

# Plants 3

- send answer to iClicker Question 13A now.
- Gymnosperms
  - new features
  - demo & life-cycle
- Angiosperms I
  - new features
  - demo & life-cycle
- iClicker Question 13B

## Be sure to have:

- ~~handout~~ only if you didn't get Current Res #1 on Friday
- flower
- pine nuts
- cup
- paper towel

Due in lab **this** week:

⇒ Plant Diversity pre-lab (Lab Manual p 87 and on-line)

⇒ Eukaryotic Cells lab report

Current Research #1 Due in lecture Friday 3/12 / or down front  
(see website for Plants 3 lecture if you didn't get a copy)

Gymnosperms "naked seed" (more later)

ex. conifers = pine, spruce, fir, etc.

evolved from seed ferns (now extinct)

"New Features"

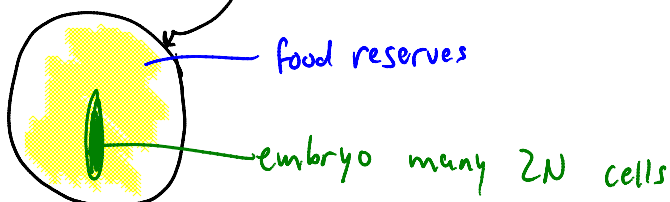
① secondary growth = increase in width

⇒ thicker plants ⇒ taller ⇒ trees (size & scale)

② seeds (not the same as spores)

= embryo (immature sporophyte) in tough shell (seed coat)  
with food reserves for early growth

ex pine nut (seed coat already removed for eating)



seed formation (happens in ♀ cone)

Zygote → embryo 2N "junior"

♀ s'phyte → food reserves N (mom)

integument (made from ♀ parent s'phyte) → seed coat (2N mom)

advantages of seed (vs. spore) for dispersal

- embryo is protected & supplied with starting food
- grows directly to s'phyte

other advantages (vs. Fern)

- sperm delivered to egg by pollen tube - don't need H<sub>2</sub>O for fertilization
- ∴ can live in dryer environments

Angiosperms - flowering plants

evolved from gymnosperms (? debate)

New features ① flowers - recruit animals for mating (pollination)

② fruits (more on weeds)

"typical flower" (very variable) ex. daffodil

