

BEARCAT DAY

29 & 30

Thursday, April 30, 2020
Friday, MAY 1, 2020

GRADE 6
ANDERSON COUNTY SCHOOLS



ANDERSON COUNTY MIDDLE SCHOOL

6TH GRADE BEARCAT DAY 29

To Submit Your Assignments:

1. Answer in Google Classroom If you cannot,
2. Email your answer to your teacher. If you cannot,
3. Drop-off your written work at the school office.

LANGUAGE ARTS	CONTEXT CLUES Read about context clues. Read the passage about Daniel Boone and answer the questions . Review the study guide for your test next week.
MATH	GEOMETRY STUDY GUIDE This week we will be reviewing geometry concepts to prepare for our assessment next week. Answer the questions on the fourth page of the study guide .
SCIENCE	STUDY GUIDE Use the study guide to review for next week's test. The guide is completely filled out. Just study. Quiz yourself.
SOCIAL STUDIES	STUDY GUIDE Answer the questions on the study guide .
PE/HEALTH	UNDERSTANDING MEDICATIONS Read the article and answer the questions .
LITERACY	NARRATIVE ON-DEMAND Continue writing your Narrative On Demand - I Survived Coronavirus 2020. Today you will complete the 4th paragraph. You also need to read through your paper, edit, and revise anything that should be changed. You should have 4 paragraphs total. You can add another paragraph if you choose.

6TH GRADE BEARCAT DAY 30

BEARCAT DAY 30 REFLECTION	
Something new that I learned this week is....	A question that I would really like to ask my teacher is...



Coached Reading

DIRECTIONS

Read this passage. As you are reading, look for unfamiliar words and context clues.

Daniel Boone

- 1 There are few names in American history that can still evoke images the way the name Daniel Boone can. The mention of Boone's name calls to mind a rugged, tough, and handsome man who helped settle the state of Kentucky. Who was Daniel Boone really, and why is he still a renowned figure?
- 2 Daniel Boone was born in Pennsylvania around 1735. His father had immigrated to the New World from England, and Daniel was one of twelve children. Like many men of his day, Boone left home when he was rather young. Around 1750, he went to live on the North Carolina frontier, the area where the settled regions ended and the dangerous wilderness began.
- 3 From there Boone began to explore the land that would become Kentucky in the 1760s and 1770s. Because there were no settlements in Kentucky then, Boone had to be a skilled navigator to avoid getting lost in the wilderness. He eventually became so familiar with the region that he founded his own town. Boonesborough, Kentucky, was born in 1775, and it was one of the first non-Native American settlements west of the Carolinas.
- 4 In the years that followed, Boone fought bravely in the Revolutionary War. He was a steely soldier, and his courageous leadership won him the respect and admiration of all who fought with him. After the war, Boone served as a judge and a politician in the state legislature. Daniel Boone, one of the toughest Americans ever, died in 1820.

Reading Guide

Read the description of Daniel Boone in paragraph 1. Based on context clues, what does the word *renowned* probably mean?

Based on context clues, what type of person do you think would be *willing* to live on the *frontier*?

What does the word *navigator* mean?



Bearcat Day 29-Context Clues Practice

* Required

1. Email address *

2. Last Name *

3. First Name *

4. Class Period *

Mark only one oval.

☐ 2nd

☐ 3rd

☐ 4th

☐ 6th

☐ 7th

Very seldom do we read lists of isolated words. More often than not, the words we read are placed in a context (i.e., they are surrounded by other words). Many times, the context provides enough information for us to determine the meaning of unfamiliar words. Authors use a variety of techniques, including comparing and contrasting ideas, providing examples, and embedding definitions in the text, to enable readers to understand unfamiliar words.

Bearcat Day 29 Context Clues
Questions 1-2

Read the paragraph about hummingbirds and answer questions 1-2.

Have you ever watched a hummingbird fly? This small American bird with bright plumage can fly sideways, backwards, and upside down. Amazingly, a hummingbird is also able to hover, hanging in the air over a certain spot, like a helicopter. When flying, hummingbirds flap their wings about 90 times a second. They flutter their wings so fast that you can't see their wings at all. You can only hear the humming sound that their fluttering makes.

5. 1. Based on context clues, the word "plumage" means *

1 point

Mark only one oval.

