



Name: _____ ODD Period: _____

Week: 27-29

Dates: 2/29-3/18

Unit: Climate

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
29 O *VOCABULARY *WATER IN THE ATMOSPHERE AND CLOUDS NOTES *CLOUD DRAWINGS	1 E	2 O *WATER IN THE ATMOSPHERE AND CLOUDS NOTES	3 E	4 O *UNDERSTANDING AIR PRESSURE
7 E	8 O *PRESSURE CENTERS AND WIND	9 E	10 O *REGIONAL WIND SYSTEMS	11 E *LATE/ABSENT WORK DUE BY 2PM
14 O FLEX DAY *CLIMATE & CLIMATE CHANGES	15 E	16 O *BILL NYE: CLIMATE *STUDY GUIDE	17 E	18 O *UNIT QUIZ *PACKET DUE *CLEMENT GONE

ASSIGNMENT	YOUR SCORE	TOTAL POINTS POSSIBLE
GOOD TO KNOW VOCABULARY WORDS		40
WATER IN THE ATMOSPHERE AND CLOUDS NOTES		60
CLOUD DRAWINGS AND DESCRIPTIONS		60
UNDERSTANDING AIR PRESSURE NOTES		40
PRESSURE CENTERS AND WIND NOTES		40
REGIONAL WIND SYSTEMS NOTES		40
CLIMATE AND CLIMATE CHANGES NOTES		80
CLIMATE STUDY GUIDE		80
TOTAL		440

AG EARTH SCIENCE FACT OF THE WEEK

CROPS GROWN IN THE UNITED STATES ARE CRITICAL FOR THE FOOD SUPPLY HERE AND AROUND THE WORLD. U.S. EXPORTS SUPPLY MORE THAN 30% OF ALL WHEAT, CORN, AND RICE ON THE GLOBAL MARKET. CHANGES IN TEMPERATURE, AMOUNT OF CARBON DIOXIDE (CO₂), AND THE FREQUENCY AND INTENSITY OF EXTREME WEATHER COULD HAVE SIGNIFICANT IMPACTS ON CROP YIELDS. (SOURCE EPA.GOV)

GOOD TO KNOW VOCABULARY WORDS

Word	Definition	Picture or Example
Precipitation		
Latent Heat		
Evaporation		
Condensation		
Sublimation		
Humidity		
Saturated		
Relative Humidity		

Word	Definition	Picture or Example
Dew Point		
Cirrus		
Cumulus		
Stratus		
Air Pressure		
Barometer		
Coriolis Effect		
Jet Streams		

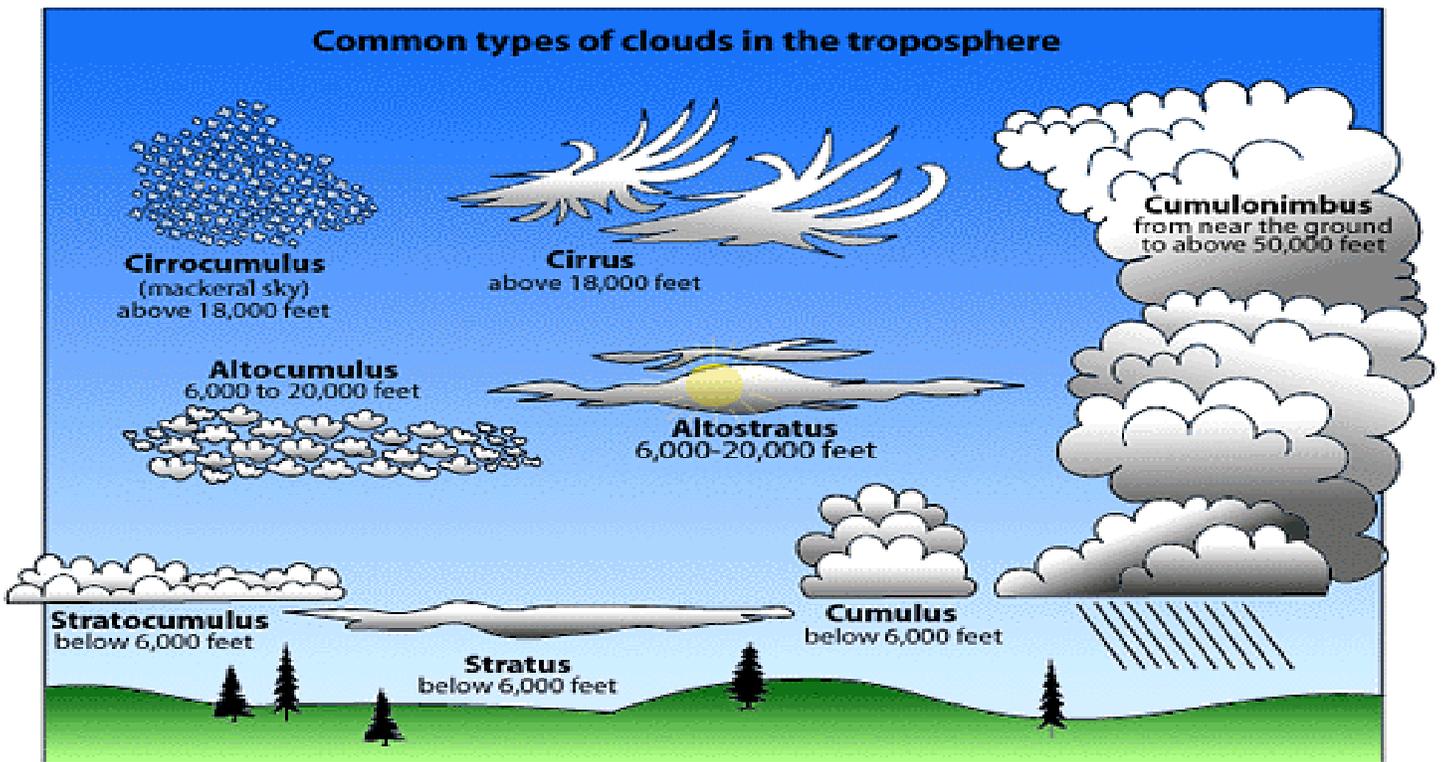
Cue Column
(titles, vocab, big ideas,
test questions)

