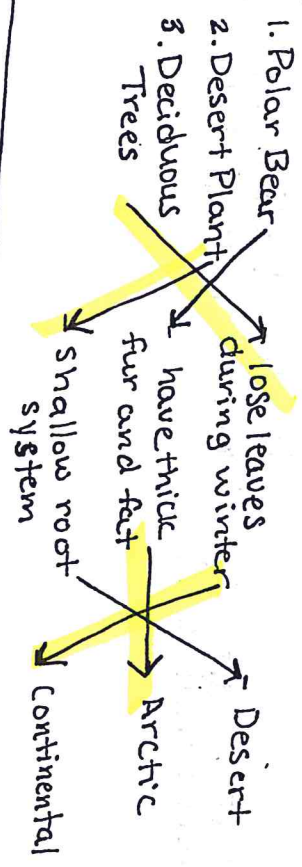


How Climate Affects Living Organisms

P210 Make → A → Match



Does Climate affect humans, as well as Plants and animals? Yes

Describe 2 ways humans must adapt to their climate.

1) Type of crop

2) Designs for buildings

What type of climate would you want to visit? Why? (Answers vary)

Answer Key

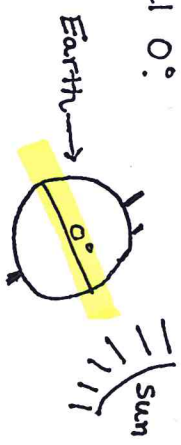
Qw. 6: Climate
Qw. 1: Climates of Earth (P.205-210)

P205 Define climate: The long-term average weather conditions that occur in a particular region

What affects climate?

- ① Latitude
- ② Large bodies of water
- ③ Altitude
- ④ Prevailing winds

P206 Draw lines of Latitude of the diagram below. Label 0°.



What happens to the temperature as altitude increases? the temperature decreases as altitude increases

Visual Check #4 - P206
According to the diagram on P206, what effect does altitude have on temperatures in Leadville, Colorado? Leadville is colder than Burlington, even though they are the same latitude, because the elevation is higher.

Classifying Climates

P.209

Climate classification systems use 3 factors to divide them.

- ① Temperature
- ② Precipitation
- ③ Vegetation

There are 5 world climates.

Fill in the name for each climate zone, and draw a picture to represent that area. (P.208)

| | | |
|--|---|-------------------------------------|
| Polar | Dry | Tropical |
| - Cold year-round - very little precip. | - Hot summers, cool winters - very low precip. | - Warm year-round - High Precip. |
| Continental | Mild | |
| - warm summers, cold winters - Moderate precip. | - warm summers, mild winters - High precip. - Humid | |

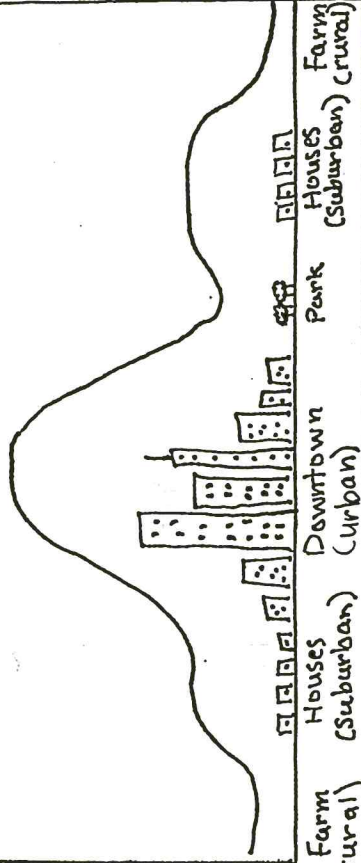
Microclimates (P.209)

↳ Greek "mikros" means small

Define: Microclimate - localized climate that is different from larger climate surrounding it

Describe what is happening in the diagram below.

Afternoon Temperature



Temp. warmer in urban areas and cooler in rural areas.

True or False

The temperature is often warmer in urban areas compared to temperatures in the surrounding countryside.

Why? The concrete absorbs solar radiation.

E6 L2 Climate Cycles (P.214-219)

LONG-TERM CYCLES

P.214

What are 4 ways in which Scientists are able to study our past climates?

- 1) Ice cores
- 2) Fossilized Pollen
- 3) Ocean sediments
- 4) growth rings of trees

* Scientists use this information to

compare present-day climates to those that occurred many thousands of years ago. *

P.214-215

Ice Ages + Interglacials

Define:

Ice Age - cold periods lasting hundreds to millions of years

Interglacial - warm periods during ice ages.

P.215

The most recent ice age began about 2 million years ago.

About half of the Northern Hemisphere was covered with ice.

