**CORAL REEF ECOLOGY**

**Concepts**
Field research
Data collection

**HCPS III Benchmarks**
SC.4.1.1

**Duration**
1 day

**Source Material**
PRISM

**Vocabulary**
Restoration
Study Site

# Beach Cleanup at a Local Beach

## Summary

Students will enact the experimental design they have devised in order to test their hypothesis at a local beach.

## Objectives

- Students will collect and categorize their data using the experimental procedure they devised

## Materials

Data collection spreadsheet for each group
Trash bags
Gloves
Sun protection (sunscreen, hats)
Overhead projector

## Making Connections

By enacting their experimental design at a local beach, students will see how science is used to conserve local ecosystems.

## Teacher Prep for Activity

Choose a beach that is safe for the students and is not too isolated from human activity. Ensure that each student has a pair of gloves, trash bags, and sun protection. Visit the beach ahead of time (if possible) to find out where the bathrooms and safest tsunami exit route would be.

## Background

No additional background is necessary.

## Procedure

1. Estimate the length and width of the study area in which your class will be gathering data within.
2. Have students collect their data on the beach using the collection strategy in Lesson 6.3. Or give each student a grocery bag and then store each grocery bag in a large garbage bag at the end of the fieldtrip.
3. Mark each trash bag with the group's name so you can identify each group's marine debris (types of debris can vary depending on their research question and their design).
4. Upon returning to the class, have the students count the trash and categorize it using the spreadsheet provided.
5. Upon completion of counting and categorizing, gather the data from all groups and record in a separate spreadsheet.

6. Graph the class data and look at the trends that are observed (What type of debris is the most abundant? Did you find more debris from shoreline use or from marine activities?).
7. Weigh all of the debris from the class and calculate the distance the class covered during their collection.
8. To end, have a large group discussion and ask the students to share (one at a time) what they learned, how they felt collecting the marine debris, and if they will make any changes in their life and behavior as a result of this experiment.

Homework: Have the students write a journal article for homework on their thoughts about the fieldtrip and the amount of marine debris they collected.

## Assessments

Completed graphs of data and journal article (homework)

## Resources

www.marinedebris.noaa.gov
www.wildhawaii.org

## Extension Activities

Have the students make posters using the trash they found and messages they want to communicate to the public about reducing marine debris. Post the posters around school or town. An example poster is seen on the next page.

# Marine debris is everyone's problem.

Marine debris threatens marine life and our oceans and coasts. It affects us too, whether we are boating, fishing, swimming, or simply enjoying a day at the beach. Trash can travel through storm drains, streams, and rivers and end up in your community, as well as in the ocean.

Learn ways to stop this from happening.

www.marinedebris.noaa.gov