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It may be possible to use Capillary Action as a Cooling method RICHARD KRISKE, University of Minnesota — It is well known that it takes no work for water to rise in a Capillary tube. It only takes work for the water to be removed from the top of the tube. It may be possible for this water to be removed using individual photons of the size needed to break the water to water hydrogen bond. This bond is often broken in evaporation of water from surfaces. As this bond is broken at the top of the Capillary tube the water makes a phase transition and makes room for another water molecule to move up the column. The phase transition cools the column and another molecule moves up the column with no work being done. There is a net energy loss in this system, and the entire system is cooled. This may be one of the mechanisms that plants use to cool themselves and the soil around the plant. This mechanism may be used to explain the slight temperature regulating effect of plants and the areas around large plant populations. Photons of other sizes may also be used in this mechanism if there are the proper molecules (Chlorophyll for instance) in a chain reaction linked to this mechanism. This chimney like effect could also be used as a precise balancing method to transport materials based on mass and chemical composition, like a chromatograph. The "Einstein Refrigerator" can be viewed as a similar idea.

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