About 10,000 years ago, Earth entered its current interglacial period.

What is the name of Earth's current interglacial period? Holocene EPOCH

P.218 EL Niño

El Niño - weakened trade winds across the Pacific ocean

Use the diagram on P.218 to answer the question

- During El Niño, what happens to the weather on the western coast of South America? normally cool and dry

become warm and wet.

* Hint: 2nd paragraph P.218 "During El Niño..."

P.219 Monsoons

Define: Monsoon - wind circulation pattern that changes direction with the seasons.

True or False: Based on the 2 diagrams on P.219, Air flows from "H" pressure to "L" pressure.



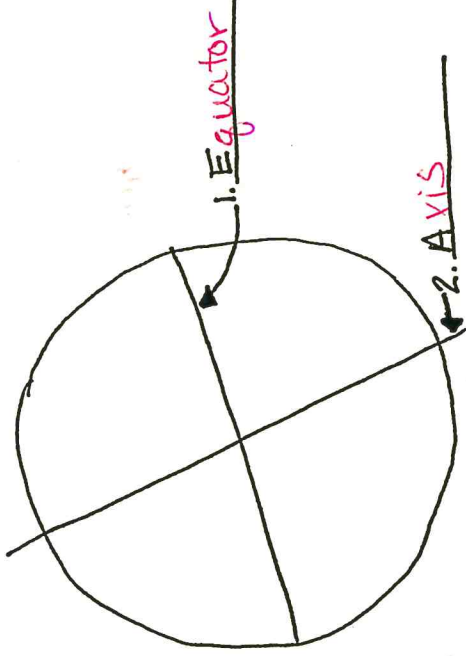
Match the term + definition

- A. Drought B Periods of unusually high temperatures.
- B. Heat wave C Periods of unusually low temperatures.
- C. Cold waves D Period with below average precipitation.

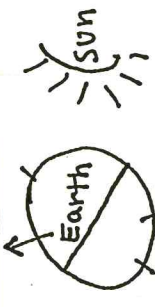



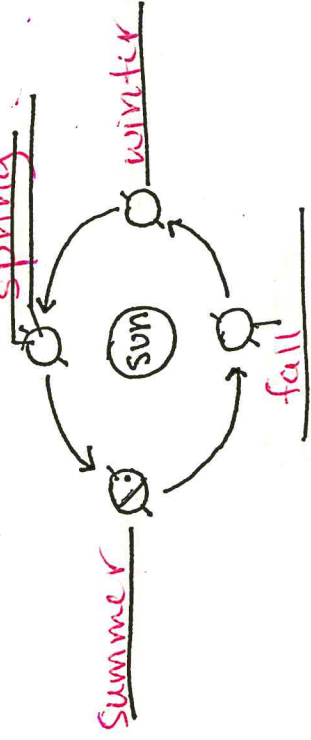
(4)

(1)

Climate Cycles

| | |
|--|---|
| P215 | Causes of Long-Term Climate cycles |
| <p>- The shape of Earth's orbit appears to vary between <u>Elliptical</u> and <u>Circular</u>.</p> <p>- The orbit cycle changes over <u>100,000</u> years.</p> | |
|  |  |
| <p>- The <u>tilt</u> of Earth's axis also influences climate change.</p> <p>- The tilt changes about every <u>41,000</u> years</p> <p>- The angle of the tilt varies from <u>22°</u> to <u>24.5°</u> about every 41,000 years</p> <p>* Earth's current tilt is: <u>23.5°</u></p> | <p>1. <u>Equatorial</u> orbit</p>  <p>2. <u>AXIS</u></p> |
| <p>Label the diagram</p> | |

SHORT-TERM CYCLES

| | |
|---|---|
| P216 | SEASONS |
| <p>- changes in the amount of <u>Solar Energy</u> received at different <u>Latitudes</u> during different times of the year cause <u>Seasons</u></p> <p>- when the Northern hemisphere is tilted towards the sun it is <u>Summer</u>. The southern hemisphere is the opposite: <u>winter</u></p> <p>Label the diagrams: winter/summer</p> | |
| <p>1. <u>Summer</u></p>  | <p>2. <u>winter</u></p>  |
| <p>3. <u>winter</u></p>  | <p>4. <u>Summer</u></p>  |
| P217 | Label the seasons: Spring/Summer/Fall/winter |
|  | |
| <p>SOLSTICE</p> <p>- June 21 or 22</p> <p>- <u>Longest</u> day</p> <p>- December 21 or 22</p> <p>- <u>Shortest</u> day</p> | <p>EQUINOX</p> <p>Equal day/night</p> <p>- March 21 or 22</p> <p>- <u>September 22</u> or <u>23</u></p> |