

Web of Marine Life- Salish Sea

The Goals for this activity are:

1. Participants will be able to describe the role of the Salish Sea and near shore environment in maintaining a healthy ecosystem for marine life. They will also be able to list 2-3 activities they can do to protect this environment.
2. Participants will be able to identify at least two animals or plants in the Salish Sea Marine Web and how they relate to each other.
3. 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 respect the plants and animals that live there.

***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).

ACTIVITY

1. Meet all attendees at _____. Provide an overview of the activities they will experience. Describe the SWS program and purpose.
2. Discuss the following
 - a. Discuss the near shore environment and what is special about it.
 - b. Discuss the Salish Sea and provide some fun facts:
 - i. Around 70% of the Earth’s surface is covered by oceans. The largest ocean on Earth is the Pacific Ocean, it covers around 30% of the Earth’s surface.
 - ii. Meaning of Name: The Pacific Ocean’s name has an original meaning of ‘peaceful sea’.
 - iii. Depth: It has a deepest point of around 36,000 feet.
 - iv. Temperature: The temperatures of the Pacific Ocean depend on the location. The nearer to the Equator the warmer the water tends to be. 86F to 28F
 - v. The temperature of the Salish Sea ranges from 45-51F
 - c. Plants and Animals of the Salish Sea—range from less than a micron to hundreds of feet
Plants:
 - i. Make their own food from --- Energy from the sun + carbon dioxide + water
 - ii. Are Producers, they Produce oxygenAnimals: multicellular as well as single cell (protozoans) and typically eat more than one species of prey. Some feed on detritus, or organic debris from decomposed dead plants and animal tissue, fecal tissue bacteria
Decomposers: Animals break down nonliving organic matter into materials that again are available to enter the food chain as nutrients
- d. Food chain

Orcas are a top predator—eat salmon, other marine mammals and squid

Salmon—when young eat insects, invertebrates as they get larger. As adults they eat squid, eels and shrimp

Forage fish eat phytoplankton and zooplankton that drift near the ocean surface,

Eel grass grows underwater in the nearshore and is a food source for invertebrates and provide a habitat for forage fish and juvenile salmon.

3. Have 6-10 students get in a circle. Give each one a card
4. Have the student with the SUN—start the activity by saying what the sun provides plants and animals on earth. Hand the student the ball of string
5. Ask a student with a Plankton/Zooplankton card to identify him/herself. Have the Sun toss them the ball of string. Have the student with these cards read the back and then say why they need the sun
6. Proceed with each card, eel grass, forage fish, salmon, orcas—asking each child to read the back of the card and they say how they relate to another plant/animal already discussed.
7. A crisscrossed web will be formed. Have the students step back to tighten the web
8. Now focus on what happens when one species dies... ask the eel grass to let grow of the string or ask the salmon, etc.
9. Ask the group what has happened and get them to discuss how the death of one species impacts the rest. E.g. Which organisms consume phytoplankton to gain energy for survival? What would happen if there was water pollution? What would happen if there was not enough salmon for the orcas? What happens if all the shoreline is developed? What happens if the temperature of the Salish Sea goes up?
10. Final Summary—Be sure to do final summary of what was discussed and have them: 1. identify one thing that they learned or tell someone next to them or 2. identify something they can do to protect these plants and animals.

Supplies

The following supplies will be in a bucket.

- a. Laminated descriptions of common plant and animal life in Web of marine life (sun, nearshore, eel grass, forage fish, plankton (both), salmon, orca)
- b. String to use to create web.

Clean up/Follow up

Return the bucket to _____. ALL items must be returned to the buckets clean and dry. If jars are wet, leave them open on the floor next to the bucket.

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