Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Make Your Own Solar Cell!**

1. **Match the component to the task:**

Task: Component:

1. Transparent anode -Berry juice
2. Transport electrons -Titanium dioxide particles
3. Absorbs light -Carbon-coated slide
4. Transport positive charges -FTO glass slide
5. Cathode -Iodine electrolyte solution

**2. Draw a side-view of your cell and label each slice with a task from above**

**3. Circle which molecule will most likely chelate to titanium dioxide (TiO2). (Remember chelate means to attach to a metal center in two or more places)**



**Pelargonidin Delphinidin**

**4. Time to test your device! (Power=Current (A) x Voltage (V))**

Current (A):\_\_\_\_\_\_\_\_\_\_\_\_\_ Power:\_\_\_\_\_\_\_\_\_\_\_\_\_

Voltage (V):\_\_\_\_\_\_\_\_\_\_\_\_\_

**5. Cover the light on your device. These are now your “dark” values:**

 Dark current (A):\_\_\_\_\_\_\_\_\_\_\_\_\_

Dark voltage (V):\_\_\_\_\_\_\_\_\_\_\_\_\_

**6. Compare you results with other groups. Why might some devices have higher power output? Was there a difference between berry types? How could berry type effect the power output?**