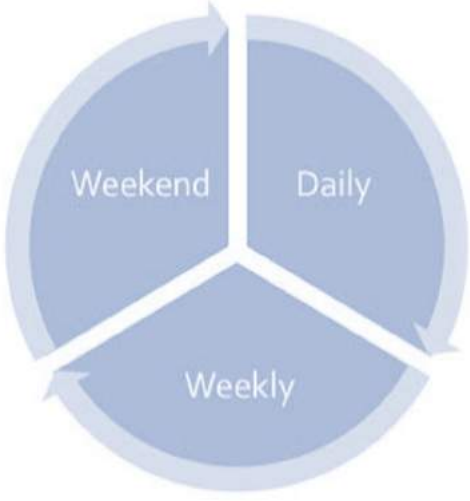
Weekly Reports

- How many feet did I walk this first week?
- At what pace did I walk?
- Look at that pictures!

Weekend Reports

- How many feet did I walk on Saturday - Sunday?
- At what pace did I walk?
- Look at that pictures!

Results shared with the class



9° LU WEEK NINE: WHAT IS A MOTOR TEST?

Goal:

Stimulate knowledge and body control to learn the self-evaluation of motor skills and stimulate proactive behaviours in favour of one's well-being

Key message:

Measure your motor skills and monitor their development over time

Material: ● Flexibility: “bending”: gymnastic bench (small box), measuring rod / ruler in cm; ● Long jump: “muscle power”: adhesive tape to mark the distance on the ground - marks every 5 cm starting from 50 cm up to 3 metres; ● 4x10 shuttle run: Clean, non-slippery floor. Stopwatch, adhesive tape, tape measure, three sponges of different colours and four cones ● 20m shuttle run test: A gymnasium or space large enough to mark out a 20m track, four cones, tape measure, CD-player and a pre-recorded CD of the test protocol.	**Methods:** Initial discussion about test, production of test material, healthy homework	**Frequency**: Two lessons	**Timing**: 60 minutes	**Potential Curricular Links:** With the introduction of motor tests, different didactic contents are possible in school subjects Sport: definitions of - endurance, strength, flexibility Biology: muscular, skeletal, balance Language: Description of a personal fitness development program, games and game rules Maths: use of test statistics, comparisons

LET'S START PLAYING FOR HEALTH

Initial Discussion about Motor test

Talking about what is a motor test? Do you know some motor tests?

Learning point

How important is it to be aware of our motor skills?

What am I able to do? How can I improve myself?

- Definition of motor skills
- Definitions of - endurance, strength, flexibility

The effective promotion of sport ensures all children have the opportunity to:

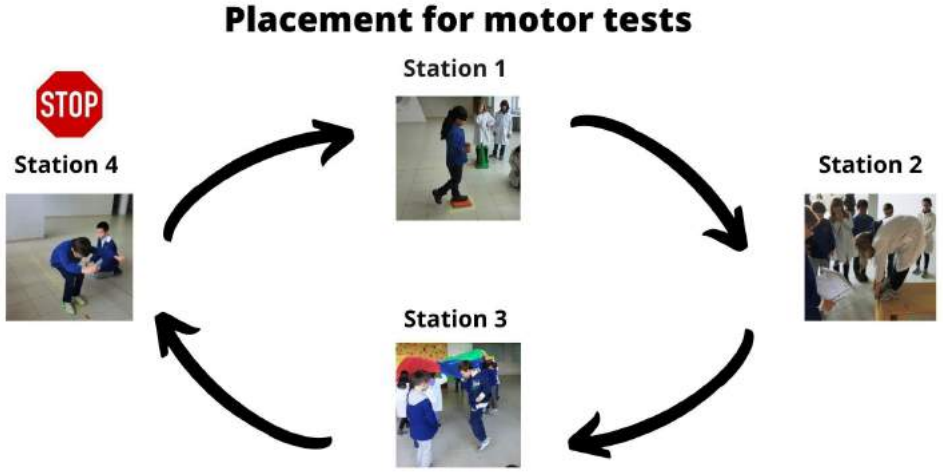
- Participate to the highest level of their interest and ability.
- Experience enjoyment and achievement.
- Become competent and enthusiastic participants.

