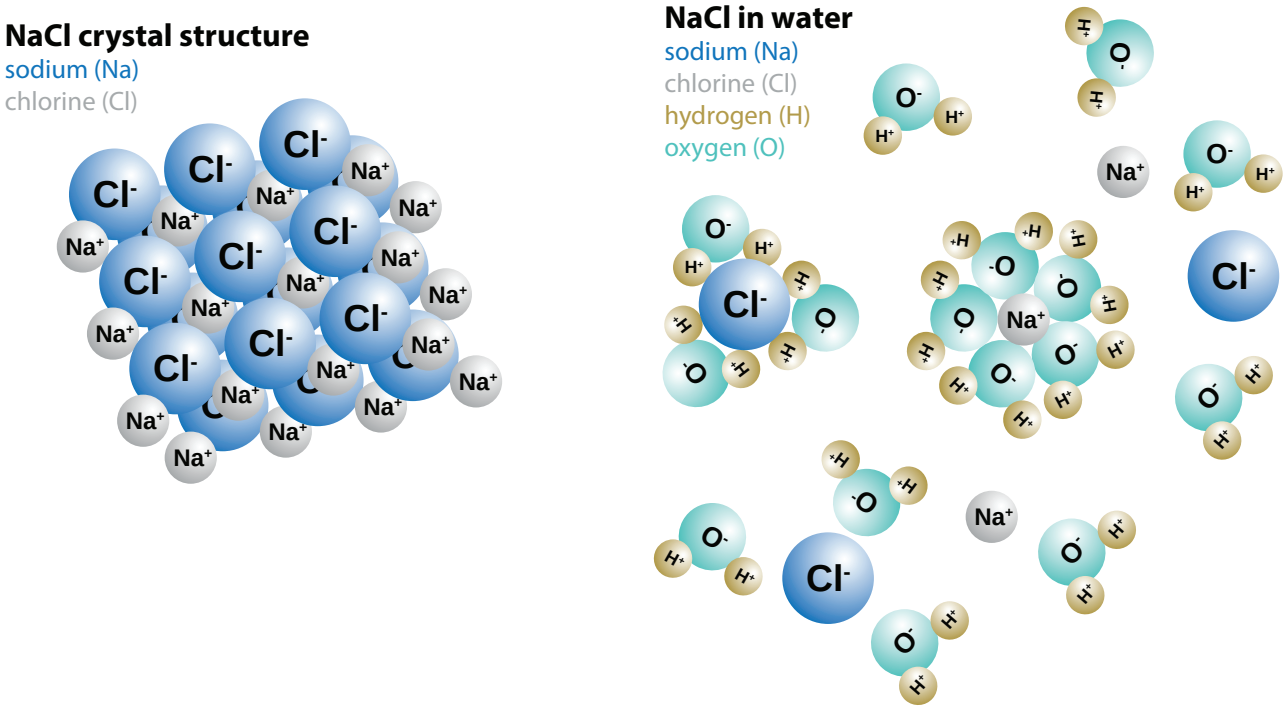
The Chemistry of Water

Vocabulary	
solvent	atom
molecule	bond

Water is called the universal **solvent**. It is called this because more substances dissolve in water than in any other chemical. A **molecule** of water is made up of two hydrogen **atoms** and one oxygen atom. An atom is the basic unit of a chemical element. The hydrogen and oxygen atoms of a water molecule are held together by **bonds**. In the configuration of a water molecule, the two hydrogen atoms occur on the same side of the oxygen atom. The hydrogen atoms create a positive electrical charge while the oxygen atom creates a negative charge.

When water molecules orient towards each other, they arrange themselves so that positive and negative charges meet. Since opposite electrical charges attract, water molecules tend to attract each other. This makes the water molecules clump or "stick" together and form drops or beads on smooth surfaces.

The electrical charges of the water molecule cause it to be a good solvent—a substance that allows other substances to become part of it. Look at the picture below. It shows how the NaCl (table salt) molecule breaks apart when mixed with water. The positive Na (sodium) atom is attracted to the negative O (oxygen) atom, and the negative Cl (chlorine) atom is attracted to the positive H (hydrogen) atoms.



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Review Questions

1. How many atoms are in a water molecule?

2. Draw a picture of a water molecule.

3. Describe the structure of a water molecule.

4. How do water molecules form droplets of water?

5. Why is water called the universal solvent?

6. Explain how NaCl or table salt dissolves in water.

7. Write the definitions of the following words.

Vocabulary	
solvent	
molecule	
atom	
bond	

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