

QUESTIONS FOR REVIEW:

- 1) When sampling water for dissolved gas measurements what important steps should you take to ensure quality data?

- 2) What was the DO concentration as determined by Winkler titration of the boiled water, pond water, and aerated water?

- 3) How do these values compare with measurements from the DO probe?

- 4) What was the class mean and standard deviation of CO₂ per gram of *Elodea* per hour per liter consumed and produced in the light and dark bottle, respectively?

- 5) What was the consumption of O₂ in the pond water after 24hr in the dark? What was the production of O₂ in the light?

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6) For the pond water light/dark incubation, calculate the following parameters:

community respiration (R) = $DO_{\text{dark}} - DO_{\text{initial}}$ (mg O₂ L⁻¹; usually a negative number)

net primary productivity (NPP) = $DO_{\text{light}} - DO_{\text{initial}}$ (usually a positive number)

gross primary productivity (GPP) = NPP - R

$P/R = GPP / -(R)$ *

*NOTE P/R >1.0 indicates net autotrophy. 1.0 indicates compensation (carbon fixed = carbon respired). <1.0 indicates net heterotrophic conditions.

NAME: _____

DATE: _____