- ☐ lights
- ☐ sunshine
- ☐ feathers
- ☐ birds

6. 2. Based on context clues, the fact that hummingbirds can hover means that

1 point

Mark only one oval.

- ☐ they can stay in the air in one place, which is impressive to the author.
- ☐ they can walk for long distances, which is surprising to the author.
- ☐ they can sink after flying for a while, which is funny to the author.
- ☐ they can sit down on branches, which is annoying to the author.

Bearcat Day 29-Article "Daniel Boone"

Read the article, "Daniel Boone."

https://drive.google.com/open?id=1R_y4mPMxpdVcAU6FRRgNeQe20aKb6vNY

Bearcat Day 29 Questions 3-6

Answer questions 3-6 based on the "Daniel Boone" article you just read. Remember to go back to the passage to look at the clues in the sentence!

7. 3. Context clues in Paragraph 1 tell you that the word "evoke" means *

1 point

Mark only one oval.

- ☐ talk about.
- ☐ change.
- ☐ destroy.
- ☐ call to mind.

8. 4. Context clues in the passage suggest that "rugged" is probably *

1 point

Mark only one oval.

- ☐ a negative description of Daniel Boone.
- ☐ a positive description of Daniel Boone.
- ☐ a word Daniel Boone used all of the time.
- ☐ a funny word with no real meaning.

9. 5. From context clues, you know that the word "immigrated" means *

1 point

Mark only one oval.

- ☐ served.
- ☐ grew up.
- ☐ moved.
- ☐ followed.

10. 6. In Paragraph 4, the author writes that Daniel Boone was "a steely solider." Based on context clues, the word "steely" means *

1 point

Mark only one oval.

- ☐ tough and strong.
- ☐ made of steel.
- ☐ often stolen.
- ☐ sneaky and suspicious.

Bearcat Day Study Guide

On Thursday, May 7th, you will have a 20 question test over what we have learned the past few weeks: text structures, argument, and context clues. This

Google Slide helps you review for the test.

You will need a piece of paper and pencil!

Text Structure:

You need to know:

1. The five text structures, why they are used and signal words used in each.
2. How to identify what text structure is being used in a passage.

Directions
Match the structure with its correct definition.
5 Text Structures

Structure	Definition	Used	Signal Words
_____	Order in which things happen.	History, social studies, discussing historical events	First, next, soon. Also look for dates and timelines.
_____	The author uses a lot of details to support a topic	To tell what something is, to present an items attributes, to show what an item or place is like	For instance, such as, for example, another including
_____	When an author tells how one event leads to another	To tell why something happened to describe several events	As a result, because, since, so, if, then, before, after, therefore
_____	When the author discusses the similarities and differences of 2 or more things	Non fiction, to provide factual information, to show the relationship between common or unlike things	Like, both, also, although, but, more, while, different
_____	When the author wants to provide an answer to a problem or question	To give ways to answer a question or problem	As a result, conclude, lead to resolve, lead to

Word bank: cause and effect, compare and contrast, sequence, description, problem and solution

The table below provides the answers. You are to write the questions for the answer in the box provided. The answer will be one of the five text structures.

Definitions	Vocabulary	Signal Words	Passages - Difficult	Passages - Easy
100 - The author states a problem and lists one or more possible solutions.	100 - tell how two or more things are alike	100 - first, next, then, before, after, finally, following, dates, and times	100 - One problem with every modern Olympics is that it has become very big and expensive to operate. The city or country that hosts the games often loses a lot of money. A stadium, pools, and playing fields must be built for the athletic events and housing is needed for the athletes who come from around the world. And all these facilities are only used for two weeks! In 1984, Los Angeles solved these problems by charging a fee for companies who wanted to be official sponsors of the games. Companies like McDonald's paid a lot of money to be part of the Olympics. Many buildings that were already being built in Los Angeles were also being used. The Coliseum where the 1932 games were held was used again and many colleges and universities in the area became playing and living areas.	100 - To surprise her mother on her birthday, Samantha got up early and made coffee. First, she filled the pot with water. Then she cleaned and replaced the filter. Next, she got fresh coffee, measured just the right amount, and poured it into the filter. Finally, she pressed the "on" button and within seconds, the aroma of the fresh-brewed coffee filled the house.
<p><i>What is _____?</i></p> <p><i>text structure</i></p>	<p><i>What is _____?</i></p>	<p><i>What is _____?</i></p>	<p><i>What is _____?</i></p>	<p><i>What is _____?</i></p>

