

Water Cycle/Currents Study Guide

- How can water be scarce when almost three-fourths of the Earth is covered by water?
most is saltwater/oceans
- A student looks outside her window after it has rained and sees puddles of water. Later that same day, the puddles have disappeared. What process explains why the puddles have disappeared?
Evaporation = liquid changes to gas
- Water vapor is one of the components of the air in the atmosphere. What change causes the water vapor in the air to form clouds?
As it cools, water vapor in air condenses to liquid
- Every day, water evaporates from Earth's surface. However, earth is unlikely to ever run out of water. Explain why Earth will not run out of water?
Water is constantly being recycled into different forms
- The average annual precipitation in many places in Florida is greater than that of most places in the United States. Why does Florida have so much rain?
Nearby warm ocean waters cause high levels of water vapor in air
- A terrarium is a closed glass container with plants growing in it, as shown below. Explain how water vapor is produced in the terrarium?

Transpiration

7. As water changes state, the water either absorbs or releases energy. Give an example of water releasing thermal energy.

water vapor condensing

8. Give an example of water absorbing energy?

Evaporation

9. There are water drops on the outside of the glass. Where did the water come from?

Condensation → water vapor touches cool glass, loses

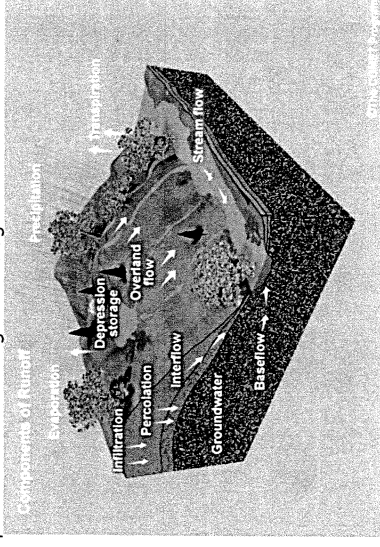
permeability). Sandy soil, in contrast, allows water to move freely (high permeability). When would be an appropriate time to use sand in an area? Soil?

Sand → draining a field Clay → lining a pond or lake

11. When water percolates into the soil how will it be stored underground?

In the pores (cracks and spaces) between the soil

12. Mikhail drew a diagram to show how rainwater can be sent to a stream. His diagram is shown below. Explain what is occurring in this diagram



Water percolates into the soil / groundwater surface and subsurface runoff towards the stream

13. Variations in air pressure from place to place are the principal cause of

wind

14. The global winds which most influence the weather in the United States are the

Prevailing Westerlies

15. Which surface winds blow between the 30 latitude and the equator?

Trade winds

16. If the Earth did not rotate, how would air at the equator move?

Cool Air from poles would move towards equator in straight line,

warm, expands, rises

18. The eastward rotation of Earth on its axis deflecting or bending the moving air or water away from its initial course is called what?

Coriolis Effect