

Fern Lab

Purpose:

To study the structure and life cycle of ferns and compare it to that of the moss. Also, to compare & contrast how ferns & mosses have adapted to a land environment.

Procedure:

Use the textbooks as a reference. Miller & Levine p. 455 – 461 & Nelson p. 261 – 263.

1. Examine the mature sporophyte of a fern. **Draw** and label the leaflets, midrib and the sori.
 - a. What are the sori?
 - b. Where are the sori located on the fern frond?
 - c. Examine the sori under the dissection microscope. What do the sori contain?
2. **Draw** the life cycle of a typical fern. **Label** the *sporophyte, sori, rhizome, roots, spores, gametophyte, antheridium, archegonium, and zygote*. Include a reference for your diagram.
3. **Explain** the life cycle you just drew in **3-4 sentences**.
4. What are the fronds attached to in ferns (look at your diagram of the life cycle)? What anchors this structure in the ground?
5. What is the gametophyte called in ferns? Is it independent, or dependent on the sporophyte generation?
6. Why can ferns grow taller than mosses?
7. What are the ecological roles of ferns?

Observations:

Answers to the questions and the diagrams completed.

Conclusions:

Discuss the purpose. Create a table (t-chart) of 5 similarities and 5 differences between mosses and ferns.