

2. Problem Identification

Overseeing Our Sandy Ecosystems

AKTI team (CYPRUS)

Topic: Marine pollution

Description:

This is an activity for school students, especially those who live in towns not close to the sea-side. The idea is to simulate the marine litter situation using a bowl. Specifically, mixing sand, pieces of marine litter commonly found in beaches and some dry marine algae. After separating marine litter from sand, discuss about the different types and source and highlight its impacts and solutions

Aims:

- Create awareness about marine litter presence and effects
- Discuss in groups about the problem and the solutions

Outcome:

A non-formal-education game to raise awareness about the marine litter problem, different types of litter found on beaches and discuss possible solutions.

Title	Procedure	Time
Preparation	In a transparent bowl (either glass or plastic) put some sand, pieces of marine litter (eg. 1 balloon, 1 cigarette butt, 1 plastic cup, 1 straw, polystyrene and 2-3 plastic pellets or microplastics) and some natural material (dry algae) from the beach. It is important to have the same number of marine litter in each bowl. Then, slightly mix the sand in order to partially hide the marine litter pieces. Several bowls can be prepared depending on the number of students. (Estimation 5 students per bowl)	15 min
Time to play	Students are expected to work in groups. Ask students to imagine that they are visiting a sandy beach and that what they see in the bowl in front of them is actually a part of that sandy beach. Using a glove, they	25 min

	are requested to identify and count all the pieces of marine litter including the 'secret' litter meaning the plastic pellet. The term 'secret' is used because the majority of students usually confuse the plastic pellets to tiny stones or they even do not recognize it.	
Discussion	Ask each group to tell the number of marine litter found and mention one type of litter. Then, discuss with all students about the source of each type of marine litter, the consequences and some possible solutions.	15 min
Conclusions	List the answers on the board and present to the whole group of students the outcome of their collaborative work.	10 min

Activity:

Educational Game about Marine Litter

- 1) Place in a bowl 10-12cm of sand



- 2) Place around 5-7 pieces of the most common types of marine litter (i.e. cigarette buds, straw, bottle cap, microplastics-pellets) inside the bowl.



- 3) Place 2-3 different types of dry marine algae that are usually washed up on the beach



4) Stir a bit the sand inside the bowl in order to hide slightly the litter



5) Give students one glove for hygiene reasons and ask them to find the marine litter.



- 6) Once they find them ask them to identify what they are and guess their source. Explain to them why marine algae are not considered marine litter.
- 7) Feel free to add other materials commonly found in your area, region or country which has been reported by others (evidence) and then, you can explain why this waste material is there. This game can be also adapted for streams, rivers or lakes depending on your area or to show a pollution problem about water and litter recently reported elsewhere.

TIP: *Students will probably not be able to spot the pellets and the microplastics so explain what they are, where they most probably come from (i.e. lost containers or factory filters that cannot hold back the small sized plastics) and explain their negative impacts to the environment.*



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