

## **Review: Chapter 11 - Exploring the Universe COPY**

1. What types of electromagnetic radiations have given proof to the possibility of the Big Bang Theory?
  - a. infrared and dark matter and microwave
  - b. dark matter
  - c. infrared and microwave
2. A reflective telescope has \_\_\_\_\_ main parts.
  - a. one
  - b. two
  - c. three
  - d. four
3. A person who studies stars, planets, and other objects in the sky is called an \_\_\_\_\_.
  - a. telescoper
  - b. starsologer
  - c. astronomer
  - d. astrologist
4. This type of telescope never has problems seeing through Earth's atmosphere. It uses lenses to enlarge an object.
  - a. Earth-based telescope
  - b. reflecting telescope
  - c. refracting telescope
  - d. space-based telescope
5. Telescope in space used to observe universe using X-Rays
  - a. Erwin Telescope
  - b. Darwin Telescope
  - c. Moon Telescope
  - d. Chandra Telescope
6. What instrument can an astronomer use to see objects that are very far away?
  - a. Microscope
  - b. Telescope
  - c. Compass
  - d. Stereoscope
7. The first person to use a telescope for astronomy was
  - a. Newton
  - b. Galileo
  - c. Copernicus
  - d. Kepler

8. The first type of telescope invented
  - a. refractor telescope
  - b. reflector telescope
  - c. composite telescope
  - d. radio telescope
9. The telescope that uses both lenses and mirrors to gather light
  - a. refractor telescope
  - b. reflector telescope
  - c. composite telescope
  - d. radio telescope
10. The telescope that detects wavelengths other than visible light
  - a. refractor telescope
  - b. reflector telescope
  - c. composite telescope
  - d. radio telescope
11. The telescope that uses a mirror to gather light
  - a. refractor telescope
  - b. x-ray telescope
  - c. reflector telescope
  - d. radio telescope
12. An enormous exoplanet, called HD 106906 b, was discovered that is 11 times the size of Jupiter. What was not used to discover this new planet?
  - a. International Space Station
  - b. Hubble Space Telescope
  - c. Infrared camera
  - d. Magellan telescope
13. What is the difference between refracting and reflecting telescopes?
  - a. A refracting telescope uses a convex lens to magnify an image, and a reflecting telescope uses a mirror.
  - b. A refracting telescope uses a mirror, and a reflecting telescope uses a concave lens to magnify an image.
  - c. A reflecting telescope uses a convex lens to magnify an image, and a refracting telescope uses a mirror
  - d. There is no difference.
14. What was the initial problem with the Hubble Space Telescope?
  - a. It is a reflecting telescope, and there was a problem with the mirror.
  - b. It is a reflecting telescope, and there was a problem with the lens.
  - c. It is a refracting telescope, and there was problem with the lens.
  - d. It is a refracting telescope, and there was a problem with the mirror.

15. Why are radio telescopes considered to be dependable telescopes?
- because they never run out of energy
  - because they use radios to help various telescope's computers communicate with each other
  - because they use radio waves, which pass freely through Earth's atmosphere in any weather condition
  - because they use radio waves, which do not pass freely through Earth's atmosphere due to unpredictable weather
16. Telescopes that bend light to make objects seem larger are
- refracting telescopes
  - reflecting telescopes
  - radio telescopes
  - spectroscopes
17. This tool makes it possible to see things in space more clearly:
- microscope
  - telescope
  - binoculars
18. Scientists use \_\_\_\_\_ to study stars and planets.
- telescopes
  - magnifying glasses
  - microscopes
19. Refracting telescopes suffer from an optical defect called chromatic aberration.
- True
  - False
20. What is the purpose of the New Millennium Program?
- to create satellites to spy on other nations
  - to develop advanced technology that will let NASA send smart spacecraft into the solar system
  - to develop technology that will create more jobs on Earth
  - to create technology faster than other nations
21. The Italian astronomer, Galileo, was the first scientist to do what?
- Discover the correct shape of the planets orbits.
  - Discover gravity and inertia.
  - Use a telescope to look at objects in the sky.
  - All of the above
22. \_\_\_\_\_ technology is used to study planets in our solar system.
- Sonar
  - Satellite
  - Cable
  - Antennae

23. Astronomers use \_\_\_\_\_ to make observations and collect data about objects in the solar system.
- a. telescopes
  - b. satellites
  - c. space probes
  - d. all of the above
24. What successful space telescope was scheduled to operate for 15 years but had its mission time extended thanks to at least 4 service calls?
- a. Hubble
  - b. Chandra
  - c. Giotto
  - d. Cassini
25. What is the Hubble Tuning Fork?
- a. A tool used to fine-tune a telescope
  - b. A machine that shows the elements of a star by looking at its light
  - c. An instrument used to measure the distance between stars
  - d. A diagram that show types of galaxies and how they evolve over time
26. What does NASA stand for?
- a. Nationals Acrobats and Swimming Association
  - b. National Aeronautics and Space Administration
  - c. Neighborhood Awareness and Sharing Alliance
  - d. News Administration and Satellite Association
27. A modern application for a satellite is for \_\_\_\_\_.
- a. gathering scientific data
  - b. gathering pictures of Earth's surface
  - c. transmitting radio and television signals
  - d. all answers are correct
28. Why are rockets ideal for exploring space?
- a. They can gather lots data.
  - b. They don't need air.
  - c. They are retrievable.
  - d. They are inexpensive.
29. Space probes, unlike satellites, are able to \_\_\_\_\_.
- a. gather data
  - b. travel out of the solar system
  - c. go into orbit
  - d. be retrieved
30. How are satellites used?
- a. to gather military information
  - b. to transmit television signals
  - c. to monitor weather
  - d. all of the above

31. What country successfully launched its first satellite named Explorer 1?
- China
  - Japan
  - United States
  - Canada
32. What country launched the world's first artificial satellite, the Sputnik?
- China
  - Germany
  - Russia
  - United States
33. Which of the following is NOT one of the four broad categories of satellites?
- intelligence
  - communication
  - navigation
  - scientific
34. Trips that people take into space are called \_\_\_\_\_.
- crewed missions
  - uncrewed missions
  - space probes
  - observations
35. What is the definition of a mission?
- exploration of a ship
  - a walk around the city
  - a specific job or task
  - a system of signals
36. How long did it take to put together the Curiosity Mission?
- 1-2 Years
  - 3-5 Years
  - 9-10 Years
  - 20-25 Years
37. Why did mission scientists put Rosetta to sleep for several years?
- to prevent rusting
  - to save money
  - to analyze data
  - to save energy
38. Most forms of energy originally come from
- water
  - the earth
  - the sun
  - natural gas

39. Earth's climate
- a. has been stable over the history of the planet
  - b. is changing as a result of natural and human processes
  - c. will stabilize over the next century, according to the predictions of most scientists
  - d. has changed only once due to the evolution of green photosynthesizing plants
  - e. history is undeterminable because there is no method of studying climatic history of the planet
40. The greenhouse effect heats the Earth's surface by
- a. infrared radiation and sunlight
  - b. sunlight and volcanic eruptions
  - c. mantle convection and infrared radiation
  - d. volcanic eruptions and mantle convection
41. Sunlight \_\_\_\_\_ the Earth's surface.
- a. cools
  - b. warms
42. Three essential theories for Earth Science are the theory of evolution, the theory of plate tectonics, and the theory of \_\_\_\_\_.
- a. relativity
  - b. earth science
  - c. climate change
  - d. human knowledge
43. What did Karl Jansky discover?
- a. the planets move on an elliptical path
  - b. the Sun was the center of the Universe
  - c. Earth rotated on a tilted axis, which caused the seasons
  - d. radio waves coming from space
44. Astrobiology is best described as
- a. the study of animals in space
  - b. the scientific search for evidence of intelligent life
  - c. the study of life in the universe
45. What was president John F. Kennedy's goal for the space program?
- a. To go to infinity and beyond.
  - b. To be the first one to land a human on the moon.
  - c. To go to the edge of our solar system.
  - d. To study the effects of the sun on Earth's atmosphere.

46. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_A \_\_\_\_\_ is a vehicle sent into space in order to explore places too dangerous or too far away for people to visit.

47. The geocentric theory claims that the \_\_\_\_\_ is at the center of the universe.

48. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_List 3 important advantages of exploring space.

49. The Hubble telescope helped scientists \_\_\_\_\_ how the universe began and how old it is.

50. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_Who was the first astronomer to build a telescope for viewing the heavens?

51. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_What are the three functions of a telescope?

52. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_What is the function of the objective lens of a refracting telescope?

53. Refracting telescopes got their name because they refract, or \_\_\_\_\_, light.

54. The main difference between a reflecting telescope and a refracting telescope is that a reflecting telescope uses a(n) \_\_\_\_\_ to focus the incoming light.

55. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_Why do space telescopes produce clearer images than telescopes on Earth?

56. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_List two advantages of radio telescopes over optical telescopes.

57. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_A \_\_\_\_\_ is an instrument used to observe distant objects.

58. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_Name one kind of tool that modern astronomers can use to collect information in outer space.

59. The Hubble Space Telescope is a giant telescope floating in space designed and built by engineers at America space agency \_\_\_\_\_.

60. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_What are telescopes used for?

61. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_Name 2 major categories of optical telescopes.

62. Isaac Newton created the first \_\_\_\_\_ telescope.

63. The Hubble telescope was launched by the United States from a space shuttle in \_\_\_\_\_.

64. A. refracting telescope B. reflecting telescope C. radio telescope D. spectroscope

\_\_\_\_\_ 1. breaks down the light given off by a star into all its colors

\_\_\_\_\_ 2. bends light to make objects seem larger

\_\_\_\_\_ 3. collects radio waves from space using large concave-shaped disk

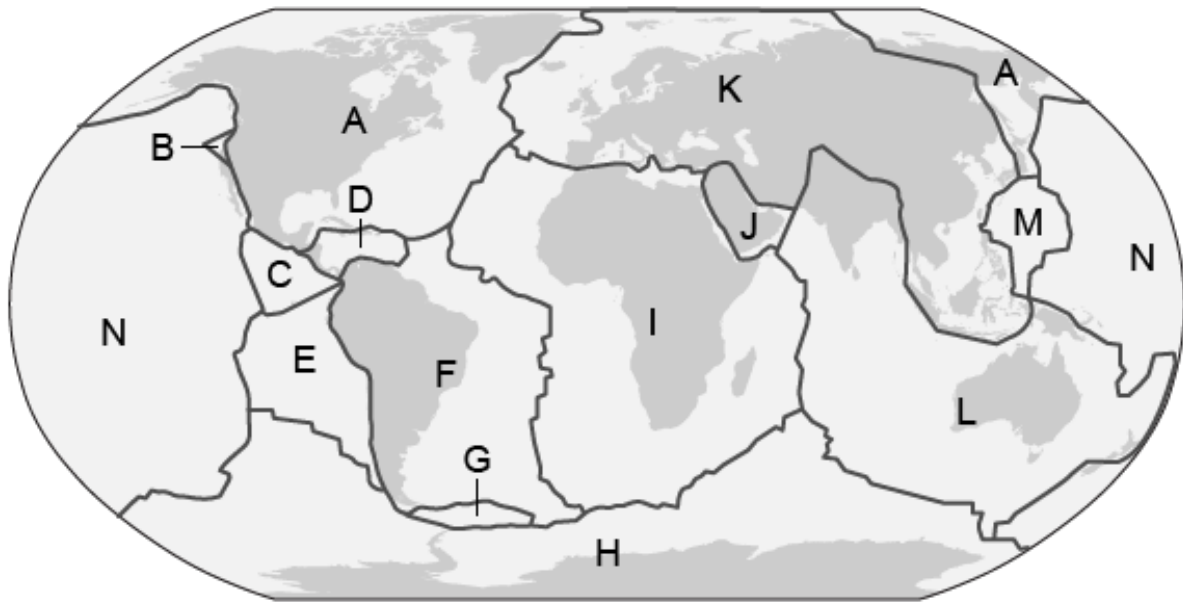
\_\_\_\_\_ 4. produces a clearer magnified image because the light is reflected



## **Review: Chapter 12 - Earth's changing surface.**

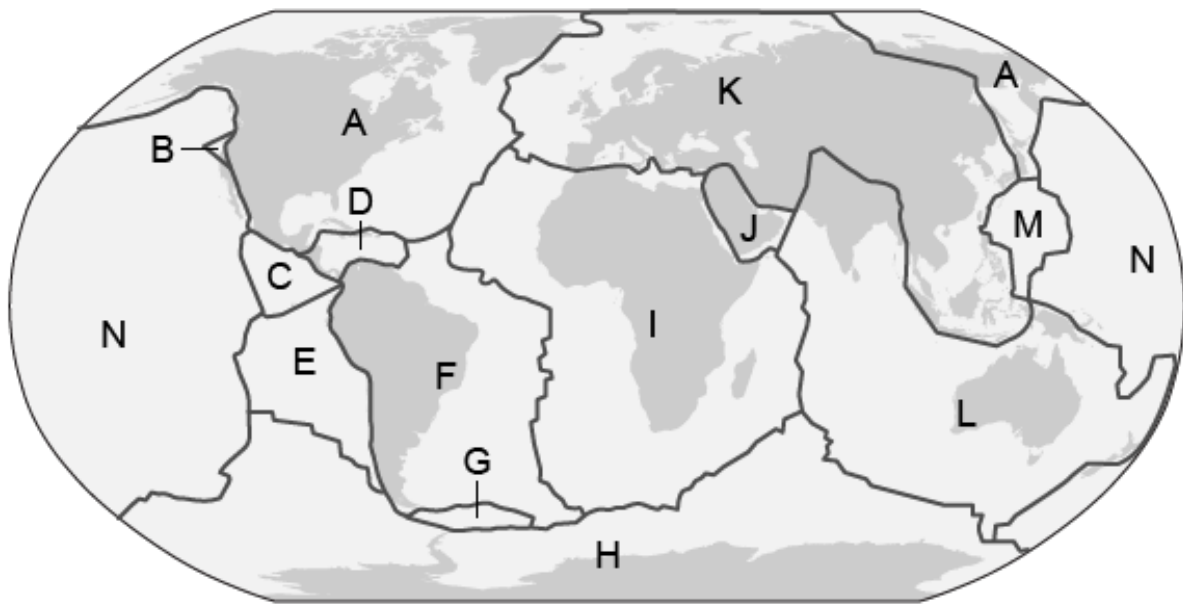
1. Earthquakes most often occur
  - a. in the middle of tectonic plates.
  - b. anywhere near a tectonic plate.
  - c. only in the 'Ring of Fire'.
  - d. on the boundary of tectonic plates.
2. The theory of plate movement and how the continents moved apart over time is called \_\_\_\_\_.
  - a. plate tectonics
  - b. geology
  - c. continental tectonics
  - d. biology
3. What is a tectonic plate?
  - a. liquid magma
  - b. technical term used for dinnerware
  - c. lava flowing into the ocean
  - d. the movable crust on top of the earth's mantle
4. What is a tectonic plate?
  - a. a dish made of rock
  - b. a kind of mountain
  - c. a moving piece of Earth's rocky crust
  - d. a loose piece of Earth's inner core
5. Tectonic plates interact at places called plate
  - a. reversals
  - b. boundaries
  - c. regions
  - d. centers

6. The map shows the major tectonic plates.



Which letter shows the Arabian plate?

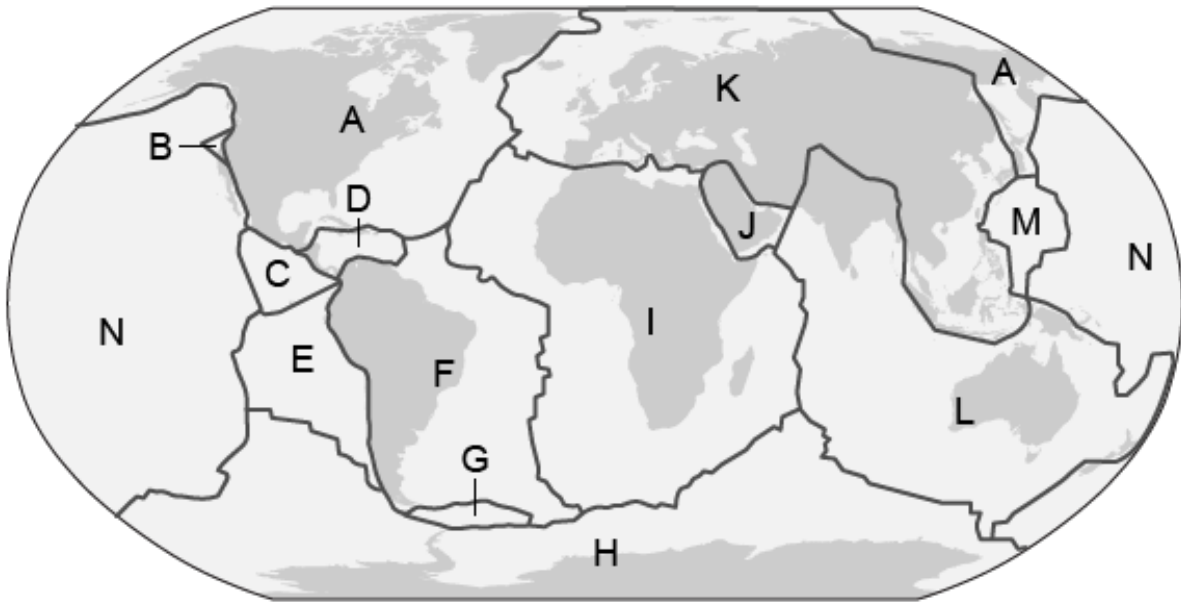
- a. I
  - b. J
  - c. L
  - d. M
7. The map shows the major tectonic plates.



Which letter shows the Caribbean plate?

- a. B
- b. C
- c. D
- d. E

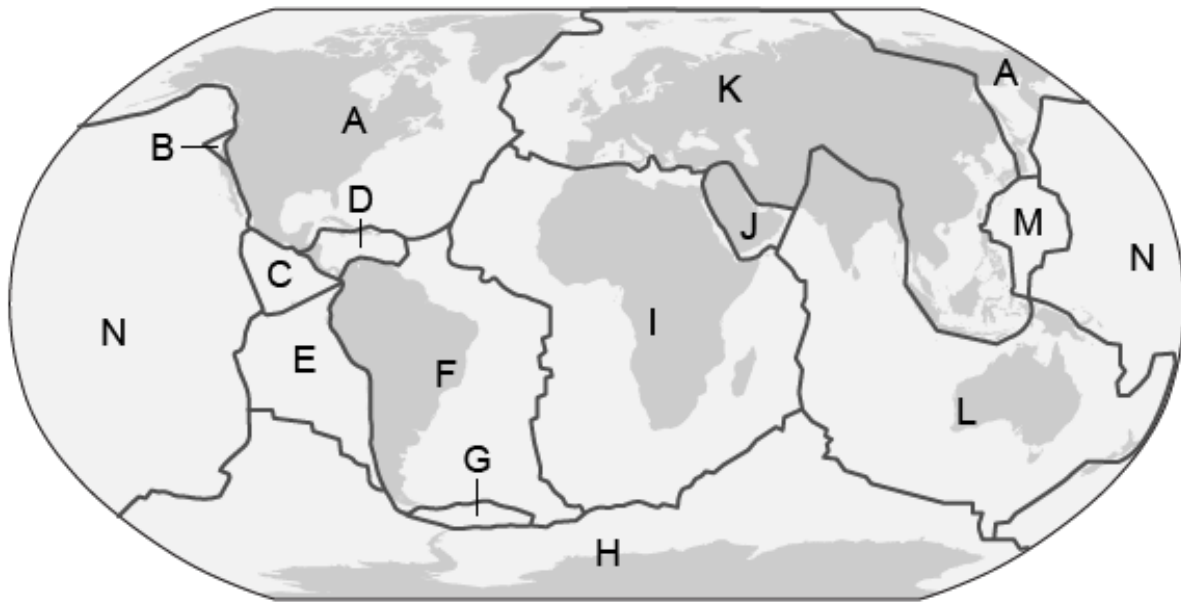
8. What moves apart or together to form volcanoes or earthquakes?
- a. tectonic plates
  - b. cups
  - c. gravity
9. The map shows the major tectonic plates.