<p>200 - the author explains a topic, person, place, or thing by listing characteristics, examples, or features</p> <p>What is _____?</p>	<p>200 - tell how two or more things are different or alike</p> <p>What is _____?</p>	<p>200 - problem is, question is, puzzle is, or solve this</p> <p>What is _____?</p>	<p>200 - The Olympic symbol consists of five interlocking rings. The rings represent the five continents - Africa, Asia, North America, Europe, and South America - from which athletes come to compete in the games. The rings are colored black, blue, green, red and yellow. At least one of these colors is found in every country flag of every country sending athletes to compete in the Olympic games.</p> <p>What is _____?</p>	<p>200 - Joey lost his science book. What should he do? He thought for a few worried moments, and then decided to retrace his steps. He remembered putting the book in his backpack that morning. He had taken it out at school when his friend Kim asked to look something up. Now he remembered - Kim still had his book!</p> <p>What is _____?</p>
<p>300 - the author lists one or more causes and the resulting effects.</p> <p>What is _____?</p>	<p>300 - an action or event that makes something else happen</p> <p>What is _____?</p>	<p>300 - sums as, similar, as well as, both, different from, as opposed to</p> <p>What is _____?</p>	<p>300 - Willow Creek is very different from New York City. There are no tall skyscrapers in Willow Creek. All you can see are fields and sky. Instead of taxicab horns and fire truck sirens, it is so quiet at night that you can hear the crickets chirping.</p> <p>What is _____?</p>	<p>300 - Every spring, shortly after the tulips bloom, farmers in Holland go through the tulip fields and cut the blooms off the tulips. This seems strange, because it leaves a field full of green stems. However, it makes the colorful tulip blooms grow back even bigger and stronger later that spring.</p> <p>What is _____?</p>

Argument

You will need to:

1. Know the 4 main parts of an argument and the purpose of an argument.
2. Identify the parts of an argument in an article.

Argument Vocabulary

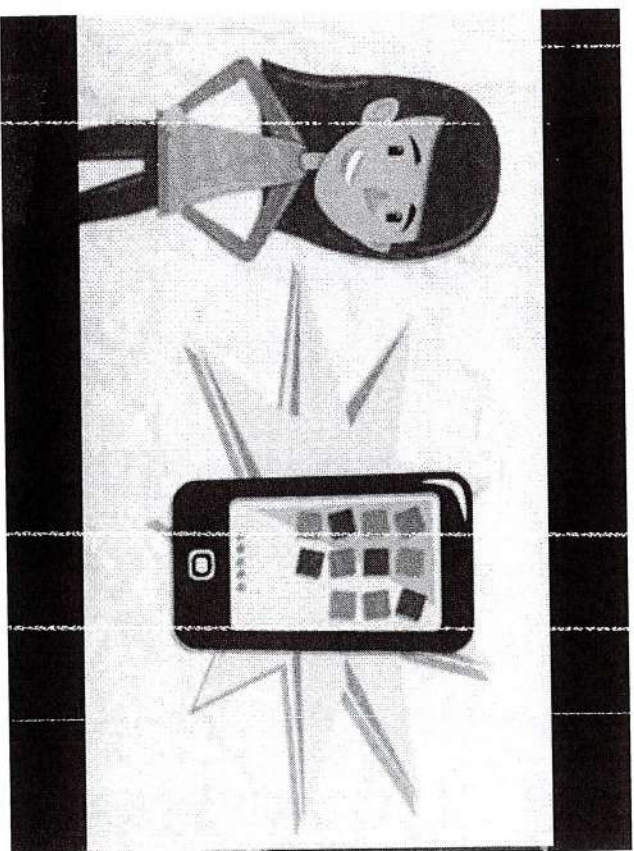
On your paper...

Under your Text Structure Chart, write purpose, claim, counterclaim, reason, and evidence.

While watching the video, define those terms.

OR

Match the terms and definitions on the next page.



