

Taking Multiple-Choice Tests: 4 Steps.

1. Cover up the answer choices.
 2. Read the question carefully and decide on a likely answer BEFORE looking at the answer choices.
 3. Then, eliminate the answer choices that are definitely wrong.
 4. Select the answer choice that best-matches the likely answer you identified in Step 2.
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Part 1. Multiple-Choice Questions (3 points each).

1) Which of the following is a topic of study in a physical geography course?

- A) landforms
- B) rocks
- C) climate
- D) water
- E) all of the above

2) The following is a fundamental question that is at the heart of any geographic inquiry.

- A) What?
- B) Where?
- C) Why?
- D) How?
- E) all of the above

3) The study of physical geography focuses on understanding _____ as the key to understanding landforms and landscapes.

- A) the biosphere
- B) cartography
- C) processes
- D) the cooling of Earth from the original nebula
- E) glaciers

4) Most processes which shape landforms and topography are _____.

- A) no longer active
- B) unknown
- C) very rapid
- D) very slow
- E) totally random

5) Applying the traditional scientific method in the future can be a challenge because:

- A) The future has not happened so you cannot perform empirical tests.
- B) The future is unknowable.
- C) The traditional scientific method has to be conducted in a lab.
- D) The traditional scientific method can only be used in the present.
- E) Future predictions are not part of science.

6) In science, the term "scientific theory" is:

- A) A first guess.
- B) An unsupported hunch.
- C) Revolution around Earth.
- D) Not relevant.
- E) The highest order of understanding.

7) Which of the following statements best describes the scientific process?

- A) Scientists are objective and unbiased.
- B) Scientists generally discover new ideas without the help of others.
- C) Scientific ideas and knowledge evolve and change over time.
- D) A and C.
- E) B and C.

8) Why would it be great to have a spare second Earth without humans?

- A) We could study the natural Earth without human influence.
- B) We could conduct experiments too dangerous for our Earth.
- C) We would have a 'lifeboat' in case we make a terrible mistake on our Earth.
- D) We are currently using the resources of over 1.5 Earths!
- E) All of the above.

9) Science can use supernatural explanations if necessary.

- A. Yes
- B. No
- C. Yes, but only for wicked problems
- D. Maybe
- E. I don't know

10) "Scale" relates _____ to _____.

- A) Earth distance, Earth distance
- B) map distance, map distance
- C) map distance, Earth distance
- D) Earth distance, map distortion
- E) map distortion, map distance

11) An angle measured north or south of the equator from the Earth's center is termed

_____.

- A) longitude
- B) contour line
- C) latitude
- D) zenith
- E) prime meridian

12) An example of a map generalization is _____.

- A) the deliberate enlargement of important map features
- B) the use of symbols
- C) the distortion of maps
- D) A and B
- E) A, B, C

13) A good and simple definition for science presented in class is:

_____.

- A) Science is creative doing.
- B) Science is organized and evidence-based thinking.
- C) Science is documented organization.
- D) Science is published doing
- E) Science is difficult.

14) What is the main difference between an observation and a hypothesis?

- A) There is no difference - they are the same.
- B) A hypothesis is one possible explanation for an observation.
- C) A hypothesis is the only possible explanation for an observation.
- D) An observation is one possible explanation for a hypothesis.
- E) An observation is the only possible explanation for a hypothesis.

15) Climate is _____; Weather is _____.

- A) predictable; unpredictable
- B) what you expect; what you get
- C) unpredictable; predictable
- D) B only
- E) A and B

16) At which locations on Earth is solar energy most concentrated?

- A) where the Sun is closest to the curved Earth surface
- B) anywhere on Earth, if it is the perihelion
- C) at places where the sun angle is high
- D) at places where the sun angle is low
- E) where the atmosphere has the most water vapor

17) Changes in daylength and the Sun's altitude above the horizon over the course of the year _____.

- A) produce the earth's rotation
- B) are phenomena that occur only at the equator
- C) are phenomena that follow an irregular, random cycle
- D) determine the earth's tilt
- E) are responsible for the seasons

18) In Westfield, the sun sets in the evening approximately over _____.

