

Directions: Provided for you today is a “fresh” kelp specimen. After examining the kelp, use this worksheet to review some key ideas regarding sea weeds. Check your notes and text to help you.

1. The kingdom which kelp belongs to is: _____
2. The phylum which kelp belongs to is: _____
3. The Latin word for brown is: _____
4. This kelp would be called _____ algae (color).
5. I have brought in some kelp in the genus *Macrocystis*. These are the same types we saw in the Huel Howser video: California Gold. Use your artistic creativity to draw the kelp provided in class.

Be sure to label the STIPE, the BLADE, and the FLOAT. There may or may not be a HOLDFAST in this class, but if there is, sketch what it looks like here as well.

6. The slippery texture on the blades and stipes of the kelp is the result of a substance called algin. Algin is able to absorb large quantities of water. In fact, one tablespoon of algin in 1 quart of water will turn it to a thick honey like viscosity. (Some students may remember a kelp ball lab from general science...that was algin.) Algin is therefore used in making gels. It is also a product in a food additive called carrageenan.

LIST at least 8 uses of algin in commercial products. (Hint- see web articles around the room or get online)

- | | |
|----|----|
| 1. | 5. |
| 2. | 6. |
| 3. | 7. |
| 4. | 8. |

7. Kelp like this are commonly found washed up on the beaches and twisted in a rope like mass called “wrack.” Kelp do photosynthesize, something we know of green organisms with chlorophyll. Kelp also has a bunch of the same other pigment as diatoms have to give them the characteristic brown or golden color. This pigment which masks the green and gives it the characteristic brown color is called: _____ (Hint- check your diatom notes!)

8. How did kelp help the war effort in the World War?

IF MICROSCOPES ARE SET UP, view each of the samples and respond to the following:

9. Compare the view of the kelp and a plant leaf. What are the whitish lines in the plant leaf that are not present in the kelp “leaf” and why aren’t they present in the kelp?
10. Look at the plant leaf & kelp leaf and say whether or not you are able to see the chlorophyll a (green) in both samples.