

Regulation of stomatal opening based on Potassium ion hypothesis

DURING THE DAY

- _____ light (from sunlight) _____ proton pump in _____ of guard cells
- Proton pump use ATPs to transport _____ ion out of guard cells
- _____ ions diffuse into guard cells through channel proteins ~ to maintain electrochemical balance
- Accumulations of K^+ (and other anions) _____ the water potential in the guard cell
- Water from surrounding _____ enters the guard cell by osmosis
- The guard cell become _____ and curve _____ more
- This causes the stoma to _____

DURING THE NIGHT

- Proton pump _____
- _____ diffuse out of the guard cell
- This _____ the water potential in the guard cell
- Water from guard cell diffuse _____ to the surrounding epidermal cells by _____
- The guard cell become _____
- This causes the stoma to _____