



Water Conservation Garden

Consider the ways plants can conserve water.

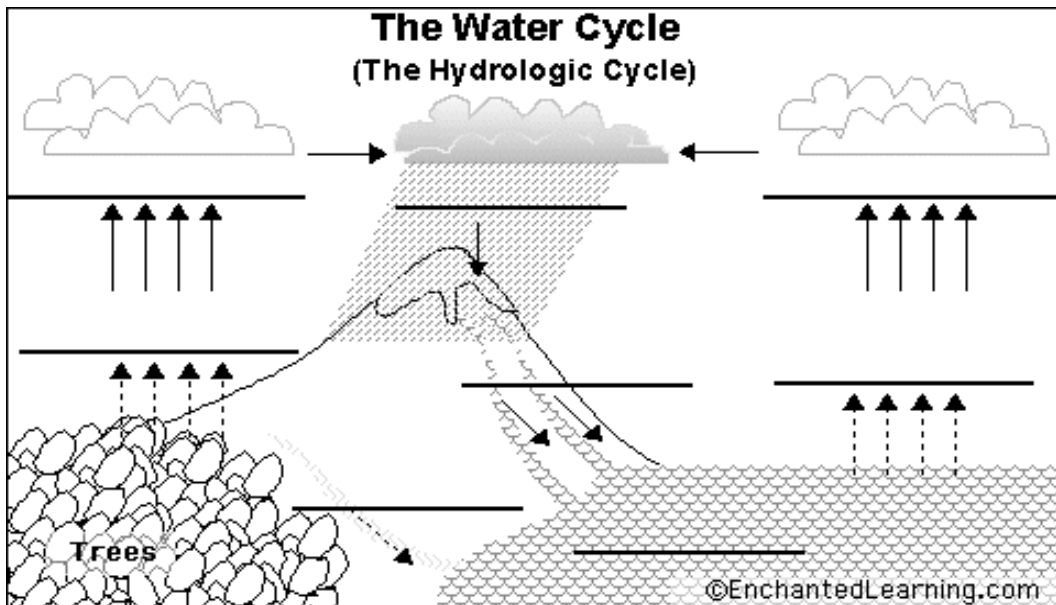
Hide and rest - During the hottest part of the day many desert grasses and other plants "roll up" their leaves (hide and rest) to reduce the amount of surface area exposed to sun and wind. Some plants simply position themselves so they have less exposure to the climatic elements on a hot, sunny day.

Spines - The hairs and spines on plants reduce moisture loss by buffering the wind. They also help to cast tiny shadows on plants. The hairs and spines can even reflect the sun's rays away from plants.

Waxy cover - Plants do not only lose H₂O through their pores, they also lose it through the cell walls on their leaves. The leaves and stems of many desert plants have a thick covering that is coated with a waxy substance, allowing them to still open and absorb CO₂.

Shrink and Swell - Desert plants have other adaptations for water storage, such as pleats or folds. These unique surfaces can swell if the plant soaks up a lot of water. Then as drought sets in, they will shrink, and the plant makes use of water it has stored.

Little leaves - Many desert plants have small leaves, no leaves, or the leaves have modified into thorns. The smaller or fewer leaves a plant has, the less H₂O is lost during transpiration since it has less surface area exposed to the sun and wind. Green twigs and stems help to carry out photosynthesis.



Fill in the blanks:

Accumulation - the process in which water pools in lakes and oceans.

Condensation - the process in which water vapor (a gas) in the air turns into liquid water.

Evaporation - the process in which liquid water from the earth's surface becomes water vapor.

Precipitation - the process in which water (as rain, snow, or hail) falls from clouds.

Subsurface Runoff - Water that flows in underground streams, drains, or sewers.

Surface Runoff - Water that flows in surface streams, rivers, or canals.

Transpiration - the process in which water within plants evaporates into the atmosphere.