

Everyday Algae

Overview: A take home scavenger hunt to help students realize that algae are a common part of our everyday lives.

Objectives:

1. Define algae, and identify the three groups
2. Understand that algae are found in many common products

Materials:

A few items from the “Everyday Algae” list
Copies of “Everyday Algae” list
Some algae to taste (nori, kombu, doles, kelp)

Procedure:

1. Show the students a few of the items from the “Everyday Algae” list, and ask them what they think these items have in common.
2. After taking some guesses, reveal that all these items contain algae.
3. Introduce the three groups of algae - red, brown, and green. Explain that there are common ingredients that come from each group. These are –
 - Alginate (from brown algae)
 - Carrageenan (from red algae)
 - Beta Carotene (from green algae)
4. Hand out the “Everyday Algae” list and have the students search for algae in their own home. The ingredients in these products differ by brand, so they will have to read the ingredients list to be sure. Have them keep track of the algae derivatives in each product (there might be more than one).
5. The following day, discuss your results in groups or as a class. List all the items you found that contain algae. Did anything contain more than one algae derivative?
6. Optional: Explain the purpose of each derivative. Alginate absorbs water, and is used in food as a thickener and stabilizer. Alginate also has a pharmaceutical use as a casting agent. Carrageenan is also to thicken and stabilize foods, as well as cosmetics. It is also used to make the foam in beer last longer. Beta Carotene is a natural orange/yellow pigment found in green algae (also in carrots, pumpkins, sweet potatoes, and spinach), it is used as a food coloring.
7. Pass out some edible algae for students to taste. Explain that algae are rich in vitamins and iodine. In some cultures it is an important part of the diet.

Variations:

- Alternative introduction: start by tasting some algae and ask students how often they think they eat algae. Surprise them with a few common products that contain algae derivatives.
- Instead of giving students the list provided, just give them the names of the derivatives and have search for some items that list them as ingredients. Provide them with a few clues.

Everyday Algae

Algae Derivatives – Look for these words in the ingredients list of common household products

Alginate (from brown algae)

Carrageenan (from red algae)

Beta carotene (from green algae)

Food Items

Bread

Brownie Mix

Cake Mix

Cheese (yellow and orange)

Chocolate milk

Cocoa Mix

Coffee Creamer

Cottage Cheese

Diet Sodas

Donut Glaze

Eggnog

Egg Substitute

Evaporated Milk

Food Coloring

Frozen Foods

Frozen Yogurt

Gravy and sauces

Ice Cream

Infant Formula

Macaroni and Cheese

Margarine

Mayonnaise

Multiple Vitamins

Noodles

Peanut Butter

Popsicles

Pudding

Relish

Rice Crackers

Salad Dressing

Sour Cream

Soy Milk

Vinegar

Whipped Topping

Whipping Cream

Yogurt

(Contains whole algae – Rice crackers, Sushi)

Other Items

Air Fresheners

Cosmetics

Livestock and Poultry Feed

Lotions

Medicine

Molding and casting materials

Paint

Paper

Pet Food

Shampoos and Conditioners

Shoe Polish

Toothpaste