

Lesson Plan
Let's learn sustainability!

School: IC "Libero Andreotti"	Teacher: Rossana Marchi
Title : Let's Learn Sustainability!	Time : 12 hours
Subject : <i>Social studies; Italian , ICT, Science, Art, foreign languages</i>	
Aim: learn to identify material to recycle and use it when it is possible; How to create a waste bin for the classroom	
Key CS elements: decomposition, pattern recognition, abstraction, practicing algorithms	
Age group : 5 th graders, 10 - 11 year olds	
Learning situations: classroom, ICT room, laptops	Activity type : laboratory activity, brainstorming, cooperative learning
Resources : laptop, white board, textbooks, sheets of paper, printer;	
Learning development:	
1.DECOMPOSITION (breaking a problem down into a smaller part)	
<ul style="list-style-type: none">● circle time - brainstorming● watching a video on separate waste collection● the students are offered a bag with more waste materials● the students differentiate the materials into 4 different containers● know the materials : the students are invited to bring snack waste to class to be analyzed● students are asked to bring: biodegradable and non-biodegradable bag, compostable food paper, 1 apple;● the materials brought are buried in the school garden	

2. **PATTERN RECOGNITION** (looking for similarity and trend within a problem)

After experimenting the different type of materials the students are invited to:

- separate collection;
- identify recycle material;
- find out material to create a waste bin

3. **ABSTRACTION** (focusing on the important part of a problem, filtering out unnecessary details)

The students will:

- discussion to extrapolate the rules to be respected at school, at home and in external environments;
- create rules on the most correct behavior with low environmental impact.
- design of containers with recycled materials;
- creation of waste bins to be recycled at school;
- create a video, with subtitles in English and French, on the work carried out;
- create a themed site with google sites

4. **ALGORITHM DESIGN** (create a step by step sequence of instruction to solve the problem)

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- creation of waste bins to be recycled at school;

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- create a themed site with google sites;
- create a video, with subtitles in English and French, on the work carried out;
- create a blog about recycling.

ASSESSMENT

The assessment of learning can take place through the new students acquisitions keeping in mind the levels of departure;

- Commitment;
- Participation;
- The improvement of concentration;
- The improvement of language;
- The ability to cooperate and improve social skills.

EXPECTED RESULTS:

- know and use packaging materials
- verify the biodegradability of some materials
- learn how to make labels on the pc
- cooperative learning
- use technological devices in the classroom
- awareness of being consumers - and therefore active citizens

NOTES: this project is about the importance of recycling as conscious behaviour.