Which letter shows the Cocos plate?

- a. B
- b. C
- c. D
- d. E

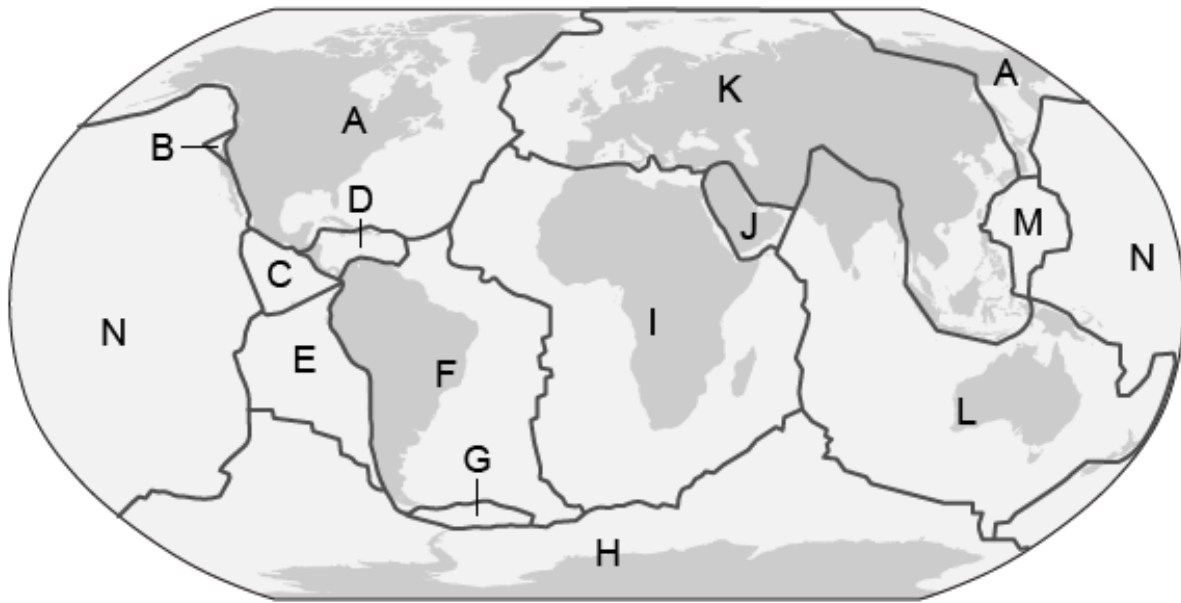
10. The map shows the major tectonic plates.



Which letter shows the Cocos plate?

- a. A
  - b. B
  - c. C
  - d. D
11. A tectonic plate segment includes the \_\_\_\_\_.
- a. all of the mantle
  - b. the crust and the asthenosphere
  - c. the upper mantle and the crust
  - d. the mantle and the core
12. What type of tectonic plate boundary involves a collision between two tectonic plates?
- a. divergent
  - b. transform
  - c. convergent
  - d. normal
13. The plate tectonics theory states that
- a. continental crust "plows through" oceanic crust
  - b. oceanic crust "slides over" continental crust
  - c. lithospheric plates move
  - d. tectonic forces cause the most damage in the center of the plates
14. What is the largest tectonic plate?
- a. Scotia plate
  - b. Pacific plate
  - c. Eurasian plate
  - d. Antarctic plate

15. The map shows the major tectonic plates.



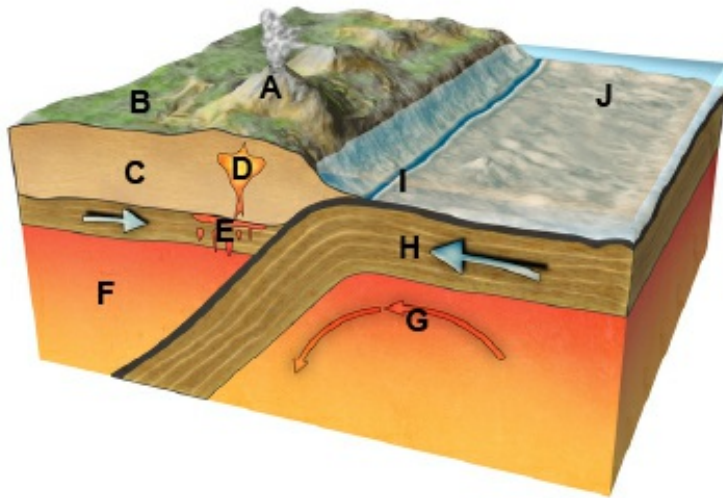
Which letter shows the Juan de Fuca plate?

- a. B
  - b. C
  - c. D
  - d. E
16. Shifting pieces of the Earth's crust are called
- a. magma
  - b. volcano
  - c. tectonic plates
  - d. island
17. The collision of India and Asia that formed the Himalayas is still colliding today, causing the mountain range to continue to rise. What keeps the mountain from getting too big?
- a. erosion
  - b. volcanism
  - c. deposition
  - d. plate tectonics
18. Earth's crust consists of major and minor \_\_\_\_\_ that move relative to each other.
- a. rock formations
  - b. tectonic plates
  - c. mantles
19. What causes tectonic plates to move?
- a. radiation from within the crust
  - b. magnetic forces from the inner core
  - c. convection currents in the mantle
  - d. slow continental drift

20. The portion of the mantle just below the lithosphere of the earth.
- oceanic crust
  - asthenosphere
  - plate tectonics
21. What can possibly happen at all three types of boundary lines?
- an earthquake
  - a volcano
  - a mountain range
  - all of the above
22. Some volcanoes form new \_\_\_\_\_ as plates move apart and magma rises to the surface of the crust.
- volcanoes
  - ocean floor
  - earthquakes
  - mantle
23. any of various instruments for measuring and recording the vibration of earthquakes
- faults
  - earthquakes
  - epicenter
  - seismograph
  - volcano
  - lava
24. Gravity can pull rocks and soil rapidly down a hill slide causing a(n)
- tsunami
  - earthquake
  - landslide
  - volcano
25. a cone-shaped landform that can erupt at times
- earthquake
  - fault
  - epicenter
  - volcano
26. a crack where earth's crust can move
- fault
  - epicenter
  - volcano
  - earthquake

27. The place underground where plates moves and the earthquake begin.
- focus
  - fault
  - volcano
  - earthquake
28. Volcanoes and earthquakes relate to the following sphere:
- biosphere
  - atmosphere
  - geosphere
  - anthrosphere
29. What do you call the sudden movement of Earth's crust?
- earthquake
  - tsunami
  - volcano
  - fault
30. Why did Wegener think that continental drift could be used to explain rock scarring in South America, India, and Australia?
- volcanoes moved the seafloor
  - glaciers cause the scarring
  - earthquakes scar rocks
  - Hess proposed this theory
31. Where do earthquakes and volcanoes (with the exception of Hawaii) usually occur, and why?
32. A transform boundary is a boundary where two plates slide past one another. What geological event will be most likely to occur along a transform boundary?
- mountain formation
  - volcano eruption
  - earthquake
  - rift valley
33. Scientists are studying a graph showing the time differences between the seismic P-waves and the seismic S-waves as they travel through Earth. Which information can they learn from the graph?
- the magnitude of an earthquake
  - the duration of an earthquake
  - the epicenter of an earthquake
  - the intensity of an earthquake

34. The five factors that determine how soils develop are:
- parent material, climate, vegetation, landscape, and time
  - animals, humus, weather, leaching, and volcanoes
  - sun, animals, humus, leaching, and earthquakes
35. What landforms are formed at a subduction zone?



- faults
  - volcanoes only
  - mountains only
  - mountains and volcanoes
36. How are volcanoes on divergent boundaries different than volcanoes on convergent boundaries?
37. The three main categories/stages of volcanoes are: \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_
38. a wave produced by an earthquake
39. One way the atmosphere shapes Earth's surface is with
- winds
  - tsunamis
  - earthquakes



40. Low land between hills or mountains
- valley
  - island
  - volcano
41. Earthquake hazards include:
- building collapse
  - fire
  - liquefaction
  - all of the above
42. The process of wearing away rocks by natural means is called
- erosion
  - weathering
  - faults
  - earthquakes
43. The rapid downhill movement of large amount of rock and soil is called a(n):
- erosion
  - landslide
  - avalanche
  - earthquake
44. A dirt and debris filled flood of water
- tsunamis
  - earthquake
  - mudslide
  - landslide
45. \_\_\_\_\_ is the deposit of weathered materials.
46. Water freezing in the cracks of rocks is an example of \_\_\_\_\_.
- deposition
  - mechanical weathering
  - chemical weathering
  - erosion
47. The movement of rocks.
- Deposition
  - Weathering
  - Erosion
48. Process in which rocks get broken down.
- Weathering
  - Erosion
  - Deposition

49. Which of these are put in the correct order?
- deposition, erosion, weathering
  - weathering, erosion, deposition
  - erosion, deposition, weathering
  - weathering, deposition, erosion
50. The process in which materials are eroded by weather or ice and are dropped into a new place, creating a new landform
- Weathering
  - Deposition
  - Erosion
51. Freezing and thawing are a type of
- chemical weathering.
  - erosion.
  - physical weathering.
  - deposition.
52. Rocks are broken down by changing the chemical makeup of the minerals through
- physical weathering.
  - erosion.
  - chemical weathering.
  - deposition.
53. Water, oxygen, carbon dioxide, and acids are significant agents of \_\_\_\_\_.
- chemical weathering
  - abrasion
  - mechanical weathering
  - erosion
54. Plains, plateaus, peninsulas, valleys, hills, basins, canyons and mountain are examples of:
- Physical Weathering
  - Chemical Weathering
  - Erosion
  - Landforms
  - Weathering
55. \_\_\_\_\_ is when particles carried by water, wind or ice are deposited in another location.

The movement of sediment or soil from one location to another is \_\_\_\_\_.

The breaking down of rocks and minerals by physical, chemical or biological processes is \_\_\_\_\_.

Deltas forming at the mouths of rivers \_\_\_\_\_.

A mudslide flowing down a steep hill \_\_\_\_\_.

Needs to take place before erosion \_\_\_\_\_.

Wind blowing sand from one location to another \_\_\_\_\_.

Can be mechanical or chemical \_\_\_\_\_.

Waves dropping sand on the beach \_\_\_\_\_.

Occurs when gravity's downward pull on sediment is stronger \_\_\_\_\_.

Results in wind or water forming beaches, barrier islands, and sand bars \_\_\_\_\_.

Human activities such as construction increase this process \_\_\_\_\_.

No movement of sediment is involved \_\_\_\_\_.

The movement of weathered materials \_\_\_\_\_.

Layers of sediment forming at the bottom of the ocean \_\_\_\_\_.

Glaciers dropping rock and sand to form terminal moraines \_\_\_\_\_.

Rocks being made smooth by tumbling across a stream-bed \_\_\_\_\_.

Wind blasting sand at rock and carving out arches \_\_\_\_\_.

Rain washing away soil from a hillside \_\_\_\_\_.

56. What is the difference between weathering and erosion?

57. Weathering must take place before erosion.

- a. True
- b. False

58. What changes earth surface?

- a. volcanoes
- b. weathering
- c. erosion
- d. all of the above

59. Weathering and erosion are quick changes to the earth's surface.

- a. True
- b. False

60. Describe how gravity causes erosion.

61. What are four factors that effect erosion?
62. What are three major causes for erosion?
- a. snow, tornado, volcano
  - b. sinkholes, landslides, mudslides
  - c. ice, wind, water
  - d. wind, heat, plate tectonics
63. List three landforms formed by erosion.
64. Which of these is an example of weathering?
- a. Mountains are built
  - b. Water freezes
  - c. Plant roots widen a crack in a rock
  - d. A volcano erupts
65. Erosion can be caused by which of the following? Select all that apply.
- a. wind
  - b. water
  - c. ice
  - d. gravitational pull
66. How do earthworms aid in weathering?
67. Label the following events with a "D" for deposition, "W" for weathering, or "E" for erosion.
- \_\_\_\_\_ Layers of sediment forming at the bottom of oceans
- \_\_\_\_\_ Water getting into cracks, freezing, and breaking the rocks or pavement apart.
- \_\_\_\_\_ Rocks being made smooth by tumbling across a stream bed.
- \_\_\_\_\_ A mudslide flowing down a steep hill.
- \_\_\_\_\_ Waves dropping sand on a beach
- \_\_\_\_\_ Wind blasting sand and rock carving out arches.
68. List three human activities that remove natural vegetation and greatly accelerate erosion.

## Review: Chapter 13 - Weather and its impacts

1. By what are most differences in air pressure caused by?
  - a. unequal heating of the atmosphere
  - b. equal heating of the atmosphere
  - c. unequal cooling of the atmosphere
  - d. equal cooling of the atmosphere
2. The \_\_\_\_\_ is the thin layer of air that surrounds Earth.
3. The atmosphere
  - a. creates the tides.
  - b. has not effect on heat gain or loss.
  - c. allows heat to escape quickly in order to cool the planet.
  - d. keeps heat from escaping too quickly into space.
4. Which of the following statements best describes humidity?
  - a. It is the amount of heat in the atmosphere.
  - b. It describes the amount of sunlight in the atmosphere.
  - c. It is the amount of water vapor in the atmosphere.
5. Sleet and hail are types of
  - a. gases in the atmosphere.
  - b. layers in the atmosphere.
  - c. air pressure.
  - d. precipitation.
6. Sleet and hail are types of
  - a. gases in the atmosphere
  - b. layers in the atmosphere
  - c. air pressure
  - d. precipitation
7. Which word better matches the sentence?

It will most likely rain later tonight in Jacksonville, Florida.

  - a. forecast
  - b. atmosphere
8. Which word better matches the sentence?

Layer of gases that surrounds the earth.

  - a. weather
  - b. atmosphere

9. Which word better fits the sentence?

Rain and snow are two types of \_\_\_\_\_.

- a. atmosphere
- b. precipitation

10. Which statement is true about weather?

- a. It occurs throughout the atmosphere
- b. It occurs throughout the upper atmosphere
- c. It occurs throughout the lower atmosphere
- d. It occurs in the stratosphere

11. What is the atmosphere?

12. The atmosphere consists of

- a. helium
- b. hydrogen
- c. oxygen
- d. a mixture of gases

13. \_\_\_\_\_ is the most abundant gas in the atmosphere (it makes up 78% of the atmosphere).

- a. Oxygen
- b. Argon
- c. Nitrogen
- d. Ozone

14. Average weather conditions in an area over a long period of time

- a. atmosphere
- b. condensation
- c. climate

15. The outermost layer of the atmosphere:

16. The atmosphere is made primarily of \_\_\_\_\_.





- a. oxygen
- b. nitrogen
- c. ammonia
- d. carbon dioxide

17. Which is not a layer of the atmosphere?
- Stratosphere
  - Mesosphere
  - Thermosphere
  - Mantle
18. Lowest layer of the atmosphere:
19. How does severe weather form? List two examples of severe weather.
20. weather
- the roads and highways
  - the grass and the trees
  - the conditions of the atmosphere
21. All precipitation is a form of severe weather.
- True
  - False
22. List 3 examples of severe weather.
23. A severe weather watch means which of the following?
- The conditions are right for severe weather, but it is not occurring yet.
  - Severe weather is occurring.
  - Severe weather has passed through and it is now safe to go outside.
  - It is the season during which the type of severe weather concerned occurs.

24. A severe weather warning means
- a. the conditions are right for severe weather, but it is not occurring yet
  - b. severe weather is occurring
  - c. severe weather has passed through and it is now safe to go outside
  - d. it is the season during which the type of severe weather concerned occurs
25. Which type of severe weather is NOT an intense tropical storm?
- a. hurricane
  - b. typhoon
  - c. tropical cyclone
  - d. tornado
26. A "snap shot" of conditions at a particular time over a large area.
- a. climate
  - b. weather map
  - c. isobar
  - d. weather
27. What is weather?
- a. An area's long-term weather pattern.
  - b. The state of the atmosphere at a given place or time.
  - c. Large volume of air that has similar characteristics of temperature and water vapor content
  - d. When large air masses of different density, moisture, and temperature meet
28. What causes wind?
- a. a sunny weather pattern followed by a cloudy weather pattern
  - b. an uneven heating of the atmosphere
  - c. a rainy weather



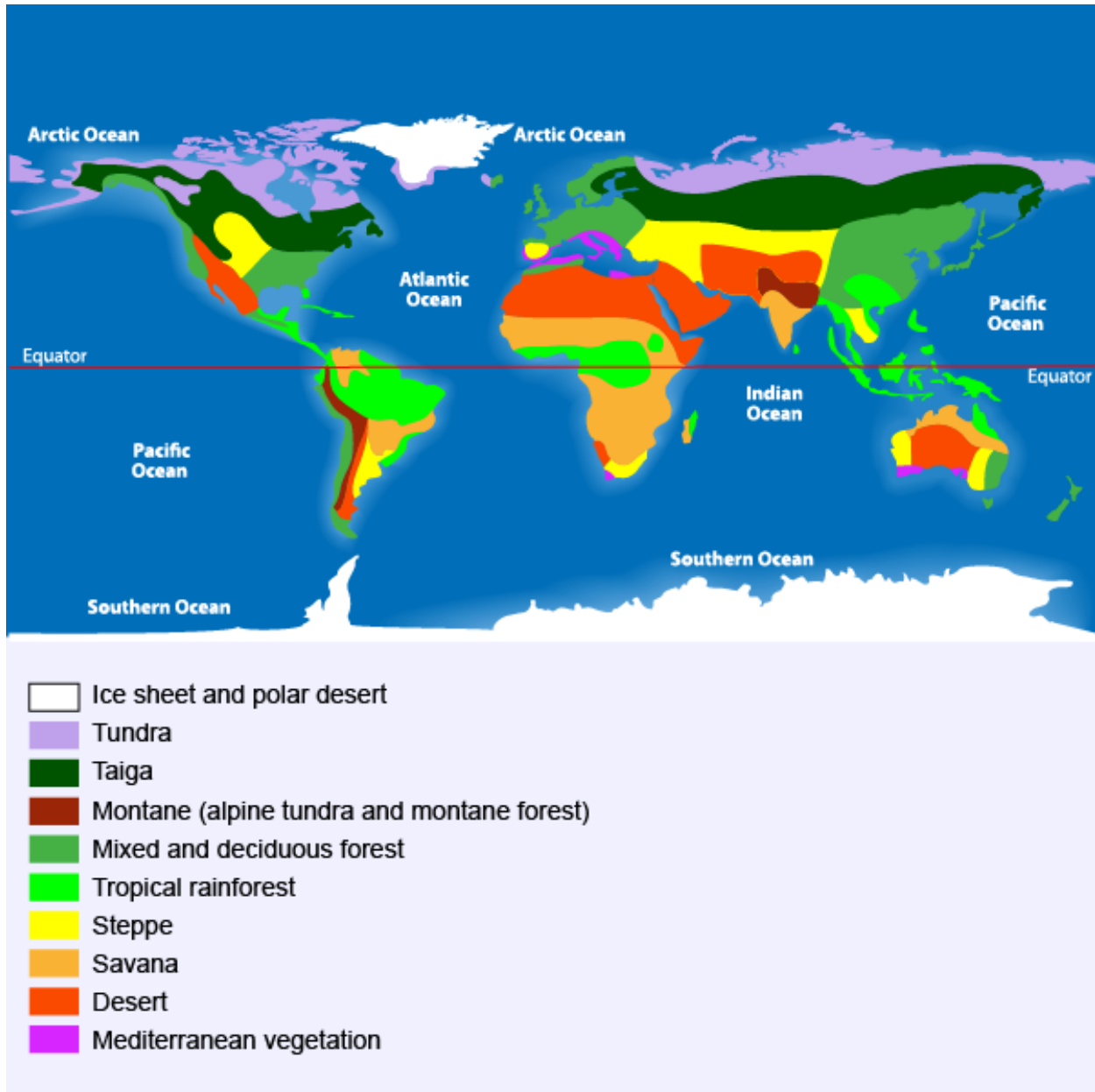
29. A map key shows the symbols below:

	Cold Front
	Warm Front
	Stationary Front
	Occluded Front

Would these symbols be used to show weather or climate?

