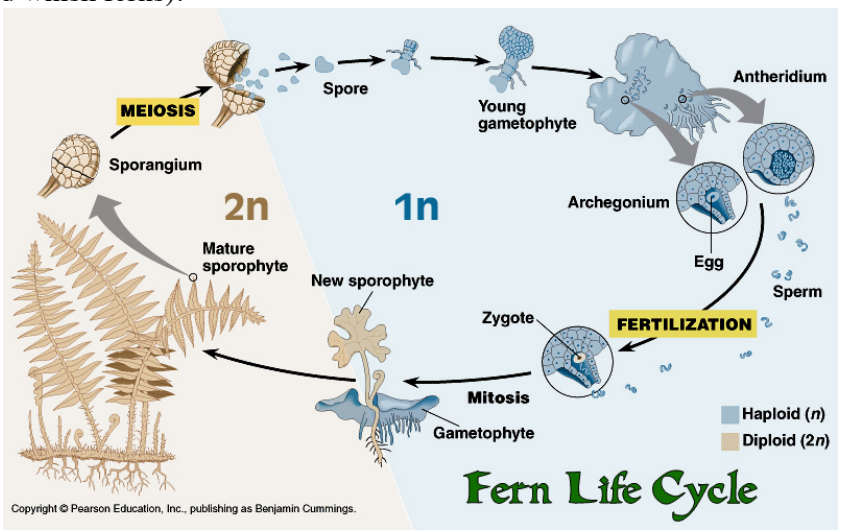
Pterophytes (Ferns) LAB

►Overview

Last week we looked at nonvascular plants (bryophytes and charophytes). This week, we're studying two major plant groups that have well-differentiated vascular tissue (xylem, which transports water and nutrients, and phloem, which transports sugars and other metabolites).

1. The first group, known as **seedless vascular plants**, consists of two phyla: **P. Pterophyta** (ferns, horsetails and whisk ferns).



►Station 1: Examine the transport tissue

	XYLEM	PHLOEM
DRAW		
DESCRIBE STRUCTURE - DOES ONE HAVE THICKER EDGES?		
FUNCTION		

- Question: Why are vascular plants able to grow much taller than non-vascular plants?

Transpiration:

a. What is transpiration

b. Why do plants use transpiration?

c. Are there any cons to transpiration?

d. Draw the flowers and celery

Draw the Celery

e. Explain why this experiment is showing transpiration

►Station 2: Sori

1. Take a small piece of leaf from the fern indicated by your instructor make a wet mount of the sore, see if you can see the individual spores
2. Draw the sporangium and some spores below.

Magnification: ____x

l) How are seeds different than spores?

►Station 3: Examine Ferns

1. Observe and compare the live specimens of ferns.
   - Fern species are often distinguished by the location of the spores under the leave. The spores are clumped into a structure called a **sori** (sing. ***sorus***) on the leaf.

	#1	#2
Drawing		
Location of Sori		