- A) Cannot be answered without additional information
- B) Albany
- C) the solstice
- D) Boston
- E) None of the above

19) The single most basic factor causing the distribution of hot and cold temperatures across the Earth's surface is _____.

- A) the moon
- B) gas circulation
- C) latitude
- D) topography
- E) storms

20) Methane (CH₄) is added to the atmosphere by _____.

- A) rice paddies
- B) cows
- C) photosynthesis
- D) A and B
- E) All of the above

21) The second most plentiful gas in the Earth's lower atmosphere is _____.

- A) nitrogen
- B) oxygen
- C) CO₂
- D) neon
- E) helium

22) To be a greenhouse gas, you need _____ or more atoms in your molecule.

- A) 1
- B) 2
- C) 3
- D) 4
- E) 5

23) Why is the natural greenhouse effect important?

- A) It creates a constant temperature on Earth.
- B) It creates a temperature range on Earth that allows for the existence of liquid water.
- C) It creates a climate like in a greenhouse.
- D) It is not important at all - the greenhouse effect is caused by humans.
- E) None of the above.

24) The 'bad' ozone in the lower atmosphere:

- A) contributes to the human greenhouse effect
- B) is a greenhouse gas because it has 3 atoms in its molecule
- C) is created by the photochemical reaction between car exhaust and sunlight
- D) is a public health hazard
- E) all of the above

25) The desire to simplify, organize, and generalize the vast array of climatic data into a comprehensible system that helps us understand the distribution of climates over Earth leads to _____.

- A) classification
- B) averaging
- C) weather forecasting
- D) compromise
- E) frustration

26) The wind belts used by mariners to sail from Europe & Africa to North America back in the days of sailing ships are called the _____.

- A) polar easterlies
- B) westerlies
- C) trade winds
- D) adiabatic winds
- E) monsoon winds

27) The global westerly wind zone most heavily impacts the _____ latitudes.

- A) equatorial
- B) high
- C) middle
- D) subtropical
- E) horse

28) In the mountains, winds usually blow _____ in the day and _____ in the night.

- A) left, right
- B) upslope, downslope
- C) random, not-random
- D) faster, slower
- E) sideways, diagonal

29) The following is a characteristic of a tropical climate.

- A) A strong annual cycle in air temperature.
- B) A minimal annual cycle in air temperature.
- C) A minimal annual cycle in precipitation.
- D) Overall, dry conditions.
- E) Generally winds from the west.

30) How much work per week (in hours) is a 3-credit class?

- A) I have no idea
- B) Less than 4 hours on-average
- C) About 9 hours on average
- D) About 6 hours on average
- E) None of the above

31) What's a PLN?

- A. A private laughing night
- B. A personal learning network
- C. A peculiar light night
- D. A partial lunar network
- E. None of the above

32) Create *and* answer your own multiple-choice question using the material we have covered so far in-class.