Classroom activities

- The activity requires the organisation of the space in a gym or other large rooms, divided into 4 stations, 1 for each test (see diagram).
- The class is divided into 4 groups; each group presents itself in front of the test station numbered from 1 to 4 (clockwise rotation); each pupil has a personal sheet containing his personal data and the matrix to record the results; they all start together in the same time; the results are recorded by the assistants assisted by the teachers; for each station there must be at least 2 pupils to record the data.
- Collection and processing of data and initial 'self-assessment' to be achieved at the end of the school year.

If the activity is extended to other classes, the children / students in the pilot class take the roles of co-conductors together with the teachers.

This activity can be used to register the initial and final situation of a class (extended over a school year). Its repetition is therefore proposed and useful for self-assessing the progress, generated by the increase in daily movement.



Healthy homework + Challenges

- The activity can also be extended to families and friends. The four motoric tests can be organised with the help of the students who have experienced them at school. In this way they can be self-organised by every family. Otherwise, the school can organise a 'movement party'. Parents can measure their personal motor skills.
- As for the pupils, the adults can as well fix their individual motoric improvements (goals) over the time of a school year.
- Ultimate challenges: parent involvement in test performance

Final Discussion after homework and challenges

How do I feel after the activity? What difficulties did I encounter? What body parts did I use? Is it easy to balance?

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10° LU WEEK TEN: HOW MOVEMENT IS RELATED TO SUSTAINABILITY?

Goal:

Knowledge about the relationship between individual and collective behaviors with the environment.

Knowledge about alternative behavior and variable alternatives with the environment

Key message:

Environmental protection is only possible through individual and collective behavior.

Material: Movement diary; online software for calculating ecological footprint; excel sheet to record collected data; project and analysis material	**Methods:** Initial discussion, laboratory, healthy homework, cross subject teaching, internet research, project work	**Frequency**: --	**Timing**: --	**Potential Curricular Links:** Science: the meaning of ecological approach; Civics: the importance of personal choices in respect of the environment

LET'S START PLAYING FOR HEALTH

Learning point

- Do our habits cause effects on the environment? Can the effects caused by us on the environment be calculated?
- What is CO2 used for? Does it exist in nature? What happens if it isn't there? What happens if there is too much? What causes the increase in CO2? If I walk, how much do I consume? What if I run?
- Look on the internet (websites) what has been written about the dangers of CO2 (mark three points that are important to you); exchange ideas to solve the problem (personally, at home, together)

Classroom Activity

- Group activity: calculate my ecological footprint (EF): graph of the individual EF and average of the EF value (expressed for no. Of 'Worlds' or 'States')
- Diagnosis? How can we improve? Energy, food, transport: we plan small steps of change
- Walk of the class: 1 km in the schoolyard or near the school. How much CO2 do we save?

Healthy homework+ Challenges

- Group activity Walkability from a common point far 1 or 2 KMs from school at least three times or more per week with family: calculate the km CO2 saved in a week (comparison with teammates)

Final Discussion after homework and challenges

How do I feel after the activity? What difficulties did I encounter?

References

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11° LU WEEK ELEVEN: HOW DO I USE MY SENSES IN PHYSICAL ACTIVITY?

Goal:

Explore the schoolyard using all the human senses; learn to observe space with one sense only (blind, deaf, touch, smell) and represent it.

Key message:

Body awareness, orientation

Material: City Park; camera or smartphone	**Methods:** Initial discussion, laboratory, healthy homework	**Frequency**: --	**Timing**: --	**Potential Curricular Links:** Math: spatial orientation, trajectories and geometric figures; Informatics: Digital Maps creation; Art: production of colleges and artifacts.

LET'S START PLAYING FOR HEALTH

Initial Discussion about physical activity

Talking about which are the senses? How many senses do we have?

Learning point

- Teacher starts to explain the five senses and describes them.
- What is the sense you use most during physical activity?
- Other senses besides the classic ones involved during physical activity for example the kinesthetic sense.
- Do we learn to use them? Let's read the Google map of our Park together.

