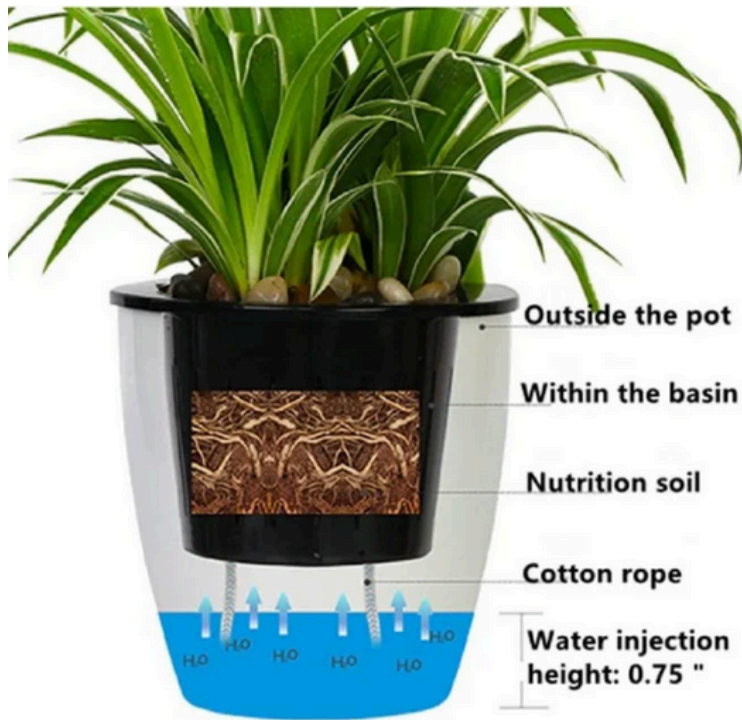




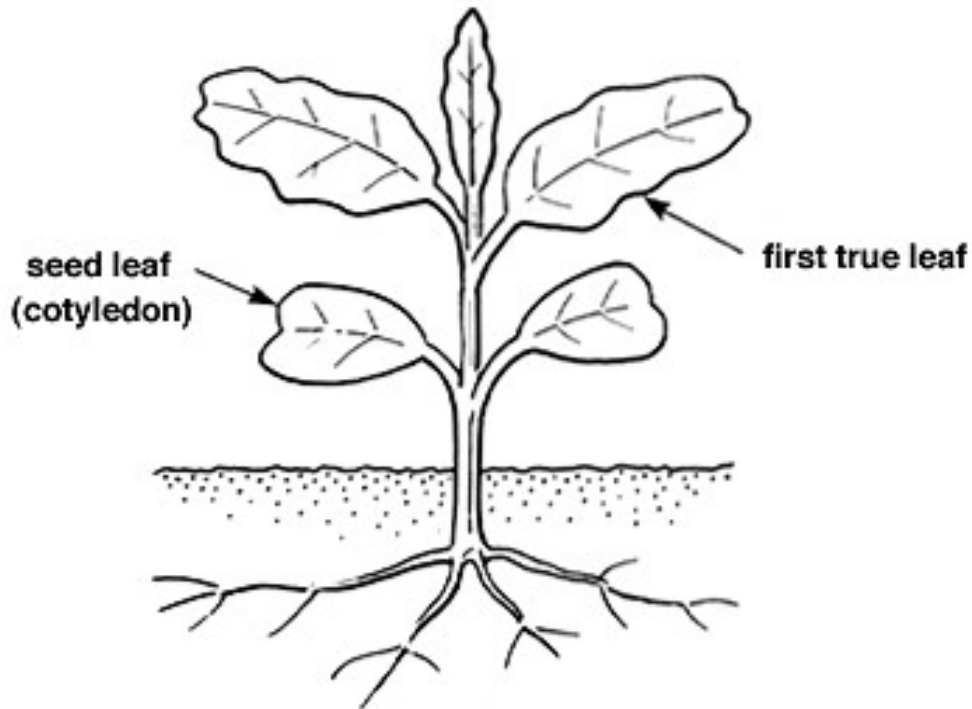
SELF -WATERING POTS & PLANT WATER MOVEMENT



- Some Self-Watering Pots use properties of water to provide consistent moisture directly to the roots of plants.
- Some self-watering pots have a cotton rope or "wick" that connects the water source to the soil.
- Water's forces of attraction to itself and other materials pull water from the reservoir into the soil to the plant's roots and up the stem.



