Objectives:
1) Recognize that hormones act as intercellular communicators
2) Know the role of at least one hormone in plant development
3) Recognize that there are many hormones and each can play several roles

Auxin

- Can promote cell elongation
- Produced in the stem tip (and in leaves and seeds)
- Auxin is transported down the stem
- Auxin can be differentially released across the stem tip.
- If such a pattern is a response to light, it can lead to a mechanism of phototropism

Phototropism
Often a result in differential elongation

Cam 35.1 / (Stern 11.10)

The Tip Senses the Light

Coleoptile Experiments

Cam 35.2 / (Stern 11.1)

Something from the tip signals the cells to elongate

Cam 35.3 / (Stern 11.2)

Mechanism of Elongation

- Auxin (IAA) promotes certain proton pumps
- The resultant decrease in pH (concentration of H+) loosens the cells wall
- The cellular pressure pushing against the cell wall elongates the cell

Cam 35.4-5 / (no analogue)
Other Influences of Auxin
These include the signaling of fruit to develop
How might farmers use auxins in their agricultural practice?

Variety of Hormones

Hormone Table Draw/
GA image / (Stern 11.4)