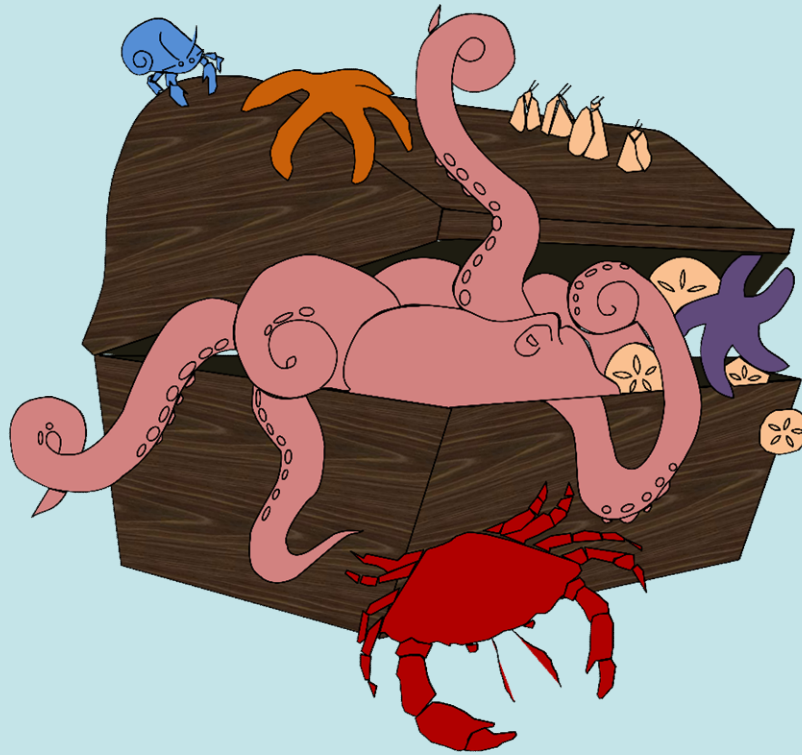


Let's Explore the Edmonds Marine Sanctuary



A Tidepool Learning Adventure

Adventure Checklist

You'll want to plan your trip for the lowest tide of the day. You'll see the most animals when the tide height is below 0. These tides are called 'minus tides'. Refer to a tide table to find the best time for your adventure.

- ✓ Printed Adventure Guide
- ✓ Crayon or pencil
- ✓ Waterproof boots or shoes
- ✓ Water and snacks
- ✓ Sunscreen
- ✓ Magnifying glass (optional)



Olympic Beach

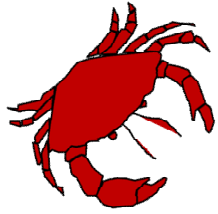
Dayton St. and Admiral Way

Rocky shore



Sandy shore





Welcome to our Home!



Four tips for being a good visitor

1. Walk gently so you don't crush us.
2. Don't pry us off rocks – we could die!
3. We need shells, rocks, and driftwood so leave them for us.
4. Only turn over small rocks to explore - turn them back when you're done.

Touch Training

Wet hands before touching



Hold animal close to ground



Gentle touch, wet finger





Tide Zones

At low tide, water pulls away from the land, exposing rocks and sand.

When that happens, you can find lots of plants and animals that are covered by water at high tide.

Head to the rocky shore and get as close to the rocks and water as you can without getting your feet wet.

Stop here for Activities 1-3.



Tide Zones



High Tide Zone

Middle Tide Zone

Low Tide Zone

If you live, eat, and breathe underwater, it can be pretty stressful when the water goes out and takes everything you need with it!

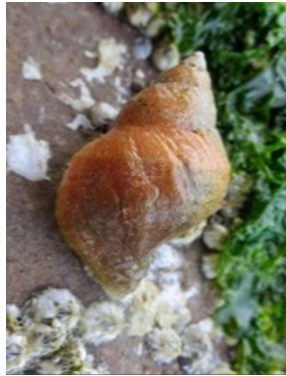
Plants and animals that can't survive very long out of water are found in the *Low Tide Zone*, which is covered by water most of the time.

Those that can survive for longer periods of time are found in the *Middle Tide Zone* or the *High Tide Zone*.

Explore the rocks and discover who lives where in Activity 1 on the next page.