Classroom activities

- The class can be divided into groups: one group for each sense to be activated. Each group has a map to enrich and define according to the sense they activate to analyze the selected park
- In the classroom, the results of sensory exploration are reported, documented, shared and discussed together to create digital maps.
- The class can be divided into group: each group could represent a disability: deaf, blind, wheelchair, etc. to increase levels of physical activity and to raise children's awareness of people with disabilities.

Healthy homework + Challenges

Adolescent are invited to play at least three times per week in the same explored park during classroom activity to do the following challenges:

- How far can I run on the course before I feel tired? Can I do ten laps of the course?
- Delimited the organized path I try a game of movement with my friends
- Relay group challenge competition among groups

Final discussion

How do I feel after the activity? What difficulties did I encounter? Which sense did I used most? What is the best group in the relay?

References

Andrea Canevaro, Andrea Camerini, I explore my body and the environment. Games and activities for children aged two to seven, Erickson, 2013

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12° LU WEEK TWELVE:

HOW TO LEARN BY DOING PHYSICAL

Goal:

Experience and knowledge of the relationship between physical activity and learning

Key message:

Learning by doing

Material: Different writing tools, digital report for work group (excel, word)	**Methods:** Initial discussion, indoor/outdoor activity, and healthy homework	**Frequency**: --	**Timing**: --	**Potential Curricular Links:** Mathematics: learn how to do math´s complex operation; Literatures: memorise poetry with movement; Language: make a sentence in a foreign language

LET'S START PLAYING FOR HEALTH

Initial Discussion about physical activity

Talking about what learning by doing is?

Learning point

- Teacher starts to explain that it is possible to learn using physical activity and play/game
- Have you ever used a game to learn something new? Group discussion about how to learn using physical activity and game
- Build games/activities with which to learn curricular concepts/knowledge

Classroom Activity

- Group work: create a game/physical activity that uses letters to learn about literature
- Group work: create a game/physical activity that uses numbers to learn about maths
- Group work: organise challange between two teams. (example: the pupils of one team take turns miming the title of a work, poem, etc. by jumping on letters drawn on the ground; the pupils of the other team must interpret it correctly)
- Draw flat and solid geometric figures on sheets that are deposited in a container. The students draw a piece of paper and "draw" with the body by jumping over the represented figure

Healthy homework+ Challanges

- Groups exchange materials created in class and try to challenge each other at home by matching physical activity/game to expected learning and they reported all the results using social network

Final discussion

How do I feel after the activity? What difficulties did I encounter? Is it funny learning by doing?

Teacher checks what has been learned and how among the groups

References

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4

LEARNING UNITS ABOUT HEALTHY SLEEP FOR SECONDARY SCHOOL

1° LU WEEK ONE
HOW MUCH SLEEP DO I NEED?

Goal:

Knowledge about recommendation toward healthy sleep habits in adolescents

Key Message:

Source: Centers for Disease Control and Prevention (CDC)

Material: "My secret sleep diary"	**Methods:** Initial discussion, content of guidelines on sleep hygiene, group activity, healthy homework	**Frequency**: One lesson	**Timing**: 60 minutes	**Potential Curricular Links:** This learning unit is not specific for a particular school subject.

LET'S START PLAYING FOR HEALTH

Initial Discussion about Healthy Sleep Habits

Talking about: What is Healthy Sleep? How many hours of sleep are enough for good health? How many hours per night do you usually sleep? (Raise your hand)

Learning points

- The teacher starts the lesson explaining the recommended number of hours of sleep for each age group (babies, children, adolescents, adults).
- Explain how lack of sleep affects health: Research has found that insufficient sleep is linked to an increased risk for the development of type 2 diabetes. Laboratory research has found that short sleep duration results in metabolic changes that may be linked to obesity. Epidemiologic studies conducted in the community have also revealed an association between short sleep duration and excess body weight. This association has been reported in all age groups—but has been particularly pronounced in children. It is believed that sleep in childhood and adolescence is particularly important for brain development.
- Children 6 to 12 years of age should sleep 9 to 12 hours per 24 hours on a regular basis to promote optimal health. Teenagers 13 to 18 years of age should sleep 8 to 10 hours per 24 hours on a regular basis to promote optimal health.
- Talking about the importance of being consistent and going to bed at the same time each night and getting up at the same time each morning, including on the weekends.

