



The Big Blue Ocean Cleanup's objective is to offer a Key Stage 2-Key Stage 3 curriculum unit to provide children with an understanding of how ocean pollution impacts on the natural world and inspire them to do something about it.

This will be achieved in 4 topics.

- 1. Seabirds**
- 2. Oceans and Currents**
- 3. Pollution Analysis**
- 4. Looking to the future**

Each topic aims to provide a basic understanding around the title theme, as well as outlining key points and how they are linked.

The lesson plans are designed to have the video presented at the start of the lesson. These videos raise the key points that will consequently be further developed within the teaching material provided, to give an overall contextual understanding. Each lesson will also contain various suggested activities that can be included/adapted/excluded from the lesson as you deem necessary.

The lesson plans are also colour coded to hopefully make it simple for you to follow:

Grey – The video narrative – the information raised within the videos.

Black – Teaching Information – extra information to explain the points raised in the video and give them context. This is the information to be relayed to the children in the way you see fit. NOTE: Some concepts are complicated and although it has been simplified as much as possible, we do understand the teaching information may not be fully suitable for younger KS2 classes, therefore please adapt as necessary. We hoped by providing you with all the information, we could give you the understanding and enable you to choose what information would be most important for your class.



Green – Key point summaries – The key points highlighted by the section of teaching information/activity. If no other extra information is retained by the students, then it is hoped they will be able to retain the key points. These key points are linked and as a minimum should allow the students to follow the lesson context from the start to finish.

Blue –Activity/Class Question: Our suggested activities/ class questions. Please adapt as you feel necessary.

Key words and definitions. Will be presented in a box.

Topic 4: Looking to the future

Video 4: <https://www.bigblueoceancleanup.org/education-programme>

Overall Learning Objectives:

1. Learn about Marine Protected Areas (MPAs)
2. Understand how MPAs help marine life within it
3. How we can help: raise awareness
4. Apply what you've learnt to a final project to raise awareness.

The video summarises key points regarding the future of our oceans and ways we can have an impact as individuals. The lesson should develop knowledge around these key points and help students understand how the key points are linked to one another.

Video information:



As we have seen, plastic rubbish and other floating items are found in all oceans and washed up on beaches. Although it is worrying, as global citizens we can do something about the problem. Some things are already in place.

Some special areas receive protection. These are known as Marine Protected Areas (MPAs) and are found in various parts of the world. Their objectives are to:

- Maintain biodiversity and provide refuge for certain species
- Protect habitats from damage by destructive human activities
- Provide areas where fish are able to grow to their adult size
- Help to maintain local economies and marine environments.

Teaching information:

Marine life is threatened by many different things: These are called stressors. For example

- Over Fishing
- Habitat loss
- Increasing sea temperatures
- Oil pollution from boats and ships
- Noise pollution from boats and ships
- **Marine plastic pollution**

These different stressors cause harm to lots of marine animals in different ways. Marine Protected Areas (MPAs) work by reducing the stressors that marine animals have to cope with.

Analogy for the children:

Explaining this concept using homeworks as a stressor. (Please adapt as necessary. If you don't want to use homework as the analogy, then use substitutes E.g household chores)

- Maths homework
- Biology homework
- English homework
- Geography homework
- Religious Education/ Religious studies homework
- Art homework



It's the end of the week and every single subject has given you homework: Maths, Biology, English, Geography, Religious studies and Art. All this homework has to be handed in on Monday morning and you only have the weekend to complete it.

Do you think you would be able to get it all done? – NO

Do you think it is fair to have to cope with it all and get it all finished? – NO.