Question: _____

A) _____

B) _____

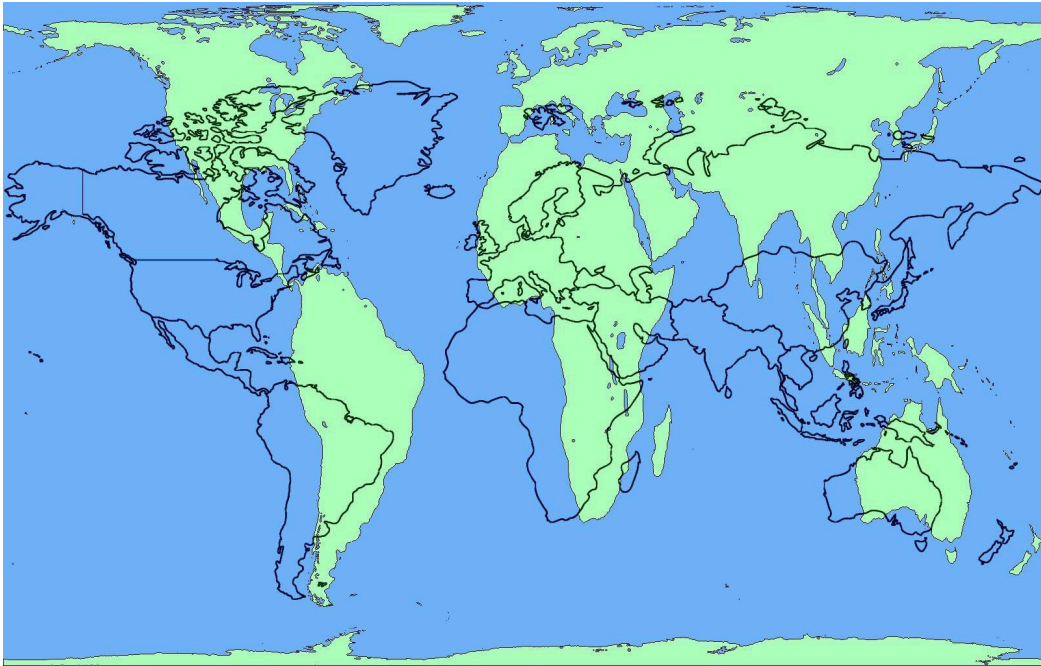
C) _____

D) _____

E) _____

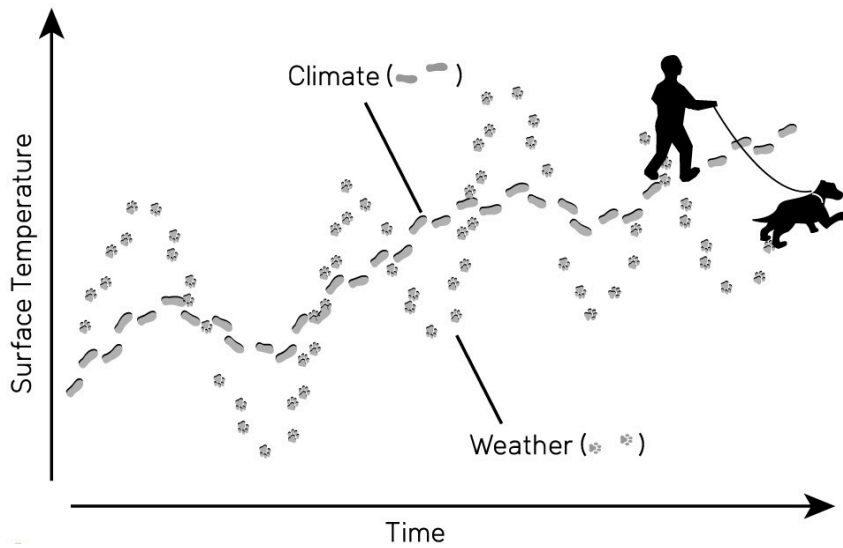
Type your question and 5 answer choices and indicate the correct answer.

Question 33.



Which of these two maps is a more 'correct' map of the world? Please explain in a few sentences.

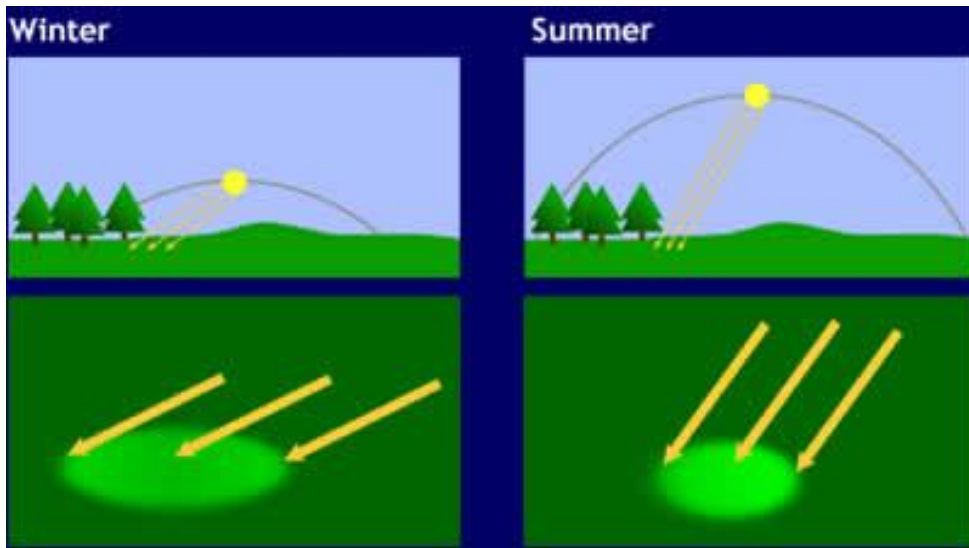
Question 34.



