

Weather Tools & Climate

Question 1 .



What can this picture tell you about the beach at the time when the picture was taken?

- ☐ A. the weather
- ☐ B. the forecast
- ☐ C. the population
- ☐ D. the climate

Question 2 .

Directions: Select the correct image.

Which of the following instruments can be used to measure wind direction?

Question 3 .

Which of these could be part of a city's weather?

- ☐ A. a history of having tornados
- ☐ B. an average temperature of 55°F
- ☐ C. an average rainfall of 12 inches per year
- ☐ D. a thunderstorm

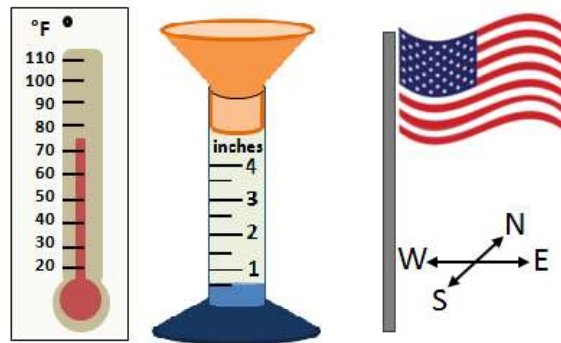
Question 4 .

A scientist keeps a record of the temperature, wind, and rain in a certain place for one week. We know the scientist is studying weather and not climate because

- ☐ A. only three factors have been measured.
- ☐ B. the scientist is only taking measurements in one place.
- ☐ C. air pressure was not recorded.
- ☐ D. the measurements are taken over a short time.

Question 5 .

The students in Miss Malloy's class must record the weather conditions every day. They are using a thermometer, a rain gauge, and the flag at the school.



The instruments in the picture show the weather conditions at their school for today. What information should be recorded in the blanks on the data table below?

Temperature	Rainfall	Wind Direction
_____	_____	_____

- ☐ A. 50°F, ½ inch, E
- ☐ B. 70°F, 1 inch, W
- ☐ C. 90°F, 1 inch, E
- ☐ D. 75°F, ½ inch, W

Question 6 .

The conditions of temperature, wind, clouds, and precipitation that happen in an area at a particular time are called

- ☐ A. the climate.
- ☐ B. the water cycle.
- ☐ C. the greenhouse effect.
- ☐ D. the weather.

Question 7 .

Directions: Drag each label to the correct weather card.

Several different weather situations are described on the cards below. Match each weather tool to the situation the tool would be best used in.

anemometer

thermometer

rain gauge

barometer

Question 8 .

Felix is using an anemometer to study the weather. He checks the anemometer two days in a row at the same time each day. The pictures below show how the anemometer looked each day.



day 1



day 2

What can Felix tell about day 2 by looking at the anemometer?

- ☐ A. It is rainier than day 1.
- ☐ B. It is windier than day 1.
- ☐ C. It is colder than day 1.
- ☐ D. It is hotter than day 1.

Question 9 .

The picture below shows an anemometer.



What does an anemometer measure?

- ☐ A. humidity
- ☐ B. air pressure
- ☐ C. temperature
- ☐ D. wind speed

Question 10 .

Which of the following is an example of climate change?

- ☐ A. It rains in a desert that is normally hot and dry.
- ☐ B. The highest temperature for the day is 47°F.
- ☐ C. The Earth's average temperature has been rising for 50 years.
- ☐ D. A thunderstorm causes heavy rain, hail, strong winds, and lightning.

Question 11 .

The weather in a particular location is influenced by _____.

- ☐ A. animal migration
- ☐ B. atmospheric movements
- ☐ C. plant life only
- ☐ D. population

Question 12 .

Ryan is using a barometer to study the weather. He checks the barometer two days in a row at the same time each day. The pictures below show the readings that he sees on each day.



What kind of weather should Ryan expect on day 2?

- ☐ A. very hot and dry
- ☐ B. rainy and windy
- ☐ C. windy and clear
- ☐ D. sunny and cold

Question 13 .

The weather report says that tomorrow will be warmer than today.

What tool could a person use to tell how much hotter it is tomorrow than today?

- ☐ A. a rain gauge
- ☐ B. a thermometer
- ☐ C. a flag pole
- ☐ D. a weather vane

Question 14 .

A farmer's crops need two inches of rain to fall this week in order to be healthy.

How can the farmer measure how much rain falls during this week?

- ☐ A. with a rain gauge
- ☐ B. with a weather vane
- ☐ C. with an umbrella
- ☐ D. with a thermometer

Question 15 .

A weather report said that the weather will be colder today because the wind is blowing from the north.

How could a person find out which way the wind was blowing if they did not hear the weather report?

- ☐ **A.** use a thermometer
- ☐ **B.** use a rain gauge
- ☐ **C.** wear a wind-proof jacket
- ☐ **D.** look at a flag on a pole

Question 16 .



picture A

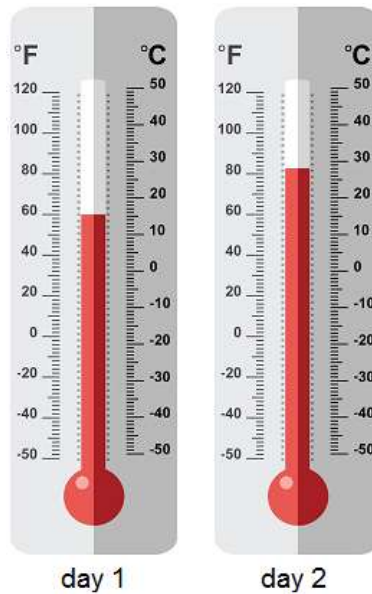
picture B

Using the flags as weather tools, compare the wind speed in picture A to the wind speed in picture B.

