

Marine Biodegradable timeline

The Goals for this activity are:

1. Participants will be able to describe the impact of marine debris on the plants and animals in the Salish Sea.
2. Participants will be able to describe the decomposition process for marine debris.
3. Participants will be able to identify list 2-3 activities they can do to prevent debris from accumulating in the marine environment.
4. Participants will leave being able to describe the importance of treating the beach and Salish sea as the “home” of plants and animals and how to maintain a healthy environment through beach clean-up activities.

***Science standards that relate to this activity:**

1. Life Sciences (Interdependent relationships in ecosystems; 5-LS2-1 Ecosystems: Interactions, energy and Dynamics)
2. Earth and Space Sciences (Human Impact, Human Sustainability; 5-ESS3 Earth and Human Activity).

Activities

1. Meet all attendees at _____. Have students/adults get in a circle. Provide an overview of the activities they will experience. Describe the SWS program and purpose.
2. Discuss the following
 - a. Describe the near shore environment and what is special about it.
 - b. Define terms: marine debris—explain that it is “garbage” in the oceans and near shore; biodegrade; Plastics, types of plastic and why they do not break down
 - c. Provide 3-4 interesting facts--
 - i. 80% of debris comes from the land
 - ii. 20 percent from the water (fishing and boating activities)
 - iii. NEED TO ADD MORE FACTS
 - d. Describe different types of debris and the breakdown process.
 - e. Describe how the debris impacts plant and animal life. Give examples for 2-3 species. Ask for examples from group (or do this at end).
3. Explain the activity-
 - a. that we are creating a visual time line of how long it may take for debris to degrade.
 - b. they will go to the rope and stand next to the marker that they think is the length of time it will take for the debris to biodegrade.
4. Give each student a card that has a picture of marine debris or piece of marine debris. Ask students to look at their card/object and think about what it is made of and how long they think it will take for it to degrade. Ask them how their object may harm marine life
5. Ask two -3 adults to help you with the rope and stretch the rope out the full length. They will hold this up at waist height.
6. Ask 3 students at a time to go to the space along the rope that reflects how long it will take for their object to degrade.

7. After everyone has a space along the rope...and if there are misplaced items/debris, provide the data so that 3-4 are correctly placed along the time line. Praise students for getting it right and help those to “get theirs right”. Continue to everyone is correctly placed.
8. Have the students help you summarize what you see, where they are placed. Ask questions like What decomposes the quickest? What might never decompose? What item surprised you the most? Ask for examples on how the debris would harm sea life.
9. Final Summary—Be sure to do final summary of what was discussed. Provide 1-2 take away points.
 - a. Ask the students to think about what they could do to:
 - i. Prevent Marine debris
 - ii. Remove Marine debris to protect plants and animals.

Supplies

The following supplies will be in a bucket.

- a. Laminated descriptions of common debris
- b. Actual Marine debris
- c. Rope with time markers

Clean up/Follow up

Return the bucket to _____. ALL items must be returned to the buckets clean and dry.

Log in your hours to SWS. Email any comments or suggestions to the chair of the Community Outreach and Education Committee.

*http://www.nextgenscience.org/search-standards?keys=&tid%5B%5D=102&tid_3%5B%5D=94

Resources <https://marinedebris.noaa.gov/activities-and-curricula>

Biodegradable time line

2-4 weeks	6 weeks	2 months	3 months	5 months	6 months	1-3 years	1-5 years	10-20 years	50 years	200 years	400 years	450 years	600 or more
Paper towel	News paper	Apple core Cardboard box	Waxed carton	Cotton towels/ clothes	Photo-degradable beverage holder	Plywood Biodegradable diaper	Wool socks Cigarette butts	Plastic grocery bags	Tin can Styrofoam cup	Aluminum can	Plastic beverage holder	Plastic bottle Cell phone case??	Fishing line

Cotton rope 3-14 month

Styrofoam buoy 90 years