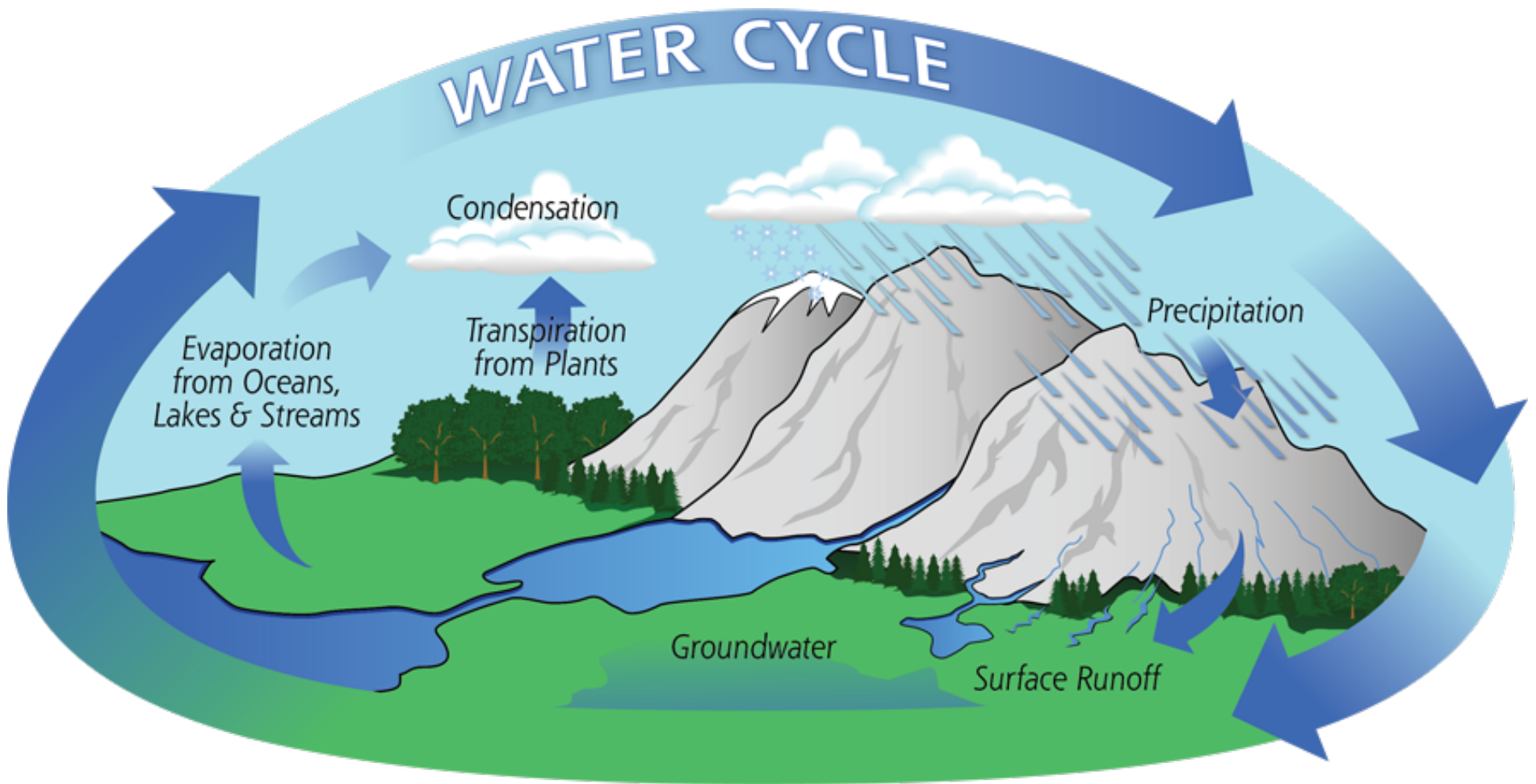
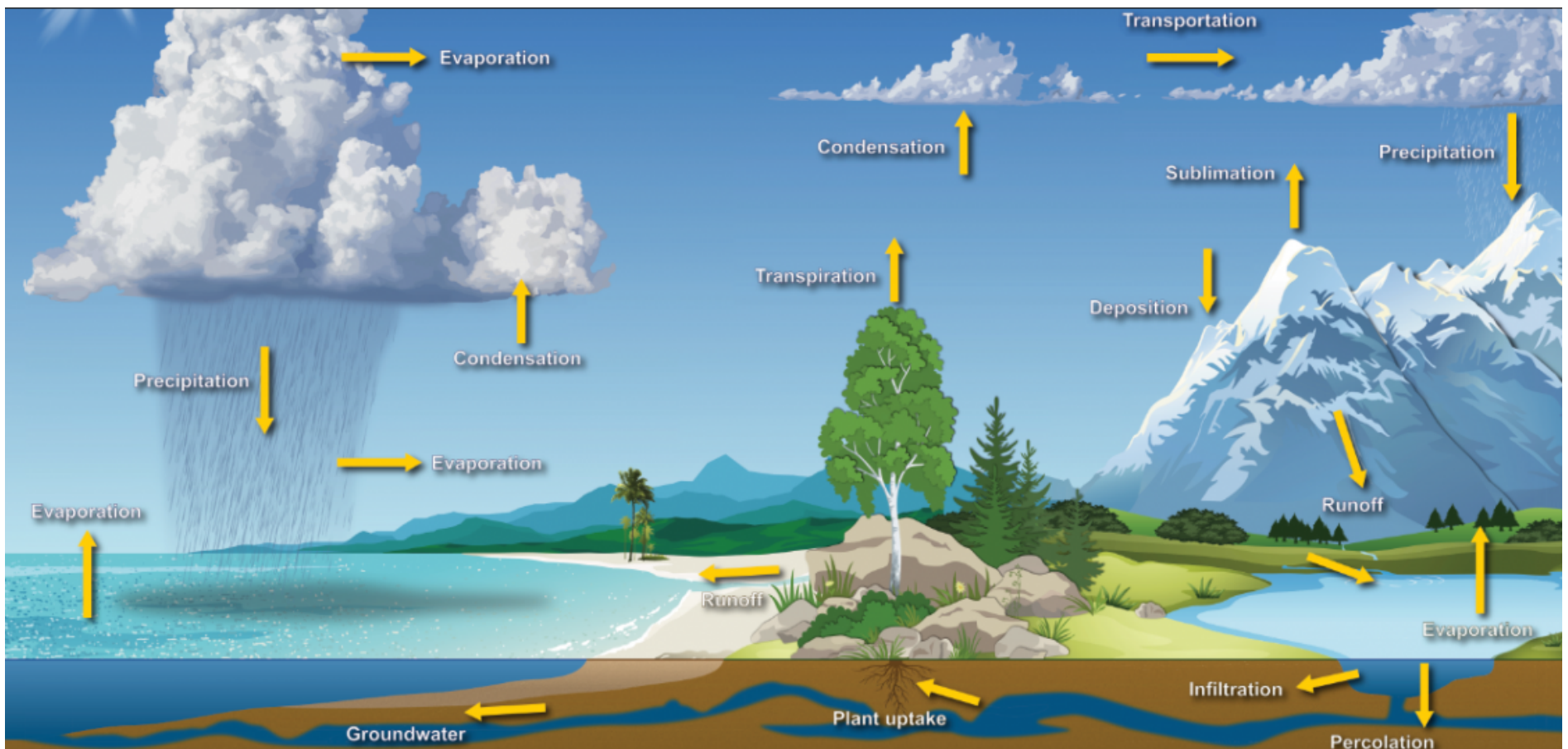