- a. weather
  - b. climate
30. Weather is determined by the conditions in the:
- a. thermosphere
  - b. mesosphere
  - c. troposphere
  - d. stratosphere
31. These are used to photograph and track large-scale air movements.
- a. weather balloons
  - b. weather satellites
  - c. sling psychrometers
  - d. barometers
32. Which best describes the difference between climate and weather?
- a. Weather is more predictable than climate
  - b. Weather is less predictable than climate
  - c. Weather and climate are both predictable
  - d. Weather and climate are both unpredictable
33. The anemometer and weather vane are weather tools used to measure wind
- a. Speed and temperature
  - b. Direction and pressure
  - c. Pressure and Temperature
  - d. Direction and Speed

34. What are weather radars?
- a. Machines used to determine the location of precipitation.
  - b. Machines used to determine the movement of precipitation.
  - c. Machines used to determine the amount of precipitation.
  - d. All of the above
35. The map shows the world's major biomes.

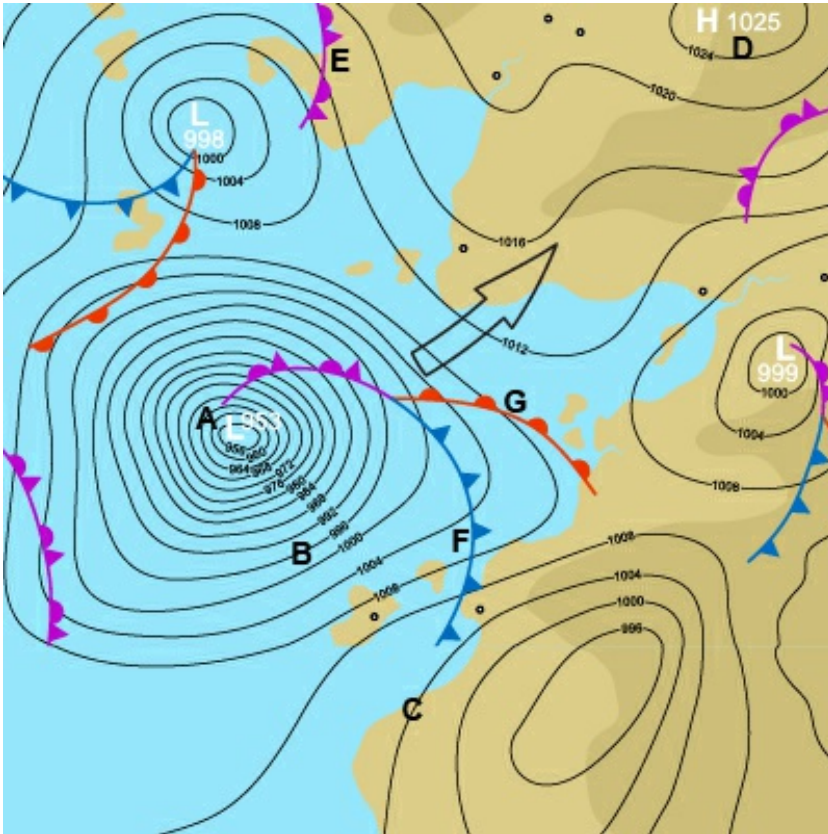


The tundra is a cold, windy, and dry biome. Only a few inches of precipitation fall each year. The average temperature for the tundra is a chilly 10 to 20 degrees Fahrenheit.

Does the passage describe the weather or climate for the tundra biome?

- a. weather
- b. climate

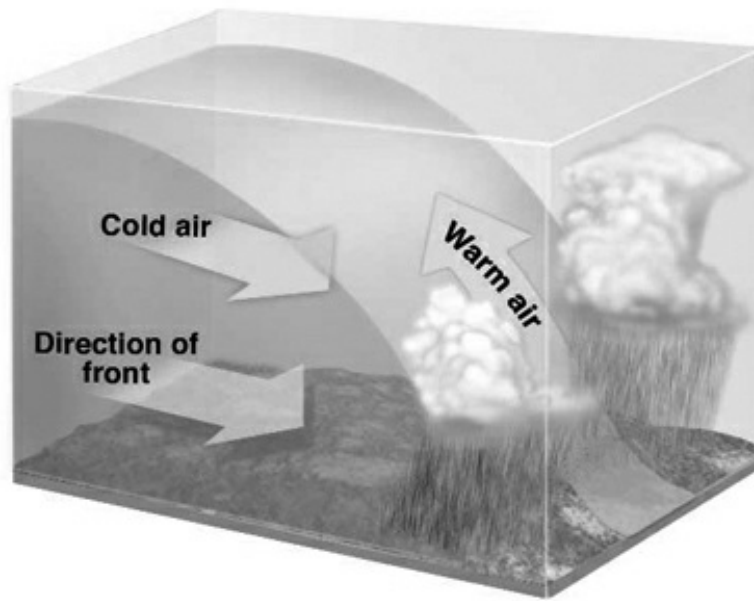
36. The map shows isobars, or lines of equal air pressure, for a location.



Does the map represent weather or climate for that location?

- a. weather
- b. climate

37. A cold front occurs when a fast moving cold air mass pushes a slower moving warm air mass upward. Storms can form along the leading edge of a cold front.



Does the passage about cold fronts describe weather or climate?

- a. weather
  - b. climate
38. Which kind of weather is a low-pressure system most likely to bring?
- a. fair weather
  - b. hot, sunny weather
  - c. precipitation
  - d. light breezes
39. A weather vane tells
- a. how fast the wind blows
  - b. the direction from which the wind comes
  - c. the air pressure
  - d. the amount of rain that falls
40. Areas with low pressure have weather that is\_\_\_\_\_ and areas of high pressure have weather that is\_\_\_\_\_.
- a. sunny, cloudy
  - b. cloudy, sunny

41. What is a hurricane?
- a. A large funnel that forms from the sky
  - b. A lightning storm
  - c. A storm that forms at sea and strikes land
  - d. An ice blizzard with gusty winds
42. Atmospheric conditions for a long period of time is called \_\_\_\_\_.
- a. weather
  - b. climate
  - c. humidity
43. The boundary between air masses.
- a. Front
  - b. Weather
  - c. Barometer
44. The process by which a gas changes into a liquid.
- a. Condensation
  - b. Weather
  - c. Evaporation
45. Which weather instrument would be the most useful to predict changes in weather?
- a. an anemometer
  - b. a rain gauge
  - c. a barometer
46. What is the weather like in summer?
47. Rain, sleet, hail, and snow are all part of the \_\_\_\_\_ process in the water cycle.
- a. transpiration
  - b. evaporation
  - c. precipitation
  - d. condensation
48. \_\_\_\_\_ is a process in the water cycle, where water vapor rises into the atmosphere.
- a. Precipitation
  - b. Transpiration
  - c. Condensation
  - d. Evaporation

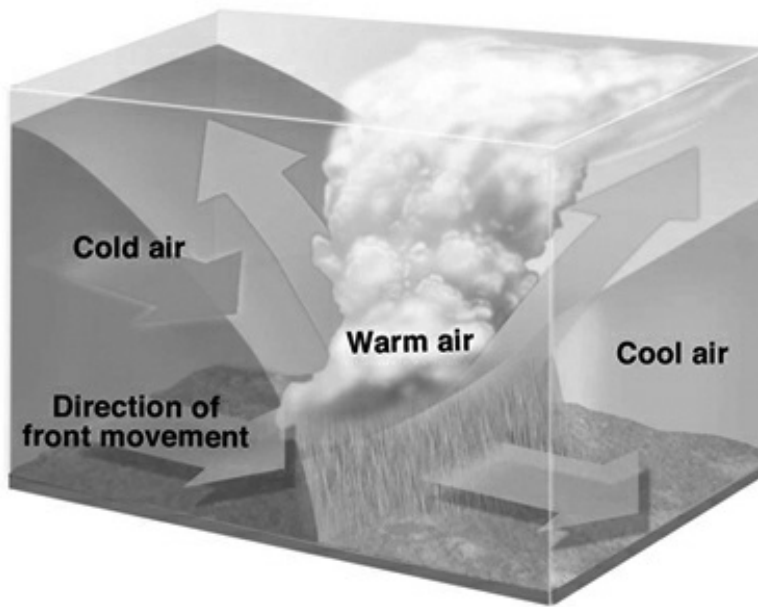
49. Create a paragraph, telling a story about the process of condensation. Make sure you include as much detail as possible.
50. Which is a type of cloud?
- Darius
  - Cirrus
  - Citrus
  - Dover
51. Name 3 types of weather.
52. Name the five features of weather.
53. Storms and severe weather occur when air masses collide. Air masses can be \_\_\_\_\_ and moist, or \_\_\_\_\_ and dry.
- Cold; warm
  - Warm; cold
54. A weather prediction before it happens is a \_\_\_\_\_.
- Forecast
  - Guess
  - Hypothesis
  - Meteorologist
55. Looking at a weather map help you to
- Predict weather
  - See weather station instruments
  - Look at radar
  - Find the location of a barometer
56. High pressure systems have \_\_\_\_\_ weather and are \_\_\_\_\_.
- rainy, stable
  - clear, stable
  - rainy, unstable
  - clear, unstable
57. \_\_\_\_\_ An artificial satellite that revolves around the Earth and detects and reports weather patterns on the Earth's surface.

58. Weather and climate are basically the same thing.
- a. True
  - b. False
59. Which is a high pressure weather system?
- a. anticyclone
  - b. cyclone
60. Which is a low pressure weather system?
- a. anticyclone
  - b. cyclone
61. Which natural hazard is caused by weather?
- a. flooding
  - b. tsunami
  - c. earthquake
  - d. volcanic eruption
62. A weather instrument that uses microwave frequency radio waves that bounce off water droplets in clouds in order to produce a map of the cloud locations would be \_\_\_\_\_.
- a. barometer
  - b. anemometer
  - c. radar
  - d. weather satellite
63. Draw a picture of what the climate is like in the summer where you live and how people interact with the climate.
64. A/An \_\_\_\_\_ cloud is often associated with fair weather.
- a. cumulus
  - b. nimbostratus
  - c. stratus
  - d. altostratus
65. Blows steadily over long distances in a predictable direction
- a. weather
  - b. humidity
  - c. global wind
  - d. insolation

66. Which kind of severe weather event do you think is the worst? Describe the reasons why you think so.
67. Which of the following choices is an example of weather?
- a. Florida is generally sunny.
  - b. Alaska is generally cold.
  - c. It is hot today.
  - d. Rain forests get a lot of rain every year.
68. What weather phenomenon is measured by the Beaufort scale?
69. What force is behind all weather on earth?
- a. wind
  - b. gravity
  - c. earth's rotation
  - d. energy from the sun
70. The stored \_\_\_\_\_ in the ocean drives much of Earth's weather.
- a. heat
  - b. energy
  - c. currents
  - d. water vapor

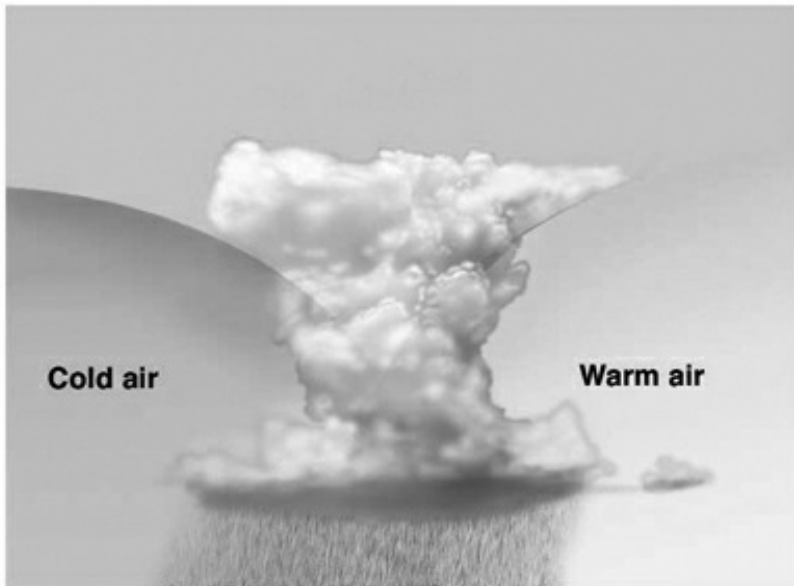


71. Which type of weather front does the diagram represent?



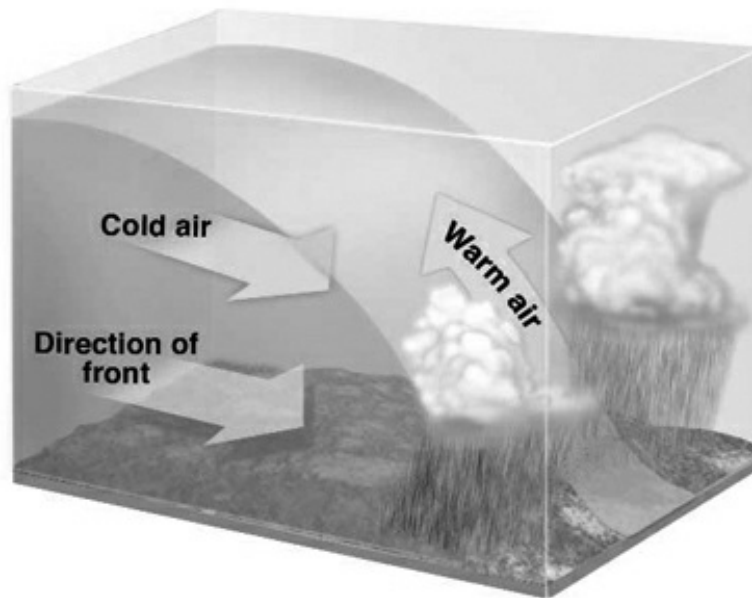
- a. cold
- b. warm
- c. occluded
- d. stationary

72. Which type of weather front does the diagram represent?



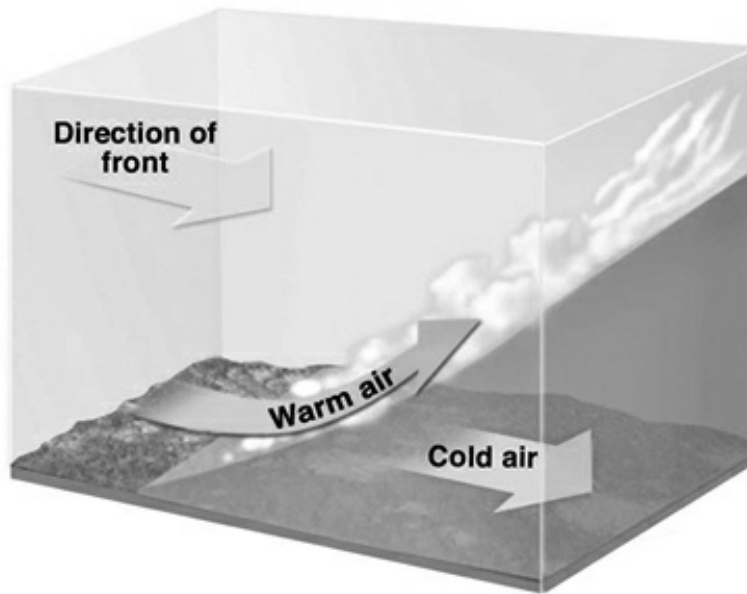
- a. cold
  - b. warm
  - c. occluded
  - d. stationary
73. C is located on a line call a(n) \_\_\_\_\_.
- a. isobar
  - b. isotherm
  - c. contour line
  - d. weather front
74. About which two atmospheric conditions does the weather map provide the most information?
- a. relative humidity and weather fronts
  - b. barometric pressure and weather fronts
  - c. relative humidity and temperature range
  - d. barometric pressure and temperature range
75. What do isobars on a map tell us?
- a. Cloud Cover
  - b. Weather
  - c. Elevation
  - d. Air Pressure

76. A weather map shows a lake effect snow storm moving east across Lake Erie. In Buffalo, the current weather is sunny and cold with no clouds. What can we expect the weather to be in Buffalo later on in the day?
- a. it will stay sunny and cold with no clouds
  - b. it will be sunny and warm with some clouds
  - c. it will be cloudy and cold with a lot of snow
  - d. it will be cloudy and cold with rain
77. Differences in air pressure causes which weather phenomena?
- a. winds
  - b. ocean currents
  - c. seasons
  - d. water cycle
78. Which type of weather front does the diagram represent?



- a. cold
- b. warm
- c. occluded
- d. stationary

79. Which type of weather front does the diagram represent?



- a. cold
- b. warm
- c. occluded
- d. stationary

80. What would the following symbol indicate on a weather map?



- a. Cold Front
- b. Warm Front
- c. Occluded Front
- d. Stationary Front

81. Given the right weather conditions, thunderstorms can turn into \_\_\_\_\_.

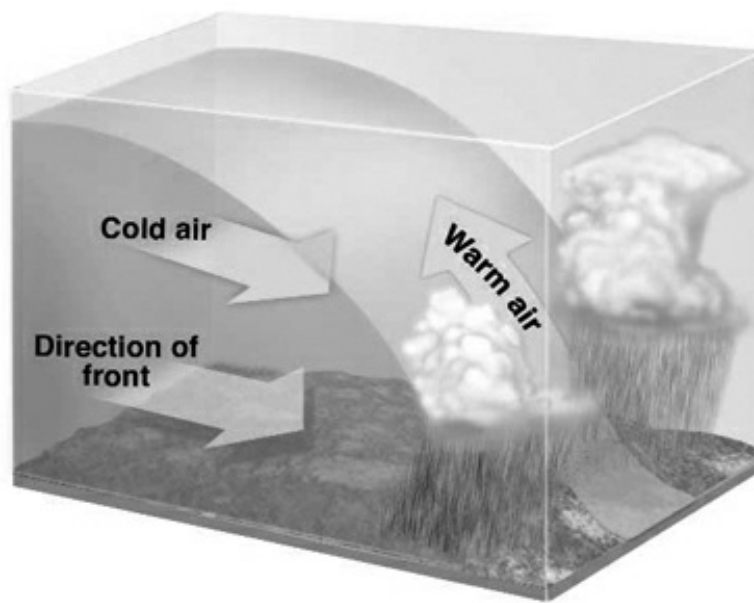
- a. Tornadoes
- b. Hurricanes
- c. Volcanoes

82. Which of the following can be used to measure and describe weather?

- a. form and amount of precipitation
- b. conditions of the sky (cloudy, sunny)
- c. temperature
- d. all of the above

83. What type of weather typically forms with a cold front?
84. How does a meteorologist begin to create a weather forecast?
- a. by going outside and observing the local weather
  - b. by reading forecasts from a book
  - c. by measuring temperature, precipitation, air pressure, and wind over a large area
  - d. by checking sea breezes
85. Describe what type of weather we may experience if the pressure on the barometer is low.
86. What causes changes in local weather from day to day?
- a. changes in wind direction
  - b. movement of air masses
  - c. Earth's movement around the Sun
  - d. Earth's rotating on its axis

87. Which symbol would be used to represent this front on a weather map?



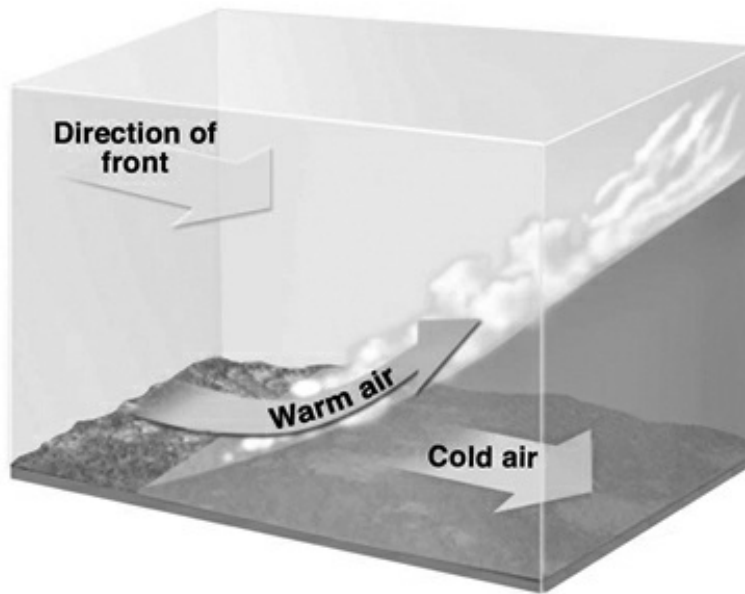
a.

b.

c.

d.

