

Improving Impacts 3-5

Program Description:

How is human impact both a positive and negative force for the planet and what are specific examples of it? Students will uncover how humans have impacted the planet from microorganisms to alligators for both good and bad. By the end of the program, students will be left with methods on how to not only appropriately dispose of their waste, but how to minimize the amount of waste as well.

At the end of program, students can...

- Analyze examples of positive and negative human impacts.
- Reflect on the benefits of conservation efforts.
- Utilize proper waste disposal techniques with sustainable habits.

Background:

- Pollution is caused when an undesired unnatural substance is introduced to the environment.
- In order to help conserve the planet's health Refuse single use waste, Reduce consumption of single use waste, Reuse and Recycle.
- Human habits and waste do not only effect humans, it can affect animals and plants, as well as microscopic organisms all over the world.
- Conservation is regulating the consumption of natural resources in order to ensure that they are still around for future generations .





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Instructions: Look at the two pictures bellow and then write a short answer to the following questions.

- What is the difference between the photos?
- What caused the pollution in 'photo one'?
- What are some ways that humans can help reduce the amount of pollution on the beach?





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Instructions: Look at the food web below and note how each level of the chain affects each other. Then answer the questions on the following page.



Improving Impacts 3-5

Instructions: Based on the food web from the last page, answer the questions below.

- Which things on the food web are affected by the microplastics? List them all:

- The fishing net is not connected to anything on the food web by a line but it still affects things on the web. Which things does it affect and how?

- How are the diatoms important to the planet?

- What will happen to diatoms if the planet gets warmer because of climate change?

- What can humans do to reduce the amount of microplastics/pollution in the ocean?



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Instructions: Look at the two pictures bellow and then write a short answer to the following questions.

- What is the difference between the photos?
- What caused the pollution in 'photo one'?
- What are some ways that humans can help reduce the amount of pollution on the beach?



1. Photo one is a polluted beach and photo two is not polluted. There is trash/waste/plastic pollution in photo one.
2. Human impact of not disposing of waste properly. Human consumption of single use plastics makes the number of pollutants on the beach higher than it would be with less consumption of those plastics. The four "R"s are not being used appropriately by humans (Refuse, Reduce, Reuse, Recycle).
3. Humans can use the Four R's (Refuse, Reduce, Reuse, Recycle) and create projects that will help clean up the pollution from the ocean that is already there to help conserve it for the future.



Improving Impacts 3-5

Instructions: Based on the food web from the last page, answer the questions below.

- Which things on the food web are affected by the microplastics? List them all:
 - The shrimp, fish, and human.
- The fishing net is not connected to anything on the food web by a line but it still affects things on the web. Which things does it affect and how?
 - The fishing net could cause the shrimp and fish to become tangled and trapped which would reduce the number of fish and shrimp in the food web. Without shrimp the fish would not have a source of food, and without fish, the shrimp population would grow to high. Also, if these animals consumed part of the net and had plastics in their bodies, then the human would consume part of that as well.
- How are the diatoms important to the planet?
 - Diatoms produce 50% of the world's oxygen and also make up a large portion of the sediment at the ocean floor which is home to many different animals.
- What will happen to diatoms if the planet gets warmer because of climate change?
 - Diatoms are very picky about the temperature and pH of the water that they live in. If too many or too little of them exist, then the amount of oxygen and CO₂ in the air will be affected as well.
- What can humans do to reduce the amount of microplastics/pollution in the ocean?
 - Humans can utilize the Four Rs correctly (Refuse, Reduce, Reuse, Recycle) and also create programs and efforts to help properly manage waste disposal and to clean up the pollution that is in the water already.