

Microplastic Oceans

FOCUS QUESTIONS

1. Discuss the issues raised in the BtN story with another student. Record the main points of your discussion.
2. What are microplastics? Give some examples.
3. What are microbeads and in which products might you find them?
4. About how many microbeads are there in a bottle of face scrub?
 - a. 100,000
 - b. 200,000
 - c. 300,000
5. What percentage of plastic in the environment is microplastic?
6. Describe the impact they can have on marine animals.
7. What are some Australian supermarkets doing to help tackle the problem?
8. Illustrate an aspect of the story.
9. What do you think should be done to reduce the amount of microplastics in the environment?
10. What was surprising about this story?

ACTIVITY

Brainstorm

Discuss the BtN *Microplastic Oceans* story as a class. What were the main issues raised in the story? Hold a class brainstorm to clarify students' understanding of the issues. Here are some questions to help focus the brainstorm:

- Find a definition for microplastics. What are microbeads?
- How are microbeads ending up in our lakes, rivers and oceans?
- Why are people concerned about microbeads?
- What impact do microbeads have on the environment?
- How can we reduce the amount of microbeads that end up in our waterways?

Record students' responses on a concept/mind map with microplastics at the centre. The concept map can be added to as students complete the activities.

KEY LEARNING

Students will develop a deeper understanding of what microplastics are and the impact they have on the environment. They will also investigate ways they can take action to reduce microplastics in the environment.

AUSTRALIAN CURRICULUM

Science – Year 4
Natural and processed materials have a range of physical properties; These properties can influence their use ([ACSSU074](#))

Science knowledge helps people to understand the effect of their actions ([ACSHE062](#))

Science – Year 5 & 6
Scientific knowledge is used to solve problems and inform personal and community decisions ([ACSHE083](#)) ([ACSHE100](#))

Science – Year 7
Interactions between organisms, including the effects of human activities can be represented by food chains and food webs ([ACSSU112](#))

HASS – Year 4
Reflect on learning to propose actions in response to an issue or challenge and consider possible effects of proposed actions ([ACHASSI081](#))



ACTIVITY

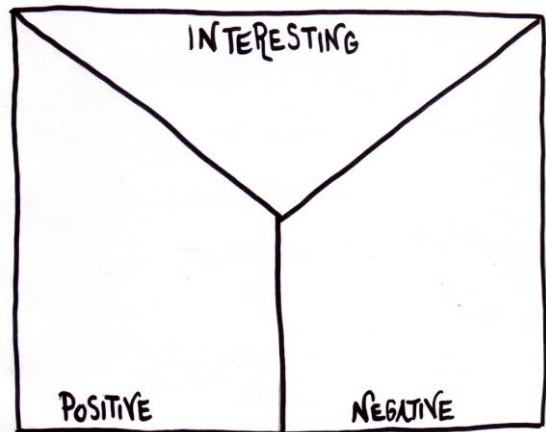
Positive, negative or interesting?

Students will practice their note-taking skills while watching the BtN *Microplastic Oceans* story. After watching the story, ask students to reflect and organise the information into three categories.

What information in this story was...?

- Positive
- Negative or
- Interesting

Students may want to watch the story again or download a copy of the *Microplastic Oceans* transcript to assist them with this activity.



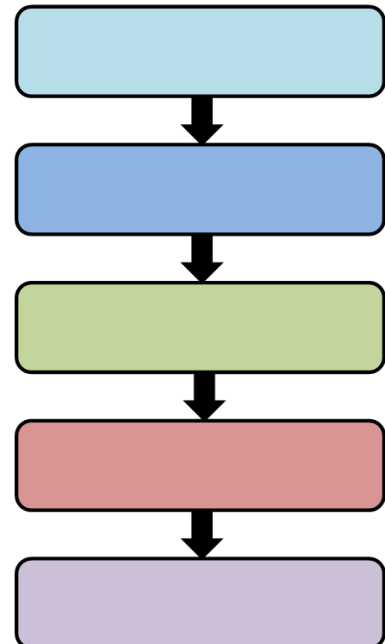
ACTIVITY

Flowchart

How do microbeads get into the food chain? How do microbeads impact on marine animals and people? Discuss as a class.

Students will research the journey of microbeads found in consumer products (like facial scrubs and toothpastes) to the fish and shellfish we eat. Draw a flowchart illustrating the journey to help understand the process.

- Microbeads are found in consumer products ranging from cleaners to facial scrubs and toothpaste.
- Microbeads are washed down the drain. Because they are so small they make it through most water treatment plants.
- Microbeads travel into our waterways (ocean, lakes and rivers).
- Microbeads attract and collect pollutants in the water.
- Marine creatures consume the microbeads – birds, fish, shellfish and plankton cannot tell the difference between microbeads and food.
- People catch fish and shellfish for human consumption.
- People consume fish and shellfish which contain toxins found in microbeads.



ACTIVITY

Take action

What do you think should be done to reduce the amount of microplastics in the environment? How can you be an active and informed citizen? Brainstorm ideas as a class.

- **Refuse it.** Avoid products with plastic microbeads. Look for polyethylene and polypropylene. If it doesn't list either of these in the ingredients, then the product is microbead free.
- **Recycle it or reuse it.** Don't litter. Avoid using plastic bags and other plastic packaging. Challenge yourself by having a 'waste-free lunch' or 'nude food' days at your school.
- **Write a letter.** Find a company that uses microbeads in their products and write them a letter – Ask that their packaging be clear if there are microbeads, or ban all together.
- **Sign a petition.** Visit the 5 Gyres website and stand up for oceans by signing the [Ban the Bead petition](#).
- **Make** your own body scrub with natural ingredients. Use the internet to find a recipe for a body scrub using only natural ingredients.



USEFUL WEBSITES

5 Gyres – Ban the bead

<http://www.5gyres.org/banthebead>

Behind the News – Ocean Rubbish

<http://www.abc.net.au/btn/story/s4301070.htm>

Behind the News – Take 3

<http://www.abc.net.au/btn/story/s3875973.htm>

ABC News – Microbeads: How some of your favourite beauty products are wreaking havoc on the environment

<http://www.abc.net.au/news/2016-01-21/microbeads-beauty-exfoliating-products-environmental-damage/7095108>

Beat the Microbead – Products containing microbeads

<http://beatthemicrobead.org/images/pdf/RED%20UNITED%20STATES.pdf>

The Story of Stuff – Plastic Microbeads 101

<http://storyofstuff.org/plastic-microbeads-ban-the-bead/>