- ☐ **A.** The wind speed in both pictures is the same.
- ☐ **B.** From just the flags, it is impossible to tell anything about wind speed in the pictures.
- ☐ **C.** The wind speed in picture B is greater than the wind speed in picture A.
- ☐ **D.** The wind speed in picture A is greater than the wind speed in picture B.

Question 17 .

Kayla is using a thermometer to study the weather. She checks the thermometer two days in a row at the same time each day. The pictures below show the readings that she sees on each day.



What most likely happened between day 1 and day 2?

- ☐ A. A cold front entered the area.
- ☐ B. A tornado formed in the area.
- ☐ C. A warm front entered the area.
- ☐ D. A blizzard formed in the area.

Question 18 .

The picture below shows a weather tool called an anemometer.



Image courtesy of US Department of Defense

Which of the following is true about anemometers?

- ☐ A. Anemometers should be held vertically (straight up and down) when being used.
- ☐ B. Anemometers are used to measure wind speed.
- ☐ C. Anemometers need to be able to spin freely in order to work.
- ☐ D. all of these

Question 19 .

Directions: Select the correct image.

Which of the following instruments can be used to measure wind speed?

Question 20 .

Which of the following correctly defines the term *climate*?

- ☐ A. weather events that are rare for a particular area
- ☐ B. weather conditions that are only affected by terrain
- ☐ C. average weather conditions in a particular area
- ☐ D. current weather conditions in a particular area

Question 21 .

A newsreader states that the next day will probably be sunny, with light wind and some rain in the afternoon. The newsreader is describing

- ☐ A. the temperature.
- ☐ B. the weather.
- ☐ C. the season.
- ☐ D. the climate.

Question 22 .

What is the main difference between weather and climate?

- ☐ A. Weather changes but climates do not.
- ☐ B. Weather and climate measure different things.
- ☐ C. Weather is short-term and climate is long-term.
- ☐ D. Weather is seasonal and climate is not.

Question 23 .

Directions: Select the correct image.

Which of the following instruments can be used to measure air pressure?

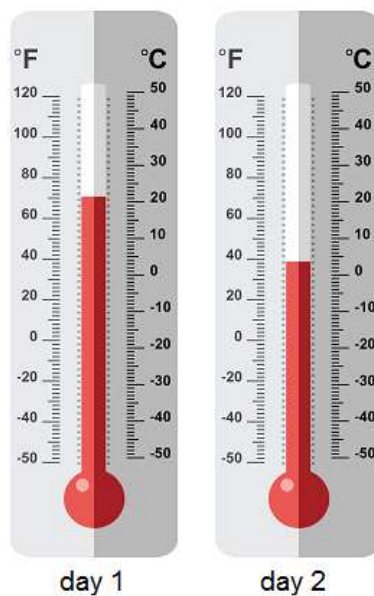
Question 24 .

How does a rain gauge measure rainfall?

- ☐ A. by measuring the darkness of clouds
- ☐ B. by measuring the sound of rainfall
- ☐ C. by collecting rain in a measuring container
- ☐ D. by counting raindrops

Question 25 .

Joseph is using a thermometer to study the weather. He checks the thermometer two days in a row at the same time each day. The pictures below show the readings that he sees on each day.



What most likely happened between day 1 and day 2?

- ☐ A. A warm front entered the area.
- ☐ B. A cold front entered the area.
- ☐ C. A hurricane formed in the area.
- ☐ D. A tornado formed in the area.

Question 26 .

The picture below shows a weather tool.



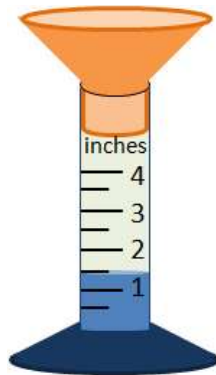
What is this weather tool used to measure?

- ☐ A. wind direction
- ☐ B. wind speed
- ☐ C. air temperature
- ☐ D. humidity

Question 27 .

Directions: Type your answer in the box. Use numerals, not words.

Patty is using a rain gauge to measure changes in the weather. Yesterday the rain gauge was empty, but this morning it looks like the picture shown below.



Patty needs to record how much rain fell during the night.

What number should she write down?

Use / for the fraction bar. Round your answer the nearest half inch.

inches

Question 28 .

The average conditions of temperature, wind, clouds, and rainfall in an area over many years is called the

- ☐ A. forecast.
- ☐ B. weather.
- ☐ C. population.
- ☐ D. climate.

Question 29 .

Directions: Select the correct image.

Which of the following instruments can be used to measure temperature?

Question 30 .

Humans can observe the weather using many different instruments.

Which of the following is an atmospheric condition that can be measured using weather tools?

- ☐ A. temperature
- ☐ B. rainfall
- ☐ C. air pressure
- ☐ D. all of these

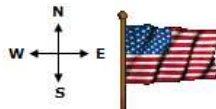
Question 31 .

A group of students place a beaker outside during a storm. After one hour, they collect the beaker and use a ruler to measure the depth of water in the beaker.

What are the students measuring?

- ☐ A. temperature
- ☐ B. precipitation
- ☐ C. humidity
- ☐ D. air pressure

Question 32 .



Based on the movement of the flag in the picture, which direction is the wind blowing?

- ☐ A. from north to south
- ☐ B. from east to west
- ☐ C. from south to north
- ☐ D. from west to east

Question 33 .

Which of these could be part of a city's climate?

- ☐ A. a current temperature of 80°F
- ☐ B. partly cloudy
- ☐ C. average rainfall of 24 inches per year
- ☐ D. a thunderstorm

Question 34 .

A barometer is a weather instrument used to measure _____.

- ☐ A. temperature
- ☐ B. air pressure
- ☐ C. wind speed
- ☐ D. humidity