Classroom activities

- Let's create your own secret sleep diary. Understand how to fill the sleep diary day by day for one week.
- Discuss with the class your sleep habits: What time do you go to bed? What time do you get up in the morning? How many hours do you sleep? Do you keep a regular schedule during weekdays and during weekends?
- Collecting the experiences of the whole classroom, draw some graphs comparing the reported amount of sleep of each classmate with the recommended amount

Healthy homework + Challenges

- Try to sleep 9 to 12 hours per night (for children 6 to 12 years of age) or 8 to 10 hours per night (for teenagers 13 to 18 years of age).
- Define a set bedtime to meet a minimum number of hours of sleep.
- Record in the diary the time you went to bed and the time you woke up. Describe how you feel and describe in the diary how you feel during the day.

Final Discussion after homework and challenges

Was I able to sleep the recommended amount of hours? If not, why not?

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2° LU WEEK TWO: TIPS FOR BETTER SLEEP

Goal:

Knowledge about recommendation toward healthy sleep habits in adolescents

Key Message:

Follow the tips to improve your sleep quality in order to stay healthy!

Material: “My quality sleep diary”	**Methods:** Initial discussion, content of guidelines on sleep hygiene, group activity, healthy homework	**Frequency**: One lesson	**Timing**: 60 minutes	**Potential Curricular Links:** This learning unit is not specific for a particular school subject.

LET'S START PLAYING FOR HEALTH

Initial Discussion about Healthy Sleep Habits

Talking about the importance of good quality rest and sleep.

Learning points

- Explain how poor quality of sleep affects brain function and academic achievement.
- Explain sleep stages and their importance in allowing the brain and body to recuperate and develop. Failure to obtain enough of both deep sleep and REM sleep may explain some of the profound consequences of insufficient sleep on thinking, emotions, and physical health.
- Explain some habits that can improve sleep health:
  - Be consistent. Go to bed at the same time each night and get up at the same time each morning, including on the weekends.
  - Make sure your bedroom is quiet, dark, relaxing, and at a comfortable temperature (See also Learning Unit on Healthy Sleep n. 4)
  - Remove electronic devices, such as TVs, computers, and smartphones, from the bedroom (See also Learning Unit on Healthy Sleep n. 4 and Learning Unit on Physical Activity n. 4)
  - Avoid large meals, caffeine, and alcohol before bedtime (See also Learning Unit on Nutrition n. 13)
  - Avoid smoking tobacco.
  - Get some exercise. Being physically active during the day can help you fall asleep more easily at night (See also the Learning Units on Physical Activity).

Classroom activities

- Let's create your own quality sleep diary: the diary should include sections to be filled in with your behavior, for example: which time you go to bed and what time you get up, how many times you wake up during the night and why, if you use electronic devices before sleeping, if the room is quiet, dark and comfortable, what you eat and drink during the day and if you exercise during the day etc.
- Understand how to fill the quality sleep diary day by day for one week.

Healthy homework + Challenges

- Track your sleep at home using a quality sleep diary: record in the diary how many times you woke up during the night (i.e. to use the bathroom) and how many minutes you need to fall asleep, which time you go to bed and what time you get up (Answer to the question "Are you consistent during the week?"), which are your habits after going to your bedroom, how many times you wake up during the night and why, if you use electronic devices before sleeping, if the room is quiet, dark and comfortable, what you eat and drink during the day (small or large meal at dinner, caffeinated items e.g. soda,

chocolate, tea etc.), if you exercise during the day and for how long and if you take a nap. Record how you feel (rested or tired) when you wake up for the day and your mood during the day (pleasant or unpleasant).
- After completing your diary, try to find out which behaviors are healthy and which ones are unhealthy.

Final Discussion after homework and challenges

Do you think your behaviors are healthy or unhealthy? Do you agree or disagree with your parents?

