



Beach Exploration Activity

OVERVIEW A multitude of species, including people, utilize and inhabit the beach at Fort Casey State Park. During this activity, students will learn about ways to be good beach stewards. They will also get an opportunity to explore the beach environment and discover common items found there.

OBJECTIVES Following completion of this lesson, the students will:

- Understand basic beach etiquette and know some ways they can help preserve the beach environment.
- Appreciate there is more to the beach than meets the eye.
- Explore and observe the beach habitat.

GRADE LEVELS

2nd - 6th grades

SCIENCE STANDARDS THAT RELATE TO THIS ACTIVITY

1. **ESS3.C Human impacts on Earth systems:** Things people do can affect the environment but they can make choices to reduce their impacts.

SCHOOL GROUP PRE-FIELD TRIP WORK

1. Please go through Vocabulary and Concepts list with students prior to the visit. (list included on the last page of this document)

MATERIALS

- 2 – Large yellow cones
- Clip boards
- Reusable scavenger hunt lists
- Flora and Fauna ID cards
- Garbage bag
- Whistle

PROCEDURES

Remember to be flexible, have fun and practice adjusting language to fit the appropriate age groups. #3. will really help to gauge what the students know or don't know already.

1. Set up yellow cones on the beach to give the students a visual barrier as to the space they are allowed to explore.

2. Meet attendees and introduce yourself

3. Ask Some Questions:

Have you been to the beach before? Do you know ways you can help protect the beach? Why is protecting the beach important?

4. Tide Pool/Beach Etiquette Basics:

Example script for volunteers:

“Just like you, animals have a home and we want to do our best as beach stewards to keep them and ourselves safe. Marine mammals like baby seals need to always be left alone and we need to keep a safe distance away. Up here in the high tide zone there is not a ton of life but

the further you get to the low tide zone there are hundreds maybe thousands of species that call that space their home. So during low tide do your best to walk carefully; there is life beneath your feet. Observe animals where they are and avoid picking them up. If you are going to touch something like a crab or sea star use one wet finger and touch gently. Another good rule of thumb is to only move rocks that are small enough to be moved with one hand. Carefully return rocks to exact position you found them. Many marine creatures make a home underneath rocks to stay wet and protected from predators. Always leave the beach cleaner than when you got there. Animals sometimes mistake garbage for food and eating trash will make them very sick. Stay on trails and stay safe, climbing on bluffs is bad for wildlife and can potentially cause a slide. It takes beach stewards like you who care to make a difference. Let's help protect the beach together!"

1. Leave the beach cleaner than when you got there.
2. Use one wet finger to touch beach critters like sea stars and crabs.
3. Do not touch marine mammals, give them lots of space.
4. Walk carefully life is beneath your feet.
5. Only move rocks that are small enough to be moved with one hand. Carefully return rocks to exact position you found them. Many creatures make homes under the rocks.
6. Stay on trails and stay safe.
7. Leave live creatures where they belong.

5. Beach Exploration time!

Let students know they can explore the area between the 2 orange cones set out on the beach and between the edge of the large driftwood and the water's edge. **Optional script:** "Today is an exercise in observing nature. Practice using all your senses except for taste of course! 😊 You will not be bringing any of the items you find back. If you have questions about an item you have found, your team can raise your hands and we will do our best to get over to help you. If you come across sharp or unsafe items, tell an adult and do not to touch."

Invite teachers/ Parents to help with this. ID cards will be available in the kit. Group kids into groups of 2-3, 3-4 depending on class size. Give one clipboard with scavenger hunt to each group. Invite teachers/chaperones to join the teams for support. Explain they are not expected to find every item, just to do their best. Give them about 10-15 min to explore. Be available to help students with questions and guidance.

6. Share time

Call students back and have them get into a group for sharing and listening time. Ask the students these questions. Who discovered an item made by man? Give 1-2 students a chance to share about what they found. Who found an item made by nature? Give 1-2 students to share their finds. Who found something strange or weird?

7. Wrap up Questions/Discussions

Who can remember the beach etiquette basics?

What can you do to help protect the organisms or habitat you learned about today?

What did you learn today?

8. Ask students to put all items in the bucket or you can do this before sharing time! Clean the scavenger hunt sheets for the next group.

Volunteers: Remember to put kits away neatly and to log your hours under WSP - Whidbey Central/South - E&O, Fort Casey Environmental talk/tour

VOCABULARY/CONCEPTS LIST for Students, Teachers, and Volunteers

Spray intertidal zone: The upper beach area that is mainly only wetted by ocean spray or highest storm waves. Almost completely dry most of the time. Lightly populated by barnacles and some snails. (NOAA)

High tide zone: Part of the beach that is normally uncovered by water, except during high tides. Lots of barnacles, marine snails, mussels, limpets, and often shore crabs are found. (NOAA)

Middle tide zone: This part of the beach is covered and uncovered by water twice a day. A big variety of animals and plants, including sea stars and anemones live here. (NOAA)

Low tide zone: This part of the beach is always covered except at very low tides. It is very crowded in this zone, a large amount of species live here. (NOAA)

<https://marinedebris.noaa.gov/sites/default/files/Intertidal%20Zone%20Animals%20Field%20Guide%201.pdf>

Bluff erosion: When water, wind, and other natural forces cause rocks and sand to wear away on our bluffs. This movement changes the shape of the beaches and bluffs.

Marine debris: any trash that is found in the marine environment

Wrack line: Is the line of debris left on the beach carried by the water of the last high tide. It usually consists of seaweed, kelp, marine debris, branches, and logs.

ONLINE RESOURCES:

Low tide beach etiquette fact sheet from the Seattle Aquarium:

<https://www.seattleaquarium.org/document.doc?id=1883>

Information for if you find a seal pup alone on the beach:

<https://www.orcanetwork.org/marinemammals/sealpupposter2.pdf>

VIDEOS:

Beach Walk: A Naturalists Review Pt 1 (Good info about beach etiquette and exploration, specific to our area.) <https://youtu.be/iO15fsKIHdc>

Planning a trip to the beach Seattle aquarium video: <https://youtu.be/ud6RN9fpNSw>

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