water in THE atmosphere and clouds

Pages 504-509 and pages 510-516

Summary

(briefly describe the main concepts, major points)



WHAT TYPES OF CLOUDS DO YOU SEE?

DIRECTIONS: Draw at least **three different types** of clouds you see in the sky this week. **Label** the type of cloud and describe its **characteristics**. Write down the **date** of when you see the cloud.

Date:	Picture	Type and Characteristics

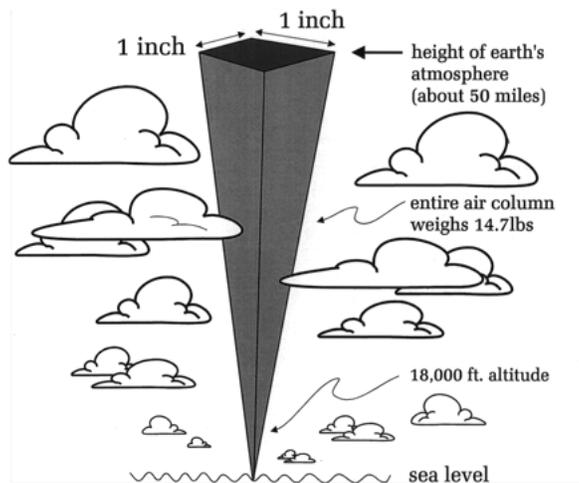
Cue Column
(titles, vocab, big ideas,
test questions)

understanding air Ppressure

Pages 532-536

Summary

(briefly describe the main concepts, major points)



Pressure Centers and Wind

Pages 537-542

Cyclone- A _____-pressure center characterized by a _____ flow of air in the Northern Hemisphere.

Anticyclone- A _____-pressure center characterized by a _____ flow of air in the Northern Hemisphere.

Trade Winds- _____ belts of winds that blow almost _____ from easterly directions and are located on the north and south sides of the subtropical highs.

Westerlies- The dominant west-to-east _____ of the atmosphere that characterizes the regions on _____ side of the subtropical high.

Polar Easterlies- In the _____ pattern of prevailing winds, wind that blow from the polar _____ toward the subpolar _____. (not constant like trade winds)

Polar Front- The _____ frontal zone separating cold air masses or polar origin from warm air masses of tropical origin

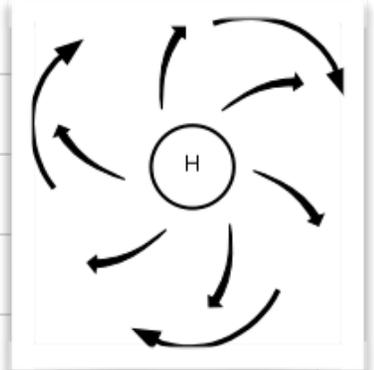
Monsoon- Seasonal reversal of wind direction associated with large continents, especially Asia.

Cue Column (titles, vocab, big ideas, test questions)	PRESSURE CENTERS and wind Pages 537-542

Cue Column
(titles, vocab, big ideas,
test questions)

PRESSURE CENTERS and wind

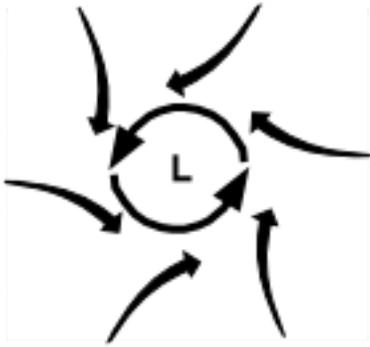
Pages 537-542



Cue Column
(titles, vocab, big ideas,
test questions)

PRESSURE CENTERS and wind

Pages 537-542



Cue Column
(titles, vocab, big ideas,
test questions)

PRESSURE CENTERS and wind

Pages 537-542

Summary

(briefly describe the main concepts, major points)



