

## Giant Kelp Structure and Function Activity Worksheet

### Part 1

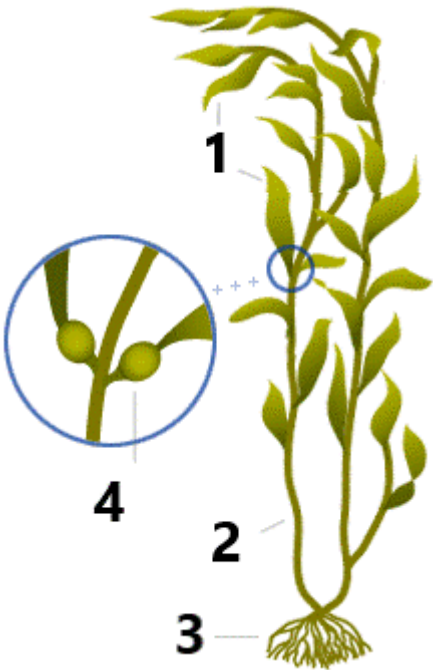
Look at the image below. Using the word bank, label each part of the kelp with the correct name. Use *Column A only*, to write your predictions before you read more information.

**Stipe**

**Holdfast**

**Blade**

**Float/Bladder**



**A) At first I thought:**

**B) Now I think:**

1. \_\_\_\_\_

1. \_\_\_\_\_

2. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

4. \_\_\_\_\_

**Part 2:** Write 1-2 sentences to predict what you think each kelp structure does. How do you think it helps the kelp to survive?

**Stipe:**

---



---

**Holdfast:**

---



---

**Blade:**

---



---

## Float/Bladder:

---

---

### **Part 3**

Read each section below to learn about what each part of the kelp looks like, and what it does to help the kelp survive. After reading all four sections, go back to part one complete *Column B*. Did your answers change at all?



#### **BLADE**

A leaf-like structure with a large surface area that absorbs sunlight for photosynthesis and nutrients from the water. The ridged texture slows the water around it and reduces the pull on kelp from the currents. The serrated edges encourage mixing of the water, bringing more nutrients into contact with the blades.



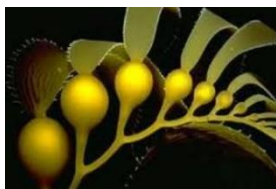
#### **STIPE**

A stem-like structure that is tough but flexible and provides support and stability to the large blades. Being flexible is important in the ocean so the kelp can sway back and forth with the water currents. Very fast growing structure, it can grow 10-12 inches each day!



#### **HOLDFAST**

Root-like structure that anchors the kelp to the seafloor, however it does not absorb nutrients from the seafloor like a plant root does. It has many finger-like projections, called haptera, that grip tightly onto rocks on the seafloor at depths of around 100 feet deep.



#### **FLOAT/BLADDER**

A balloon-like structure filled with gases, located at the base of the blades and connected to the stipe. These floats provide buoyancy to the large blades, floating them up towards the surface where there is more sunlight. Gases inside include: oxygen, nitrogen, and carbon dioxide.