88. Which symbol would be used to represent this front on a weather map?



- a.
- b.
- c.
- d.

89. Places located in high latitudes have

- a. a very warm climate.
- b. the same weather as places in other latitudes.
- c. a mix of extremely hot and extremely cold weather.
- d. the coldest climates on Earth.

90. The three main types of clouds are:

- a. Altostratus, Stratus, Cirrus Status
- b. Cumulus, Altocumulus, Cumulusnimbus
- c. Stratuscumulus, Cirrus, Cululus
- d. Cirrus, Stratus, Cumulus

91. The opposite of too much rain is too little or not rain, which causes a \_\_\_\_\_.
- a. Rainbow
  - b. Flood
  - c. Front
  - d. Drought
92. Dark clouds cover the sun and the wind blows stronger. From this observation, a person may be able to predict that
- a. Sunny weather is on its way.
  - b. A storm is coming.
  - c. It is nighttime.



## Review: Chapter 14 - Oceans

1. Which word better fits the sentence?

The surfer rode the large \_\_\_\_\_ all the way to the beach.

- a. tide
- b. wave

2. Which word better fits the sentence?

We had to move our beach towels as the ocean water moved toward us during high \_\_\_\_\_.

- a. tide
- b. wave

3. What are the basic motions of ocean water? There are three answers.

4. The regular rising and falling of sea level due mainly to the pull of the moon is called

- a. waves
- b. tides
- c. surf
- d. crest

5. The gravitational pull of the Earth's moon (and sun) generates what ocean phenomenon?

- a. tides
- b. density
- c. turbulence
- d. waves

6. What carries warm water toward the poles?

- a. tides
- b. rivers
- c. waves
- d. currents

7. Which of the following lists ocean waves from smallest to largest?

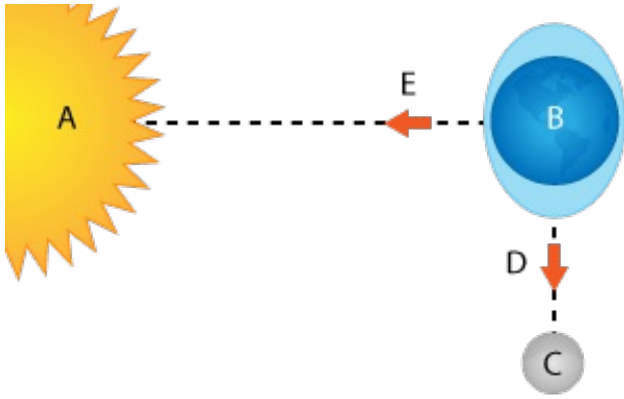
- a. seiches, chop, capillary waves, swells, tsunamis, tides
- b. swells, capillary waves, seiches, chop, tides, tsunamis
- c. capillary waves, chop, swells, seiches, tsunamis, tides
- d. chop, seiches, swells, capillary waves, tides, tsunamis

8. Vertical displacements of water are

- a. tides.
- b. density currents.
- c. waves.
- d. surface currents.

9. Wind causes an up-and-down movement of ocean water, called a \_\_\_\_\_.
- deep ocean current
  - tide
  - surface current
  - wave
10. Why does a wave usually break?
- one wave catches up to another
  - the friction of the shallow shore floor on the base of the wave
  - the tide
  - the currents
11. What are the basic motions of the ocean?
12. Which is caused by density differences?
- surface currents
  - ocean waves
  - deep ocean currents
  - ocean tides
13. This tide occurs on two points of the earth at a time - one closest to the moon and one farthest from the moon
- Low tide
  - High tide
  - Spring tide
  - Neap tide
14. Corey has a job helping to set new pilings into the sea bottom at Cedar Key, Florida. The pilings will support a new Marine Science Lab when the job is complete. He works all day and notices that on this day, the tide changed very little compared to normal. On the way home after work, he notices the moon is in the first quarter phase.  
"Aha, that explains it", he says to himself as he drives his golf cart home.  
What did he just realize?
- It is a Spring Tide
  - It is a Fall Tide
  - It is a Neap Tide

15. Look at the tidal bulge on the side of the Earth (B) near E. Which statement best describes the tide occurring here?



- a. ebb tide
  - b. low tide
  - c. high tide
  - d. slack tide
16. A \_\_\_\_\_ is a moderate tide that occurs when the sun and the moon are at right angles.
- a. neap tide
  - b. spring tide
  - c. diurnal tide
  - d. semidiurnal tide
17. Tides that produce the least difference between consecutive high and low tides are called
- a. neap tides.
  - b. spring tides.
  - c. fall tides.
  - d. full tides.
18. Terrance stands on the Number 4 bridge in Cedar Key, Florida and makes 2 observations.  
One: The tide has ebbed and is at an unusually low level.  
Two: A bright full moon is rising over the exposed mud flats and marsh grass.  
What type of tide has occurred?
- a. Neap Tide
  - b. Flood Tide
  - c. Spring Tide
19. The \_\_\_\_\_ of high tide and the \_\_\_\_\_ of low tide are called neap tides (least extreme tides).
20. Which has the highest high tide and lowest low tide?
- a. Spring Tide
  - b. Neap Tide

21. A single high and a single low tide daily.
- Diurnal tides
  - Neap tides
  - Spring tides
  - Tidal range
22. Aquatic biomes are grouped by \_\_\_\_\_.
- temperature and precipitation
  - salinity and latitude
  - salinity and depth
  - salinity and temperature
23. The difference between a lake and a pond is \_\_\_\_\_.
- salinity and depth
  - temperature and salinity
  - altitude and surface area
  - surface area and depth
24. Coral reefs are affected by the \_\_\_\_\_, or saltiness of ocean water.
25. Which factors affect the density of deep-ocean currents?
- surface currents and wind strength
  - clockwise direction and ocean location
  - hemisphere and amount of salt
  - temperature and amount of salt
26. Explain why the oceans are salty and most lakes are not salty.
27. The two major controlling factors for deep ocean currents are
- salinity and wind
  - pressure and salinity
  - wind and temperature
  - temperature and salinity
28. Due to seafloor spreading, oceanic crust is \_\_\_\_\_ and sediment is \_\_\_\_\_ on ocean ridge crests.
- old; thin
  - old; thick
  - young; thin
  - young; thick

29. Which of the following factors affect ocean water density?
- pressure
  - temperature
  - salinity
  - all of the above
30. What is the average salinity at the ocean surface?
- 35 ppt
  - 40 ppt
  - 45 ppt
  - 25 ppt
31. What is the approximate density of the ocean surface?
- $1027 \text{ kg/m}^3$
  - $1030 \text{ kg/m}^3$
  - $1033 \text{ kg/m}^3$
  - $1034 \text{ kg/m}^3$
32. The area where new ocean floor is formed when lava erupts through cracks in Earth's crust is called \_\_\_\_\_
- Seafloor
  - Continental Shelf
  - Continental Slope
  - Mid-Ocean Ridge
33. \_\_\_\_\_ are found near continents, particularly around the edges of the Pacific Ocean.
- Ocean trenches
  - Ocean mountains
  - Mid-ocean ridges
  - Seafloor spreading
34. What does turbidity measure?
- the salinity of the water
  - how hot the water is
  - the visibility of the water
  - the density of the water
35. The salinity of the estuary water is \_\_\_\_\_ average ocean water.
- higher than
  - lower than
  - equal to
  - none of the above

36. Water density increases as \_\_\_\_\_ decreases.
- salinity
  - sand
  - oxygen levels
  - temperature
37. Which type of seawater has the greatest density?
- warm, with low salinity
  - warm, with high salinity
  - cold, with low salinity
  - cold, with high salinity
38. Seafloor spreading is when new seafloor is formed when \_\_\_\_\_ is forced upward.
- magma
  - water
  - soil
  - calcium carbonate
39. Why is ocean water more dense near the North and South Poles?
40. Oceans have a huge effect on weather and climate mainly because
- oceans have huge waves
  - oceans are very salty
  - the fish and sea creatures give off heat
  - oceans hold and spread heat around the world by currents
41. In the ocean any movement of material that results from differences in density:
- Convection current
  - Upwelling
  - Surface current
  - Coriolis Effect
42. \_\_\_\_\_ currents are driven mainly by winds and \_\_\_\_\_ currents are caused by differences in density of ocean water.
43. \_\_\_\_\_ is the flat seafloor from 4,000 m to 6,000 m below the ocean surface, formed by the deposition of sediments.
- Mid-Ocean Ridge
  - Continental Shelf
  - Abyssal Plain
  - Continental Slope

44. The definition of salinity is
- the total amount of dissolved salt in seawater
  - the total amount of dirt in the ocean
  - the difference between temperature and density
  - the total amount of minerals in seawater
45. Describe the process of the seafloor spreading.
46. The small, plantlike organisms that make up the first link in the ocean's food chain are \_\_\_\_\_. The dissolved minerals and salts that are left behind cause oceans to be \_\_\_\_\_.
47. Which is the best estimate of seafloor spreading rates?
- 1 - 10 mm/yr
  - 1 - 10 cm/yr
  - 1 - 10 m/yr
  - 1 - 10 km/yr
48. What is evidence that seafloor spreading exists?
- fossils
  - pillow-like rocks
  - pressure
  - mountain ranges
49. The ocean basin feature that is a long, narrow, steep-sided depression in the seafloor formed where one crustal plates sinks beneath another is called a \_\_\_\_\_
- Continental Slope
  - Trench
  - Continental Shelf
  - Mid-Ocean Ridge
50. What are Benthos?
- Ocean animals that actively swim
  - Marine organisms that drift with the current
  - Newly hatched fish and crabs
  - Plants and animals living on or in the seafloor
51. The dark, superheated water at a hydrothermal vent is over 500 degrees F, yet it remains a liquid when water boils at 212 degrees F.  
What causes this very hot water to remain in the liquid state?
- The surrounding deep ocean water pressure.
  - The cold deep ocean temperatures.
  - The minerals dissolved in the vent water.

52. Where do most surface ocean currents and water waves get their energy?
- gravity
  - wind
  - salinity gradients
  - the thermocline
53. Name two things that effect surface ocean currents
- \_\_\_\_\_
  - \_\_\_\_\_
54. Explain what density currents are AND where they occur.
55. Higher salinity \_\_\_\_\_ vapor pressure and \_\_\_\_\_ evaporation rate.
- decreases, decreases
  - decreases, increases
  - increases, increases
  - increases, decreases
56. Only 3% of water on earth is
- Salty
  - Tap water
  - Fresh water
57. What mathematical unit is used to measure salinity?
- parts per thousand (ppt)
  - parts per million (ppm)
  - parts per billion (ppb)
  - none of the above
58. These currents are responsible for a slow mixing of water between the surface and deeper ocean.
- surface currents
  - deep ocean currents
  - density currents
  - California currents
  - global surface currents
59. Which of the following DOES NOT cause a decrease in salinity?
- evaporation
  - melting of sea ice
  - precipitation
  - runoff



60. About 90% of all tsunamis occur in this ocean.
- Atlantic Ocean
  - Indian Ocean
  - Pacific Ocean
61. The world's largest ocean is the
- Atlantic Ocean
  - Pacific Ocean
  - Arctic Ocean
  - The Indian Ocean
62. The seas are still rising. Many researchers believe the cause is
- global warming
  - glaciers getting bigger
  - the ocean water getting more dense
  - lower temperatures on Earth's surface
63. Which of the following does NOT affect wave height in deep water?
- wavelength
  - wind speed
  - wind duration
  - fetch
64. What ocean is Challenger Deep located in?
- Indian Ocean
  - Atlantic Ocean
  - Pacific Ocean
  - Arctic Ocean
65. Name 3 things that are causing our oceans to be in danger.
- - 
  -
66. The \_\_\_\_\_ is home for many ocean organisms including plankton.
67. Which of the following oceans is said to have the saltiest water?
- Pacific Ocean
  - Atlantic Ocean
  - Red Sea

68. What is the ocean closest to Florida called?
- a. Pacific Ocean
  - b. Atlantic Ocean
  - c. Indian Ocean
  - d. Caspian Sea
69. Semi-enclosed area where the fresh water from a river meets salty water from the sea.
- a. aquifer
  - b. ocean
  - c. estuary
  - d. wetland
70. Which is not an ocean?
- a. Indian
  - b. Pacific
  - c. Superior
  - d. Atlantic
71. Which of the following factors would most influence the shore impact of a tsunami?
- a. tide height
  - b. the season
  - c. air temperature
  - d. water temperature

72. The map shows the Atlantic Ocean. It also shows the continents it borders.



Which statement best describes continents and oceans?

- a. all continents are surrounded by oceans
- b. some continents are surrounded by oceans
- c. continents are not surrounded by oceans

73. As the ocean floor moves away from the mid ocean ridge

- a. the climate changes
- b. lava flows out of the rift and hardens to form new ocean floor

74. The deepest part of the ocean is the \_\_\_\_\_.

- a. abyss
- b. aphotic zone
- c. disphotic zone
- d. photic zone

75. What ocean is the most shallow and the coldest?
76. Name the five oceans.
77. The ocean is divided into three basic areas
1. \_\_\_\_\_
  2. \_\_\_\_\_
  3. \_\_\_\_\_
78. What is the movement of cold, deep ocean water to the ocean's surface?
- a. deep ocean current
  - b. El Nino
  - c. Coriolis effect
  - d. upwelling
79. What is the oceanic ridge?
- a. the bottom of the ocean where little light penetrates therefore there is very little life
  - b. the continuous range of mountains on the ocean floor that winds around the Earth
  - c. a section of the ocean floor that rises to connect open ocean floor to continental shelf
  - d. mountain ranges from each ocean connecting to form a gigantic mountain system
80. This is a 1 to 2 kilometer deep, several kilometers wide, land from which splits many segments of the oceanic-ridge crust
- a. continental shelf
  - b. mid-oceanic ridge
  - c. oceanic crust
  - d. rift valley
81. \_\_\_\_\_ is the study of earth's oceans.
- a. Hydrology
  - b. Topography
  - c. Psychology
  - d. Oceanography
82. The deepest part of the ocean is:
- a. Mount Everest
  - b. Marianas Trench
  - c. Marianas Fault
83. Ocean currents drive
- a. water patterns
  - b. weather patterns
  - c. mountain rains
  - d. air

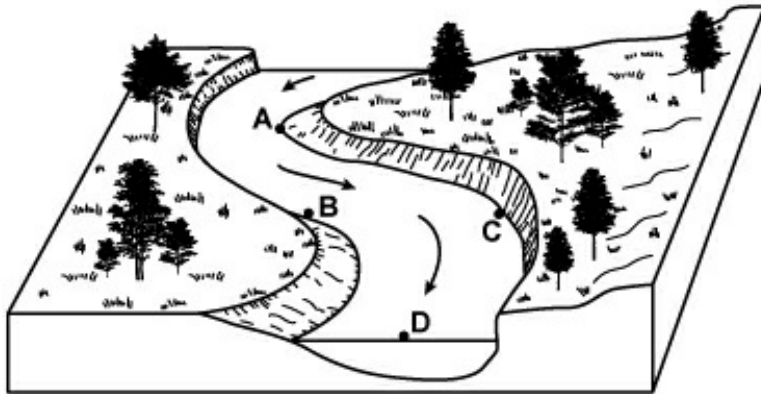
84. Where are the oceans located?
- on top of the oceanic plates
  - on top of the continental plates
  - in holes in the crust
  - none of the above
85. Undersea mountain ranges in the middle of ocean floors are known as \_\_\_\_\_.
- Deep-ocean trenches
  - Sea-floor spreading
  - Mid-ocean ridges
86. Describe a tsunami.

87. The process that moves sand along a shore is
- upwelling
  - longshore drift
  - abrasion
  - density current

88. Why is the ocean a carbon sink?

89. \_\_\_\_\_ is land next to the ocean.

90. The diagram shows water flow in a meandering river channel. Which of the following best explains why water flows in the river channel?



- gravitational force
  - energy from the sun
  - differences in water salinity
  - energy from the Earth's interior
91. Describe the topography of the ocean floor.

92. Most of the Earth's freshwater is found in \_\_\_\_\_.  
a. ice  
b. aquifers  
c. oceans  
d. lakes
93. The height of the ocean's surface is called the \_\_\_\_\_.  
a. climate  
b. sea level  
c. heat wave
94. Gentle, rolling waves which appear in the ocean even during calm weather are known as \_\_\_\_\_.  
a. currents  
b. surf  
c. tidal waves  
d. swells
95. The oceans cover \_\_\_\_\_ of the Earth's surface.
96. What is a mid-ocean ridge?
97. The name of the most common salt in the ocean is:  
a. oxygen  
b. sodium chloride  
c. hydrogen

## Review: Chapter 11 - Exploring the Universe COPY Answer Key

1. What types of electromagnetic radiations have given proof to the possibility of the Big Bang Theory?
  - a. infrared and dark matter and microwave
  - b. dark matter
  - c. infrared and microwave**
2. A reflective telescope has \_\_\_\_\_ main parts.
  - a. one
  - b. two
  - c. three**
  - d. four
3. A person who studies stars, planets, and other objects in the sky is called an \_\_\_\_\_.
  - a. telescoper
  - b. starsologer
  - c. astronomer**
  - d. astrologist
4. This type of telescope never has problems seeing through Earth's atmosphere. It uses lenses to enlarge an object.
  - a. Earth-based telescope
  - b. reflecting telescope
  - c. refracting telescope
  - d. space-based telescope**
5. Telescope in space used to observe universe using X-Rays
  - a. Erwin Telescope
  - b. Darwin Telescope
  - c. Moon Telescope
  - d. Chandra Telescope**
6. What instrument can an astronomer use to see objects that are very far away?
  - a. Microscope
  - b. Telescope**
  - c. Compass
  - d. Stereoscope
7. The first person to use a telescope for astronomy was
  - a. Newton
  - b. Galileo**
  - c. Copernicus
  - d. Kepler

8. The first type of telescope invented
- a. refractor telescope**
  - b. reflector telescope
  - c. composite telescope
  - d. radio telescope
9. The telescope that uses both lenses and mirrors to gather light
- a. refractor telescope
  - b. reflector telescope
  - c. composite telescope**
  - d. radio telescope
10. The telescope that detects wavelengths other than visible light
- a. refractor telescope
  - b. reflector telescope
  - c. composite telescope
  - d. radio telescope**
11. The telescope that uses a mirror to gather light
- a. refractor telescope
  - b. x-ray telescope
  - c. reflector telescope**
  - d. radio telescope
12. An enormous exoplanet, called HD 106906 b, was discovered that is 11 times the size of Jupiter. What was not used to discover this new planet?
- a. International Space Station**
  - b. Hubble Space Telescope
  - c. Infrared camera
  - d. Magellan telescope
13. What is the difference between refracting and reflecting telescopes?
- a. A refracting telescope uses a convex lens to magnify an image, and a reflecting telescope uses a mirror.**
  - b. A refracting telescope uses a mirror, and a reflecting telescope uses a concave lens to magnify an image.
  - c. A reflecting telescope uses a convex lens to magnify an image, and a refracting telescope uses a mirror
  - d. There is no difference.
14. What was the initial problem with the Hubble Space Telescope?
- a. It is a reflecting telescope, and there was a problem with the mirror.**
  - b. It is a reflecting telescope, and there was a problem with the lens.
  - c. It is a refracting telescope, and there was problem with the lens.
  - d. It is a refracting telescope, and there was a problem with the mirror.