Regional Wind Systems

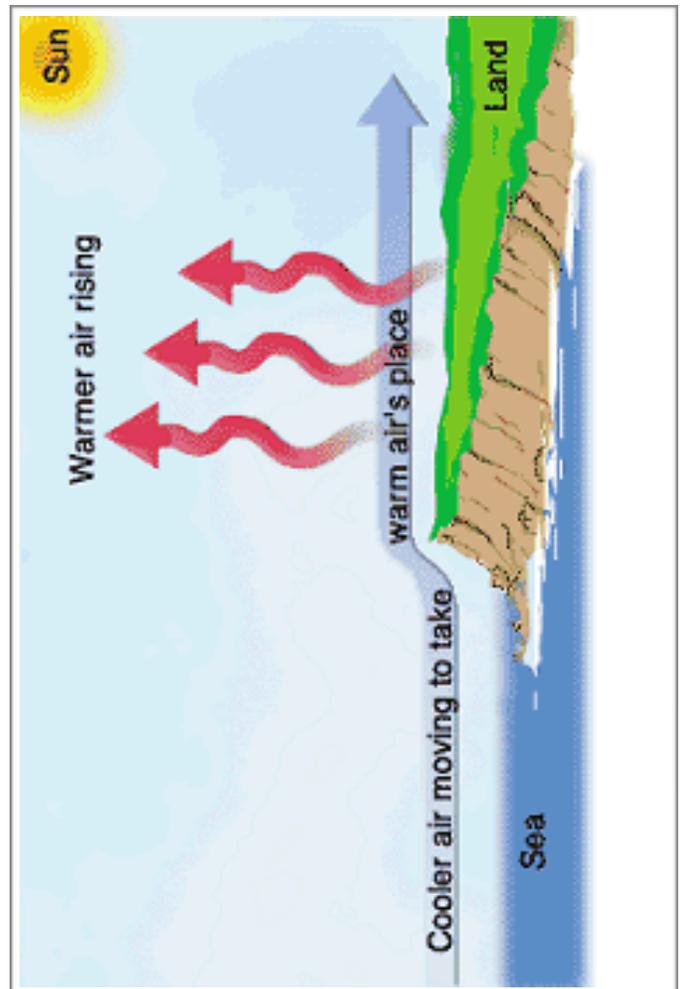
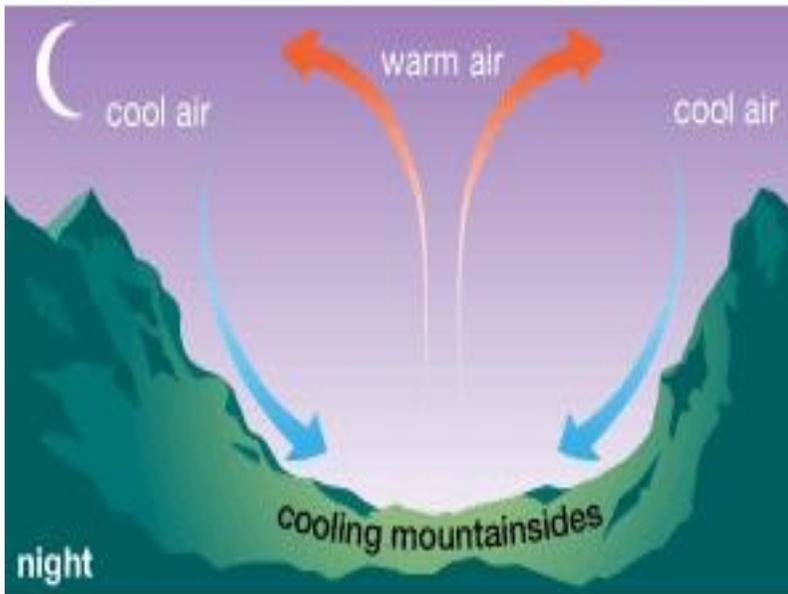
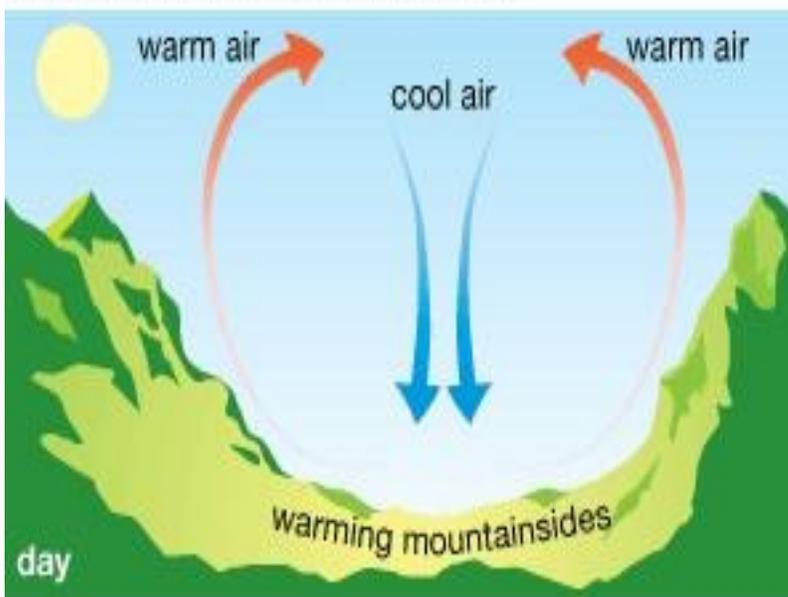
Pages 543-548

Prevailing Wind- A wind that _____ blows from one direction more than from another

Anemometer- An instrument used to determine _____ speed

El Nino- The name given to the _____ warming of the ocean that occurs in the central and eastern Pacific; A major El Nino can cause _____ weather in many parts of the world.