If all these different homeworks represented a different stressor, do you think you could cope with all these stressors? – NO

If all your homework was taken away so all that was left was a piece of maths homework, do you now think you could get it done? – YES

So by taking away the other homeworks/ the other stressors, it allows you to cope with the one that is left. YES

If an animal has to deal with lots of stressors that cause it harm eg, habitat loss, fishing, noise pollution and plastic pollution, do you think it would be able to cope and survive? NO

But if you took a lot of them away, might it be able to cope with the ones that are left have a better chance of surviving? YES

This is how Marine Protected Areas works: They provide an area free from many stressors,

No habitat destruction

No fishing,

No noise from boats or ships

No oil pollution from boats or ships

Animals inside this protected areas have a lot less stressors, therefore are able to cope with the few that are left – This is usually marine plastic pollution because once in the ocean it cannot be controlled.

As a result this means animals living there have a refuge, a place of safety where they survive and have better health.

- Their habitat is protected

-They are able to survive and grow to adult size

-They are then able to reproduce



- This increases the amounts of animals.
- It allows for lots of different marine animals means there is a high biodiversity.
- The good health of the animals in the marine protected area is beneficial to any animals living close by, so success of the Marine Protected Areas spreads outwards into nearby areas.
- This is hugely important for the ocean as it helps it recover!

Stressor – *A threat to marine animals that cause them harm*

Refuge – *Place of safety*

Biodiversity – *Lots of different marine animals living together in an area*

Key points:

Marine Protected Areas provide a place of safety for the animals within it by reducing the amount of threats in the environment.

They protect habitats, allow animals to survive, grow, reproduce and increase in numbers.

Lots of animals allows for lots of different species to survive giving a high biodiversity. The good health of the animals in the MPA is beneficial to animals nearby- success of MPA spreads.

Hugely important to help the Oceans recover

Video Information:

Now unfortunately these areas cover a very small percentage of the worlds oceans and we need to do more to protect unregistered areas. What we can all do is raise awareness. Now you can do this by informing people of the problems at home, in your school and in the wider community. Yes you yourselves can take direct action at home and at school by



making sure that your rubbish is sorted effectively and you can do this by using the on pack recycling label app and by using visual prompts.

You can also stop using single use plastics such as plastic bags and plastic straws. Get yourself a long lasting re-usable water bottle and tuppaware. You could even take things further and write a letter to your local authorities from your class and even better, take part in a beach clean campaign that's organised through the Big Blue Ocean clean-ups global ambassador programme.

Teaching information:

We've already talked about Reducing, reusing and recycling. But there is more that can be done!

Raising people's awareness to the problems plastic is causing to our oceans is hugely beneficial.

We need to encourage growth of Marine Protected Areas as well as introduction of new Marine Protected Areas

Examples of how you can help:

- Writing to the local authorities – For example write a letter to your local council and tell them what you've learnt, tell them how they can help and what you think they should do about it!
- Beach cleans – If you live near the sea, find out if there are any locally organised beach cleans you could take part in
- If your school is nowhere near the sea, then river bank cleans can be equally important. Rivers transport plastic to the ocean and any litter nearby is therefore likely to end up in the ocean and as a result the sea. A river bank clean is an equally good way of reducing the amount of litter. Organise your own?
- Making posters to help us recycle efficiently
- Class assemblies to raise awareness to the rest of your school!

Final Activity – Choose a suitable project for the class from any of the suggestions below or feel free to come up with one yourself.

- Writing a letter to the local authorities
- Making posters about any topic learnt during unit – efficient recycling / food webs / plastic transportation through currents / marine protected areas, etc.



- Class assembly
- Make art linked to marine life/ the ocean but out of plastic rubbish.
- Write a plan for a river bank clean or beach clean. What would you need? How to make sure you are safe – litter picking tongs/ gloves. How might you count what you find? Could you categorise it?
- Plan out a plastic free day for the school. See if you could make it happen!
- Write out suggestions as to how supermarkets could improve their packaging using what you have learnt from Reduce Reuse Recycle
- Summarise what you've learnt so you can teach/ educate your parents about it

Thank you

Lesson plan material provided by Ellen McArthur, MSci Marine Biology 2019,
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Please do not hesitate to get in contact if you have any questions or queries. I will endeavour to reply as soon as possible. Any feedback will also be greatly appreciated.

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