

CLEAN THE COAST

Build a device to remove trash from the ocean



POSSIBLE BUILDING MATERIALS

- Sticks
- Straws
- Elastic bands
- Chenille stems
- Foil
- Cardboard tubes/ Empty and clean plastic containers
- Plastic wrap

TOOLS

- Scissors
- Tape

TESTING MATERIALS

To test the trash collector:

- Water safe bin/ Bowl/Sink/ Bathtub
- Bath toys/Plastic recyclable items
- Water

SET UP THE PROBLEM

1. Unfortunately trash ends up in the ocean. Not only does the trash not look nice, but it is not healthy for the creatures that live in the ocean.
2. Build a device that can help collect trash from the ocean.

ENGINEERING BACKGROUND

Environmental engineers improve and maintain the environment to protect the health of all species and the natural environment.

LEARNING GOAL

Executive function skills help us plan and keep track of information. During engineering activities children use executive function skills to brainstorm possible designs and then choose one to build. As they are building and testing, they will also need to keep track of the overarching goal (removing trash from the ocean) while tracking what works and does not work in their design.

✓ TIPS FOR ADULTS

Before building: Ask children what they already know about trash in the ocean "Have you heard that there is trash in the ocean? Why do you think it's important to get the trash out of the ocean?"

Ask them to brainstorm solutions to getting the trash out. This might include conversation about other cleaning devices they are familiar with as well as physical actions they might use for cleaning such as scooping or grabbing "Can you think of some things we can design to take the trash out of the ocean? What types of objects will work underwater?"

As they are testing their design in water ask them to notice how their design works "What is working well with your design? Are there parts that don't work like you thought? Are there things you might change to make it even better for picking up trash in the ocean?"



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