

## The Attraction of Particles when Dissolving can be explained by the Particle Theory

### Particles stay together because

i) they are attracted to each other. Sometimes particles can become attracted to other particles (like sugar and water).

ii) Particles are always moving.

<https://phet.colorado.edu/en/simulation/legacy/soluble-salts>

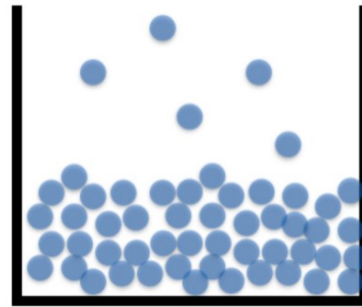
### **Molecules of water and salt combining - advanced**

[Why'd the Ocean Stop Getting Saltier? - YouTube](#)

[Why is the Dead Sea so salty? - YouTube](#)

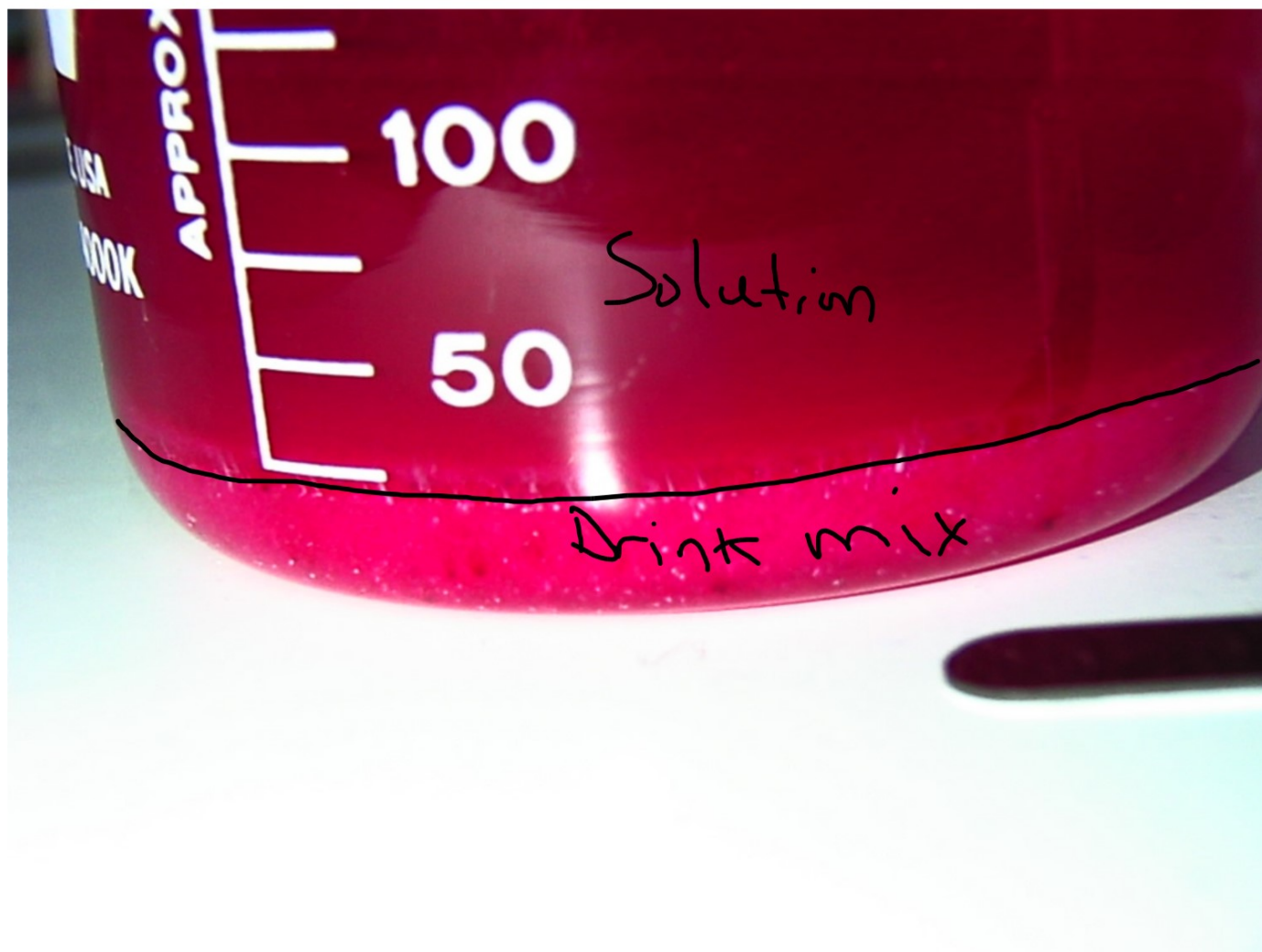
[The Dead Sea Is DYING - YouTube](#)

[The Benefits of Dead Sea Products on The Doctors TV Show - YouTube](#)

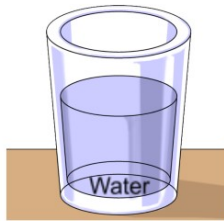


A drop of water of water evaporates into gas.

The particles are always moving, however, and some are always on the outside of the drop. These outside particles occasionally jump off into the air. Overtime, all the particles jump off. They still exist, but they are independent and free to move about as gas.



## → Why Do Some Materials NOT Dissolve?



Solvent



Solute

→ There is usually less solute than solvent in a solution (more solvent than solute.)

**Solute** - is the substance that dissolves in a solvent to form a solution (ex. the salt in water)

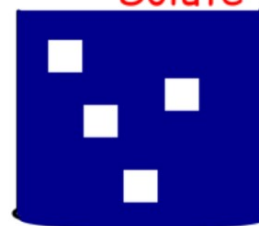
**Solvent** - is the substance that dissolves a solute to form a solution (Ex. usually water)

Already have  
**Solution** - is a mixture of 2 or more materials that come together to form one set of properties that blend together



Sugar Water **Solution**

Sugar Cube  
**Solute**



Sugar and water together is a solution.  
 sugar is the solute  
 water is the solvent