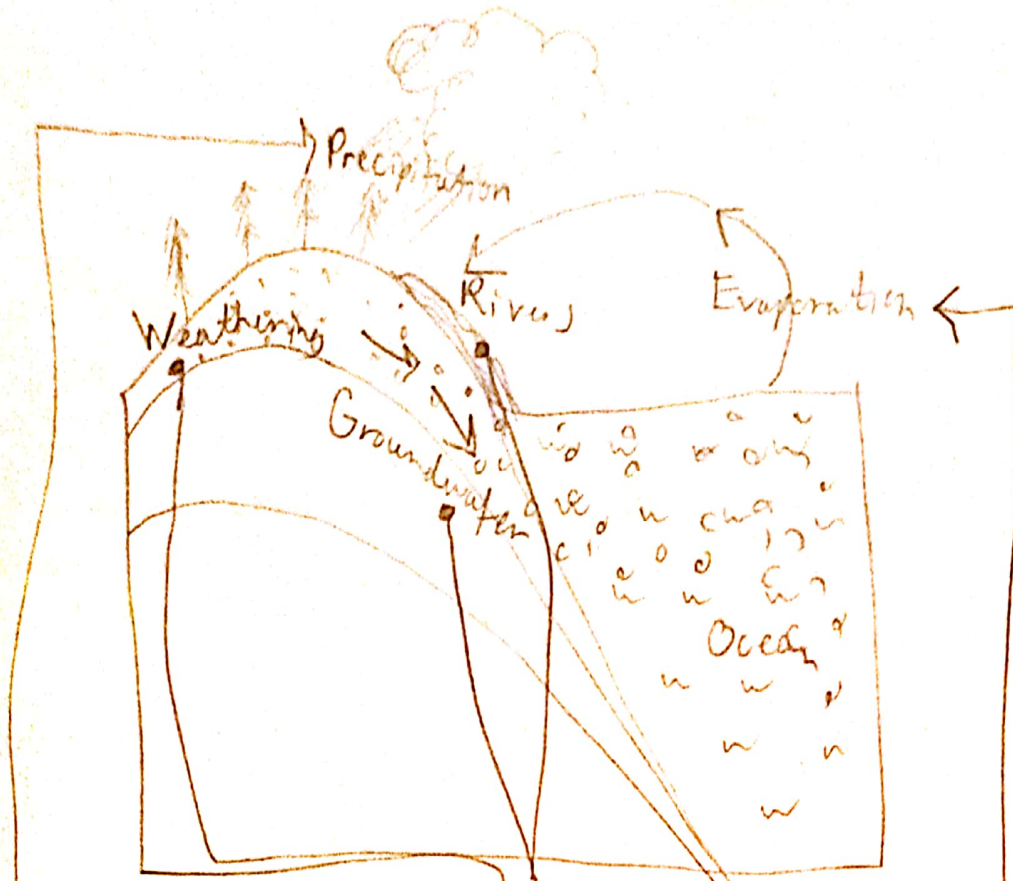


Question: Sketch, label, and explain how weathering makes oceans salty (4.3E).



1. Soil, rock, and sediment on/near the surface are exposed to atmospheric water and oxygen. Reacting water arrives through various means of precipitation.

2. Hydrolysis reactions in subsurface drive out cations from existing mineral structure while producing clay minerals. These dominant feldspar cations, sodium and potassium, can form salts.

3. Cations and anions, like chloride, are carried by running water to the ocean, whether it be via groundwater or rivers.

4. While rivers are the source of salt for oceans, oceans are saltier than streams due to ocean evaporation. When seawater evaporates, salt is left behind in the ocean, increasing the salinity of the oceans. This also produces salt bed deposits, which, if uplifted, can also contribute to the salt content of streams and oceans.