

# Biodegradable Sea Turtle Ornaments



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Create an eco-friendly decorative ornament and consider new habits to adopt to reduce plastic use.

## Duration

Preparation: 10 minutes

Activity: 45 minutes

## Supplies

- Ornament dough ingredients (salt, flour, water)
- Markers
- Recycled Yarn or String
- Sea Turtle Cookie Cutter or Pattern



## Background

Sea Turtles are a type of marine reptiles that has existed on this planet for approximately 100 million years, in numbers too large to estimate. Within the last 100 years, the number of sea turtles on our planet has declined, placing all seven species of sea turtle on the IUCN Red List of Threatened Species. While there are natural pressures that threaten the survival of sea turtles, such as predation and disease, there are several human-made threats that cause harm to sea turtles. One example of a human-made threat to sea turtles is pollution in the form of trash, waste, debris, and chemicals. Most of the debris that enters our waterways and oceans takes a very long time to breakdown and the smaller pieces that remain can be just as dangerous. Animals like sea turtles often mistake marine debris for food such as jellyfish. Plastic waste often gets stuck in the throat of a sea turtle and doesn't break down if it reaches the stomach. Animals may also become entangled, or trapped, in marine debris.

How can we prevent contributing to the build-up marine debris? One way is to reduce the amount of plastic we use every day and find alternate resources that are made of natural materials which biodegrade, or break down, quicker. In this activity, you will create an eco-friendly ornament that will breakdown naturally over time.

## Instructions

### Prepare Dough

1. Mix 1 cup of flour and  $\frac{1}{2}$  cup of water together to form a ball. Sprinkle dough with food coloring if desired.
2. Divide dough into smaller pieces
3. Roll out the dough or press it flat with the palm of your hand
4. If students are older, give them dough to create their own turtles. If not, create them for the student.

### Forming Ornaments

1. Create shapes in the dough using cookie cutters or the Sea Turtle Pattern attached.
2. Make a small hole near the top of the ornaments for hanging.
3. Bake at 350F for 20 minutes, or until hard.
4. Let sit at room temperature for 10 minutes.

## Decorating and Displaying

1. Decorate the ornaments using markers.
  - a. Explain that once the ornaments are decorated, they are not edible
  - b. Although the ornament will biodegrade, string will not. Consider using string made of hemp as an alternative.
2. If you wish to display the ornaments in a public location, consider making a poster about the marine debris and the effect on wildlife.
3. Establish a time (perhaps 2 weeks later) for students to pick up their ornament.
4. If students' ornaments displayed in this location are safe from water, maybe hang them outside the classroom window so they can see the biodegrading over time.

## Vocabulary

**Biodegradable**-The capability of an object or substance to break down over time by bacteria. Biodegradable substances include wood, food scraps, wool, and cotton.

**Marine Debris**-Human-created waste that has been released in the ocean.

**Sea Turtle**-A marine reptile adapted to living in the ocean.

## Extension

If you chose to display the ornaments in a nearby location, use a kitchen scale to record and graph the change in mass of the ornaments over time to track the rate of biodegrading.

Participants can create a poster explaining the impact of marine debris, researching debris examples and the estimated time it takes for it to biodegrade. Students can investigate how marine debris affects sea turtles and other wildlife. The completed poster can be displayed at a grocery store near a plastic bag recycling receptacle, library, or museum.

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Activity adapted from "Salty Sea Turtles" in "Sun, Sand, and Sea Turtles" page 102 (2010)

# Sea Turtle Ornament Templates