Argument Vocabulary

_____ : to convince or persuade the reader

_____ : stating what you want to prove based on what you know (evidence)
(Child says, "I need the new Iphone.")

_____ : other side of the argument that is provable, supportable with evidence
(Mom says, "Your phone is fine, you don't need a new one.")

_____ : facts, research and experience
(facts about the new phone, how the phone will help you with school, ect.)

_____ : tells why you want to prove a topic, tells why the topic is important, to make
someone care about the topic

(what solid reasons does the child want the new phone? It is faster? Better battery life?)

NEVER SAY "BECAUSE I SAID SO"

Word Bank: counterclaim, claim, evidence, reason, purpose

Argument Practice

Kahoot Argument Practice

Kahoot Challenge Pin: 09669092

1 - Quiz

What is the purpose of an argument article?

- ☐ to entertain
- ☐ to inform
- ☐ to persuade

Resource: Tanya Ann Photography/Momert/Getty Images

2 - Quiz

What type of claim? Columbus Day should be a holiday because students enjoy having the day off from school.

- ☐ strong
- ☐ weak

3 - Quiz

Which of the following is NOT strong evidence?

- ☐ opinions
- ☐ facts
- ☐ research
- ☒ experiences

4 - Quiz

Strong claims must NOT be based on

- ☐ facts
- ☐ knowledge
- ☐ opinions
- ☒ research

6 - Quiz

Other side of the argument that is provable, supportable with evidence is the

- ☐ claim
- ☐ counter claim
- ☒ reasons
- ☐ evidence

7 - Quiz

Which of the following is NOT what reasons provide...

- ☐ tell why you want to prove a topic
- ☐ tells why the topic is important
- ☐ tell you opinion on the subject
- ☐ encourage someone to care about the topic

9 - Quiz

Strong or Weak Claim? I think most people like spring, just like I do.

☐ strong

☐ Weak

Resource: Marcie Gonzalez/Moment/Getty Images

10 - Quiz

Strong or Weak? Spring is the best season of the year because weather becomes warmer after a long winter.

☐ Strong

☐ Weak

12 - Quiz

Which reason is NOT a strong reason for NOT paying college athletes.

College athletics is expensive for schools.

College athletes spend up to 40 hours a week on sports.

College athletes bring millions of dollars into a school athletic program.

College athletes get paid by means of scholarships and free food and board.

Context Clues

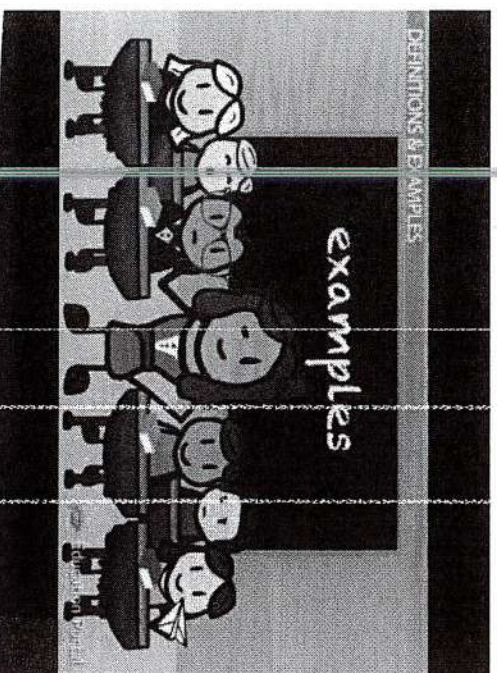
You need to:

1. Know what context clues and the four major types.
2. Identify the meaning of unknown words using context clues, and/or substitution.

Context Clue Vocabulary

On your paper,

1. Write the following notes.
2. As you watch the video, fill in the blanks.



Context clues are the other _____ and sentences
_____ the word in question (that we don't know)

Types of Context Clues:

Definition: the writer actually puts the unknown words
_____ in the sentence.

Examples: The writer provides _____ of the
word in the sentence.

Synonyms (mean the same): the writer provides
words that mean the _____ as the unknown word

Antonym (mean the opposite): the writer provides
words that mean the _____ of the unknown word

Substitution: which means _____ out a word
you do know for a word you don't know until the sentence
makes sense.



www.quia.com

Name _____

Date _____

ELA: Context Clues (Middle School)

Bobby thinks it's funny to tantalize Sally, such as making fun of her curly hair, but it only makes the other kids mad at him.