References

Centers for Disease Control and Prevention (CDC) (Available at: https://www.cdc.gov/sleep/index.html; https://www.cdc.gov/sleep/about_sleep/sleep_hygiene.htm)

Division of Sleep Medicine at Harvard Medical School and WGBH Educational Foundation (Available at: http://healthysleep.med.harvard.edu/healthy/matters/benefits-of-sleep/learning-memory)

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3° LU WEEK THREE: FEEL COMFORTABLE AND RELAXED

Goal:

Knowledge about recommendations toward sleep positions and relaxation techniques

Key Message:

Choose your ideal sleeping position and practice relaxation techniques when you go to bed

Material: Tatami or carpet	**Methods:** Initial discussion, group activity, practice training, healthy homework	**Frequency**: One lesson	**Timing**: 60 minutes	**Potential Curricular Links:** This learning unit is not specific for a particular school subject.

LET'S START PLAYING FOR HEALTH

Initial Discussion

Start talking about sleep positions: what position do adolescents usually sleep in?

Learning points

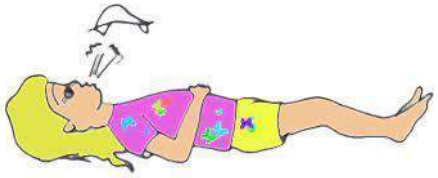
- Focus on the importance of a comfortable sleep position in order to have a good rest and a healthy attitude for every part of your body (vertebral column, stomach, neck, circulation).
- The best sleep position is one that promotes healthy spinal alignment from your hips all the way to your head. Specifically, sleeping on the side or back is considered more beneficial than sleeping on the stomach. In either of these sleep positions, it's easier to keep your spine supported and balanced, which relieves pressure on the spinal tissues and enables your muscles to relax and recover.
- Explain how different sleep positions can provide different benefits that may be helpful for you in various health conditions, such as back pain, allergies, acid reflux, nasal congestion.
- Think about how a good resting position could help you fall asleep faster than usual and thus achieve the correct amount of sleeping hours (see also LU n.1 on Sleep: "How much sleep do I need?")

Classroom activities

- The teacher shows on a tatami or on a carpet:
  - Various sleeping positions:

  - Tips to find comfortable positions:

- Elementary relaxation techniques (breathing control and muscles relaxation):



- Practice training: following the instructions of the teacher, try the different positions to fall asleep and the relaxation techniques.

Healthy homework + Challenges

- Every night, before bedtime, practice the relaxation techniques and use the suggested sleeping positions (remember that it is better not to sleep in the prone position). Try to mentally relax.
- Monitor the quality of your sleep (if you wake up at night and why, how rested you feel in the morning…). You can mark it in a daily diary.
- Try the suggested positions for 1 week and notice if the quality of your sleep improves.

Final Discussion after homework and challenges

Was I able to find a comfortable position in my bed and to relax before falling asleep? If not, why not?

References

Sleep Foundation (Available at: www.sleepfoundation.org)

4° LU WEEK FOUR: MY IDEAL BEDROOM

Goal:

Knowledge about the importance of a right sleep setting to promote a good rest

Key Message:

A proper setting is fundamental in order to improve your sleep quality and to help you to fall asleep

Material: Sketch book	**Methods:** Initial discussion, content of CDC guidelines, Group activity, healthy homework	**Frequency**: One lesson	**Timing**: 60 minutes	**Potential Curricular Links:** This learning unit is not specific for a particular school subject.

LET'S START PLAYING FOR HEALTH

Initial Discussion about Healthy Sleep Habits

Start talking about the adequacy of the setting to improve the quality of sleep and to achieve a good rest.

Learning points

- Focus on the ideal bedroom: explain that the bedroom should be quiet, dark, relaxing, and at a comfortable temperature (18°-20°C);
- Focus on the different types of light color in your bedroom: blue light has the strongest impact on the quality of your sleep, because it influences the circadian rhythms. The exposure to blue light (and white light, which contains blue light) 1 or 2 hours before bedtime can make it difficult for you to fall asleep and stay asleep. On the contrary, red light has no effect on the circadian clock, so you can use a dim red light at night. Lastly, yellow and orange light have little effect on the clock.
- Focus on electronic device usage and their presence in the bedroom: explain why using electronic devices before going to bed negatively affects sleep quality: electronic devices emit strong blue light; when you use these devices, blue light floods your brain, tricking it into thinking it's daytime. As a result, your brain suppresses melatonin production and works to stay awake. You should take away all electronic devices from your bedroom.