Depiction of how water moves between the Earth and the atmosphere in a cycle that renews the water supply. The water on Earth is constantly being *recycled* – new water is not constantly made.



The water cycle shows the continuous movement of water within the Earth and atmosphere. It is a complex system that includes many different processes. Liquid water evaporates into water vapor, condenses to form clouds, and precipitates back to earth in the form of rain and snow. Water in different phases moves through the atmosphere (transportation). Liquid water flows across land (runoff), into the ground (infiltration and percolation), and through the ground (groundwater). Groundwater moves into plants (plant uptake) and evaporates from plants into the atmosphere (transpiration). Solid ice and snow can turn directly into gas (sublimation). The opposite can also take place when water vapor becomes solid (deposition).



How do human activities affect the water cycle?

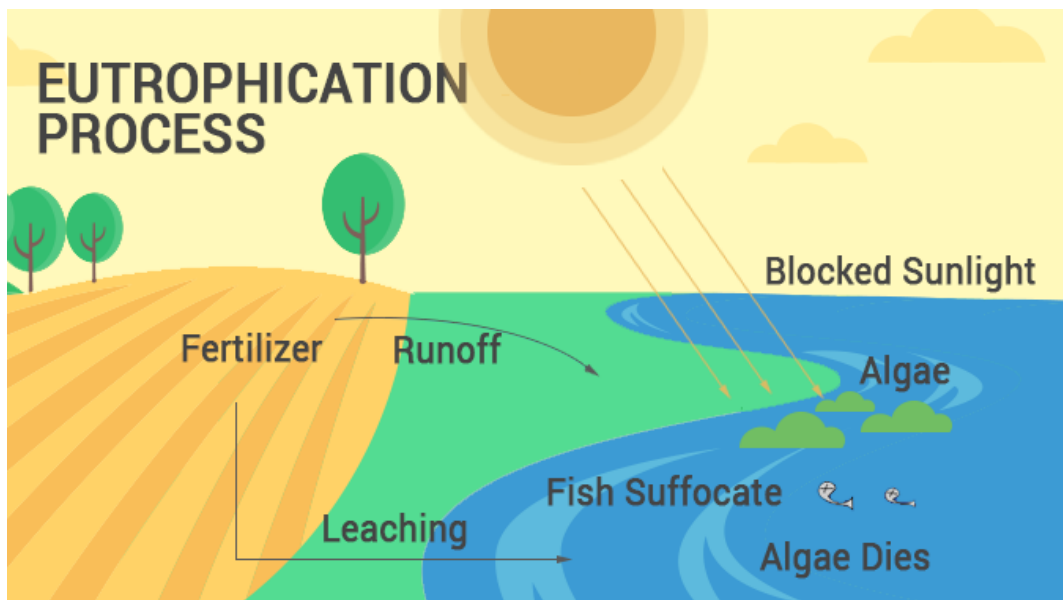
We interrupt water pathways in two ways:

1. Withdrawals:

We take water out of the system to irrigate crops, to provide us with drinking water and to carry out many of our industrial processes.

2. Discharges:

We add substances to the water – intentionally or not. As precipitation falls on the ground and moves into rivers and creeks, it picks up a whole range of pollutants. In rural areas these pollutants may include farm pesticides, herbicides and fertilizers as well as wastes from faulty septic systems and improperly handled manure. In urban areas, the pollutants may include gas, oil, pet waste, fertilizers, pesticides, salt and treated human waste from sewage treatment plants.



Eutrophication is the buildup of nutrients in water. Too many nutrients cause an overgrowth of algae on the water surface that blocks sunlight. This causes water plants to die, and they are decomposed and settle to the bottom. During decomposition, the water is stripped of oxygen, which causes fish to die, as well. All the extra dead material keeps the nutrient level high, and also starts to fill in the pond.