Activity 1: Rock Exploration

Explore the rocks and look for these plants and animals in the high, middle, and low tide zones. How many can you find?



Dog Whelk



Acorn Barnacle



Shore Crab



Aggregating Anemone



Rockweed



Ochre Star



Calcareous
Tube Worm



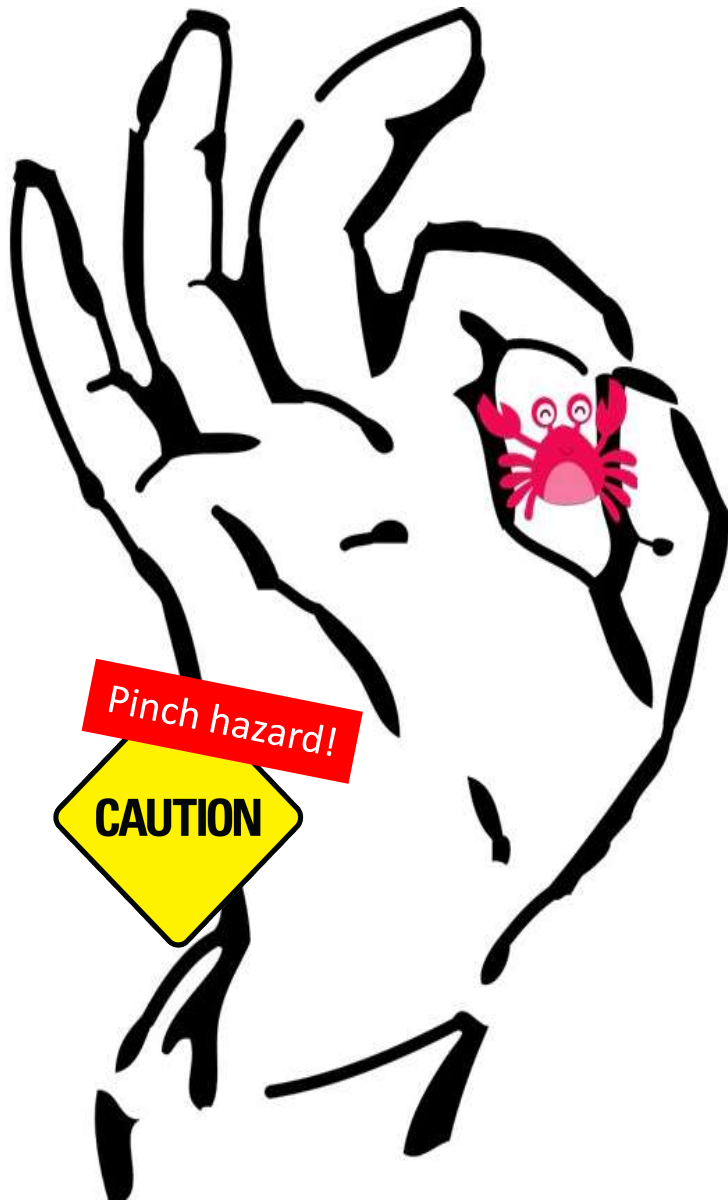
Painted Anemone



Red Sea Cucumber



Sea Lettuce



Touchable Crabs

Make a circle with your finger and thumb like the picture on the left. Now you have your very own crab gauge to measure crabs!

Only crabs small enough to fit through your crab gauge are safe to touch. Crabs are delicate, so be sure to touch them very gently.

Hunt for touchable crabs in Activity 2 on the next page.

Don't forget!

Wet hands before touching



Hold animal close to ground



Activity 2: Crab Search

Look for these common crabs as you explore the rocks. If they're smaller than your crab gauge, they're safe to handle gently.

