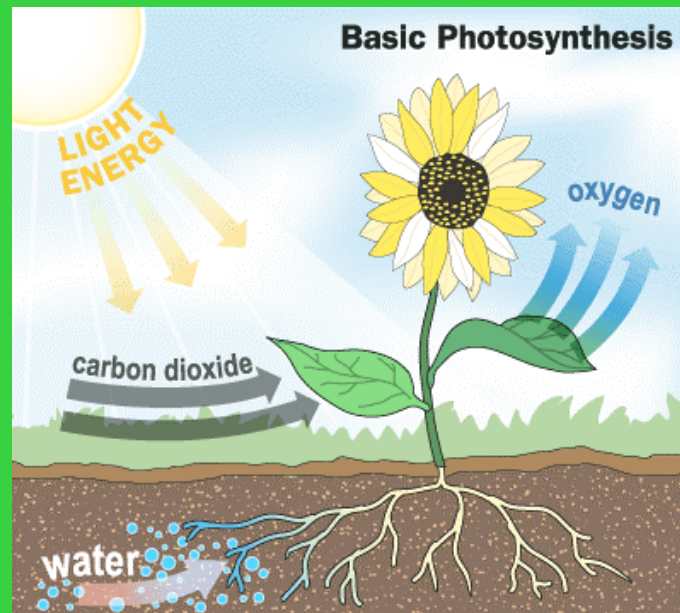


Cacti Adaptations



How do plants make their own food???

Sunlight + Water + Carbon Dioxide → Oxygen, Water, Glucose



Photosynthesis!!!

Transpiration



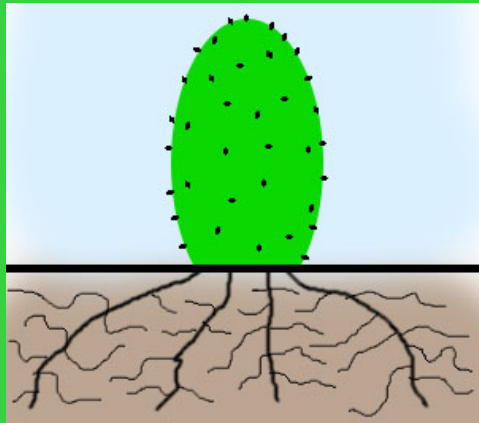
When the leaves open up to release oxygen to the air, water is also released.



Cacti live in the desert where there is little water so losing water through transpiration is deadly!

Roots

Fibrous Roots



- Spread out wide from the plant
- Grow close to the ground's surface
- Collect surface water



Taproots



- Anchor the cacti
- Store food and water deep underground away from hot and dry weather
- Reach deeper water supply

Root Hairs

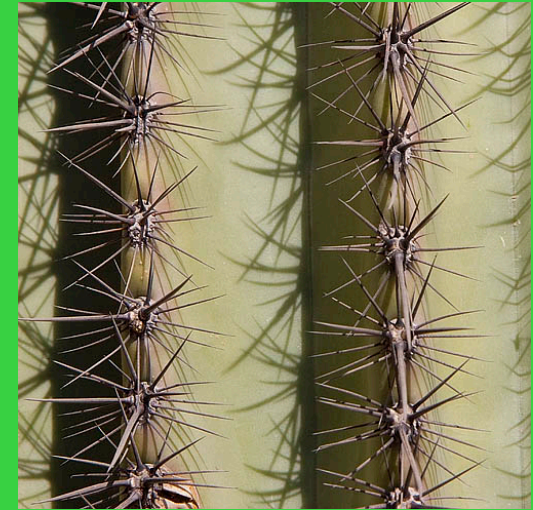


- Root hairs grow quickly on fibrous roots when there is rain so the cacti can collect the smallest amount of water.
- After the ground dries, root hairs die so the cacti doesn't have to use any water or energy to maintain them.

Spines/Leaves



Spines don't lose water!

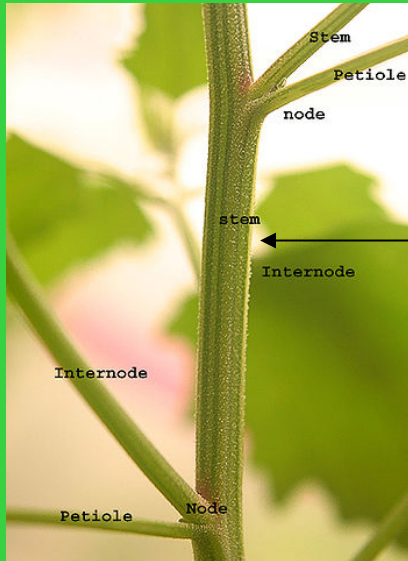


Spines provide shade!



White dense spines help reflect sunlight!

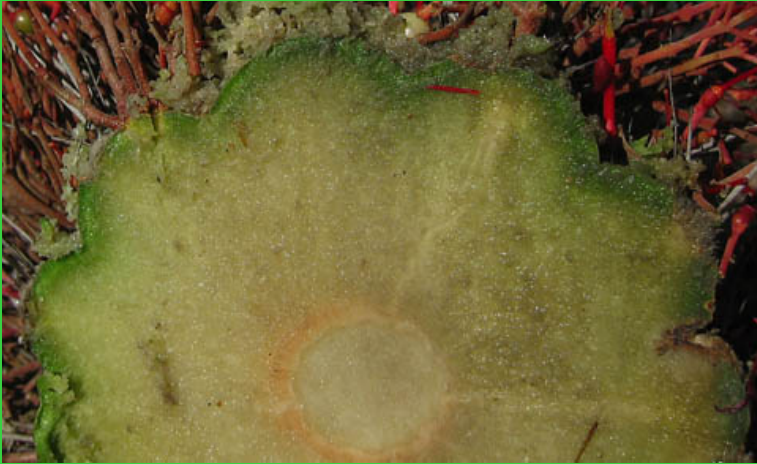
Stems



Stems



Stems



Cacti stem is thick and fleshy to store lots of water!



Stem has waxy waterproof coating to help keep water in the cacti.