



# Terrific Alaskan Tidepool Travels

## The Difficulties of Tide Pool Life

The following questions will be addressed with the students during the session:

1. *Why would it be hard to live in a tidepool?*

- **Salt water**-These animals would die if they were put into fresh water as their bodies have special characteristics that allow them to only live in salt water. For example they secrete salts so that excess salt does not build up in their bodies.
- **Waves**- The movement of the ocean can move animals off rocks causing them to float away or kill them.
- **Tides**- Sometimes these animals are left with very little water to live in and that water can become too salty and/or too warm.
- **Weather**- The sun can cause the water to become too warm. Rain can dilute the water of the tide pool.
- **Predators**- Other animals such as birds often eat tide pool animals.

2. *What would you need to do to hold yourself down when **waves** come?*

- **Anemones** can stick to rocks with their big foot, bend with the water, and close themselves up for protection.
- **Urchins, stars, cucumbers** have tube feet to help them attach to rocks.
- **Crabs** hold on to sand or rocks with their feet.
- **Hermit crabs** carry their house on their backs and can go inside their shells for mobile protection.
- **Barnacles** attach strongly to rocks. They can go inside their shell house.



## Terrific Alaskan Tidepool Travels

- **Octopuses** can hide in a hole or cave and hold themselves in place with their suckers.
  - **Snails and Chitons** attach to rocks with their foot and go inside their shell house.
3. *What would you need to defend yourself against **predators**?*
- **Anemones** are able to detach and swim away. They can pull their arms inside their bodies or use them to sting.
  - **Urchins** have spines to protect themselves. They are also able to cover themselves with rocks and shells.
  - **Stars** are able to run away on their tube feet. They have spines that are on their body and their arms detach in the mouth of a predator to escape.
  - **Cucumbers** are bright red so that they look poisonous. They also look spiny. They are able to spit out their guts to offend and confuse their predators.
  - **Hermit crabs** look like a rock, hide in their house and use their claws.
  - **Crabs** look like a rock and use their claws.
  - **Barnacles** go inside their house
  - **Octopus** hide, change color, ink, use their beak to fight back, or move using jet propulsion.
  - **Snails** have a muscular foot to hold onto rocks and go inside their mobile house.
  - **Chitons** roll up into a ball or use their foot to hold onto rocks.

## Vocabulary List

**Conservation-** protection of the ocean from species loss, pollution, or contamination

**Intertidal-** the area of the shore bounded by low and high tides

**Ocean-** a large body of saltwater that covers over 70% of the Earth

**Predators-** an animal that hunts or feeds on another animal

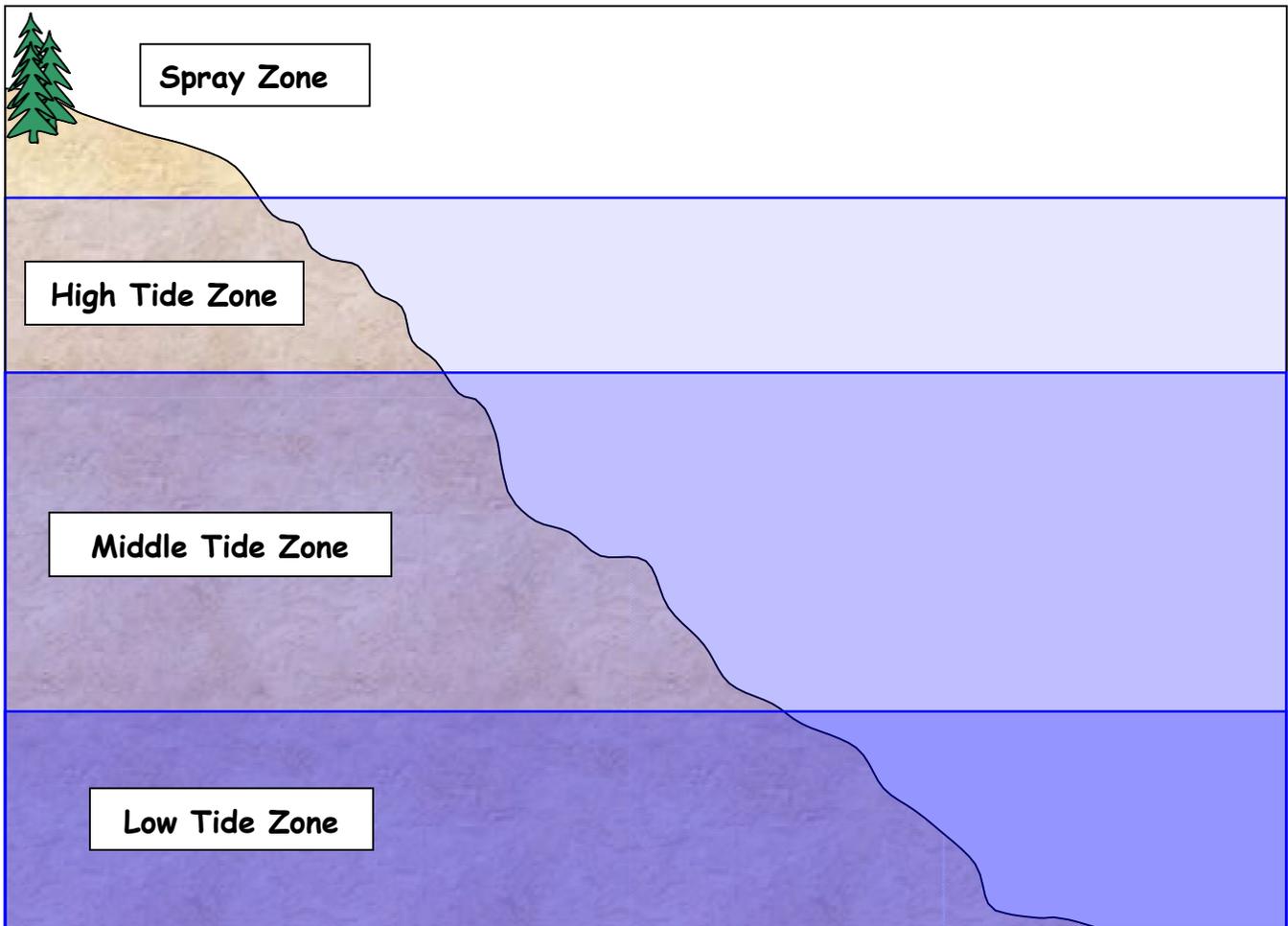
**Tides-** the rise and fall of the ocean caused by the moon and partially the sun