15. Why are radio telescopes considered to be dependable telescopes?
- a. because they never run out of energy
  - b. because they use radios to help various telescope's computers communicate with each other
  - c. because they use radio waves, which pass freely through Earth's atmosphere in any weather condition**
  - d. because they use radio waves, which do not pass freely through Earth's atmosphere due to unpredictable weather
16. Telescopes that bend light to make objects seem larger are
- a. refracting telescopes**
  - b. reflecting telescopes
  - c. radio telescopes
  - d. spectroscopes
17. This tool makes it possible to see things in space more clearly:
- a. microscope
  - b. telescope**
  - c. binoculars
18. Scientists use \_\_\_\_\_ to study stars and planets.
- a. telescopes**
  - b. magnifying glasses
  - c. microscopes
19. Refracting telescopes suffer from an optical defect called chromatic aberration.
- a. True**
  - b. False
20. What is the purpose of the New Millennium Program?
- a. to create satellites to spy on other nations
  - b. to develop advanced technology that will let NASA send smart spacecraft into the solar system**
  - c. to develop technology that will create more jobs on Earth
  - d. to create technology faster than other nations
21. The Italian astronomer, Galileo, was the first scientist to do what?
- a. Discover the correct shape of the planets orbits.
  - b. Discover gravity and inertia.
  - c. Use a telescope to look at objects in the sky.**
  - d. All of the above
22. \_\_\_\_\_ technology is used to study planets in our solar system.
- a. Sonar
  - b. Satellite**
  - c. Cable
  - d. Antennae

23. Astronomers use \_\_\_\_\_ to make observations and collect data about objects in the solar system.
- a. telescopes
  - b. satellites
  - c. space probes
  - d. all of the above**
24. What successful space telescope was scheduled to operate for 15 years but had its mission time extended thanks to at least 4 service calls?
- a. Hubble**
  - b. Chandra
  - c. Giotto
  - d. Cassini
25. What is the Hubble Tuning Fork?
- a. A tool used to fine-tune a telescope
  - b. A machine that shows the elements of a star by looking at its light
  - c. An instrument used to measure the distance between stars
  - d. A diagram that show types of galaxies and how they evolve over time**
26. What does NASA stand for?
- a. Nationals Acrobats and Swimming Association
  - b. National Aeronautics and Space Administration**
  - c. Neighborhood Awareness and Sharing Alliance
  - d. News Administration and Satellite Association
27. A modern application for a satellite is for \_\_\_\_\_.
- a. gathering scientific data
  - b. gathering pictures of Earth's surface
  - c. transmitting radio and television signals
  - d. all answers are correct**
28. Why are rockets ideal for exploring space?
- a. They can gather lots data.
  - b. They don't need air.**
  - c. They are retrievable.
  - d. They are inexpensive.
29. Space probes, unlike satellites, are able to \_\_\_\_\_.
- a. gather data
  - b. travel out of the solar system**
  - c. go into orbit
  - d. be retrieved
30. How are satellites used?
- a. to gather military information
  - b. to transmit television signals
  - c. to monitor weather
  - d. all of the above**

31. What country successfully launched its first satellite named Explorer 1?
- a. China
  - b. Japan
  - c. United States**
  - d. Canada
32. What country launched the world's first artificial satellite, the Sputnik?
- a. China
  - b. Germany
  - c. Russia**
  - d. United States
33. Which of the following is NOT one of the four broad categories of satellites?
- a. intelligence**
  - b. communication
  - c. navigation
  - d. scientific
34. Trips that people take into space are called \_\_\_\_\_.
- a. crewed missions**
  - b. uncrewed missions
  - c. space probes
  - d. observations
35. What is the definition of a mission?
- a. exploration of a ship
  - b. a walk around the city
  - c. a specific job or task**
  - d. a system of signals
36. How long did it take to put together the Curiosity Mission?
- a. 1-2 Years
  - b. 3-5 Years
  - c. 9-10 Years**
  - d. 20-25 Years
37. Why did mission scientists put Rosetta to sleep for several years?
- a. to prevent rusting
  - b. to save money
  - c. to analyze data
  - d. to save energy**
38. Most forms of energy originally come from
- a. water
  - b. the earth
  - c. the sun**
  - d. natural gas

39. Earth's climate
- a. has been stable over the history of the planet
  - b. is changing as a result of natural and human processes**
  - c. will stabilize over the next century, according to the predictions of most scientists
  - d. has changed only once due to the evolution of green photosynthesizing plants
  - e. history is undeterminable because there is no method of studying climatic history of the planet
40. The greenhouse effect heats the Earth's surface by
- a. infrared radiation and sunlight**
  - b. sunlight and volcanic eruptions
  - c. mantle convection and infrared radiation
  - d. volcanic eruptions and mantle convection
41. Sunlight \_\_\_\_\_ the Earth's surface.
- a. cools
  - b. warms**
42. Three essential theories for Earth Science are the theory of evolution, the theory of plate tectonics, and the theory of \_\_\_\_\_.
- a. relativity
  - b. earth science
  - c. climate change**
  - d. human knowledge
43. What did Karl Jansky discover?
- a. the planets move on an elliptical path
  - b. the Sun was the center of the Universe
  - c. Earth rotated on a tilted axis, which caused the seasons
  - d. radio waves coming from space**
44. Astrobiology is best described as
- a. the study of animals in space
  - b. the scientific search for evidence of intelligent life
  - c. the study of life in the universe**
45. What was president John F. Kennedy's goal for the space program?
- a. To go to infinity and beyond.
  - b. To be the first one to land a human on the moon.**
  - c. To go to the edge of our solar system.
  - d. To study the effects of the sun on Earth's atmosphere.
46. \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_A
- \_\_\_\_\_ is a vehicle sent into space in order to explore places too dangerous or too far away for people to visit.
47. The geocentric theory claims that the earth is at the center of the universe.

48. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_Li  
st 3 important advantages of exploring space.
49. The Hubble telescope helped scientists ascertain how the universe began and how old it is.
50. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Who was the first astronomer to build a telescope for viewing the heavens?
51. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
What are the three functions of a telescope?
52. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
What is the function of the objective lens of a refracting telescope?
53. Refracting telescopes got their name because they refract, or bend, light.
54. The main difference between a reflecting telescope and a refracting telescope is that a reflecting telescope uses a(n) mirrorto focus the incoming light.
55. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Why do space telescopes produce clearer images than telescopes on Earth?
56. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_Li  
st two advantages of radio telescopes over optical telescopes.
57. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_A  
\_\_\_\_\_ is an instrument used to observe distant objects.
58. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_N  
ame one kind of tool that modern astronomers can use to collect information in outer space.
59. The Hubble Space Telescope is a giant telescope floating in space designed and built by engineers at America space agency NASA.

60. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What are telescopes used for?

61. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_N

name 2 major categories of optical telescopes.

62. Isaac Newton created the first reflecting telescope.

63. The Hubble telescope was launched by the United States from a space shuttle in 1990.

64. A. refracting telescope B. reflecting telescope C. radio telescope D. spectroscope

D 1. breaks down the light given off by a star into all its colors

A 2. bends light to make objects seem larger

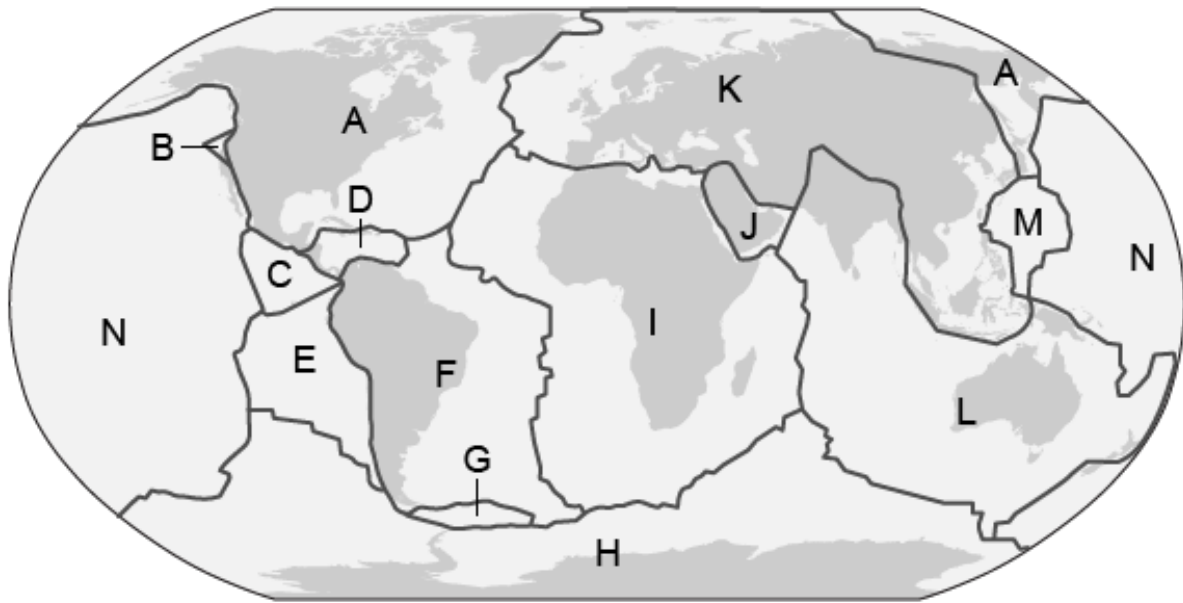
C 3. collects radio waves from space using large concave-shaped disk

B 4. produces a clearer magnified image because the light is reflected

## Review: Chapter 12 - Earth's changing surface. Answer Key

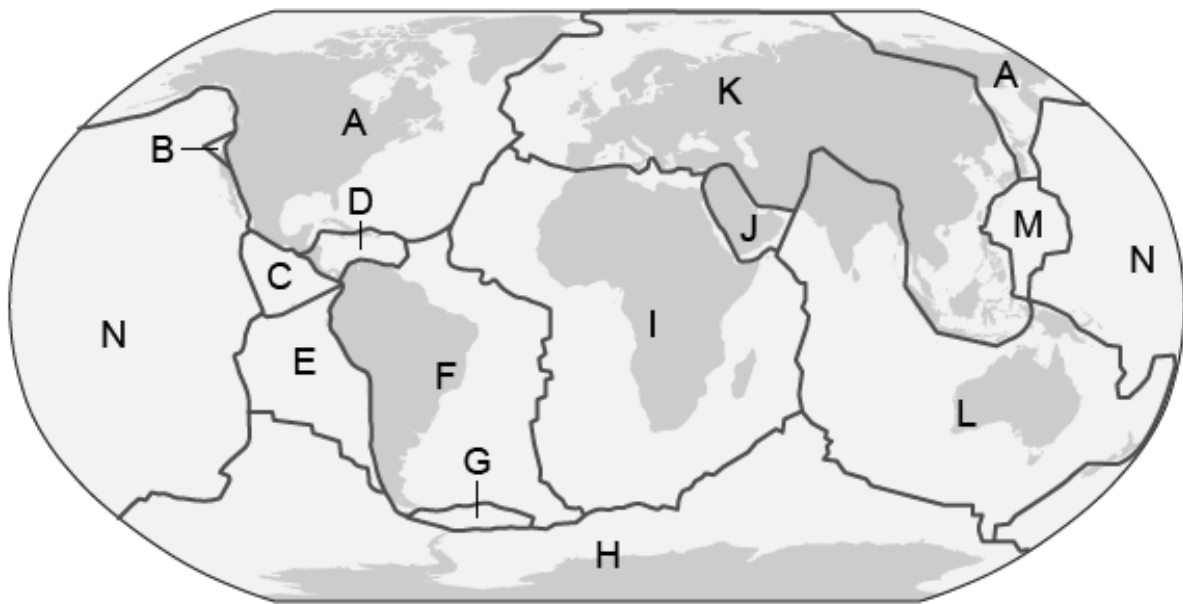
1. Earthquakes most often occur
  - a. in the middle of tectonic plates.
  - b. anywhere near a tectonic plate.
  - c. only in the 'Ring of Fire'.
  - d. on the boundary of tectonic plates.**
2. The theory of plate movement and how the continents moved apart over time is called \_\_\_\_\_.
  - a. plate tectonics**
  - b. geology
  - c. continental tectonics
  - d. biology
3. What is a tectonic plate?
  - a. liquid magma
  - b. technical term used for dinnerware
  - c. lava flowing into the ocean
  - d. the movable crust on top of the earth's mantle**
4. What is a tectonic plate?
  - a. a dish made of rock
  - b. a kind of mountain
  - c. a moving piece of Earth's rocky crust**
  - d. a loose piece of Earth's inner core
5. Tectonic plates interact at places called plate
  - a. reversals
  - b. boundaries**
  - c. regions
  - d. centers

6. The map shows the major tectonic plates.



Which letter shows the Arabian plate?

- a. I
  - b. J**
  - c. L
  - d. M
7. The map shows the major tectonic plates.



Which letter shows the Caribbean plate?

- a. B
- b. C
- c. D**
- d. E



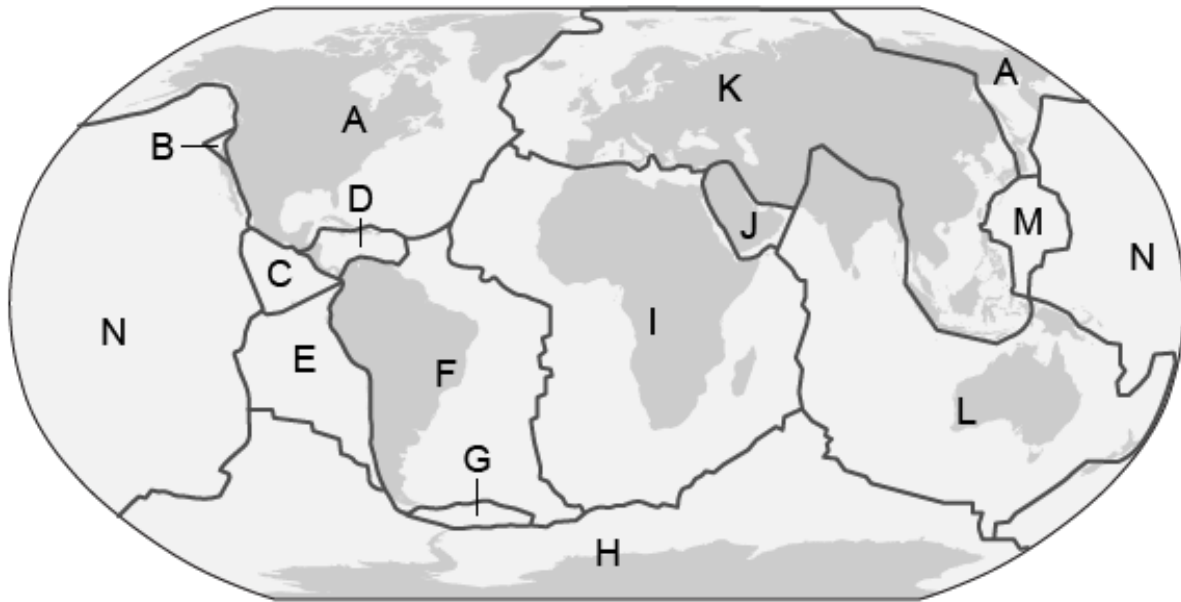
8. What moves apart or together to form volcanoes or earthquakes?

**a. tectonic plates**

b. cups

c. gravity

9. The map shows the major tectonic plates.



Which letter shows the Cocos plate?

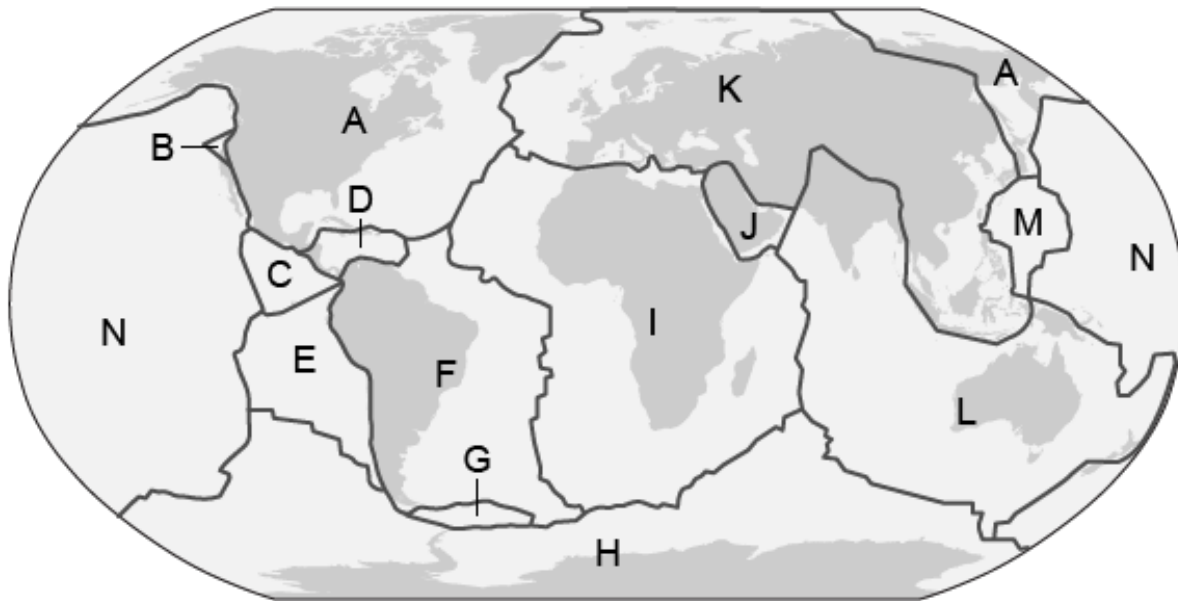
a. B

**b. C**

c. D

d. E

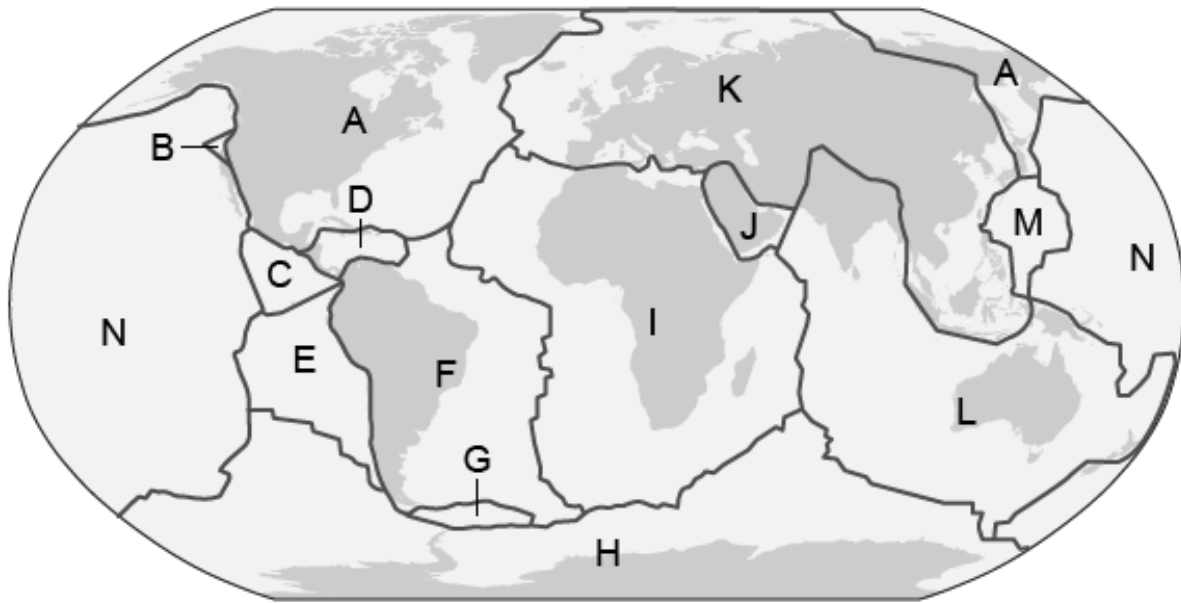
10. The map shows the major tectonic plates.