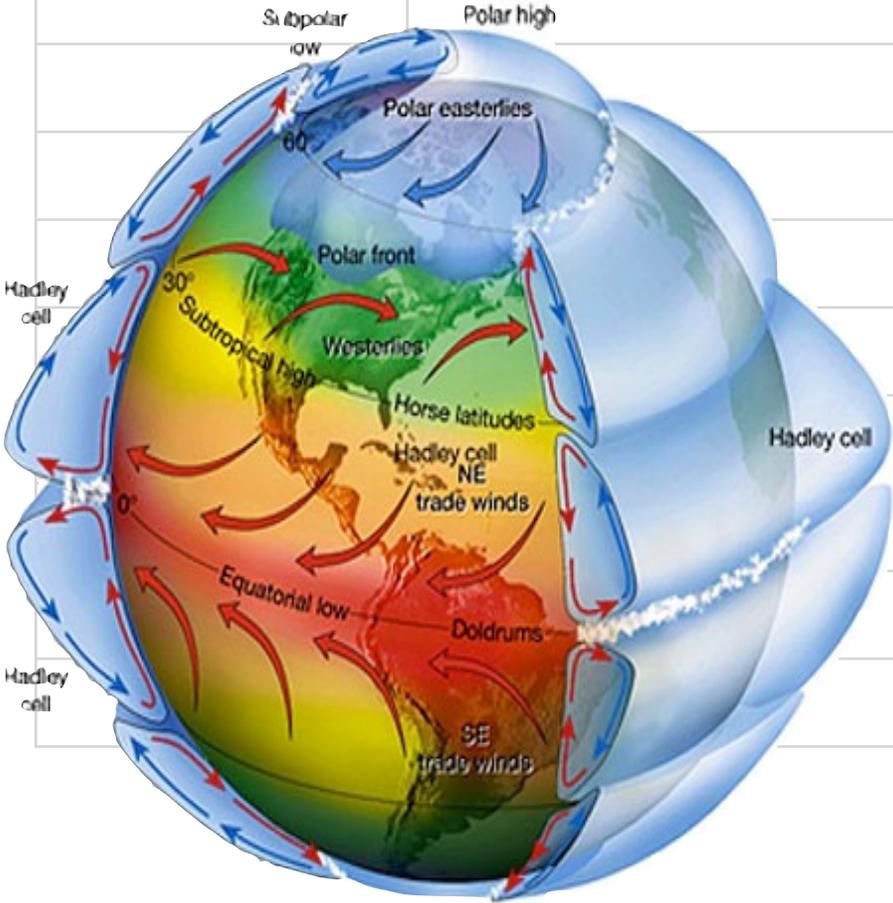
Valley and mountain breezes



Cue Column
(titles, vocab, big ideas,
test questions)

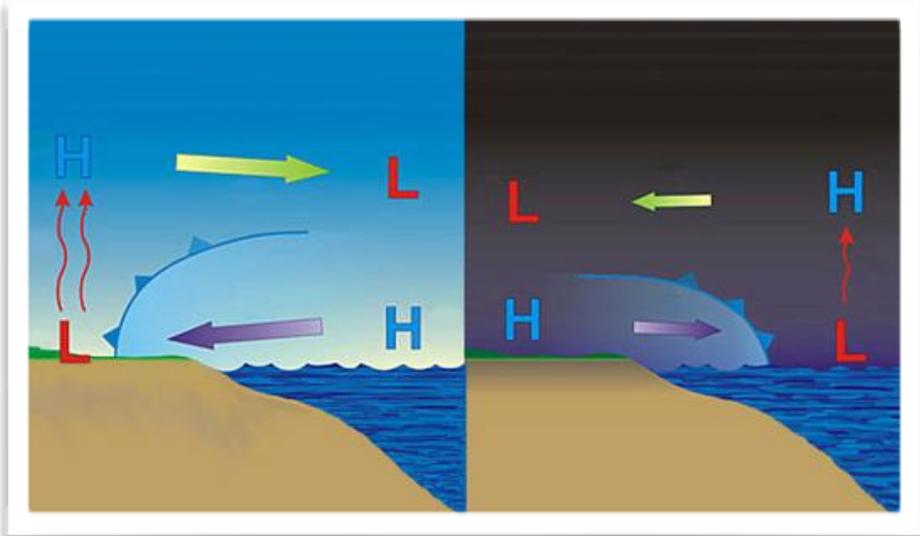
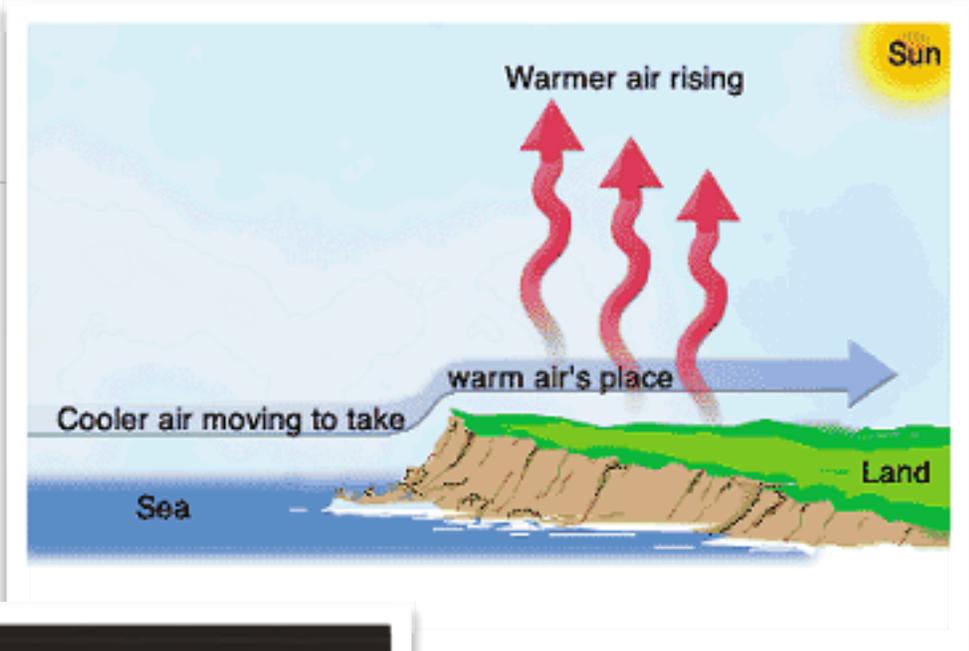
Regional wind systems

