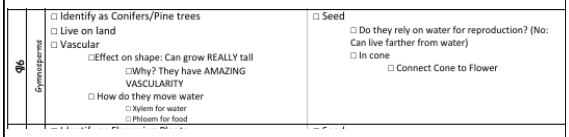
Gymnosperms

AKA Pine Trees

Paragraph #6

And then they had seeds



Commonly Known as:

Conifers AKA Pine trees

How are they like Ferns?

1. **Land Plants**
2. **Vascular**
   - Xylem and Phloem
   - But now the vascular tissue has evolved to awesome new levels to let conifers become the tallest plants

Where do they live?

On Land – and rocks at it!

- 3rd plants to make it to land
  - By far the best at living on land
  - Can handle arid (dry) areas
  - Awesome vascular tissue to transport water over great distances
  - No longer need water for reproduction because they have SEEDS!

How do Conifers Reproduce?

- SEEDS!
  - The first seeds have evolved
  - Since they are the first they are more simplistic (less derived)
    - Naked seeds
      - In fact: "Gymnosperm" Means Naked Seeds
      - The ovule/seed is produced on a leaf-like structure and is **unprotected**, or naked
    - Use a **cone** to protect their seed instead

Vascular

- What does that mean?
  - They CAN move water

- How does this affect their shape?
  - No longer constrained to have maximum SA for Osmosis
    - Don't have to be long/skinny or short/fat
  - Can be tall because they can move water
- Have **AMAZING** vascular tissue to grow so tall, has wood/cellulose around tubes to stop them from collapsing