Educational Activities On Marine Litter (Italy)

LA LOTTA ALL'INQUINAMENTO

Sempre più spiagge senza plastica e sigarette

Crescono i comuni in cui sono vietati il fumo e l'uso degli oggetti monouso. Il primo provvedimento a Carloforte, ma i lidi della Gallura sono i più tutelati

Mare pulito | I divieti nelle spiagge sarde

Agliastra
Tinnia d'Agultu e Vignola
Badesi
Arzachena
Costa Smeralda (anche divieto di fumo)
La Maddalena (fumo)
Laìci - Porto San Paolo
San Teodoro (anche divieto di fumo)
Siniscola
Carloforte

Divieto di fumo
Alghero (futuro)
Porto Torres
Stintino
Sant'Antioco
Castelsardo

Dall'estate anche nei lidi della Costa Smeralda si potranno usare solo prodotti biodegradabili

Nella costa ovest e nel sud dell'isola pochissimi casi di limitazioni nell'uso della plastica

ambientalisti: «Serve anche più educazione»

del Gruppo d'intervento giuridico all'utilizzo responsabile dei beni naturalistici

News about Marine litter on Italian paper showing the problem with plastics and cigarette butts

1. Proposed Solutions

A New Life For Plastics: Bioplastics And 3d Design

LICEO ENRICO FERMI HIGH SCHOOL TEAM (ITALY)

Topic: Biology, Technology, Engineering, Environmental Education, Chemistry, Statistics

Description: The world population is living, working, vacationing, along the coasts, and standing on the front row of the greatest, most unprecedented, plastic waste tide ever faced. Plastic is versatile, lightweight, flexible, moisture resistant, strong, and relatively inexpensive. Those are the attractive qualities that lead us, around the world, to such a voracious appetite and over-consumption of plastic goods. Our tremendous attraction to plastic, coupled with an undeniable behavioral propensity of increasingly over-consuming, discarding, littering and thus polluting, has became a combination of lethal nature. The future for the world is bioeconomy, recycle and use biodegradable material

Aims: Collaboration Communication Science & engineering civic competence entrepreneurship digital competence.

Outcome: More awareness of alternative solution for plastics

Learning designer link: https://v.gd/RcWp4L

Activities

Title	Procedure	Time
Introduction	The teacher introduces the topic of plastic pollution, explains that the main idea is to know plastics well, catalogue them, and recycle them. The class analyses the pictures and articles about the topic of plastic pollution and marine debris, recycling and bioeconomy	45 min
Real Labs	Investigate and discuss about different kinds of plastic and microplastics in the water.	60 min
Organic Solution Bioplastics	Students explore the possibilities of bioplastics and familiarize themselves with different terminologies	45 min
Making Bioplastics	Students make a plastic from potato starch and other foods	45 min

Product design and 3D Printing	The class makes a 3D design for a keychain.	45 min
Evaluation	Students presenting results and school exhibition for the whole community	20 min

Teachers explaining working plan and use of protocol before going to sampling site

1. Environmental Consequences

Could Plastic be the next Sediments?

AIRIcerca TEAM (ITALY)

Topic: Science

Description: This scenario is suitable for students aged between 11-13 years. The students have to reflect about the composition of nowadays rocks and fossils and think about what will happen in future due to the marine litter problem.

Aims: Learn about sedimentation and fossils creation process, learn how to classify a rock, improve awareness on marine litter.

Outcome: Recognize sedimentary rocks, Label rocks and fossils, Produce an ideal rock made by plastic.

Learning designer: https://v.gd/FWyhyb

Title	Procedure	Time
Discussion	Brainstorming "think about Hawaii islands and search a photo that represents this photo" 5 minutes to search the photo and 5 minutes for students to express their idea and photo (you can use a padlet in order to collect their photos).	10 minutes
Read	Show your students the photo of a Hawaiian beach with marine litter to underline that this is a global problem. Show your students the photo of the Plasticonglomerate, a rock made by plastic fragments, sands and volcanic rocks, that will be used as a starting point for Anthropocene, a Geological Era during which the anthropogenic impacts was recorded in rocks. Describe the characteristics of this new type of Rocks and compare it with the rocks that will be expected on a Hawaiian beaches. Teachers introduce to students the way possible to create a fossils and invite students to reflect about which will be the fossils of the future.	30 minutes
Discussion	In group students think about the differences between a conglomerate composed by organic clast and a plasticonglomerate and write down this information.	20 minutes

Workgroup	Using marine litter founded during the beach clean up in group students have to create a plasticonglomerate and a way to show this, with an explication that indicate the point included in the attached scheme. The rocks created by students should be compared with a real conglomerate found during the beach clean up. Students could also think about what will be the fossil of the future and create it with marine litter and fill in the scheme. This should be presented compared with a real fossil, included in a rock found during the beach clean up. In addition to the rocks and fossils students have to think about a slogan to presents their work.	60 minutes
Presentation	Students presents their work to classmates and together they decide which work will represent the class and would be showed in the main entrance of the school, including the slogan.	60 minutes

Photo: Plasticonglomerate image