STARTING SEEDLINGS IN SELF-WATERING POTS!

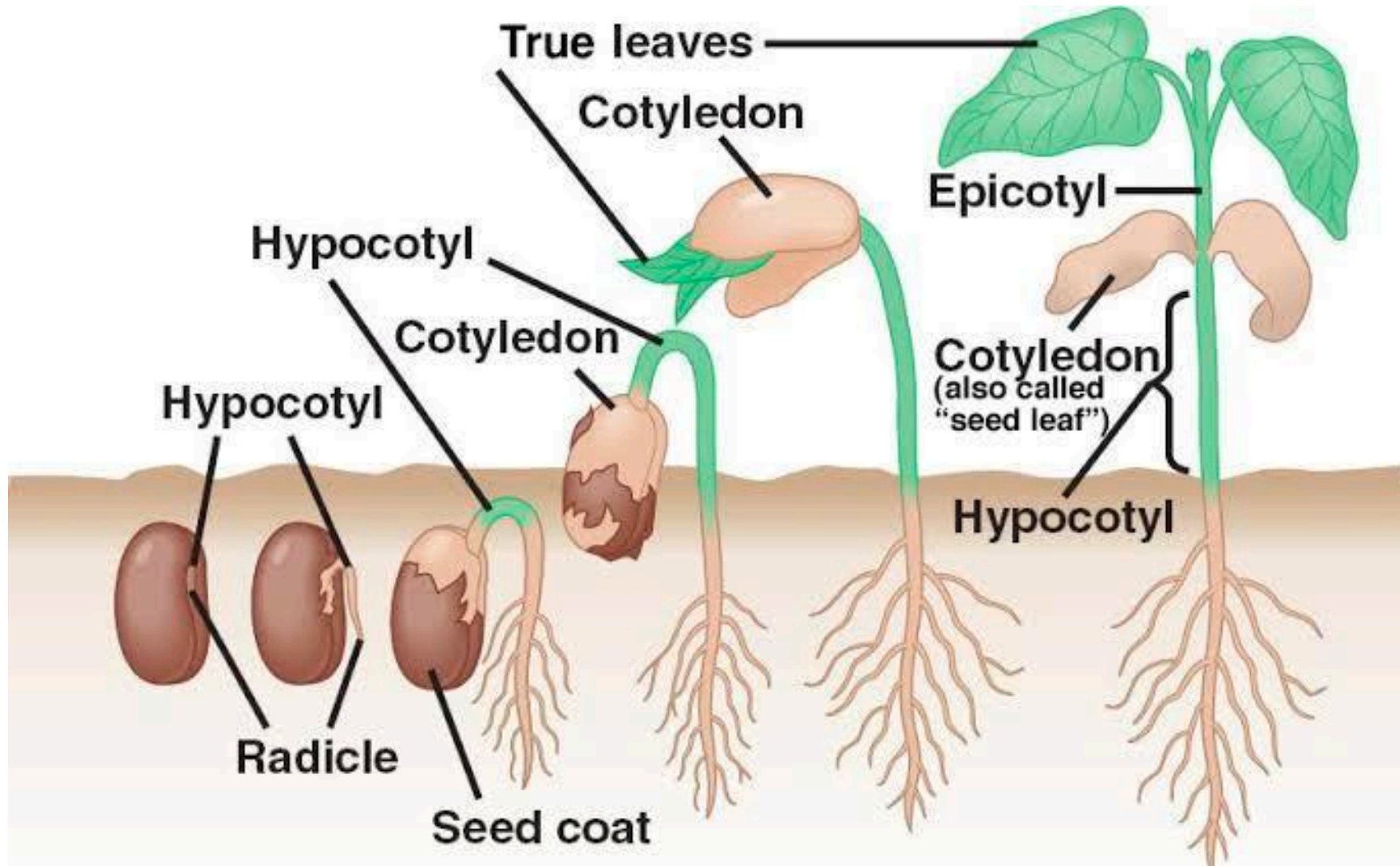


A seedling's first "leaves" are actually part of its embryo and can't photosynthesize. These are called "seed leaves".

- Delicate seedlings need evenly moist soil & self-watering pots can help ensure they don't dry out.
- Seedlings also need to be as close to lights as possible in order to produce healthy and stocky plants. (Or they get too spindly and weak.)



