

Use your scientific skills to describe and identify what you find on the beach. The objects washed up by the waves and tide can tell us a lot about the underwater environment. Please make sure you return everything that belongs on the beach!

1. Find three different kinds of plants, name them and describe/draw them below:

These can include: green seaweed, brown seaweed, red seaweed, (Scientific names if we can identify) Posidonia seagrass, amphibolis seagrass, spinifex grass from sand dunes

2. Find these items and name them:

- a. Something red:

Could include: sunset shell, pheasant shell, crab shell, seaweed, sea sponge.

- b. An example of one animal living on another:

Oyster on razor shell, tube worms on abalone, sponge growing on oyster shell

- c. Something that does not belong on the beach:

Litter! Could also be driftwood from the land, a dog, sea glass

- d. Three types of bivalves (a mollusc with two shells, like a clam):

Could include: Cockle, Mud Oyster, Mussel, Razor shell, Scallop, Jingle Shell

3. Find the sand drift fencing.

- a. Why is it there?

To stop the movement of sand and to catch sand when windy. This reduces erosion of the sand dunes during storms and protects the road and houses.

- b. How does it work?

The fence traps wind-blown sand in the dunes, hopefully long enough for dune plants to grow and help hold them together. The build-up reduces the impact of high tides and storm swells as it absorbs the energy produced from these sources.

4. Is there any evidence of pollution on the beach? If so, describe three types and how you think they may have got there.

- a. E.g. Soft plastic wrapping, blown by the wind

- b. E.g. Tangled fishing line, discarded or lost by a fisherman on boat or jetty

- c. E.g. Plastic bottle, washed down the storm water drain

5. Is the tide: Coming (n) Going out (t) Stationary (y)

- a. How can you tell?

Observation over time indicates if waves on average are moving up the beach or out to sea.

- b. Find the high tidemark line. Approximately how many metres from the sand dunes is it?
You can estimate this by pacing from the dunes.
What do you see gathered here?
Beach wrack (seaweed and seagrass) are common along the high tide line.
6. Find a cuttle bone.
 - a. Describe how each side of the bone is different.
One side is hard, while the other is soft (can make a mark with your fingernail)
 - b. Why do you think the bone is so light?
So that the cuttle can still float in the water, while giving the body some structure.
 - c. Is there any evidence of other animals using the cuttle or bone?
Teeth marks in broken pieces could indicate shark or dolphin bites as they have eaten the cuttle. Scratch marks could indicate sea birds that have sharpened their beaks and claws in the soft side once the bone has washed up.
7. Can you find any examples of marine animals that cannot move? (These are probably invertebrates, or animals without backbones). List some here:
Could include: sea sponges, sea squirts, barnacles, ascidians, bryozoans or hydroids
8. As you return to the ramp, there is a large pipe on the right-hand side. What is its function?
This is a stormwater outlet pipe – this pumps stormwater washed down the drains in the road from the sump at Military Road out onto the beach and into the sea.

We hope you enjoyed your walk along the beach, come back again soon!