Please use the diagram above to explain the differences between climate and weather.

Source: <https://climate.ncsu.edu/learn/weather-vs-climate-whats-the-difference/>

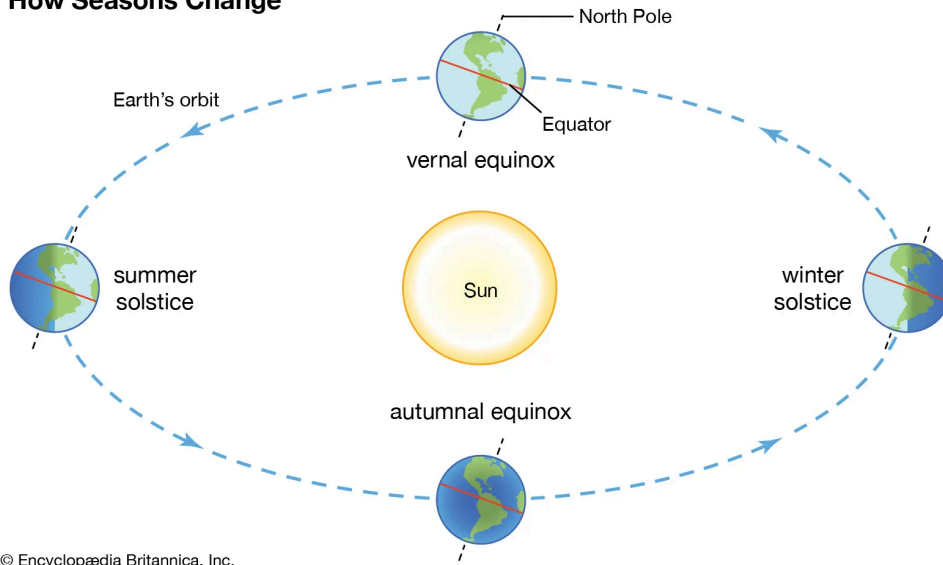
Question 35.



Please use the diagram above to explain the two main reasons why it is colder in the winter than in the summer in Westfield.

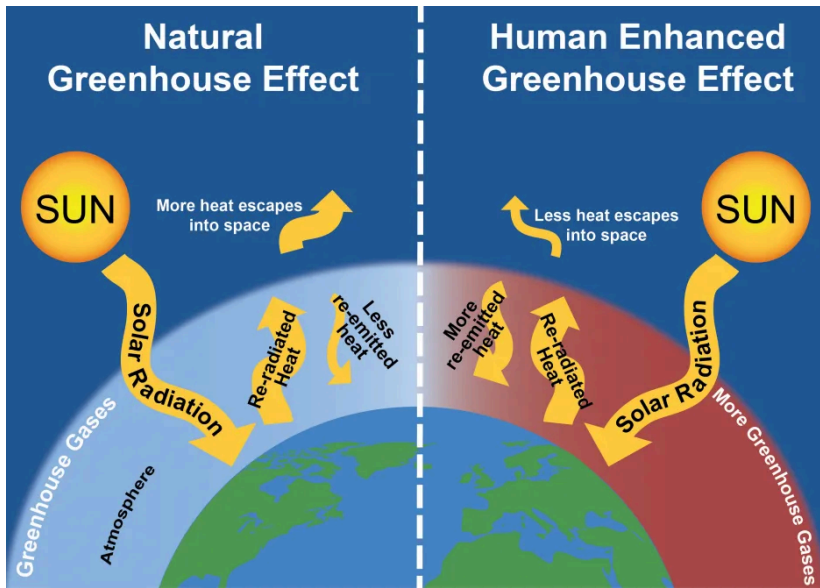
Question 36.

