Study Questions for Articles 4-5

- Article 4 Bazzaz & Fajer
- 1) What effect might increased CO₂ levels have on water loss from plants and why?
- 2) What are the biochemical and anatomical differences between C3 and C4 plants?
- 3) What are some examples they present of C3 plants? What are some examples they present of C4 plants?
- 4) What is photorespiration?
- 5) Why might we expect the response of C3 plants to increased CO₂ levels to be greater than the response of C4 plants?
- 6) Why might a CO₂-induced shift in flowering times be ecologically important?

Article 5 - Shaw et al. 2002

1) Describe the experiment that was done.

What type of ecosystem was being manipulated? What treatments were used? How were they justified? Were the treatments replicated? If so, how many replicates were used? Did they have a control? If so, what was it? What did they measure?

- 2) What is relatively unique about this experiment compared to most of the previous studies on how ecosystems responds to increased CO₂?
- 3) What is the main result of this study and why is it surprising?
- 4) What do the authors identify as potential explanations that might account for their surprising results?