Pages 543-548



Summary

(briefly describe the main concepts, major points)



Climate

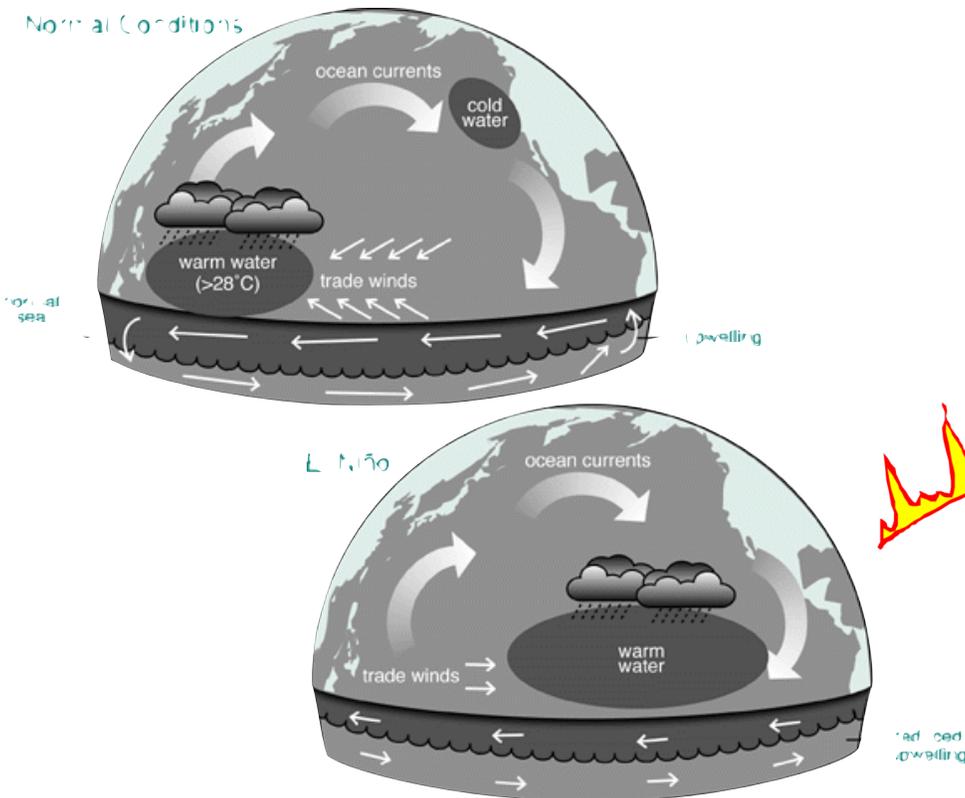
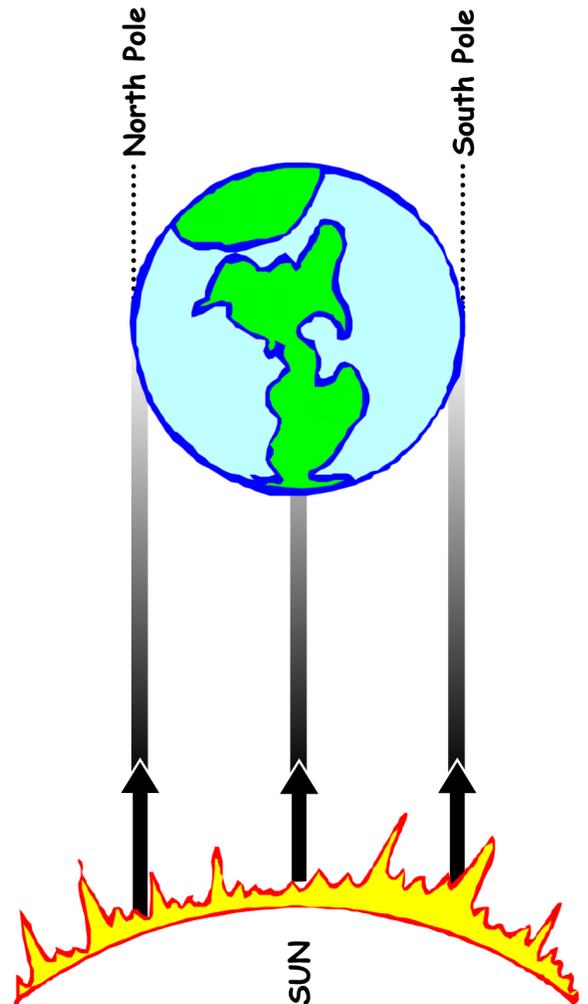
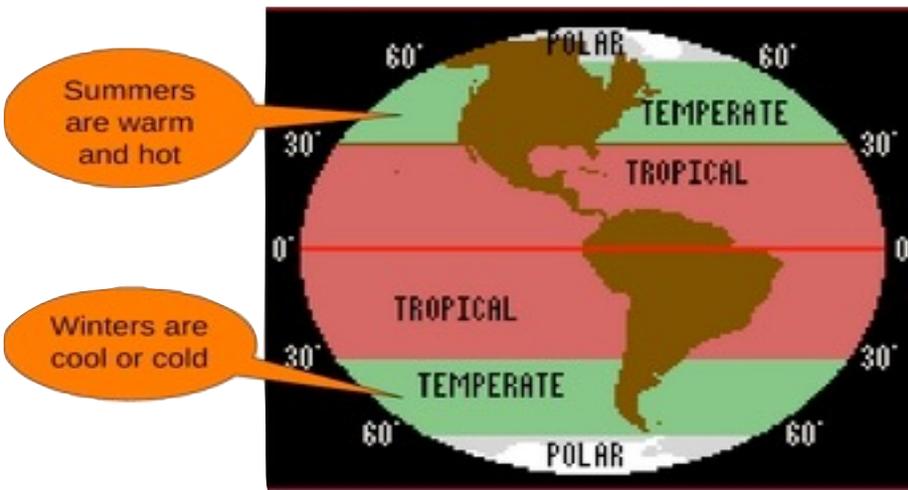
Pages 588-591

