

# The Whys of Weather: Clouds

by ReadWorks



Have you ever looked up at clouds and wondered where they come from or what they are made of? Clouds can be different shapes, but they are all mostly made of water.

There are always small particles of water in the air that people can't see. A lot of these tiny particles of water are in the form of a gas called water vapor. Most of the water vapor in the air comes from the oceans. This happens when liquid water toward the surface of the oceans is warmed, usually by the sun. Eventually, the warmed water becomes water vapor, rising into the air.

To make clouds, the water particles in the air have to come together, but they can't come together as water vapor. They need to be liquid water or ice crystals. Water vapor can turn into liquid water through a process called condensation.

In the air, liquid water can stick to specks of dust, water drops, or ice crystals. This forms cloud droplets. Lots of cloud droplets together form clouds.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

1. What are clouds mostly made of?

- A. air
- B. water
- C. sunlight
- D. none of the above

2. The text describes the sequence of how clouds form. What happens before water vapor turns into liquid water through condensation?

- A. Water vapor rises in the air.
- B. Liquid water sticks to specks of dust, water drops, or ice crystals.
- C. Cloud droplets form clouds.
- D. Rain falls from the clouds.

3. Clouds are not entirely made up of water droplets. What evidence from the text supports this statement?

- A. "Most of the water vapor in the air comes from the oceans. This happens when liquid water toward the surface of the oceans is warmed, usually by the sun."
- B. "There are always small particles of water in the air that people can't see. A lot of these tiny particles of water are in the form of a gas called water vapor."
- C. "In the air, liquid water can stick to specks of dust, water drops, or ice crystals. This forms cloud droplets. Lots of cloud droplets together form clouds."
- D. "To make clouds, the water particles in the air have to come together, but they can't come together as water vapor."

4. Read these sentences: "In the air, liquid water can stick to specks of dust, water drops, or ice crystals. This forms cloud droplets. Lots of cloud droplets together form clouds."

As used in these sentences, what does the word "form" most nearly mean?

- A. destroy or harm
- B. make or create
- C. show or display
- D. train or guide

5. What is the main idea of this passage?

- A. Clouds can be different shapes, but they are all mostly made of water.
- B. To make clouds, the water particles in the air have to come together.
- C. Most of the water vapor in the air comes from the oceans.
- D. Clouds are formed when water vapor in the air turns into liquid water that can stick to specks of dust, water drops, or ice crystals.

6. What is condensation?

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7. Why is condensation necessary for clouds to form? Use evidence in the text to support your answer.

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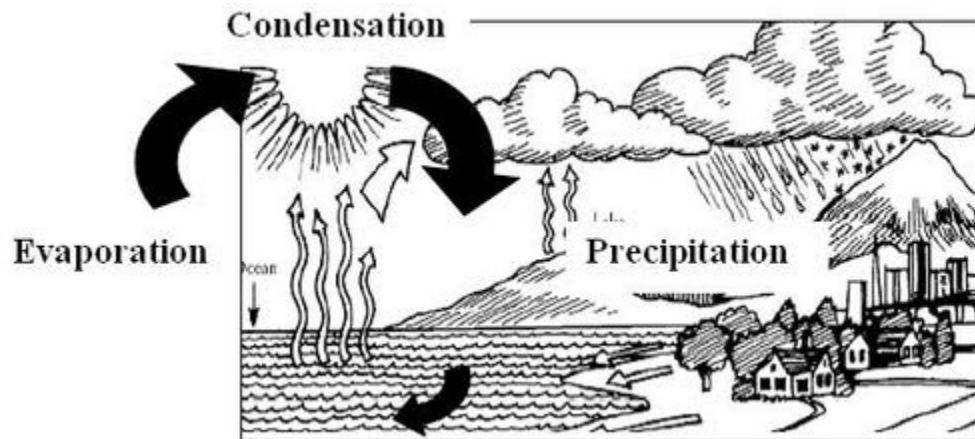
8. Choose the answer that best completes the sentence.

\_\_\_\_\_ there are always small particles of water in the air, people cannot see them!

- A. As a result
- B. However
- C. Even though
- D. Because

# Weather - The Water Cycle

by ReadWorks



Where does the water that causes rain come from? Actually, the water was there all along. All of the water in the whole world has always been here. Think of all of the oceans and lakes on the globe. This is where the tiny water particles in the air come from. But how does this happen?

The Earth's water cycle begins with a change in temperature. When the sun heats the Earth, a little water from oceans, lakes, and rivers evaporates. It turns into an invisible gas or vapor. Water molecules rise into the air. Eventually, clouds form and the water drops back to Earth as rain. The rain flows into rivers or streams back to the ocean or lakes again. Do you see the arrows in the picture? These arrows show the path of water from the ocean, to the sky, and then back to the earth. This is the water cycle.

Condensation also plays a big role in the creation of rain. The air far up in the sky can be very cold. When the warm air that contains invisible water droplets rises from earth and meets cold air, the droplets become visible. This process is called condensation. Clouds are formed as the air high up becomes colder and heavier. When the water drops grow too heavy to be held by the air, they fall out of the clouds as precipitation, or rain. The rain runs into the Earth's oceans, rivers, and lakes. Then, the cycle starts all over again!

**Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

1. What do all of the arrows in the picture represent?
  - A. Lakes
  - B. The movement of water
  - C. Evaporation
  - D. Condensation
  
2. In the water cycle, lake water will do which of the following first?
  - A. Turn into water vapor in the air
  - B. Condense
  - C. Turn into rain
  - D. Turn into a cloud
  
3. Water vapor in the air will do which of the following last?
  - A. Flow into oceans, rivers, and lakes as rainwater
  - B. Turn into a cloud
  - C. Turn into rain
  - D. Disappear
  
4. What force causes the water cycle to start?
  - A. Evaporation
  - B. Condensation
  - C. Precipitation
  - D. Temperature change
  
5. The passage is mostly about
  - A. The differences between condensation and precipitation
  - B. How the sun causes rain
  - C. How water goes through different phases on earth
  - D. How rain moves in a circle

6. What do you think the author's purpose might be for writing this passage?

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7. What is condensation?

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8. The question below is an incomplete sentence. Choose the word that best completes the sentence.

The water cycle has a bunch of different stages, \_\_\_\_\_ condensation.

- A. also
- B. and
- C. except
- D. including