Which letter shows the Cocos plate?

- a. A
  - b. B
  - c. C**
  - d. D
11. A tectonic plate segment includes the \_\_\_\_\_.
- a. all of the mantle
  - b. the crust and the asthenosphere
  - c. the upper mantle and the crust**
  - d. the mantle and the core
12. What type of tectonic plate boundary involves a collision between two tectonic plates?
- a. divergent
  - b. transform
  - c. convergent**
  - d. normal
13. The plate tectonics theory states that
- a. continental crust "plows through" oceanic crust
  - b. oceanic crust "slides over" continental crust
  - c. lithospheric plates move**
  - d. tectonic forces cause the most damage in the center of the plates
14. What is the largest tectonic plate?
- a. Scotia plate
  - b. Pacific plate**
  - c. Eurasian plate
  - d. Antarctic plate

15. The map shows the major tectonic plates.



Which letter shows the Juan de Fuca plate?

- a. **B**
  - b. C
  - c. D
  - d. E
16. Shifting pieces of the Earth's crust are called
- a. magma
  - b. volcano
  - c. **tectonic plates**
  - d. island
17. The collision of India and Asia that formed the Himalayas is still colliding today, causing the mountain range to continue to rise. What keeps the mountain from getting too big?
- a. **erosion**
  - b. volcanism
  - c. deposition
  - d. plate tectonics
18. Earth's crust consists of major and minor \_\_\_\_\_ that move relative to each other.
- a. rock formations
  - b. **tectonic plates**
  - c. mantles
19. What causes tectonic plates to move?
- a. radiation from within the crust
  - b. magnetic forces from the inner core
  - c. **convection currents in the mantle**
  - d. slow continental drift

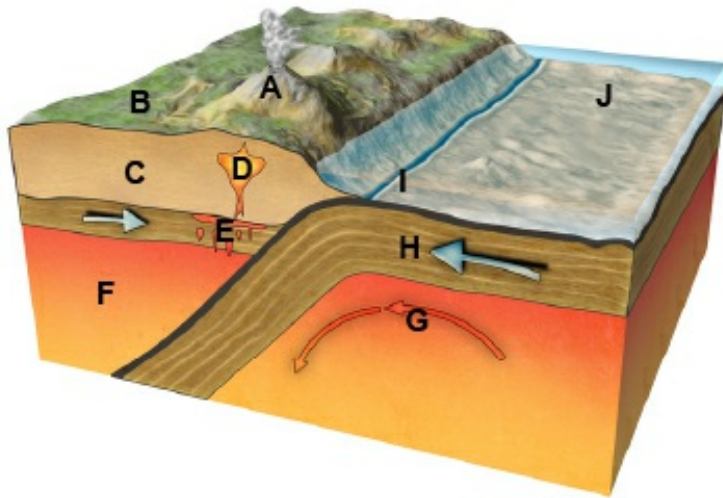
20. The portion of the mantle just below the lithosphere of the earth.
- a. oceanic crust
  - b. asthenosphere**
  - c. plate tectonics
21. What can possibly happen at all three types of boundary lines?
- a. an earthquake
  - b. a volcano
  - c. a mountain range
  - d. all of the above**
22. Some volcanoes form new \_\_\_\_\_ as plates move apart and magma rises to the surface of the crust.
- a. volcanoes
  - b. ocean floor**
  - c. earthquakes
  - d. mantle
23. any of various instruments for measuring and recording the vibration of earthquakes
- a. faults
  - b. earthquakes
  - c. epicenter
  - d. seismograph**
  - e. volcano
  - f. lava
24. Gravity can pull rocks and soil rapidly down a hill slide causing a(n)
- a. tsunami
  - b. earthquake
  - c. landslide**
  - d. volcano
25. a cone-shaped landform that can erupt at times
- a. earthquake
  - b. fault
  - c. epicenter
  - d. volcano**
26. a crack where earth's crust can move
- a. fault**
  - b. epicenter
  - c. volcano
  - d. earthquake

27. The place underground where plates moves and the earthquake begin.
- a. focus**
  - b. fault
  - c. volcano
  - d. earthquake
28. Volcanoes and earthquakes relate to the following sphere:
- a. biosphere
  - b. atmosphere
  - c. geosphere**
  - d. anthrosphere
29. What do you call the sudden movement of Earth's crust?
- a. earthquake**
  - b. tsunami
  - c. volcano
  - d. fault
30. Why did Wegener think that continental drift could be used to explain rock scarring in South America, India, and Australia?
- a. volcanoes moved the seafloor
  - b. glaciers cause the scarring**
  - c. earthquakes scar rocks
  - d. Hess proposed this theory
31. Where do earthquakes and volcanoes (with the exception of Hawaii) usually occur, and why?
- They usually happen at the boundaries where the Earth's plate come together. At these boundaries, there are cracks called faults. Pressure builds up along faults until there is a slipping of the plates, causing an earthquake. Under these faults, it is easy for volcanoes to form as the pressure melts rock and it's forced up near the faults where the Earth's crust is weak.***
32. A transform boundary is a boundary where two plates slide past one another. What geological event will be most likely to occur along a transform boundary?
- a. mountain formation
  - b. volcano eruption
  - c. earthquake**
  - d. rift valley
33. Scientists are studying a graph showing the time differences between the seismic P-waves and the seismic S-waves as they travel through Earth. Which information can they learn from the graph?
- a. the magnitude of an earthquake
  - b. the duration of an earthquake
  - c. the epicenter of an earthquake**
  - d. the intensity of an earthquake

34. The five factors that determine how soils develop are:

- a. **parent material, climate, vegetation, landscape, and time**
- b. animals, humus, weather, leaching, and volcanoes
- c. sun, animals, humus, leaching, and earthquakes

35. What landforms are formed at a subduction zone?



- a. faults
- b. volcanoes only
- c. mountains only
- d. **mountains and volcanoes**

36. How are volcanoes on divergent boundaries different than volcanoes on convergent boundaries?

**Volcanoes on divergent boundaries are formed when the plates move part causing rifts to form. When these plates separate, they form long, deep cracks called rifts. Magma flows through these rifts as lava and is quickly cooled by the ocean's water. As more lava flows, it builds up from the bottom of the ocean. Sometimes the volcanoes and rift eruptions rise above the top of the ocean and form islands.**

**Volcanoes on convergent boundaries form when the Earth's plates move together. When these plates move together the part that slides underneath another plate is partially melted forming magma. The magma is then forced up to the surface forming volcanoes.**

37. The three main categories/stages of volcanoes are: active, dormant, and extinct

38. a wave produced by an earthquake

**seismic wave**

39. One way the atmosphere shapes Earth's surface is with  
**a. winds**  
b. tsunamis  
c. earthquakes
40. Low land between hills or mountains  
**a. valley**  
b. island  
c. volcano
41. Earthquake hazards include:  
a. building collapse  
b. fire  
c. liquefaction  
**d. all of the above**
42. The process of wearing away rocks by natural means is called  
a. erosion  
**b. weathering**  
c. faults  
d. earthquakes
43. The rapid downhill movement of large amount of rock and soil is called a(n):  
a. erosion  
**b. landslide**  
c. avalanche  
d. earthquake
44. A dirt and debris filled flood of water  
a. tsunamis  
b. earthquake  
**c. mudslide**  
d. landslide
45. Deposition is the deposit of weathered materials.
46. Water freezing in the cracks of rocks is an example of \_\_\_\_\_.  
a. deposition  
**b. mechanical weathering**  
c. chemical weathering  
d. erosion
47. The movement of rocks.  
a. Deposition  
b. Weathering  
**c. Erosion**

48. Process in which rocks get broken down.
- a. Weathering**
  - b. Erosion
  - c. Deposition
49. Which of these are put in the correct order?
- a. deposition, erosion, weathering
  - b. weathering, erosion, deposition**
  - c. erosion, deposition, weathering
  - d. weathering, deposition, erosion
50. The process in which materials are eroded by weather or ice and are dropped into a new place, creating a new landform
- a. Weathering
  - b. Deposition**
  - c. Erosion
51. Freezing and thawing are a type of
- a. chemical weathering.
  - b. erosion.
  - c. physical weathering.**
  - d. deposition.
52. Rocks are broken down by changing the chemical makeup of the minerals through
- a. physical weathering.
  - b. erosion.
  - c. chemical weathering.**
  - d. deposition.
53. Water, oxygen, carbon dioxide, and acids are significant agents of \_\_\_\_\_.
- a. chemical weathering**
  - b. abrasion
  - c. mechanical weathering
  - d. erosion
54. Plains, plateaus, peninsulas, valleys, hills, basins, canyons and mountain are examples of:
- a. Physical Weathering
  - b. Chemical Weathering
  - c. Erosion
  - d. Landforms**
  - e. Weathering
55. Deposition is when particles carried by water, wind or ice are deposited in another location.

The movement of sediment or soil from one location to another is erosion.

The breaking down of rocks and minerals by physical, chemical or biological processes is weathering.



Deltas forming at the mouths of rivers deposition.

A mudslide flowing down a steep hill erosion.

Needs to take place before erosion weathering.

Wind blowing sand from one location to another erosion.

Can be mechanical or chemical weathering.

Waves dropping sand on the beach deposition.

Occurs when gravity's downward pull on sediment is stronger erosion.

Results in wind or water forming beaches, barrier islands, and sand bars deposition.

Human activities such as construction increase this process erosion.

No movement of sediment is involved weathering.

The movement of weathered materials erosion.

Layers of sediment forming at the bottom of the ocean deposition.

Glaciers dropping rock and sand to form terminal moraines deposition.

Rocks being made smooth by tumbling across a stream-bed weathering.

Wind blasting sand at rock and carving out arches weathering.

Rain washing away soil from a hillside erosion.

56. What is the difference between weathering and erosion?

***Weathering is the breaking up of rocks on the surface of the earth as they are exposed to the elements. Erosion is the movement of weathered material by water, ice and wind***

57. Weathering must take place before erosion.

**a. True**

b. False

58. What changes earth surface?

a. volcanoes

b. weathering

c. erosion

**d. all of the above**

59. Weathering and erosion are quick changes to the earth's surface.

a. True

**b. False**

60. Describe how gravity causes erosion.

**answers will vary - downward flow of water, landslides**

61. What are four factors that effect erosion?

**precipitation, wind, slope, vegetation, soil composition**

62. What are three major causes for erosion?

a. snow, tornado, volcano

b. sinkholes, landslides, mudslides

**c. ice, wind, water**

d. wind, heat, plate tectonics

63. List three landforms formed by erosion.

**answers will vary - valley, canyon, cave**

64. Which of these is an example of weathering?

a. Mountains are built

b. Water freezes

**c. Plant roots widen a crack in a rock**

d. A volcano erupts

65. Erosion can be caused by which of the following? Select all that apply.

**a. wind**

**b. water**

**c. ice**

**d. gravitational pull**

66. How do earthworms aid in weathering?

**When they burrow, they move soil particles around and expose fresh surfaces to weather.**

67. Label the following events with a "D" for deposition, "W" for weathering, or "E" for erosion.

D Layers of sediment forming at the bottom of oceans

W Water getting into cracks, freezing, and breaking the rocks or pavement apart.

E Rocks being made smooth by tumbling across a stream bed.

E A mudslide flowing down a steep hill.

D Waves dropping sand on a beach

W Wind blasting sand and rock carving out arches.

68. List three human activities that remove natural vegetation and greatly accelerate erosion.

**answers will vary - clear cutting, slash and burn agriculture, building**

## Review: Chapter 13 - Weather and its impacts Answer Key

1. By what are most differences in air pressure caused by?  
**a. unequal heating of the atmosphere**  
b. equal heating of the atmosphere  
c. unequal cooling of the atmosphere  
d. equal cooling of the atmosphere
2. The \_\_\_\_\_ is the thin layer of air that surrounds Earth.  
**atmosphere**
3. The atmosphere  
a. creates the tides.  
b. has not effect on heat gain or loss.  
c. allows heat to escape quickly in order to cool the planet.  
**d. keeps heat from escaping too quickly into space.**
4. Which of the following statements best describes humidity?  
a. It is the amount of heat in the atmosphere.  
b. It describes the amount of sunlight in the atmosphere.  
**c. It is the amount of water vapor in the atmosphere.**
5. Sleet and hail are types of  
a. gases in the atmosphere.  
b. layers in the atmosphere.  
c. air pressure.  
**d. precipitation.**
6. Sleet and hail are types of  
a. gases in the atmosphere  
b. layers in the atmosphere  
c. air pressure  
**d. precipitation**
7. Which word better matches the sentence?  
  
It will most likely rain later tonight in Jacksonville, Florida.  
**a. forecast**  
b. atmosphere
8. Which word better matches the sentence?  
  
Layer of gases that surrounds the earth.  
a. weather  
**b. atmosphere**

9. Which word better fits the sentence?

Rain and snow are two types of \_\_\_\_\_.

- a. atmosphere
- b. precipitation**

10. Which statement is true about weather?

- a. It occurs throughout the atmosphere
- b. It occurs throughout the upper atmosphere
- c. It occurs throughout the lower atmosphere**
- d. It occurs in the stratosphere

11. What is the atmosphere?

**A very thin blanket of air that surrounds Earth.**

12. The atmosphere consists of

- a. helium
- b. hydrogen
- c. oxygen
- d. a mixture of gases**

13. \_\_\_\_\_ is the most abundant gas in the atmosphere (it makes up 78% of the atmosphere).

- a. Oxygen
- b. Argon
- c. Nitrogen**
- d. Ozone

14. Average weather conditions in an area over a long period of time

- a. atmosphere
- b. condensation
- c. climate**

15. The outermost layer of the atmosphere:

**exosphere**

16. The atmosphere is made primarily of \_\_\_\_\_.

- a. oxygen
- b. nitrogen**
- c. ammonia
- d. carbon dioxide

17. Which is not a layer of the atmosphere?

- a. Stratosphere
- b. Mesosphere
- c. Thermosphere
- d. Mantle**

18. Lowest layer of the atmosphere:

**troposphere**

19. How does severe weather form? List two examples of severe weather.

**Some examples: tornadoes, hurricanes, snowstorms, thunderstorms**

**Causes vary but typically include moisture in the atmosphere, thermal lift, and atmospheric instability**

20. weather

a. the roads and highways

b. the grass and the trees

**c. the conditions of the atmosphere**

21. All precipitation is a form of severe weather.

a. True

**b. False**

22. List 3 examples of severe weather.

**Hurricanes, tornadoes, blizzards and thunderstorms.**

23. A severe weather watch means which of the following?

**a. The conditions are right for severe weather, but it is not occurring yet.**

b. Severe weather is occurring.

c. Severe weather has passed through and it is now safe to go outside.

d. It is the season during which the type of severe weather concerned occurs.

24. A severe weather warning means

a. the conditions are right for severe weather, but it is not occurring yet

**b. severe weather is occurring**

c. severe weather has passed through and it is now safe to go outside

d. it is the season during which the type of severe weather concerned occurs

25. Which type of severe weather is NOT an intense tropical storm?

a. hurricane

b. typhoon

c. tropical cyclone

**d. tornado**

26. A "snap shot" of conditions at a particular time over a large area.





a. climate

**b. weather map**

c. isobar

d. weather

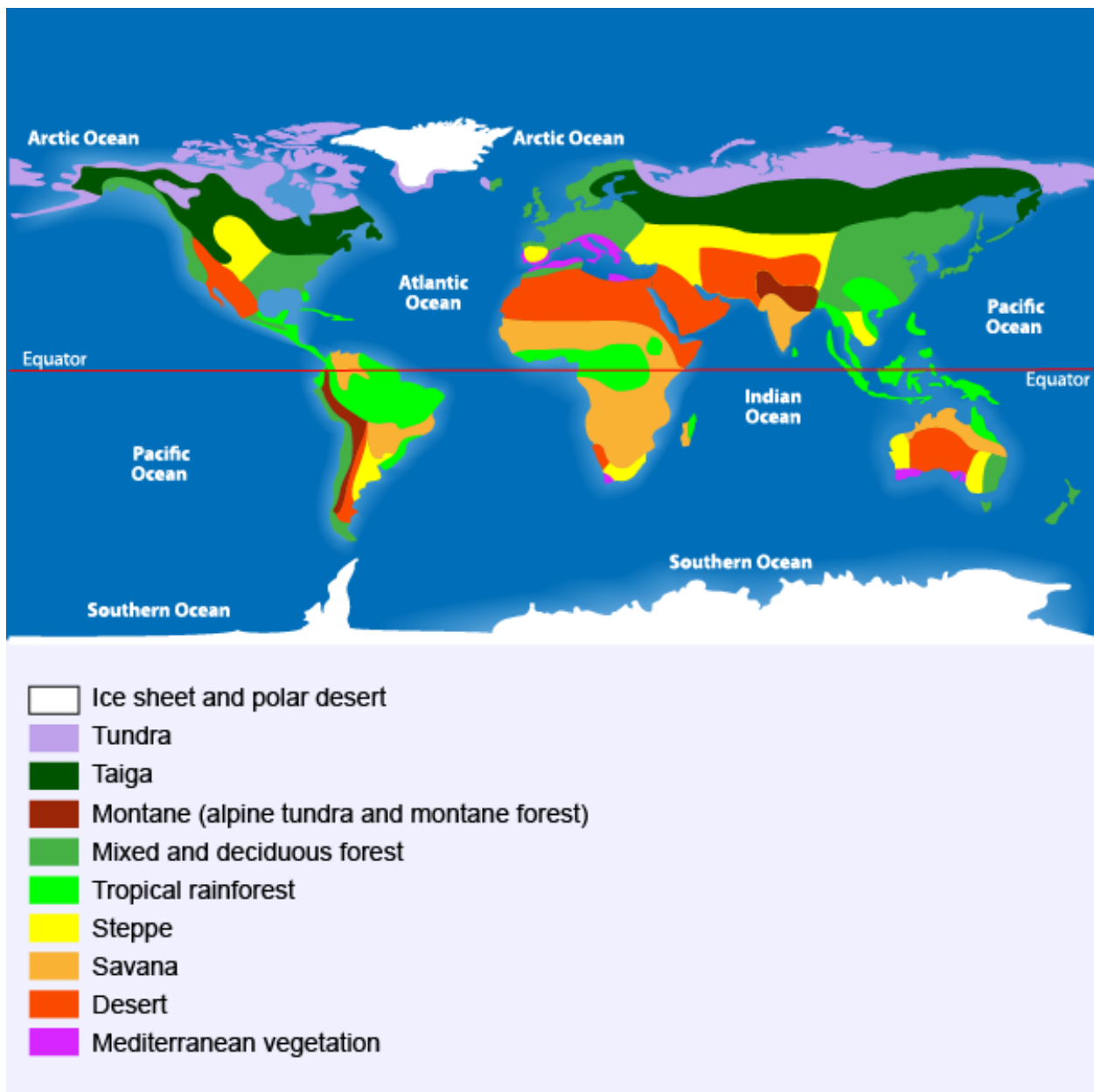
27. What is weather?
- a. An area's long-term weather pattern.
  - b. The state of the atmosphere at a given place or time.**
  - c. Large volume of air that has similar characteristics of temperature and water vapor content
  - d. When large air masses of different density, moisture, and temperature meet
28. What causes wind?
- a. a sunny weather pattern followed by a cloudy weather pattern
  - b. an uneven heating of the atmosphere**
  - c. a rainy weather
29. A map key shows the symbols below:

	Cold Front
	Warm Front
	Stationary Front
	Occluded Front

Would these symbols be used to show weather or climate?