Tropical Zone- Region between the Tropic of _____ and the Tropic of Capricorn. The sun's rays are most _____ and the temperatures are always warm.

Temperate Zone- Region _____ of the Tropic of Cancer and _____ of the Tropic of Capricorn. The sun's rays strike the Earth at smaller angle than the tropical zone.

Polar Zone- The regions covering the north and south _____ (66.5° north and south latitudes and the poles). The sun's rays strike at a very _____ angle.

Temperate Climate



Cue Column
(titles, vocab, big ideas,
test questions)

climate
Pages 588-591

Summary

(briefly describe the main concepts, major points)



Climate Changes

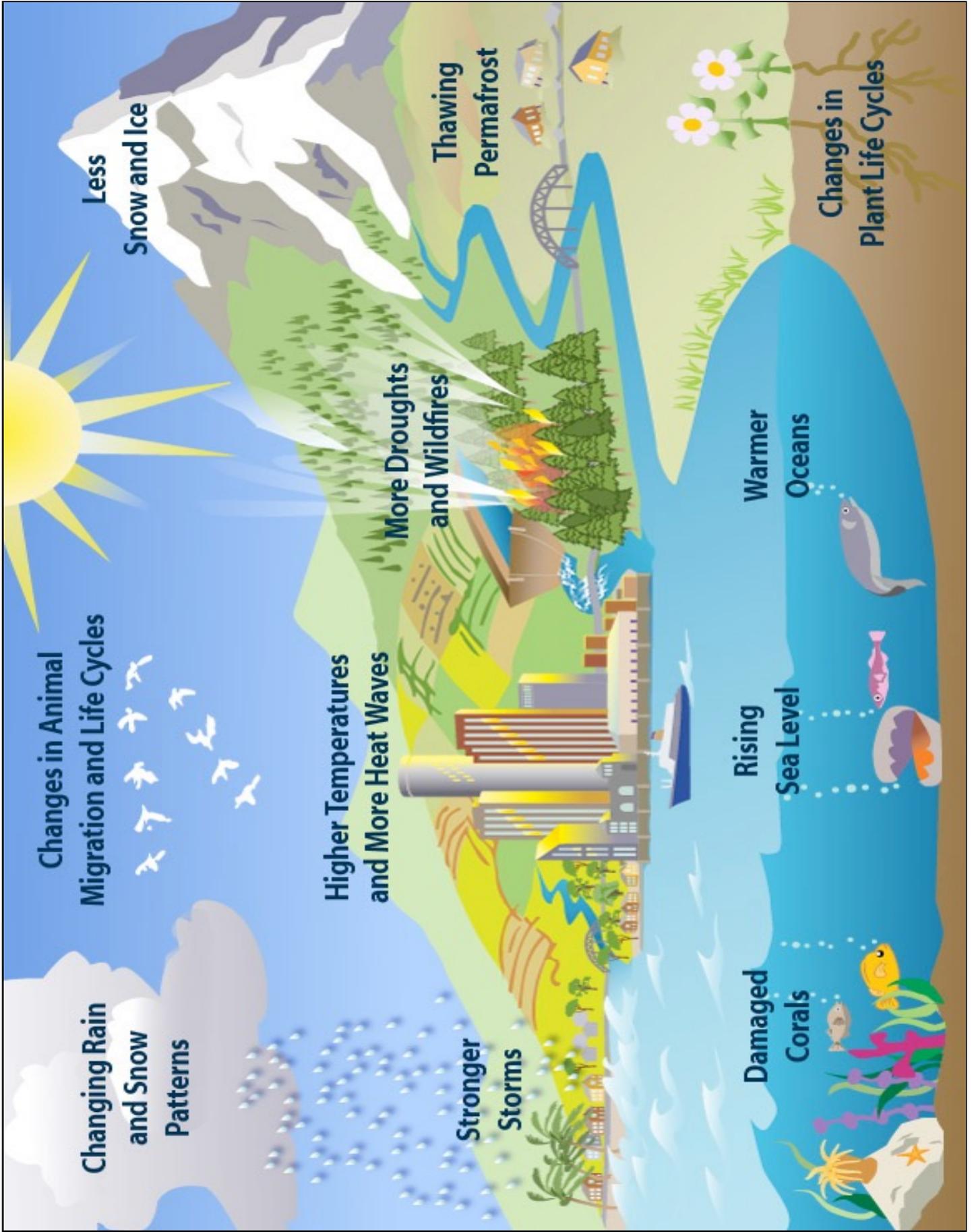
Pages 601-603

Greenhouse Effect- The heating of the Earth's surface and atmosphere from solar radiation being _____ and _____ by the atmosphere, mainly by water vapor and carbon dioxide

Global Warming- The _____ in average temperatures of earth and the atmosphere due in part to increased _____ dioxide levels.



Cue Column (titles, vocab, big ideas, test questions)	CLIMATE CHANGES Pages 601-603



Bill Nye: Climate

Directions: Bill Nye's "Climate" will be shown today in class today. Write 10 COMPLETE sentence facts pertaining to video that captured your interest. This is due at the end of the period. Be thorough with your answers.

1.

2.

3.

4.

5.

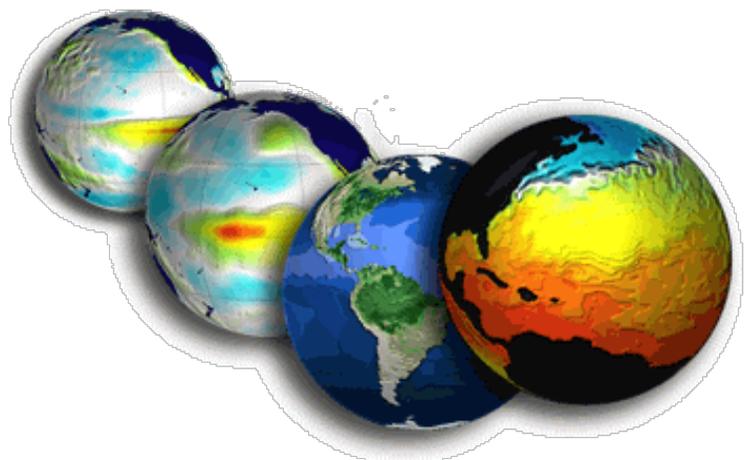