**Waves-** the rise and fall of the ocean water, caused by wind and ocean currents

# Terrific Alaskan Tidepool Travels



Feel free to print this page to use during the session:



**Octopus**



**Sea star**



**Sea urchin**



**Sea anemone**



**Hermit crab**



**Sea cucumber**



**Barnacle**



**Mussels**



### Post-Session Activity Ideas

#### Math:

1. In a tidepool there are 3 urchins and 2 sea stars. How many animals total are there?
2. If there are 2 crabs and 1 octopus in a tidepool, how many animals total are in the tidepool?
3. 6 sea cucumbers and 2 sea stars meet in a tidepool. How many animals total are there?
4. A bird sees 3 crabs and eats 2 of them. How many crabs are left?
5. If there are 3 sea stars on a rock and 1 sea star crawls away, how many sea stars are left on the rock?
6. There are 2 sea cucumbers, and a group of 3 joins them. How many sea cucumbers are there now?
7. There are 5 hermit crabs, and 1 loses its house. How many hermit crabs have houses now?
8. There are 10 creatures living on a rock. A big wave hits the tidepool and 2 animals drift away. How many animals are left on the rock?
9. There are 2 anemones with 10 tentacles each. How many total tentacles are there?
10. In a tidepool, there are 3 sea stars with 5 arms each. How many total arms are there in the tidepool?

## Terrific Alaskan Tidepool Travels



### Social Studies:

#### **Tidepool Tender**

Tidepool creatures are often used by humans for food and other purposes. They are part of some cultures' economies. Have your students find some examples of tidepool currencies and share them with their class.

### Art:

#### **Create your own invertebrate:**

Using everyday items (erasers, paper clips, foam balls, clay, pipe cleaners, craft sticks, etc) have your students create their own invertebrate. Have them present their creature to the class telling everyone the creature's name, where it lives in the tidepool and explain what it uses for defense against the waves and against predators.

**Create a Tidepool Diorama:** Using a box or a paper plate, have students create three-dimensional intertidal animals and place them in the correct zones.

**Create a Tidepool Mural:** Create a tidepool mural that shows the four tide zones and what lives in each area. Use sand paper to replicate sandy beach areas.

### Theater/Physical Education:

**Videotape a Skit:** Write a script for a skit about a day in the life of a tidepool. What might happen during the day to the creatures that live in the tidepool and the people who visit? Make your own puppets or costumes to use in the skit. Create a videotape to share with another class.

**Become a Sea Creature:** Learn about a tidepool creature and act out how the creature acts in the tidepool. Who are your friends and enemies? How do your body parts work? How do you move?

### Language Arts:

**Write a Tidepool or Seashore Poem:** Write a poem that expresses your feelings about a tidepool. Use all of your senses to get an idea of how you feel. What does it sound like? How does it smell? Can you feel the sun or wetness from the waves? Does the air have a taste? What do you see? Share your poetry with friends.

**Write a Guide for Visiting Tidepool Areas:** Have students write about what to expect for visiting a tidepool. What kind of creatures and plants can they expect to see? They can include the importance of protecting and respecting tide pool life and directions for making a visit safe.