Key concept

Ecological and carbon footprint

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CONCEPT: Ecological and carbon footprint

1- BRIEF DESCRIPTION OF THE CONCEPT

The eco footprint and the carbon footprint are ways of measuring our impact on our environment. Whatever we do, eat or drink, we leave some ecological footprint, damaging some part of the planet, and a carbon footprint, emitting greenhouse gases. There are many tools of measuring this footprint. The objective of this concept for video creation is to raise the awareness of the damage we make and detect ways to reduce our footprint in our LivingSTEM and permaculture activities. The students also develop critical thinking through visualizing which products we eat leave a large footprint, and which a smaller - an avocado from Chile or a tomato from your permaculture garden, chocolate cream with palm fat or honey from your own beehive, blueberries from South America or an Apple from your garden.

Source: http://www.gentlefootprints.org
2- Activities of the LivingStem project that may be related to this concept

This concept is very much aligned with a number of challenges, i.e. the challenge on the United Nation’s global goals, on designing an eco-sustainable city, on healthy food, on animals and nature maintenance and on sustainable energy. The topics are all relevant to the eco/carbon footprint concepts and ideal to inspire children and teenagers to visualize their reflections and ideas on the footprint they make.

The Ideal Kitchen Garden Game with the Deck of Cards includes also many moments, where the students can visualize the footprints for the plants and animal products.

And finally, the Ideal Menu Game has integrated a number of reflection exercises on the “food”-footprint we make. Visualizing our “food” print with short videos can be easily integrated in the game activities.

3- Methodology proposal for the implementation of the activity described above

The venues and framework for the videos can be the classroom, the school kitchen garden, the school kitchen, a permaculture garden or just outside in the schoolyard.

2 classroom preparation hours should be allocated to organise video teams, to gather some background information on the eco- and carbon-footprints and how to calculate those and to create short video scripts using the storytelling canvas.
Possible scenes could be:

- Presenting products with huge and with small footprints
- Visualizing the footprint difference between food imported from across the world and local organically grown food
- Visualizing what an eco footprint and a carbon footprint is
- Showing examples how permaculture gardens reduce the eco- and carbon footprint
- Visualizing how renewable energy reduces the footprint
- Visualizing the "food" print of the ideal menu plate
- Making interviews about the carbon-/eco-footprint with stakeholders

Make the video as a presentation, peep-talk or an an interview in a TV show (you can even invent a name)

- “Today let’s explore ....(insert subject)”
- Brief explanation of the concept
- What the pupils will do as an experiment (or hypothesis)
- The different steps of the process and why
- What are the results?
- What is the conclusion?
- “Thank you for watching!”

4- Children involvement in the activity

The children/teenagers are involved in all processes of film making from idea creation, to story making and telling, shooting the video, editing and spreading
the video. They should also become aware of how to make accreditations and how to align with GDPR rules.

The exercise should be playful, fostering curiosity and creativity in the children, so that the storytelling canvas should be relatively open with space for surprise and fun parts.

Sharing and collaboration within groups and between groups should be encouraged.

Depending on the age and skills of the pupils, the teacher will either make the montage of the video themselves or they will guide and assist the students in the process.

5- Links between this concept and science (STEAM) and permaculture

STEAM skills covered are biology, chemistry, technology and engineering (water/energy), design, nutrition, mathematics (calculating the footprint) as well as social studies and policy making. Reducing our carbon- and ecological footprint is integral in the permaculture ethical principles of fair share, care for the people and care for the earth.