6.

7.

8.

9.

10.



Climate Study Guide

1. Which gas is most important for understanding atmospheric processes?

a.	oxygen	c.	water vapor
b.	ozone	d.	carbon dioxide

2. Rain, snow, sleet, and hail are all examples of

a.	evaporation.	c.	precipitation.
b.	condensation.	d.	deposition.

3. Which term describes the conversion of a solid directly to a gas, without passing through the liquid state?

a.	evaporation	c.	condensation
b.	sublimation	d.	deposition

4. The change of state from a gas to a liquid is called

a.	evaporation.	c.	condensation.
b.	sublimation.	d.	deposition.

5. Air that has reached its water-vapor capacity is said to be

a.	dry.	c.	stable.
b.	unstable.	d.	saturated.

6. The ratio of air's water-vapor content to its capacity to hold water vapor at that same temperature is the

a.	vapor pressure.	c.	specific humidity.
b.	relative humidity.	d.	wet adiabatic rate.

7. The wet adiabatic rate of cooling is less than the dry rate because

a.	wet air is unsaturated.	c.	of the release of latent heat.
b.	dry air is less dense.	d.	of the dew point.

8. Which of the following occurs when air is compressed?

a.	Air temperature rises.	c.	Air molecules move faster.
b.	Air temperature cools.	d.	both a and c

9. Weather-producing fronts are parts of storm systems called

a.	middle-latitude cyclones.	c.	tropical storms.
b.	hurricanes.	d.	tornadoes.