In this sentence, the word tantalize means

- ☐ rush
- ☐ tease
- ☐ poke
- ☐ talk to

Although the cabinet was ligneous, it wasn't made with real wood.

In this sentence, the word ligneous means

- ☐ empty
- ☐ native
- ☐ brown
- ☐ wood-like

I know that Jeff is smart, so I was confused when he did such a vacuous thing as to jump off the roof of our house.

In this sentence, the word vacuous means

- ☐ cowardly
- ☐ outstanding
- ☐ annoying
- ☐ stupid

Famous conquistadors include Cortes, who conquered Aztec Mexico and Pizarro, who conquered Inca Peru.

In this sentence, the word conquistadors means

- ☐ conquerors
- ☐ victims
- ☐ geographers

0105ers

Questions

The new speaker from the health clinic was so inarticulate that all of us left the auditorium wondering what the message was.

In this sentence, the word inarticulate means

- ☐ conflicted
- ☐ cowardly
- ☐ unclearly spoken
- ☐ full of anger

The departing president of the organization gave his valediction. When he was through, he welcomed the new president to the position.

In this sentence, the word valediction means

- ☐ welcome
- ☐ beginning
- ☐ starting
- ☐ farewell

I felt sorry for the poor pathetic dog after he was dropped off along the road in the rain.

In this sentence, the word pathetic means

- ☐ cheerful
- ☐ joyful
- ☐ happy
- ☐ sad

Ashley stared at the newest style of jeans in the catalog. She just had to have them. Her birthday money was not quite enough to cover the expense. Although she didn't want to grovel, she decided to plead with her parents for the money to buy them.

In this sentence, the word grovel means

- ☐ revolt
- ☐ network
- ☐ plead
- ☐ resist

Math Study guide

I CAN FIND VOLUME IN REAL LIFE PROBLEMS.

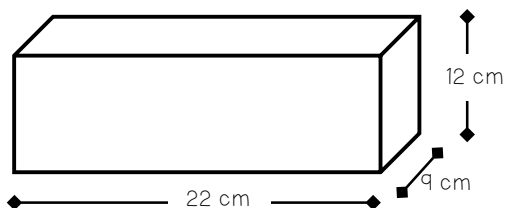
6.G.2

20. A school supply company packages the erasers shown below in boxes of 12. How many cubic inches does the package contain?



21. A farmer is filling a hole in his farm with dirt. He measures the hole to be in the shape of a rectangular prism measuring 12 feet by 4 feet by 3 feet. If the cost of dirt is \$1.25 per cubic foot, then how much will he spend?

22. A terrarium is filled one-fourth of the way with dirt. How many cubic centimeters of dirt does the terrarium have?



23. A large box will hold 1,000 cubic inches. A small box measures 5 inches by 5 inches by 5 inches. How many smaller boxes will the large box hold?

I'VE GOT THIS:

I NEED TO STUDY:

Science Study Guide

EARTH'S AXIS

Rotation is the spinning of Earth on its axis. The axis is an imaginary line that passes through the North and South Poles of the planet.



The Earth's axis is not vertical, but tilted 23.5 degrees.

S
U
N



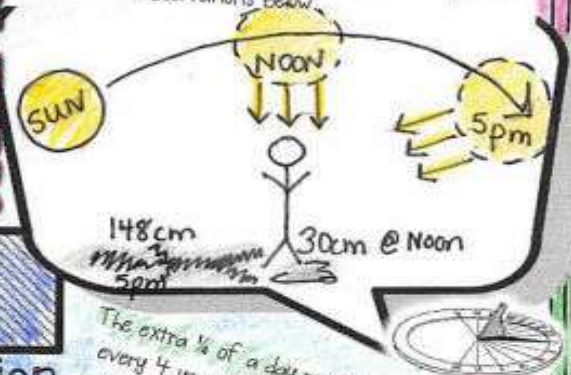
50% ↑ ↓ 50%

What causes day and night?

Earth's rotation West to East causes 50% of the Earth to get sun-light and 50% to get dark.

