

# Photosynthesis and Cellular Respiration in Algae Beads Results Page

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

Date: \_\_\_\_\_

## PART A: Data Collection (25 points)

- Record class absorbance readings of both the light treatment and dark treatment.

### Light Treatment

| Absorbance 550 nm | 5 min | 10 min | 15 min | 20 min | 25 min | 30 min |
|-------------------|-------|--------|--------|--------|--------|--------|
| Group 1           | .139  | .384   | .507   | .642   | .804   | .951   |
| Group 2           |       |        |        |        |        |        |
| Group 3           |       |        |        |        |        |        |
| Group 4           |       |        |        |        |        |        |
| Group 5           |       |        |        |        |        |        |
| Group 6           |       |        |        |        |        |        |
| Average           |       |        |        |        |        |        |

### Dark Treatment

| Absorbance 550 nm | 5 min | 10 min | 15 min | 20 min | 25 min | 30 min |
|-------------------|-------|--------|--------|--------|--------|--------|
| Group 1           | .24   | .217   | .196   | .162   | .17    | .142   |
| Group 2           |       |        |        |        |        |        |
| Group 3           |       |        |        |        |        |        |
| Group 4           |       |        |        |        |        |        |
| Group 5           |       |        |        |        |        |        |
| Group 6           |       |        |        |        |        |        |
| Average           |       |        |        |        |        |        |

## PART B: Questions (25 points)

- Scientists measure the rates of biochemical processes by monitoring either substrate depletion or product generation. Considering this, how might you monitor the rate of photosynthesis? Of cellular respiration?
- What type of organism would you need to use to be able to monitor BOTH photosynthesis and cellular respiration? Why are eukaryotic algal cells in the Photosynthesis and Cellular Respiration Lab a good choice?
- As the algae photosynthesize, how will the pH of the CO<sub>2</sub> indicator change? Why? How will the pH change if the cells begin to respire?