SA #42	ANGIOSPERMS: Flower to Fruit and Seeds
BIO 2130	Stern, Chapters 8 and 23 (Parts)

OVERVIEW: We finish our taxonomic survey with the **Magnoliophyta**, the "flowering plants" or **angiosperms**. There are two taxonomic classes of angiosperms, the Liliopsida (monocotyledons) and Magnoliopsida (dicotyledons), distinguished by the number of cotyledons, or embryonic leaves within the seed.

READING & EMPHASIS:

On page 131 of Chapter 8, your text authors explain how Chapters 8 and 23 are complementary to each other in the treatment of angiosperms. Please read this statement before proceeding with the reading assignment noted below:

1. Read Chapter 8, pages 130-136, which presents the structure of *flowers*, *seeds*, and *fruits*.
2. Read Chapter 23, pages 441-450, which emphasizes the processes of meiosis, pollination, and fertilization.

STUDY QUESTIONS below represent what will be the focus of our discussion in lecture. Refer to your laboratory notes and graphics in addition to Chapters 8 and 23 to answer them.

1. Write a definition of **flower**. How do you explain the origin of flowers and flower parts such as sepals, petals, anthers, stamens, and ovary from a creation and evolution perspective?

2. Draw an angiosperm *ovule* in cross-section including details of the egg sac (female gametophyte), and label each structure within and around the egg sac. Then, extend each label to indicate the structures into which these structures develop–*i.e.* each of the following: *embryo, endosperm, seed coat, fruit*. Consult your laboratory study of the *Capsella* embryo.

3. Write a definition of *fruit*. What are two major categories of *fleshy fruits*, and two major categories of *dry fruits*? List one example of each category.

4. Both pine cones and legumes open to release seeds, yet legumes are not gymnosperms. Explain.

5. *Ginkgo biloba*, *Taxus cuspidata*, and wild black cherry (*Prunus serotina*) all have fleshy, edible tissues in their mature reproductive structures, but *Ginkgo* and *Taxus* are classified as gymnosperms, not angiosperms. Explain.