

Case Study “Environmental change and management of the coastal environment”

Activity Sheet 4 “Plastics in our waterways -what are the facts?”

Introduction:

A significant and growing pressure on our coastal environment is marine debris, in particular plastics. Activity Sheet 4 aims to make students aware of the nature, size and significance of this pressure and introduces them to the content that will be covered in this topic.

The content of this activity sheet relates to the following Geographical Concepts and Skills and Geographic Knowledge:

Geographic Concepts and Skills

Data and Information

- Collect and record relevant geographical data and information, using ethical protocols, from reliable and useful primary and secondary sources.
- Select, organise and represent data and information in different forms, including by constructing special purpose maps that conform to cartographic conventions, using digital and spatial technologies as appropriate.

Geographic Knowledge

- Causes and consequences of an environmental change, comparing examples from Australia and at least one other country.

Introductory Activity

Steps

1. Divide the class into groups of 4-5.
2. Explain the rules of the game/activity.
 - Working together, each group is to find out as many facts/statistics about plastics in our waterways and write down each fact (for this activity it is easier and quicker if they write each fact on a separate sticky note that is provided or [Padlet](#)).
 - Students can access online resources to find these facts.
 - Each group then takes it in turns to read out their fact.
 - If this fact is acceptable a member of the group places the sticky note on the whiteboard (or keeps the Padlet note). If you believe that the fact is not acceptable or has already been used the group has the chance to read out another fact.
 - If the group no longer has any facts they are out of the game.
 - This process continues until there is only 1 group left.

3. Allocate a time period for research that suits your class (10-15 minutes should be sufficient and means that the focus is maintained). Once the allocated time for this activity is up, students are to stop researching and organise their facts.

4. Before the groups read out the facts designate the order. It is suggested that if there are 4 groups then for fairness the order should be groups 1,2,3 and 4 followed by groups 4,3,2 and 1 and so on.

5. At the end of the game you should have a wide range of facts that will open discussion such as:

- What facts surprised you the most?
- Were you aware of the size of the problem?
- What emotions or thoughts did you have whilst statements were read out?
- Which of the facts do you believe were the most important?
- Can you categorise these facts into any order?
- Which of the problems associated with plastics in our waterways need to be dealt with first and why?
- Whose responsibility is it to deal with this problem?

6. Get students to select 10 -15 of the facts that interested them the most and write them down in their notes. Alternatively record them in a way that suits your class (if you used Padlet then the board could be printed or emailed to students).

7. Get students to create an infographic about plastics in our waterways. Begin by showing samples of an infographic. The steps required to create an infographic can be found at sites such as: [How to Make an Infographic in 10 Steps \[Guide\] - Infogram](#)

The infographics could be presented or displayed in the classroom

8. To provide an overview of this topic watch "[Baykeepers Documentary Film](#)". This can be found on [Youtube](#)

A good article that summarises the content of this topic is "[Plastic and how it affects our oceans](#)" from ABC News"

As alternative to the above activity you could use and modify those found on Activity Sheet 7 in the Water in the World unit.