Lab 6: Seedless Plants

GOALS:
- Know the four main events in the evolution of plants and the four plant types that we will study in labs 6 and 7.
- Understand the plant life cycle: alternation of generations.
- Describe and understand the major characteristics of the 2 types of seedless plants including sporophyte, gametophyte, where gametes are produced, where fertilization takes place and where the zygote develops.

KEY TERMS:
- embryo protection
- vascular tissue
- seeds
- flowers
- sporophyte
- generation
- gametophyte
- gamete(s)
- egg
- sperm
- zygote
- haploid
- alternation of generations
- diploid
- moss
- antheridia
- archegonia
- sporangium
- spore(s)
- fern
- prothallus
- sorus/sori
- frond
- annulus

I. Seedless plants: Introduction, evolution and diversity:
pp. 365-367: read and answer questions.

II. Nonvascular plants:
pp. 368-370: read and answer questions; start filing out chart on C19.
   a. Materials for moss observations are on the front bench.
      i. Live moss gametophyte.
      ii. Demo-slide of moss male reproductive structures (antheridia).
      iii. Demo- slide of moss female reproductive structures (archegonia).
      iv. Live and/or preserved moss sporophyte.

III. Seedless vascular plants:
   a. Read & answer questions on page 372 (top).
   b. SKIP Whisk ferns, club mosses and horsetails
   c. Ferns: read and answer questions on page 374-377.
      i. Samples are on the side benches.
      ii. Frond with sori – observe w/ dissecting microscope.
      iii. Slide with the cross-section of sorus
      iv. Slide with fern prothallus (antheridia & archegonia on same slide) – observe with microscope
      v. Demo Slide of fern prothallus with sporophyte attached.

IV. Review – Seedless plants:
p. 378: answer questions: 1-9, 11, 13-16