DOODLE-IT

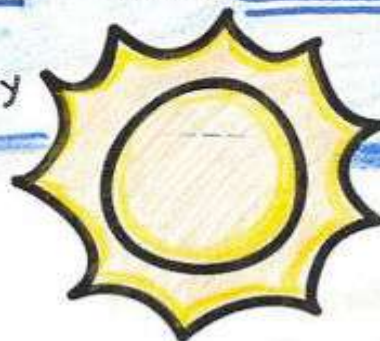
Shadows change depending on how high or low the Sun is in the sky. Try going outside on a sunny day. Measure your shadow at midday and then again in late afternoon. Draw your observations below:



EARTH'S ORBIT

Earth's orbit is the elliptical path that the Earth takes around the sun once every year.

"AKA" revolution



365 $\frac{1}{4}$ days

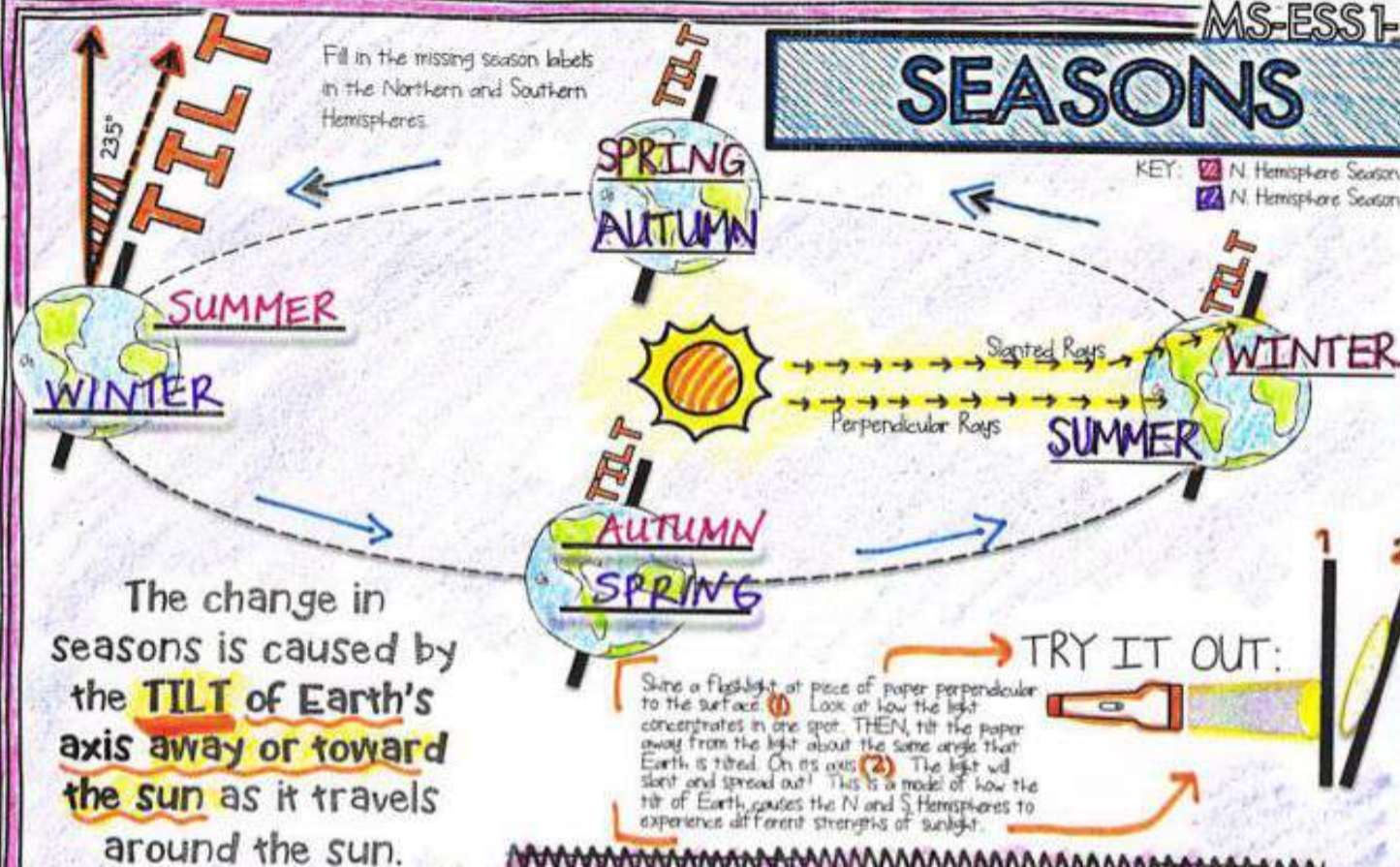
One year

The extra $\frac{1}{4}$ of a day results in a leap year once every 4 years. During a leap year we add one extra day to the calendar (FEBRUARY 29th). Leap years are needed to keep our calendar in sync with the solar year or the Earth's solar orbit.