- a. weather**
  - b. climate
30. Weather is determined by the conditions in the:
- a. thermosphere
  - b. mesosphere
  - c. troposphere**
  - d. stratosphere
31. These are used to photograph and track large-scale air movements.
- a. weather balloons
  - b. weather satellites**
  - c. sling psychrometers
  - d. barometers

32. Which best describes the difference between climate and weather?
- a. Weather is more predictable than climate
  - b. Weather is less predictable than climate**
  - c. Weather and climate are both predictable
  - d. Weather and climate are both unpredictable
33. The anemometer and weather vane are weather tools used to measure wind
- a. Speed and temperature
  - b. Direction and pressure
  - c. Pressure and Temperature
  - d. Direction and Speed**
34. What are weather radars?
- a. Machines used to determine the location of precipitation.
  - b. Machines used to determine the movement of precipitation.
  - c. Machines used to determine the amount of precipitation.
  - d. All of the above**
35. The map shows the world's major biomes.



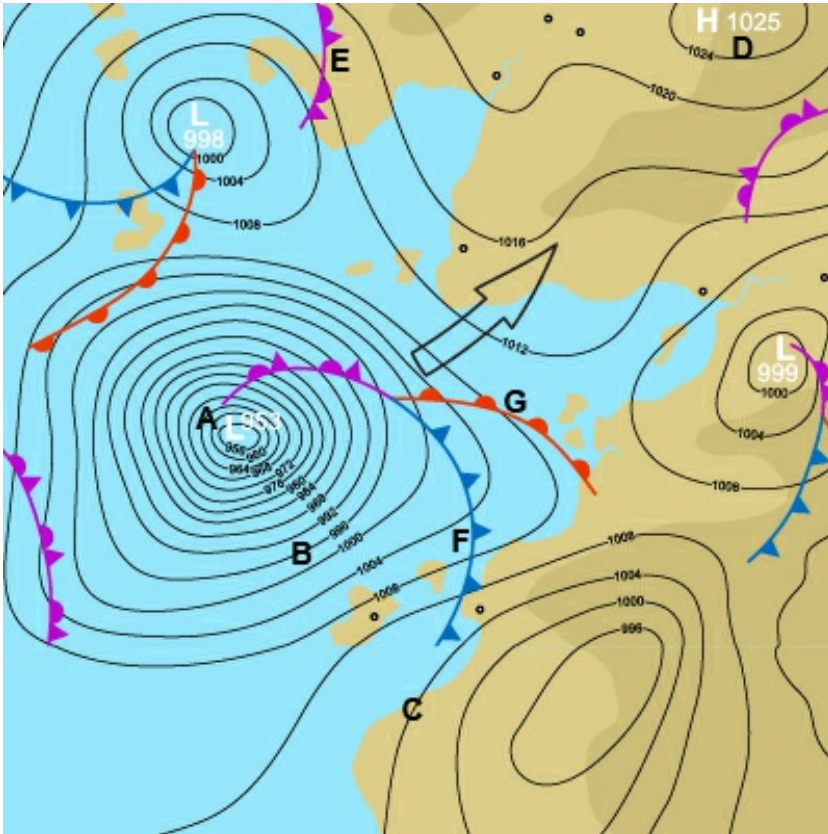
The tundra is a cold, windy, and dry biome. Only a few inches of precipitation fall each year. The average temperature for the tundra is a chilly 10 to 20 degrees Fahrenheit.

Does the passage describe the weather or climate for the tundra biome?

- a. weather
- b. climate**



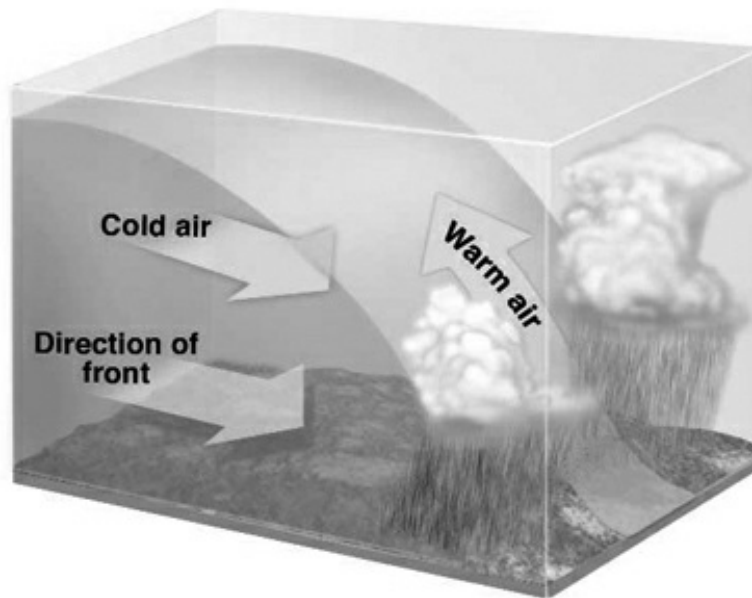
36. The map shows isobars, or lines of equal air pressure, for a location.



Does the map represent weather or climate for that location?

- a. ***weather***  
b. climate

37. A cold front occurs when a fast moving cold air mass pushes a slower moving warm air mass upward. Storms can form along the leading edge of a cold front.



Does the passage about cold fronts describe weather or climate?

- a. weather**  
b. climate
38. Which kind of weather is a low-pressure system most likely to bring?
- a. fair weather  
b. hot, sunny weather  
**c. precipitation**  
d. light breezes
39. A weather vane tells
- a. how fast the wind blows  
**b. the direction from which the wind comes**  
c. the air pressure  
d. the amount of rain that falls
40. Areas with low pressure have weather that is\_\_\_\_\_ and areas of high pressure have weather that is\_\_\_\_\_.
- a. sunny, cloudy  
**b. cloudy, sunny**

41. What is a hurricane?
- a. A large funnel that forms from the sky
  - b. A lightning storm
  - c. A storm that forms at sea and strikes land**
  - d. An ice blizzard with gusty winds
42. Atmospheric conditions for a long period of time is called \_\_\_\_\_.
- a. weather
  - b. climate**
  - c. humidity
43. The boundary between air masses.
- a. Front**
  - b. Weather
  - c. Barometer
44. The process by which a gas changes into a liquid.
- a. Condensation**
  - b. Weather
  - c. Evaporation
45. Which weather instrument would be the most useful to predict changes in weather?
- a. an anemometer
  - b. a rain gauge
  - c. a barometer**
46. What is the weather like in summer?
- Answers include: hot, humid, sunny, summer showers, etc.**
47. Rain, sleet, hail, and snow are all part of the \_\_\_\_\_ process in the water cycle.
- a. transpiration
  - b. evaporation
  - c. precipitation**
  - d. condensation
48. \_\_\_\_\_ is a process in the water cycle, where water vapor rises into the atmosphere.
- a. Precipitation
  - b. Transpiration
  - c. Condensation
  - d. Evaporation**
49. Create a paragraph, telling a story about the process of condensation. Make sure you include as much detail as possible.
- See paragraph**

50. Which is a type of cloud?
- a. Darius
  - b. Cirrus**
  - c. Citrus
  - d. Dover
51. Name 3 types of weather.
- Answers will vary. Sunny, rainy, hot, cold, cloudy, etc.**
52. Name the five features of weather.
- Temperature**  
**Atmospheric Pressure**  
**Humidity**  
**Wind**  
**Precipitation**
53. Storms and severe weather occur when air masses collide. Air masses can be \_\_\_\_\_ and moist, or \_\_\_\_\_ and dry.
- a. Cold; warm
  - b. Warm; cold**
54. A weather prediction before it happens is a \_\_\_\_\_.
- a. Forecast**
  - b. Guess
  - c. Hypothesis
  - d. Meteorologist
55. Looking at a weather map help you to
- a. Predict weather**
  - b. See weather station instruments
  - c. Look at radar
  - d. Find the location of a barometer
56. High pressure systems have \_\_\_\_\_ weather and are \_\_\_\_\_.
- a. rainy, stable
  - b. clear, stable**
  - c. rainy, unstable
  - d. clear, unstable
57. Weather satellite An artificial satellite that revolves around the Earth and detects and reports weather patterns on the Earth's surface.
58. Weather and climate are basically the same thing.
- a. True
  - b. False**
59. Which is a high pressure weather system?
- a. anticyclone**
  - b. cyclone

60. Which is a low pressure weather system?
- a. anticyclone
  - b. cyclone**
61. Which natural hazard is caused by weather?
- a. flooding**
  - b. tsunami
  - c. earthquake
  - d. volcanic eruption
62. A weather instrument that uses microwave frequency radio waves that bounce off water droplets in clouds in order to produce a map of the cloud locations would be \_\_\_\_\_.
- a. barometer
  - b. anemometer
  - c. radar**
  - d. weather satellite
63. Draw a picture of what the climate is like in the summer where you live and how people interact with the climate.
- drawings will vary - should show warm weather and example of how people interact with warm weather (clothing/activities)***
64. A/An \_\_\_\_\_ cloud is often associated with fair weather.
- a. cumulus**
  - b. nimbostratus
  - c. stratus
  - d. altostratus
65. Blows steadily over long distances in a predictable direction
- a. weather
  - b. humidity
  - c. global wind**
  - d. insolation
66. Which kind of severe weather event do you think is the worst? Describe the reasons why you think so.
- answers will vary***
67. Which of the following choices is an example of weather?
- a. Florida is generally sunny.
  - b. Alaska is generally cold.
  - c. It is hot today.**
  - d. Rain forests get a lot of rain every year.
68. What weather phenomenon is measured by the Beaufort scale?
- Wind speed***

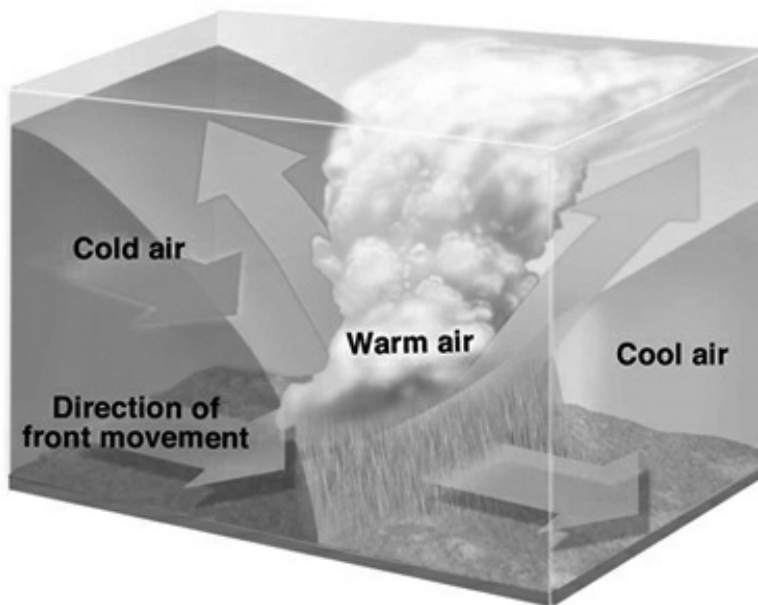
69. What force is behind all weather on earth?

- a. wind
- b. gravity
- c. earth's rotation
- d. energy from the sun**

70. The stored \_\_\_\_\_ in the ocean drives much of Earth's weather.

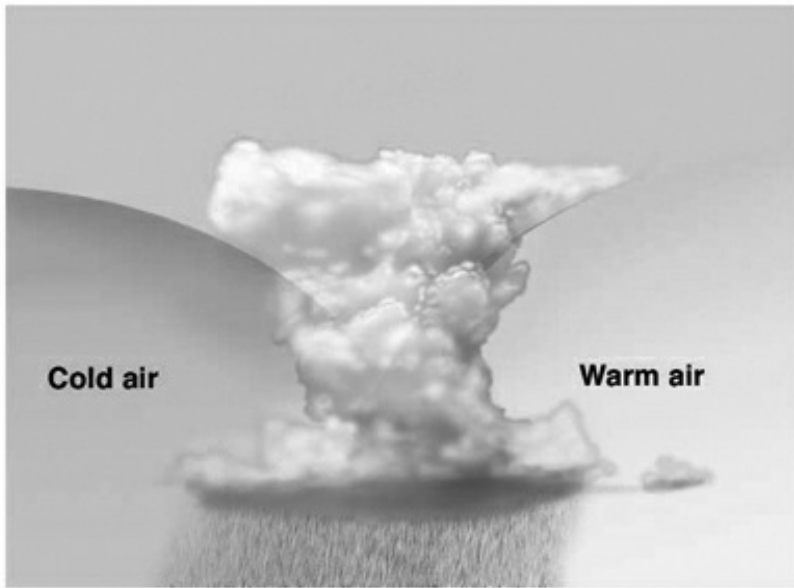
- a. heat**
- b. energy
- c. currents
- d. water vapor

71. Which type of weather front does the diagram represent?



- a. cold
- b. warm
- c. occluded**
- d. stationary

72. Which type of weather front does the diagram represent?



- a. cold
- b. warm
- c. occluded
- d. stationary**

73. C is located on a line call a(n) \_\_\_\_\_.

- a. isobar**
- b. isotherm
- c. contour line
- d. weather front

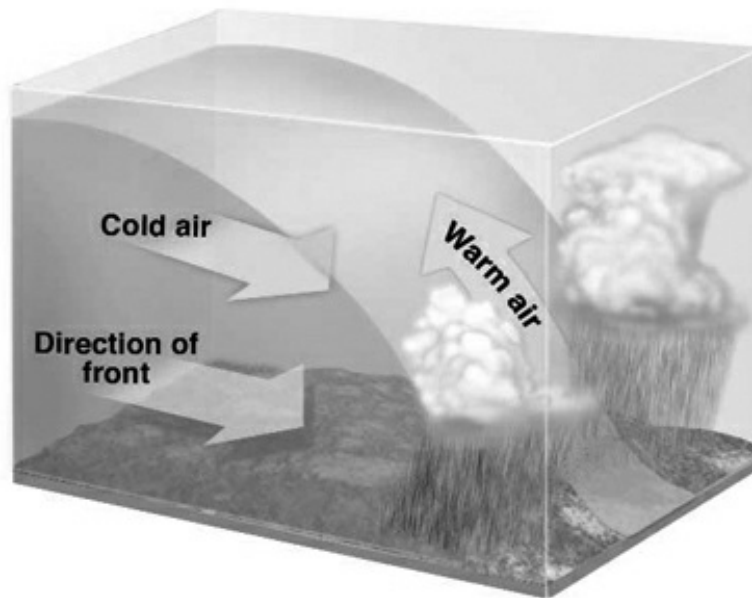
74. About which two atmospheric conditions does the weather map provide the most information?

- a. relative humidity and weather fronts
- b. barometric pressure and weather fronts**
- c. relative humidity and temperature range
- d. barometric pressure and temperature range

75. What do isobars on a map tell us?

- a. Cloud Cover
- b. Weather
- c. Elevation
- d. Air Pressure**

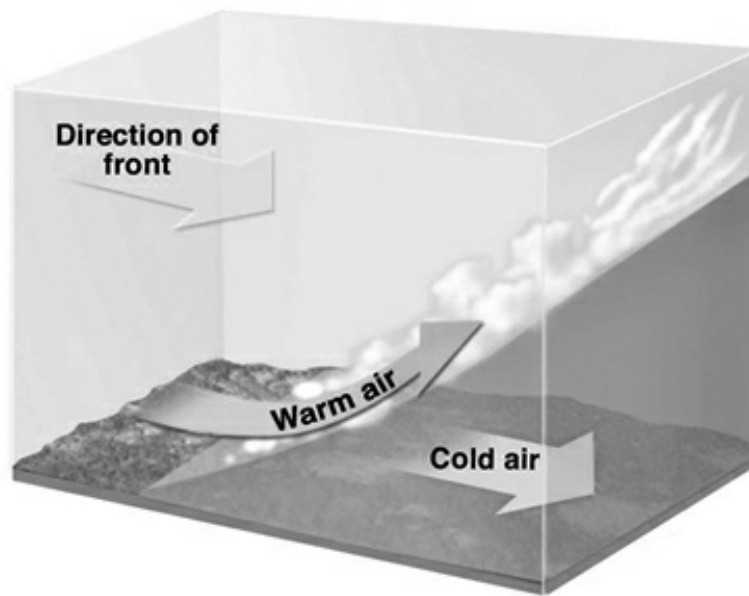
76. A weather map shows a lake effect snow storm moving east across Lake Erie. In Buffalo, the current weather is sunny and cold with no clouds. What can we expect the weather to be in Buffalo later on in the day?
- a. it will stay sunny and cold with no clouds
  - b. it will be sunny and warm with some clouds
  - c. it will be cloudy and cold with a lot of snow**
  - d. it will be cloudy and cold with rain
77. Differences in air pressure causes which weather phenomena?
- a. winds**
  - b. ocean currents
  - c. seasons
  - d. water cycle
78. Which type of weather front does the diagram represent?



- a. cold**
- b. warm
- c. occluded
- d. stationary



79. Which type of weather front does the diagram represent?



- a. cold
- b. warm**
- c. occluded
- d. stationary

80. What would the following symbol indicate on a weather map?



- a. Cold Front
- b. Warm Front
- c. Occluded Front
- d. Stationary Front**

81. Given the right weather conditions, thunderstorms can turn into \_\_\_\_\_.

- a. Tornadoes**
- b. Hurricanes
- c. Volcanoes

82. Which of the following can be used to measure and describe weather?

- a. form and amount of precipitation
- b. conditions of the sky (cloudy, sunny)
- c. temperature
- d. all of the above**

83. What type of weather typically forms with a cold front?

***intense precipitation and thunderstorm.***

84. How does a meteorologist begin to create a weather forecast?

- a. by going outside and observing the local weather
- b. by reading forecasts from a book

***c. by measuring temperature, precipitation, air pressure, and wind over a large area***

- d. by checking sea breezes

85. Describe what type of weather we may experience if the pressure on the barometer is low.

***more likely to be "bad" weather such as storms, precipitation, and/or clouds***

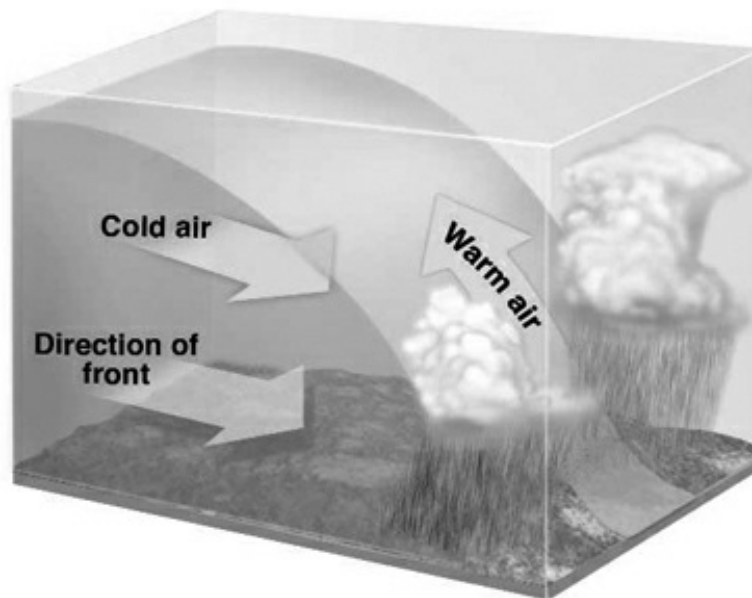
86. What causes changes in local weather from day to day?

