eTwinning project: "Young scientists for a sustainable planet"

About the project:

This project is a collaboration between two schools in Europe. It is designed for students in lower secondary education.
The project has these two main goals:

- To do scientific research about topics related to the Sustainable Development Goals (SDGs) for taking action in our community.
- To improve English language skills, being the language of communication for this project.

Each investigation follows the scientific method. We start by introducing the topic and getting some background information. Then, we ask some questions about the topic and state our hypotheses. We design our investigation to verify our hypothesis and we start the process of data collection. Once we gather all the data, we analyze the results, in order to find sustainable solutions for our communities and take action. Finally, we present our work.

PROGRAMME

1st research topic: *Single-use plastic in schools: how are we doing?*

1st semester 2022

Global goals related to the topic:
6 Clean water and sanitation
11 Sustainable cities and communities
14 Life below water

1. INTRODUCTION TO THE TOPIC

    - Preparation task "A Plastic Ocean" https://learnenglishteens.britishcouncil.org/study-break/video-zone/plastic-ocean
    - Watch a documentary: "A Plastic Ocean" - pause the documentary when needed to check understanding and create some discussion.
    - Multiple choice questions about "A plastic Ocean": https://learnenglishteens.britishcouncil.org/study-break/video-zone/plastic-ocean

- Discuss and make a video (individual or in groups): *Do you use a lot of plastic in your daily life? What do you think we can do, as individuals, to help improve the problem of having too much plastic in our oceans?* Create group videos answering these questions and share them through the eTwinning platform.

  Padlet for videos:

  https://padlet.com/mromano35/hf8xi23ru4th6gs9

2. QUESTIONS AND HYPOTHESES

   Investigate how we are doing about single-use plastic in our school using the scientific method.

   - Ask questions about the topic, state hypotheses and design an experiment to test our hypotheses.

3. DATA COLLECTION

   Students gather all the data with the experiments.
   Bellera students share experimental designs and materials with Poland.

   - Some examples of experiments:
     A. Create a survey (google form) for the school community in order to gather data and investigate our topic.
     B. Investigate the number of recycling bins for plastic waste (make a list).
     C. Investigate the products that our school canteen sells that are packaged in single-use plastic (make a list).
     D. Analyze the quality of tap water and compare it to bottled water (ask city council, if possible).

4. DATA ANALYSIS

   Both schools together analyze results and try to find solutions during the stay in Poland.

   Make a presentation during the stay in Poland with the data analysis.

   Students present the results using a template of a slide presentation that includes all the parts of the investigation.

   In Poland we can do a field trip related to the topic.

5. TAKE ACTION

   Each school writes proposal letters for the School Board or other competent body (we provide a proposal letter template).

6. PRESENTING OUR WORK

   Some examples:

   - 3rd ISCVO congress (online or in-person, using the slide presentation).
   - Social media
   - Articles

Additional resources (background information about the topic) :
The story of bottled water:
https://www.storyofstuff.org/movies/story-of-bottled-water/

About this film:

The Story of Bottled Water, released on March 22, 2010 (World Water Day), employs the Story of Stuff style to tell the story of manufactured demand—how you get Americans to buy more than half a billion bottles of water every week when it already flows virtually free from the tap. Over five minutes, the film explores the bottled water industry's attacks on tap water and its use of seductive, environmental-themed advertising to cover up the mountains of plastic waste it produces. The film concludes with a call for viewers to make a personal commitment to avoid bottled water and support public investment in clean, available tap water for all.

ADDITIONAL RESEARCH TOPICS:

- **CO_2 monitoring and ventilation project**

We could take our CO_2 sensor to Poland and do an experiment in the school. The goal is to understand how we can use the concentration of CO_2 as an indirect measure of air quality in a classroom and what we can do to improve it.
We also have CO_2 concentration data from last year's measurements in the 2nd floor of Bellera school, that MOLL students can analyze and draw some conclusions to present at the congress.

- **Clean and sustainable mobility project**

Analyze school mobility and find more sustainable alternatives.