Classroom activities

- Describe your dreaming bedroom: how do you imagine it, according to directions you have just heard? Talk about it with your mates.
- Think with your mates about alternative activities to electronic devices, before going to sleep (reading books, listening to audiobooks, listening to relaxing sounds or music, gentle stretching or meditation…)
- There is a genetic link for the morningness or eveningness tendency: some people are naturally "early to bed and early to rise" and tend to have more difficulties working at night, so they are represented by a lark. On the other hand, people that are naturally "late to bed and late to rise", have fewer difficulties working at night and tend to have more trouble with early morning start times, so they are represented by an owl. Which of these animals represents you better? Discuss about it with your mates.

Healthy homework + Challenges

- Project your ideal bedroom;
- Organize your bedroom (take away everything that is not related to sleeping; reduce lighting for 1-2 hours before bedtime: use room-darkening shades or heavy, lined draperies, or wear an eye mask during sleep; reduce noise: wear earplugs and turn off the cell phone; set the right temperature: 18-20° but if this won't work for you, the generally accepted temperature range for sleep is 15.6 to 19.4°C);

- Use your bed and pajamas only when sleeping; wear something else during the day and weekends;
- You may enjoy your favorite scent with an aromatherapy diffuser
- Try not to use your smartphone or computer while you are in your bedroom for 1-2 hours before bedtime; try instead to do something else for a week. If you must use these devices before bedtime, remember to turn down the screen brightness (choose night shift/night light) and stop using them when you are falling asleep.
- Try to organize your bedroom following these directions for 1 week and notice if the quality of your sleep improves

Final Discussion after homework and challenges

Was I able to create a proper setting in order to fall asleep easily? If not, why not?

References

Centers for Disease Control and Prevention (CDC) - Sleep Hygiene Tips (available at: https://www.cdc.gov/sleep/about_sleep/sleep_hygiene.html)

Centers for Disease Control and Prevention (CDC) - Sleep and Sleep Disorders (available at: https://www.cdc.gov/sleep/about_sleep/index.html)

5° LU WEEK FIVE:
MY SLEEP ROUTINE

Goal:

Knowledge about recommendation toward healthy sleep habits in adolescents

Key Message:

A sleep routine can improve your sleep quality

Material: Bedtime routine list	**Methods:** Initial discussion, content of CDC guidelines, group activity, healthy homework	**Frequency**: One lesson	**Timing**: 60 minutes	**Potential Curricular Links:** This learning unit is not specific for a particular school subject.

LET'S START PLAYING FOR HEALTH

Initial Discussion about Healthy Sleep Habits

Talking about the importance of achieving a healthy sleep routine.

Learning points

- Focus on why a bedtime routine is important. A bedtime routine is a set of activities you perform every night in the same order, 30 to 60 minutes before going to bed. It can help you relax and set your mind for sleeping.

Classroom activities

- Think with your mates about the best activities to do before bedtime to relax and fall asleep easily, and how to plan them everyday at the same time. Turn them into a bedtime routine. Here some tips:
  - If you need to relax you can take a warm bath about an hour before going to sleep;
  - Listen to relaxing music;
  - Do some light yoga, stretching or breathing exercises (see also Learning Unit on Healthy Sleep n. 3);
  - Read a relaxing book;
  - Write down a to-do list or journal for the next day to reduce anxiety;
  - If you find yourself anxious at bedtime, choose a moment during the day to write down your worries and free your mind;
  - Limit napping time to less than 1 hour. Do not take a nap if it's late in the afternoon or in the evening;
  - Remember to take a little time for yourself: relax and enjoy your own company!
  - You can also schedule a morning routine to begin the day, including, for instance:
  - open blinds first thing in the morning;
  - get up at the same time every day, even on weekends or during vacations.

Healthy homework + Challenges

- Follow your bedtime routine for a week and notice if the quality of your sleep improves

Final Discussion after homework and challenges

Was I able to create and consistently follow my sleep routine? If not, why not?

References

Centers for Disease Control and Prevention (CDC) (available at: http://www.cdc.gov/sleep/about_sleep/sleep_hygiene.html)

American Academy of Sleep Medicine (available at: http://www.aasm.org/)

Sleep Foundation (available at: http://www.sleepfoundation.org)

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