- a. changes in wind direction

***b. movement of air masses***

- c. Earth's movement around the Sun
- d. Earth's rotating on its axis

87. Which symbol would be used to represent this front on a weather map?

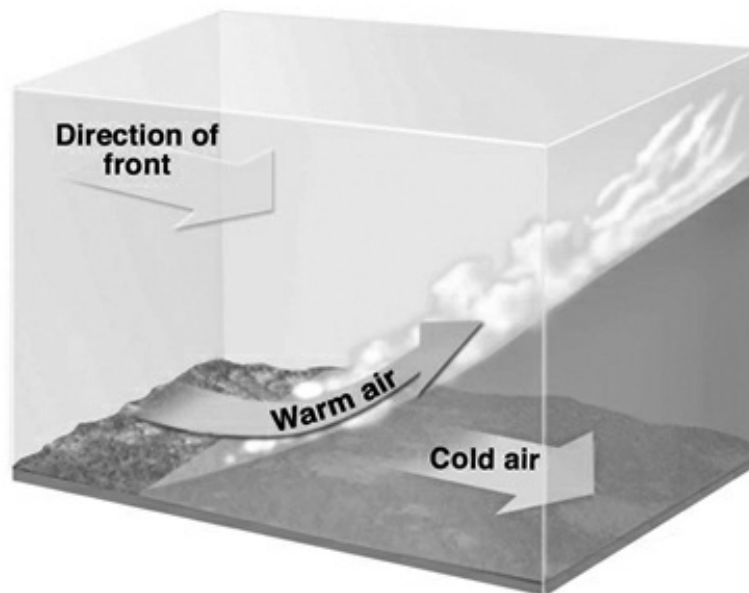


a. 

b. 



88. Which symbol would be used to represent this front on a weather map?



89. Places located in high latitudes have

- a. a very warm climate.
- b. the same weather as places in other latitudes.
- c. a mix of extremely hot and extremely cold weather.
- d. the coldest climates on Earth.**

90. The three main types of clouds are:
- a. Altostratus, Stratus, Cirrus Status
  - b. Cumulus, Altocumulus, Cumulusnimbus
  - c. Stratuscumulus, Cirrus, Cululus
  - d. Cirrus, Stratus, Cumulus**
91. The opposite of too much rain is too little or not rain, which causes a \_\_\_\_\_.
- a. Rainbow
  - b. Flood
  - c. Front
  - d. Drought**
92. Dark clouds cover the sun and the wind blows stronger. From this observation, a person may be able to predict that
- a. Sunny weather is on its way.
  - b. A storm is coming.**
  - c. It is nighttime.

## Review: Chapter 14 - Oceans Answer Key

1. Which word better fits the sentence?

The surfer rode the large \_\_\_\_\_ all the way to the beach.

- a. tide
- b. wave**

2. Which word better fits the sentence?

We had to move our beach towels as the ocean water moved toward us during high \_\_\_\_\_.

- a. tide**
- b. wave

3. What are the basic motions of ocean water? There are three answers.

**waves, currents, tides**

4. The regular rising and falling of sea level due mainly to the pull of the moon is called

- a. waves
- b. tides**
- c. surf
- d. crest

5. The gravitational pull of the Earth's moon (and sun) generates what ocean phenomenon?

- a. tides**
- b. density
- c. turbulence
- d. waves

6. What carries warm water toward the poles?

- a. tides
- b. rivers
- c. waves
- d. currents**

7. Which of the following lists ocean waves from smallest to largest?

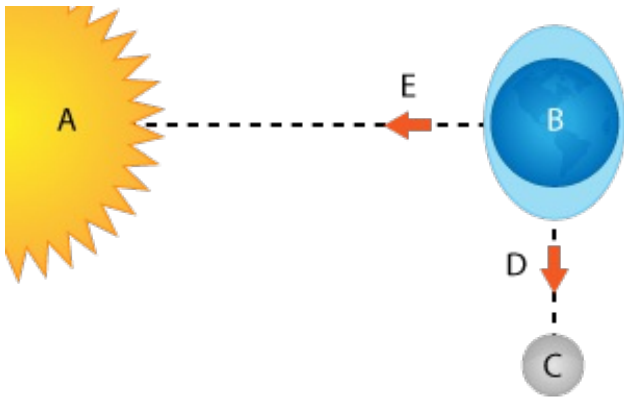
- a. seiches, chop, capillary waves, swells, tsunamis, tides
- b. swells, capillary waves, seiches, chop, tides, tsunamis
- c. capillary waves, chop, swells, seiches, tsunamis, tides**
- d. chop, seiches, swells, capillary waves, tides, tsunamis

8. Vertical displacements of water are

- a. tides.
- b. density currents.
- c. waves.**
- d. surface currents.

9. Wind causes an up-and-down movement of ocean water, called a \_\_\_\_\_.  
a. deep ocean current  
b. tide  
c. surface current  
**d. wave**
10. Why does a wave usually break?  
a. one wave catches up to another  
**b. the friction of the shallow shore floor on the base of the wave**  
c. the tide  
d. the currents
11. What are the basic motions of the ocean?  
**up/down waves; steady movement currents; rise/fall of tides**
12. Which is caused by density differences?  
a. surface currents  
b. ocean waves  
**c. deep ocean currents**  
d. ocean tides
13. This tide occurs on two points of the earth at a time - one closest to the moon and one farthest from the moon  
a. Low tide  
**b. High tide**  
c. Spring tide  
d. Neap tide
14. Corey has a job helping to set new pilings into the sea bottom at Cedar Key, Florida. The pilings will support a new Marine Science Lab when the job is complete. He works all day and notices that on this day, the tide changed very little compared to normal. On the way home after work, he notices the moon is in the first quarter phase.  
"Aha, that explains it", he says to himself as he drives his golf cart home.  
What did he just realize?  
a. It is a Spring Tide  
b. It is a Fall Tide  
**c. It is a Neap Tide**

15. Look at the tidal bulge on the side of the Earth (B) near E. Which statement best describes the tide occurring here?



- a. ebb tide
  - b. low tide**
  - c. high tide
  - d. slack tide
16. A \_\_\_\_\_ is a moderate tide that occurs when the sun and the moon are at right angles.
- a. neap tide**
  - b. spring tide
  - c. diurnal tide
  - d. semidiurnal tide
17. Tides that produce the least difference between consecutive high and low tides are called
- a. neap tides.**
  - b. spring tides.
  - c. fall tides.
  - d. full tides.
18. Terrance stands on the Number 4 bridge in Cedar Key, Florida and makes 2 observations.  
One: The tide has ebbed and is at an unusually low level.  
Two: A bright full moon is rising over the exposed mud flats and marsh grass.  
What type of tide has occurred?
- a. Neap Tide
  - b. Flood Tide
  - c. Spring Tide**
19. The lowest of high tide and the highest of low tide are called neap tides (least extreme tides).
20. Which has the highest high tide and lowest low tide?
- a. Spring Tide**
  - b. Neap Tide
21. A single high and a single low tide daily.
- a. Diurnal tides**
  - b. Neap tides
  - c. Spring tides
  - d. Tidal range

22. Aquatic biomes are grouped by \_\_\_\_\_.  
a. temperature and precipitation  
b. salinity and latitude  
**c. salinity and depth**  
d. salinity and temperature
23. The difference between a lake and a pond is \_\_\_\_\_.  
a. salinity and depth  
b. temperature and salinity  
c. altitude and surface area  
**d. surface area and depth**
24. Coral reefs are affected by the \_\_\_\_\_, or saltiness of ocean water.  
**salinity**
25. Which factors affect the density of deep-ocean currents?  
a. surface currents and wind strength  
b. clockwise direction and ocean location  
c. hemisphere and amount of salt  
**d. temperature and amount of salt**
26. Explain why the oceans are salty and most lakes are not salty.  
***Most lakes have rivers running out of them (outlets) that carry salts while oceans do not have an outlet so the salt accumulates and is concentrated through evaporation.***
27. The two major controlling factors for deep ocean currents are  
a. salinity and wind  
b. pressure and salinity  
c. wind and temperature  
**d. temperature and salinity**
28. Due to seafloor spreading, oceanic crust is \_\_\_\_\_ and sediment is \_\_\_\_\_ on ocean ridge crests.  
a. old; thin  
b. old; thick  
**c. young; thin**  
d. young; thick
29. Which of the following factors affect ocean water density?  
a. pressure  
b. temperature  
c. salinity  
**d. all of the above**



30. What is the average salinity at the ocean surface?
- a. 35 ppt**
  - b. 40 ppt
  - c. 45 ppt
  - d. 25 ppt
31. What is the approximate density of the ocean surface?
- a. 1027 kg/m<sup>3</sup>**
  - b. 1030 kg/m<sup>3</sup>
  - c. 1033 kg/m<sup>3</sup>
  - d. 1034 kg/m<sup>3</sup>
32. The area where new ocean floor is formed when lava erupts through cracks in Earth's crust is called \_\_\_\_\_
- a. Seafloor
  - b. Continental Shelf
  - c. Continental Slope
  - d. Mid-Ocean Ridge**
33. \_\_\_\_\_ are found near continents, particularly around the edges of the Pacific Ocean.
- a. Ocean trenches**
  - b. Ocean mountains
  - c. Mid-ocean ridges
  - d. Seafloor spreading
34. What does turbidity measure?
- a. the salinity of the water
  - b. how hot the water is
  - c. the visibility of the water**
  - d. the density of the water
35. The salinity of the estuary water is \_\_\_\_\_ average ocean water.
- a. higher than
  - b. lower than**
  - c. equal to
  - d. none of the above
36. Water density increases as \_\_\_\_\_ decreases.
- a. salinity
  - b. sand
  - c. oxygen levels
  - d. temperature**

37. Which type of seawater has the greatest density?
- a. warm, with low salinity
  - b. warm, with high salinity
  - c. cold, with low salinity
  - d. cold, with high salinity**
38. Seafloor spreading is when new seafloor is formed when \_\_\_\_\_ is forced upward.
- a. magma**
  - b. water
  - c. soil
  - d. calcium carbonate
39. Why is ocean water more dense near the North and South Poles?
- When ocean water freezes it leaves the salt behind, making the water colder and more salty.***
40. Oceans have a huge effect on weather and climate mainly because
- a. oceans have huge waves
  - b. oceans are very salty
  - c. the fish and sea creatures give off heat
  - d. oceans hold and spread heat around the world by currents**
41. In the ocean any movement of material that results from differences in density:
- a. Convection current**
  - b. Upwelling
  - c. Surface current
  - d. Coriolis Effect
42. Surface currents are driven mainly by winds and deep ocean currents are caused by differences in density of ocean water.
43. \_\_\_\_\_ is the flat seafloor from 4,000 m to 6,000 m below the ocean surface, formed by the deposition of sediments.
- a. Mid-Ocean Ridge
  - b. Continental Shelf
  - c. Abyssal Plain**
  - d. Continental Slope
44. The definition of salinity is
- a. the total amount of dissolved salt in seawater**
  - b. the total amount of dirt in the ocean
  - c. the difference between temperature and density
  - d. the total amount of minerals in seawater
45. Describe the process of the seafloor spreading.
- new ocean crust forms at a mid-ocean ridge where two plates move apart due to convection and magma erupts from the rift to form new ocean floor***

46. The small, plantlike organisms that make up the first link in the ocean's food chain are phytoplankton. The dissolved minerals and salts that are left behind cause oceans to be saline.
47. Which is the best estimate of seafloor spreading rates?
- a. 1 - 10 mm/yr
  - b. 1 - 10 cm/yr**
  - c. 1 - 10 m/yr
  - d. 1 - 10 km/yr
48. What is evidence that seafloor spreading exists?
- a. fossils
  - b. pillow-like rocks**
  - c. pressure
  - d. mountain ranges
49. The ocean basin feature that is a long, narrow, steep-sided depression in the seafloor formed where one crustal plates sinks beneath another is called a \_\_\_\_\_
- a. Continental Slope
  - b. Trench**
  - c. Continental Shelf
  - d. Mid-Ocean Ridge
50. What are Benthos?
- a. Ocean animals that actively swim
  - b. Marine organisms that drift with the current
  - c. Newly hatched fish and crabs
  - d. Plants and animals living on or in the seafloor**
51. The dark, superheated water at a hydrothermal vent is over 500 degrees F, yet it remains a liquid when water boils at 212 degrees F. What causes this very hot water to remain in the liquid state?
- a. The surrounding deep ocean water pressure.**
  - b. The cold deep ocean temperatures.
  - c. The minerals dissolved in the vent water.
52. Where do most surface ocean currents and water waves get their energy?
- a. gravity
  - b. wind**
  - c. salinity gradients
  - d. the thermocline
53. Name two things that effect surface ocean currents
- 1. temperature
  - 2. wind
54. Explain what density currents are AND where they occur.
- Cold dense salty water sinks and less dense, less salty water rises. They occur at the poles.**

55. Higher salinity \_\_\_\_\_ vapor pressure and \_\_\_\_\_ evaporation rate.  
**a. decreases, decreases**  
b. decreases, increases  
c. increases, increases  
d. increases, decreases
56. Only 3% of water on earth is  
a. Salty  
b. Tap water  
**c. Fresh water**
57. What mathematical unit is used to measure salinity?  
**a. parts per thousand (ppt)**  
b. parts per million (ppm)  
c. parts per billion (ppb)  
d. none of the above
58. These currents are responsible for a slow mixing of water between the surface and deeper ocean.  
a. surface currents  
b. deep ocean currents  
**c. density currents**  
d. California currents  
e. global surface currents
59. Which of the following DOES NOT cause a decrease in salinity?  
**a. evaporation**  
b. melting of sea ice  
c. precipitation  
d. runoff
60. About 90% of all tsunamis occur in this ocean.  
a. Atlantic Ocean  
b. Indian Ocean  
**c. Pacific Ocean**
61. The world's largest ocean is the  
a. Atlantic Ocean  
**b. Pacific Ocean**  
c. Arctic Ocean  
d. The Indian Ocean
62. The seas are still rising. Many researchers believe the cause is  
**a. global warming**  
b. glaciers getting bigger  
c. the ocean water getting more dense  
d. lower temperatures on Earth's surface

63. Which of the following does NOT affect wave height in deep water?

- a. wavelength**
- b. wind speed
- c. wind duration
- d. fetch

64. What ocean is Challenger Deep located in?

- a. Indian Ocean
- b. Atlantic Ocean
- c. Pacific Ocean**
- d. Arctic Ocean

65. Name 3 things that are causing our oceans to be in danger.

1.

2.

3.

**answers will vary - warming temperatures cause glaciers to melt and ocean waters to warm, dumping, over fishing**

66. The ocean surface is home for many ocean organisms including plankton.

67. Which of the following oceans is said to have the saltiest water?

- a. Pacific Ocean
- b. Atlantic Ocean
- c. Red Sea**

68. What is the ocean closest to Florida called?

- a. Pacific Ocean
- b. Atlantic Ocean**
- c. Indian Ocean
- d. Caspian Sea

69. Semi-enclosed area where the fresh water from a river meets salty water from the sea.

- a. aquifer
- b. ocean
- c. estuary**
- d. wetland

70. Which is not an ocean?

- a. Indian
- b. Pacific
- c. Superior**
- d. Atlantic

71. Which of the following factors would most influence the shore impact of a tsunami?

- a. tide height**
- b. the season
- c. air temperature
- d. water temperature

72. The map shows the Atlantic Ocean. It also shows the continents it borders.



Which statement best describes continents and oceans?

- a. all continents are surrounded by oceans**
- b. some continents are surrounded by oceans
- c. continents are not surrounded by oceans

73. As the ocean floor moves away from the mid ocean ridge

- a. the climate changes
- b. lava flows out of the rift and hardens to form new ocean floor**

74. The deepest part of the ocean is the \_\_\_\_\_.

- a. abyss**
- b. aphotic zone
- c. disphotic zone
- d. photic zone

75. What ocean is the most shallow and the coldest?

**The Arctic Ocean.**

76. Name the five oceans.

**The Atlantic, The Pacific, The Arctic, The Southern (Antarctic), and The Indian.**

77. The ocean is divided into three basic areas

- 1. continental margins
- 2. deep ocean basins
- 3. ocean ridges

78. What is the movement of cold, deep ocean water to the ocean's surface?

- a. deep ocean current
- b. El Nino
- c. Coriolis effect

**d. upwelling**

79. What is the oceanic ridge?

- a. the bottom of the ocean where little light penetrates therefore there is very little life
- b. the continuous range of mountains on the ocean floor that winds around the Earth
- c. a section of the ocean floor that rises to connect open ocean floor to continental shelf

**d. mountain ranges from each ocean connecting to form a gigantic mountain system**

80. This is a 1 to 2 kilometer deep, several kilometers wide, land from which splits many segments of the oceanic-ridge crust

- a. continental shelf
- b. mid-oceanic ridge
- c. oceanic crust

**d. rift valley**

81. \_\_\_\_\_ is the study of earth's oceans.

- a. Hydrology
- b. Topography
- c. Psychology

**d. Oceanography**

82. The deepest part of the ocean is:

- a. Mount Everest
- b. Marianas Trench**
- c. Marianas Fault

83. Ocean currents drive
- a. water patterns
  - b. weather patterns**
  - c. mountain rains
  - d. air
84. Where are the oceans located?
- a. on top of the oceanic plates**
  - b. on top of the continental plates
  - c. in holes in the crust
  - d. none of the above
85. Undersea mountain ranges in the middle of ocean floors are known as \_\_\_\_\_.
- a. Deep-ocean trenches
  - b. Sea-floor spreading
  - c. Mid-ocean ridges**

86. Describe a tsunami.

**A series of large ocean waves generated from an ocean-floor earthquake.**

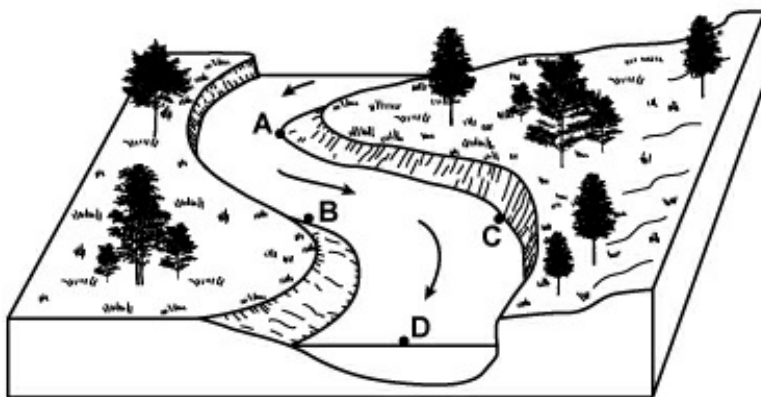
87. The process that moves sand along a shore is
- a. upwelling
  - b. longshore drift**
  - c. abrasion
  - d. density current

88. Why is the ocean a carbon sink?

**The ocean stores carbon for long periods of time and keeps it out of the atmosphere.**

89. Coast is land next to the ocean.

90. The diagram shows water flow in a meandering river channel. Which of the following best explains why water flows in the river channel?



- a. gravitational force**
- b. energy from the sun
- c. differences in water salinity
- d. energy from the Earth's interior



91. Describe the topography of the ocean floor.

***Abyssal plains -large, flat areas; seamounts-volcanic mountains guyots--flat-topped seamounts; trenches-long,narrow crevices; midocean ridges-mountain ranges; reefs-masses and ridges of limestone rocks built by organisms.***

92. Most of the Earth's freshwater is found in \_\_\_\_\_.

- a. ice**
- b. aquifers
- c. oceans
- d. lakes

93. The height of the ocean's surface is called the \_\_\_\_\_.

- a. climate
- b. sea level**
- c. heat wave

94. Gentle, rolling waves which appear in the ocean even during calm weather are known as \_\_\_\_\_.

- a. currents
- b. surf
- c. tidal waves
- d. swells**

95. The oceans cover \_\_\_\_\_ of the Earth's surface.

**70%**

96. What is a mid-ocean ridge?

***(Answers may vary)***

***Long chains of mountains on the ocean floor.***

97. The name of the most common salt in the ocean is:

- a. oxygen
- b. sodium chloride**
- c. hydrogen