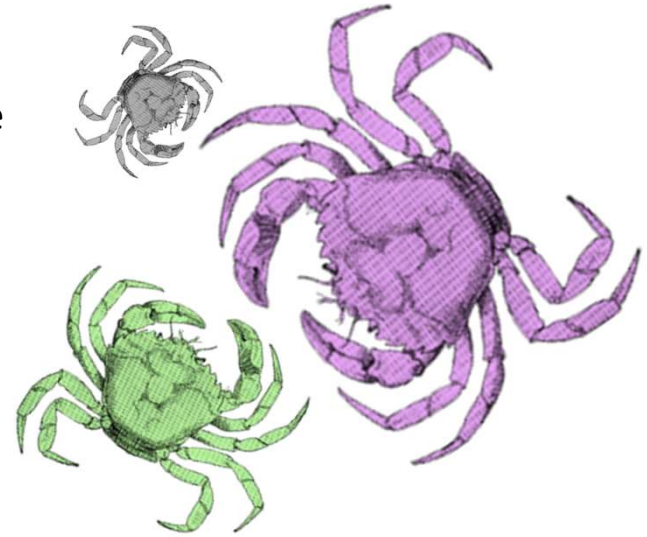
Shore Crabs

These little crabs come in many different colors but are mostly purple or green in Edmonds. They can be found hiding under rocks and in crevices, and moving around tidepools as they forage for small plants and animals.



Hermit Crab

Look inside a shell and you might find a hermit crab living inside. These crabs move to bigger shells as their bodies grow. Be sure to leave any shells you find on the beach so these crabs will always have a new home to move to when they need it.





Barnacles out of water.



Barnacles feeding in water.

Barnacles

Barnacles have hard shells that close up tight when the water goes out at low tide. This helps them stay cool, wet, and safe inside while they wait for the water to return at high tide.

Find a spot in the tidepools where barnacles are covered by water, and stop for Activity 3 on the next page.



Activity 3: Feeding Barnacles

Look closely at these tidepool barnacles (use a hand lens if you have one), and you'll see what looks like little brooms sweeping in and out of their bodies. You're watching barnacles eat tiny plants and animals called plankton.



Barnacles don't eat with their hands like we do. They glue their head to a rock so they can eat with their feet!

Everyone can be a barnacle!



NEXT: Head to the sandy beach for Activities 4-6.

Seaweed

Seaweed comes in all different shapes, sizes, colors, and textures. You can find three types of seaweed - red, green, and brown –on the beaches in Edmonds.

Find a place on the beach with some seaweed and stop for Activity 4 on the next page.



Activity 4: Seaweed Face



Picture time!

Find some small pieces of seaweed and make a face. You can also use small bits of rock, wood, and shells. Remember to leave everything on the beach - take only pictures home with you!



Stormwater

Find the drainage pipe just below the walkway that runs along the seawall. If you came here during a rain storm, you'd see water pouring out through this pipe and into the ocean.

Drainage pipes like these carry water from rain that runs off from houses, lawns, streets, cars, driveways, and parking lots all over the city.

Because the water comes from rain, we call this water 'stormwater'. Stormwater is not treated – it flows directly to the ocean carrying everything from our streets with it.



5 Easy Steps

To protect Puget Sound

1



Wash your car on grass, gravel or a commercial car wash to limit detergent runoff.

2



Fix vehicle leaks to reduce oil and other motor fluids and keep your tires properly inflated.

3



Always pick up pet waste and put it in the trash to reduce fecal coliform and other pathogens in water.

4



Reduce herbicides, pesticides, and fertilizer by using natural yard care methods.

5



Spread the word! Tells others what you know so they can help too.