10. Cool air acts as a barrier over which warmer, less dense air rises, in a process known as

a.	divergence.	c.	orographic lifting.
b.	frontal wedging.	d.	subduction.

11. Which cloud type is best described as sheets or layers that cover much or all of the sky?

a.	cumulus	c.	stratus
b.	cirrus	d.	alto

12. Which cloud type consists of globular cloud masses with a cauliflower structure?

a.	cumulus	c.	stratus
b.	cirrus	d.	alto

13. Which term is used to describe clouds of middle height?

a.	cumulus	c.	stratus
b.	cirrus	d.	alto

14. Which type of precipitation consists of small clear-to-translucent ice particles?

a.	rime	c.	hail
b.	sleet	d.	glaze

15. The force exerted by the weight of the air above is called

a.	air pressure.	c.	the Coriolis effect.
b.	convergence.	d.	divergence.

16. What is the ultimate energy source for most wind?

a.	Earth's rotation	c.	solar radiation
b.	Earth's revolution	d.	tides

17. Which of the following is NOT a force that influences wind?

a.	Coriolis effect	c.	pressure gradient
b.	magnetic field	d.	friction

18. In the Southern Hemisphere, winds associated with a low-pressure system blow

a.	clockwise toward the center.
b.	counterclockwise toward the center.
c.	clockwise outward from the center.
d.	counterclockwise outward from the center.

19. In the Northern Hemisphere, winds associated with a high-pressure system blow

a.	counterclockwise toward the center.
b.	clockwise toward the center.
c.	clockwise outward from the center.
d.	counterclockwise outward from the center.

20. Centers of low pressure are called

a.	anticyclones.	c.	jet streams.
b.	air masses.	d.	cyclones.

21. High-pressure systems are usually associated with which of the following?

a.	descending air	c.	relatively dry conditions
b.	clear weather	d.	all of the above

22. The general movement of low-pressure centers across the United States is from

a.	north to south.	c.	west to east.
b.	south to north.	d.	east to west.

23. What is NOT true about lows that move across the United States?

a.	They can produce bad weather.
b.	Their paths are very predictable.
c.	They move in roughly a west-to-east direction.
d.	They may require up to a week to cross the country.

24. Which surface winds blow between the subtropical high and the equator?

a.	trade winds	c.	sea breezes
b.	polar easterlies	d.	westerlies

25. Near the equator, rising air is associated with a pressure zone known as the

a.	equatorial high.	c.	tropical low.
b.	equatorial low.	d.	tropical high.

26. A land breeze usually originates during the

a.	evening and flows toward the land.	c.	evening and flows toward the water.
b.	day and flows toward the land.	d.	day and flows toward the water.

27. When is a sea breeze most intense?

a.	during mid- to late afternoon	c.	in the late morning
b.	in the late evening	d.	at sunrise

28. Which instrument is used to measure wind speed?

a.	anemometer	c.	thermometer
b.	barometer	d.	all of the above

29. Which phenomenon is associated with surface temperatures in the eastern Pacific that are colder than average?

a.	La Niña	c.	global warming
b.	El Niño	d.	local winds

30. Which region is located between 23.5° north and south of the equator?

a.	temperate zone	c.	polar zone
b.	tropical zone	d.	desert zone

31. In polar areas, solar radiation strikes Earth at a

a.	small angle.	c.	right angle.
b.	large angle.	d.	greater angle than at the tropics.

32. What is the relationship between elevation and climate?

a.	The higher the elevation is, the colder the climate.
b.	The lower the elevation is, the colder the climate.
c.	The higher the elevation is, the warmer the climate.
d.	There is no relationship between elevation and climate.

33. Increased altitude generally causes lower

a.	relative humidity.	c.	wind velocities.
b.	temperatures.	d.	rainfall amounts.

34. Which of the following is NOT true of the relationship between vegetation and climate?

a.	Vegetation influences ocean currents.
b.	Vegetation influences cloud formation.
c.	Vegetation influences rates of solar absorption.
d.	Vegetation influences regional precipitation patterns.

35. What happens to air when it sinks?

a.	It expands and cools.	c.	It compresses and warms.
b.	It becomes wetter.	d.	Its pressure decreases.

36. Polar climates are characterized by

a.	heavy precipitation.	c.	thick vegetation.
b.	warm summers.	d.	low rates of evaporation.

37. Which climate experiences seasonal periods of perpetual night?

a.	humid tropical	c.	highland
b.	humid mid-latitude	d.	polar

38. Which of the following is NOT true of greenhouse gases?

a.	They absorb Earth's radiation.
b.	They are produced solely by human activities.
c.	They are transparent to incoming solar radiation.
d.	They include carbon dioxide and water vapor.

39. Which greenhouse gas is the most powerful absorber of radiation emitted by Earth?

a.	carbon dioxide	c.	nitrogen
b.	methane	d.	water vapor

40. Which of the following is NOT a possible consequence of global warming?

a.	more frequent and intense hurricanes	c.	reduction in secondary pollutants
b.	rising sea level	d.	more frequent and intense droughts