

Biology 252: *Form and Function Paper*

Overview: Plant form is typically well suited to carrying out the functions necessary for growth and reproduction. For this assignment, you will be asked to write a paper in which you identify and discuss ways in which plants have evolved to cope with one of the topics listed below. In particular, how are specific morphological or anatomical structures adapted to maximizing a plant's chances of success in surviving to a reproductive age and ensuring that its progeny are provided with the best possible chance of themselves reaching maturity?

Assignment: You will choose one of the seven topics listed below. Consider the major morphological features of plants as we have discussed them in class (seed, root, stem, leaf, flower, and fruit), and discuss how in different plants these structures are adapted to handle the wide range of both the beneficial and detrimental forces associated with the topic you are considering. While this may seem to be a Herculean task given the breadth of the topics, you are not expected to thoroughly cover every possible angle. Your paper should, however, demonstrate that you have researched your topic extensively. You should provide examples of species or other taxonomic groupings where applicable.

In addition to its overall content and presentation, your paper will be graded on its organization and your application of ideas and use of botanical terms that have been raised in class. Other points of consideration will include thoroughness, creativity, and use of sources. Formatting should follow that of the American Journal of Botany (for an online sample issue, visit the following website: <http://www.amjbot.org/content/vol190/issue5/>). You will need to cite at least ten references, five of which must be from primary literature. To help you organize your thoughts and material, an outline of your paper will be due two weeks before you hand in your paper.

Topics: Light
Water
Nutrients
Temperature
Protection - Biotic
Protection - Abiotic
Competition

Dates: Outline Due: Tuesday, October 28
Paper Due: Tuesday, November 11