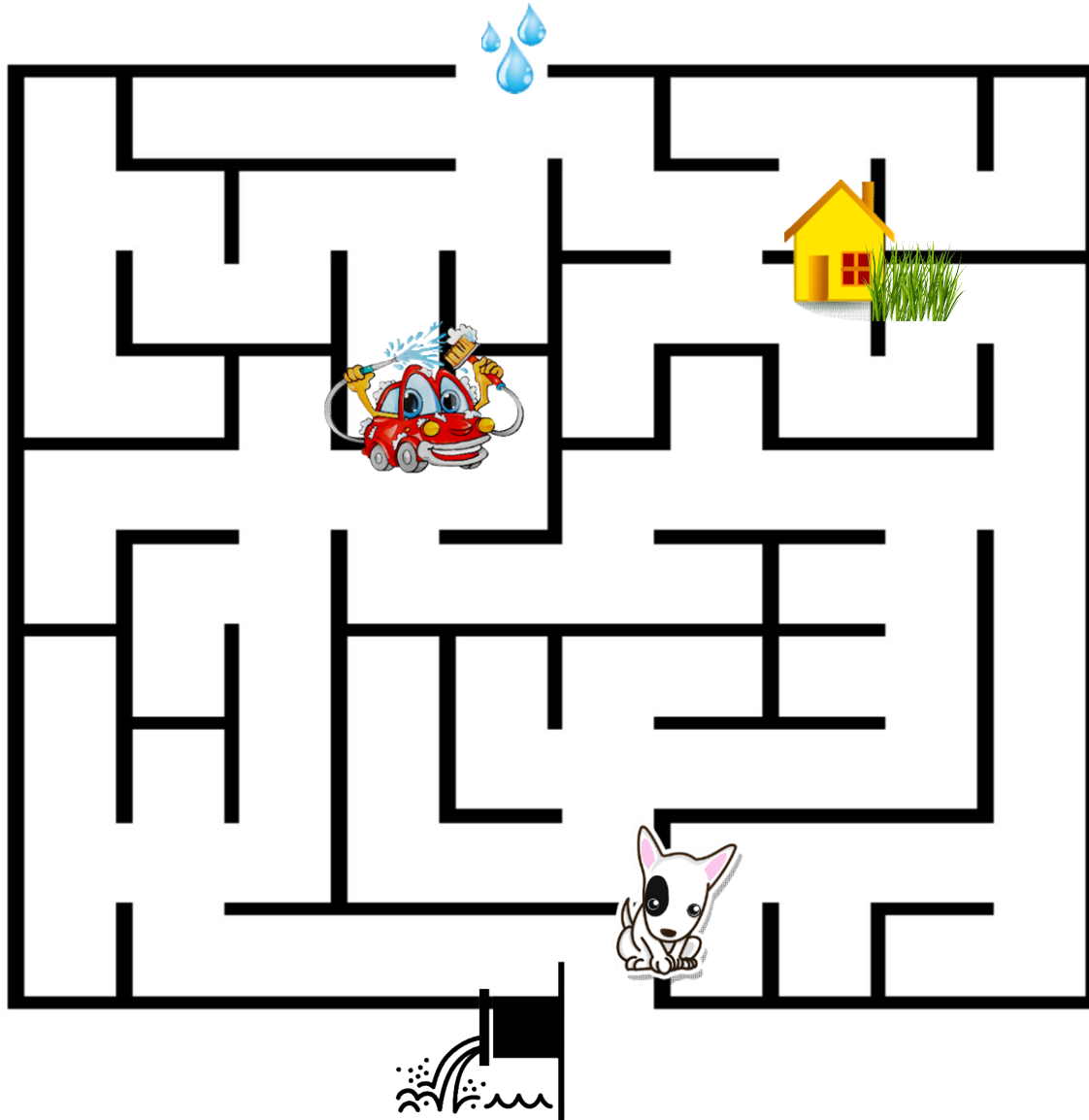
Stormwater

Pollution from houses, cars, pets, and lawns can make animals in our marine sanctuary sick. It can effect their ability to catch food, reproduce, and navigate from one place to another.

But you can help keep the animals here safe by keeping pollutants out of stormwater runoff. **Review the tips on the left to prepare for Activity 5 on the next page.**



Activity 5: Stormwater Maze



Help these rain drops through the maze to a stormpipe that drains to Puget Sound.

What can YOU do to help reduce stormwater pollution in your neighborhood?





Eelgrass

Eelgrass forms large, grassy meadows that give many animals a place to hide, hunt, and raise their young. Eelgrass meadows are so important that they are sometimes referred to as 'nurseries'. **Walk along the beach until you find a patch of eelgrass.**



Eelgrass on Olympic Beach

Want to rush down to explore!?



You never want to walk on eelgrass without being very careful. Learn why in Activity 6 on the next page.



Activity 6 Eelgrass Picture Search

All of the animals in this picture rely on eelgrass to survive. By walking very carefully, you can avoid crushing them.

Use your crayon to circle these animals in the picture on the left.

- Crab
- Shrimp
- Sea slug
- Fish eggs
- Snail
- Sea anemone



Activity 7

The Beach Hero Pledge



Now that you've gotten to know the plants and animals that live in our sanctuary, you can make a pledge to protect them. When you read the Beach Hero Pledge, be sure to say it loud enough so that all the animals hear you!

To remain a Beach Hero in good standing, I pledge to

1. Handle animals gently and never pry them off rocks.
2. Step slowly and carefully to avoid crushing animals.
3. Leave rocks, shells, and driftwood where I find them.
4. Tell my friends and family how to protect the beach.