

Educational Visit Resources

What is seaweed?

Seaweed is a form of algae that has holds onto the ground and also has an upper end that protrudes to or close to the surface of water. It doesn't have roots like land based plants.

Seaweed is **benthos**, a form of ocean life that is connected to the ocean floor. Some seaweeds need to be exposed directly to sunlight – the kinds you can see around the rocks. Others can grow at a depth of up to 6 metres, if the sea is very clear and the sunlight can reach it through the water.

Seaweed is **NOT** a plant although it is a vegetable!.

Blades (sometimes called fronds)

The blades of the seaweed are like the leaves.

Photosynthesis occurs on the blades. Photosynthesis is the process where plants convert sunlight to oxygen. Seaweeds like a lot of sunlight.

Next time you walk along the sea shore in winter – is there much seaweed about? If you can go to the same place in the summer, sea if there is any difference?

What happens if the blade of the seaweed can't reach the surface, or if the sunlight doesn't shine down?

The further up the shore you go are the seaweed plants the same as those close to the shore and under the water more? Which is biggest? Which is softest? Why do you think this is?

Floats

The hollow part of the seaweed that causes it to come to the surface of the water is called a float.

Hmmm, I'm guessing all kids could tell why it is called a float.

Do you think it would be possible to make a flotation device made out of seaweed?

Stipe

The stipe is the stalk of the seaweed. It will vary in size and thickness depending on the species and the location where it lives.

You can compare the stipe of seaweed to the stem of a flower. Other plants also have stipes: mushrooms and ferns are well known plants with stipes.

Holdfasts

The holdfasts anchor the seaweed to the ocean floor. Sometimes the seaweed will attach to harbour walls and floats at sea.

What would happen if the holdfasts were not present?

Kelp Babies

When kelp is ready to reproduce it develops patches on the frond which are dark brown and slightly raised on one side of the frond. You can run your finger over the patch and feel how it is raised. These patches contain 'spores' – like mushrooms. Except when they release they do something very special!

They become something called sporophytes and they are called zooplankton. Now the word zoo plankton is given to tiny microscopic animals in the ocean. Sporophytes are called zooplankton because for 24 hours they are either male or female, they have a little tail – like tadpoles and they swim! (Except they are so small you can hardly see them, unless through a powerful microscope) They are looking for something to attach to. If they don't attach in 24 hours they die. And after they attach they stop being zooplankton. Isn't that amazing!!

Are baby kelps animal or vegetable or algae? What do you think?

Activities with Seaweed

Experiment – Putting Seaweed in Fresh Water

Put some kelp in fresh water and some in salt water for a day. What is it like when you take it out?

Does jelly come out of the kelp? What do you think it is?

Answer – that is called algenate. It contains lots of minerals and can be used for cosmetics and body creams. Scientists also make a material from it called polymers.

Drying Dulse

Take two pieces of dulse. Let one dry in the sunlight or near a heater (like sitting on a radiator), but away from damp.

Let the second one dry, but then get damp – say with the dew overnight, the dry it again. Do this twice. What is the difference?

Project

Gather seaweed called 'Fucus Seratus' – it looks like it has a serrated edge along the blade. This is the best seaweed for having a bath in!

Why do you think it is good to have a bath in seaweed?

Seaweed baths are very popular as people think that the seaweed makes your skin look healthy and it takes impurities out of your body.

Making a Seaweed Present

Get some Fucus Seratas and dry it. Write up instructions on how to have a seaweed bath and these are:

Put the seaweed in a jug. Get an adult to boil a kettle and fill up the jug. Let it sit for 2 minutes then pour the hotwater from the jug into the bath.

Fill the jug up again with cold water – with the seaweed still in it and let sit for 2 minutes, then pour the whole lot into the bath. Then fill up the bath as normal and wash yourself with seaweed!

Why don't you put this into a nice bag for a gift for your mum or dad etc.

(Why do you think it is important to put the seaweed in boiling and then cold water?

- It helps bring out all the goodness that makes your skin nice).

Seaweed Collage Craft

You will need:

- A variety of seaweed – fresh or if dried put it in water before use. Try and get seaweeds with different colours
- Absorbant drawing paper
- Craft glue
- Craft scissors

Cut the seaweed with craft scissors to make a picture. It could be flowers and birds or maybe a seaweed monster!

Put a spot of glue on the back of each piece and put it on the absorbant paper.

Put the picture in a frame.

Seaweed for Supper

Did you know that most seaweeds in the world are edible? Some of them are very good for you and in some countries people eat seaweed nearly every day.

In Ireland we mostly eat dulse. This is dried. In the past people would carry it in their pockets for a snack - like crisps today. In Ireland we also make a desert from Carrageen.

Carrageen Pudding

Get two mugs full of carrageen - fill the mugs tight to make sure you have enough. Then wash the carrageen well and leave it out in the sun. This helps take away the sea taste of it.

Next put the carrageen in with a pint of milk and a teaspoon of vanilla extract. Bring to the boil and slowly simmer until the carrageen has all but disappeared. Add 2 tbs of castor sugar. Strain into a bowl or jelly mould and put in the fridge to set.

Serve with fruit coulis, or stewed fruit such as rhubarb.

In the past people ate Bladderlocks (Alaria) like cabbage, mixed through their potatoes. It smells a bit like cabbage when it is cooked. Alaria is known as wakame - which is one of the most popular seaweeds in Japan and Korea.

Islander kelp make kelp noodles, salad cut products and they shred the kelp to add to lots of products. They cook the kelp so it is not brown, but very green and a little bit crunchy.

Did you know that kelp is not salty? It only tastes salty when it is raw because there is seawater on it.

It is actually just .2% salt. If you had 100grms of cooked kelp, what do you think .2% would look like?

A Little Seaweed Tongue Twister

Try saying this three times quickly:

She sees seaweed simmering in the sushi.

Nature Notebook

Draw specimens of seaweed in a nature notebook. Label the different parts. Try to try them to size compared to one another.

So what's the big deal about seaweed, anyway?

Seaweed is a major source of oxygen in our atmosphere. It is also a significant source of food for fish that affects the rest of the food chain. Its also a very nutritional food stuff for people, containing lots of iron, calcium, vitamin D and even protein!

So how about Seaweed Appreciation?

How about:

- Have you hugged your seaweed today?
- Stop and smell the seaweed.
- This car stops for seaweed.
- You think of some.....