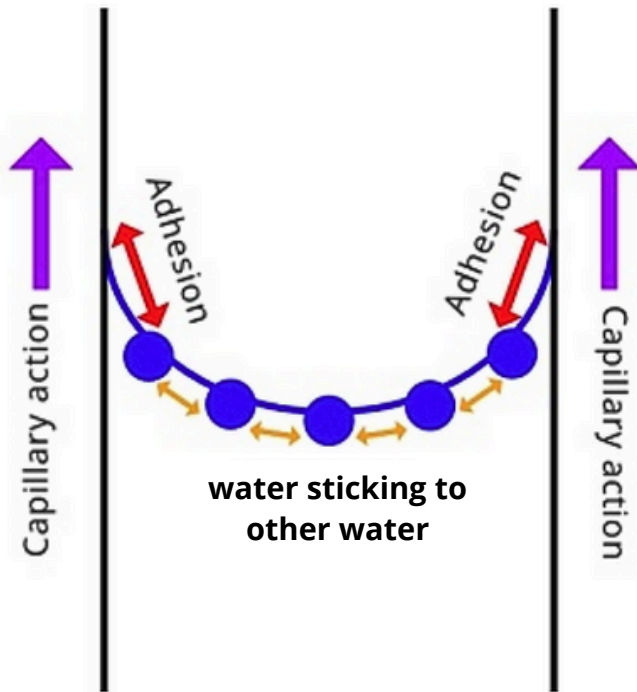
EARLY GROWTH OF A SEEDLING





CAPILLARY ACTION MOVES WATER

*See Amendments section on Lesson Plan for Walking Rainbow Experiment



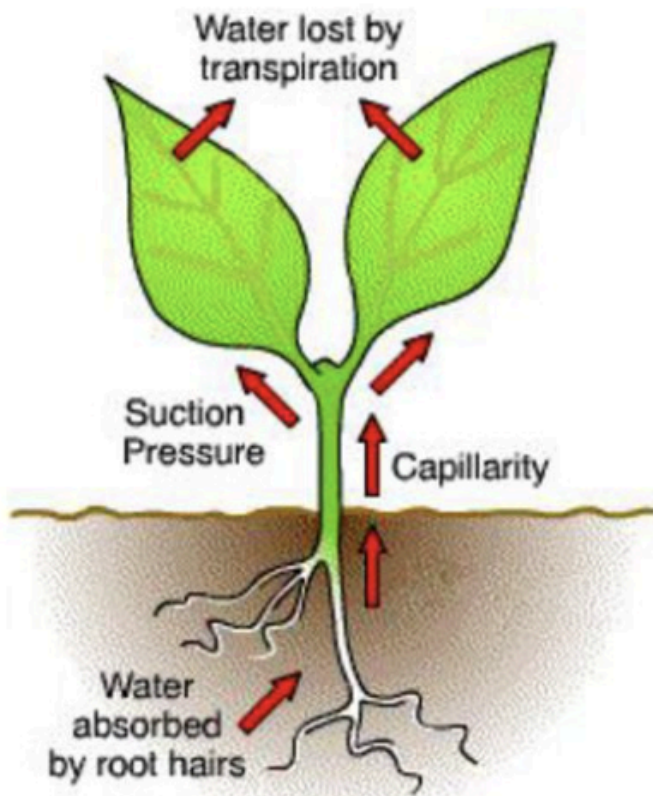
The attraction of water to a surface (**red** arrows) is stronger than its self-attraction (**orange** arrows).

The result is capillary action, where the attraction pulls water across a surface (**purple** arrows) like up a narrow straw or string.

- Capillary action is when a liquid moves up something solid, like a tube/string or into a material with a lot of small holes like a paper towel or sponge.
- This happens because water's building-block are **sticky to each other** and they **adhere (stick)** to other things, like a paper towel, straws, tables, etc.
- As one water building-block moves up, it pulls more water with it since they stick to each other.



HOW DOES CAPILLARY ACTION IN PLANTS WORK?



Capillary Action in Plants

- **Capillary action** is how plants bring water up their roots and stems to the rest of the plant- water sticks to them.
- The building-blocks of the water are attracted to the material of the inside of the stem and spread up it.
- Plants lose water from their leaves in a type of breathing (**transpiration**), pulling water from below where it's wetter.
- This creates a flow from **high**-water level in the soil, through the plant and out to the **low**-water level in the dry air.