

Materials needed:

Printout of this activity
Pen or pencil

Overview: No matter how far away from the ocean you live, you may be surprised by your connection to it. There are probably products in your home that contain something that comes from the ocean. Let's take a look at some products to see if they contain seaweed!

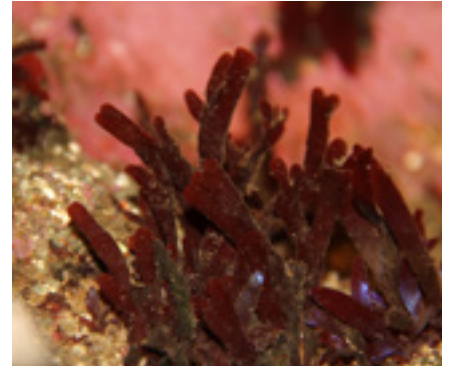
Seaweeds are a type of algae. Algae are like the plants of the sea. Just like land plants, algae use photosynthesis, which means they transform sunlight into useable energy. There are three groups of seaweed (algae): red, brown and green.

Bull kelp is a type of brown algae. It's common in the Puget Sound area. It forms huge kelp forests which provide a habitat for many local animals like crabs, fishes and sea otters. Bull kelp can grow up to a foot a day! At the Seattle Aquarium, you can find bull kelp in the Underwater Dome or even in the water off our piers.

Different ingredients come from different types of seaweed. Let's look at some common ones:

- o **Carrageenan** is extracted from red algae (rhodophyta) and used to bind foods together. Some examples of products that contain carrageenan are dog food, chocolate, toothpaste and baby food.
- o **Alginate/algin** comes from brown algae (phaeophyta) and is used to make water-based products thicker or creamier. Ranch dressing, heartburn relief medicine and hand creams all can contain alginate.
- o **Agar** comes from red algae (rhodophyta) and is used as a food thickener and jelling agent. Some products that include agar are smoothies and packaged pastries.
- o **Beta carotene** is a natural pigment from green algae (chlorophyta). It's used as a yellow-orange food coloring.
- o **Kelp** comes from brown algae (phaeophyta) and is often added to foods because of the various vitamins and minerals it contains. Kelp can also be eaten on its own, in dried form.

Red algae



Brown algae



Green algae



Kelp (brown algae)



ACTIVITY

What foods do you think contain seaweed? _____

What other products do you think contain seaweed? _____

You may be surprised how many different foods and products contain seaweed! Becoming familiar with the terms, or “code words,” described above will help. You can check any product that has a list of ingredients for these code words to see if there’s seaweed in that product. And, as you now know, seaweed can be added to food as a binding agent. It can make products creamier. It can also be used as a food pigment to add color.

Use the table below to list products in your kitchen or bathroom and whether they contain seaweed. Make a guess before you look at the ingredient list. Why do these products contain seaweed?

Code words:

Carrageenan, alginate/alginate, agar, beta carotene, kelp, seaweed

Suggestions: shampoo, mayonnaise, toothpaste, ice cream, makeup, chocolate, salad dressing

Product name	Do you think this product contains seaweed?	Does this product contain seaweed?	If yes, what type? Why do you think this product has seaweed in it?
Example: Chocolate ice cream	yes	yes	Carrageenan , maybe as a binding agent to keep the ice cream from separating

How many items did you find with seaweed as an ingredient? _____

You might have found a surprising amount!

Why is this important?

Seaweed is just one of the many things that come from the ocean which we use in our daily lives. It represents yet another of the uncountable ways that we depend on the ocean every day. And seaweed also depends on a healthy ocean to survive and thrive. Pollution and climate change can affect seaweed, just as they affect all the other living things in the sea.

Consider the ways that we can help keep the ocean healthy—and not just because a healthy ocean will provide a home for lots of seaweed so we can keep eating ice cream and using shampoo!