How Seasons Change



Use the diagram above to briefly explain: What causes the seasons?

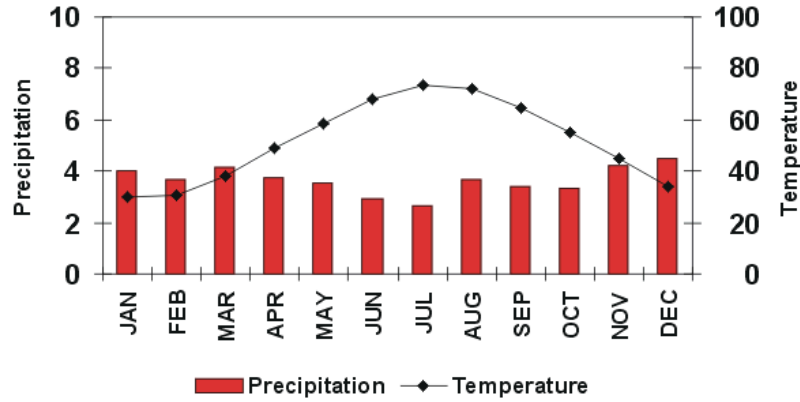
Question 37.



Please use the diagram above to explain how the natural greenhouse effect and the human-enhanced greenhouse effect combine for the total greenhouse effect.

Question 38.

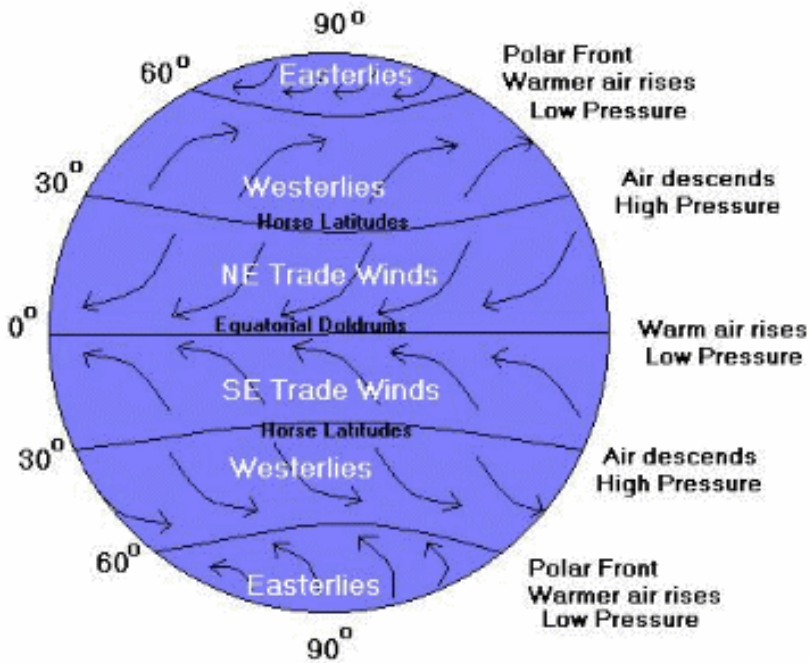
**Boston,
Massachusetts**



Lat.: 42° 22' N
Long.: 71° 02' W
Elevation: 15 ft. asl
Total Annual Precip.: 43.81"
Avg. Annual Temp.: 51.5°F

Please use the diagram above to describe and explain the general climate of Massachusetts.

Question 39.



Please write a suitable caption for this figure that a) describes and b) explains the figure.
([Source](#))