The Composition of Seawater

**Water** is essential to life and central to our study of the oceans! It exists in many different places on Earth, some more accessible than others, known collectively as **reservoirs**. The processes that **transfer** the water molecule – H2O – between reservoirs form the **hydrologic cycle**.

* List as many major reservoirs of water on Earth as you can. Example: oceans
* Which three reservoirs do you think contain the most water?
* Of all the reservoirs you listed, in which do you predict a water molecule will have the longest average stay? The shortest?
* List all the processes you know that transfer water molecules between reservoirs.

When you finish this page, stop. We’ll piece the information together at the board into an illustration of the hydrologic cycle, which we’ll need before answering the back.

**Dissolved** substances in water are known as **solutes**. Some **transport processes** in the **hydrologic cycle** carry both solutes and water.

* Which transport processes in the hydrologic cycle are most likely to transport both solutes and water?
* Which transport processes in the hydrologic cycle are unlikely to transport large quantities of solutes?
* What types of substances, including solutes, are likely to be in **seawater**?
* Which of the substance types (above) are solutes?
* Place a star next to any of the types of substances that would also be found in **fresh water**, for example, a Maine pond.

The **concentration** of a substance in water is the amount (mass, volume, molecules, etc) of the substance present in a given amount of water (mass, volume, molecules, etc).

* For any substance present in both fresh water and seawater, predict where it will be more concentrated:

More concentrated in seawater More concentrated in fresh water