Did you know that Earth's orbit is about 577 million miles (930 million km) long?

SEASONS

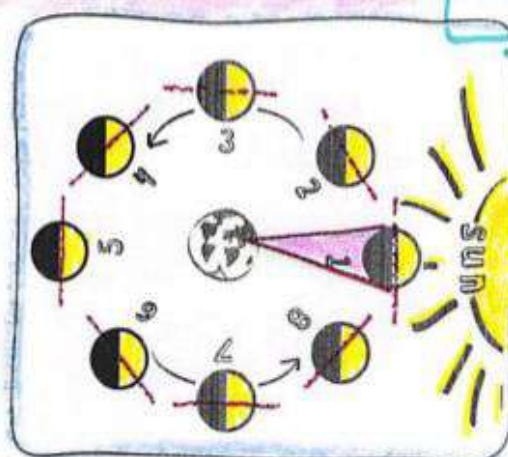
KEY: N. Hemisphere Season
 S. Hemisphere Season



MOON (LUNAR) PHASES

The moon is Earth's only natural satellite. It is a cold dry sphere with a surface covered in craters, dust and rocks. The moon's journey around Earth takes about 27 days.

Point of View



Our point of view changes as the MOON orbits EARTH. The dotted line in the diagram represents where our line of vision ends.

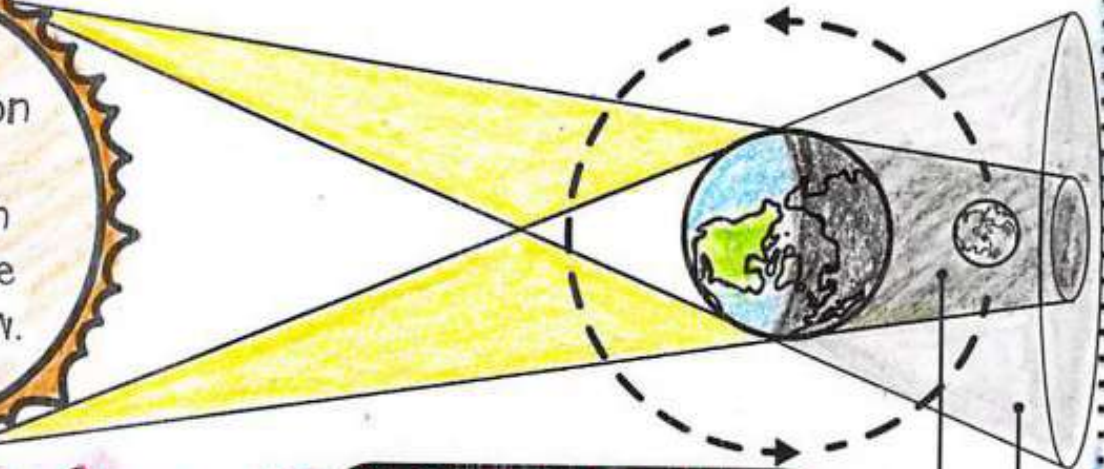
Can you shade what we see at each phase? The NEW and FULL moon are done for you.



LUNAR ECLIPSE

Accurately color and shade the eclipse diagrams to show you understand!

The phenomenon that occurs when the moon passes into the Earth's shadow.



Umbra

Penumbra

Eclipses can be complicated! What question(s) do you have about how/why they occur? Write the questions in the first box and then seek out an expert source to find answers!

Eclipse Q and A

My Questions

Why don't we have an eclipse every single month? →

When is the next U.S. total solar eclipse? ??

Expert Answers

The moon's orbit and the Earth's orbit are NOT on the same plane. The moon's orbit is tilted 5 degrees.

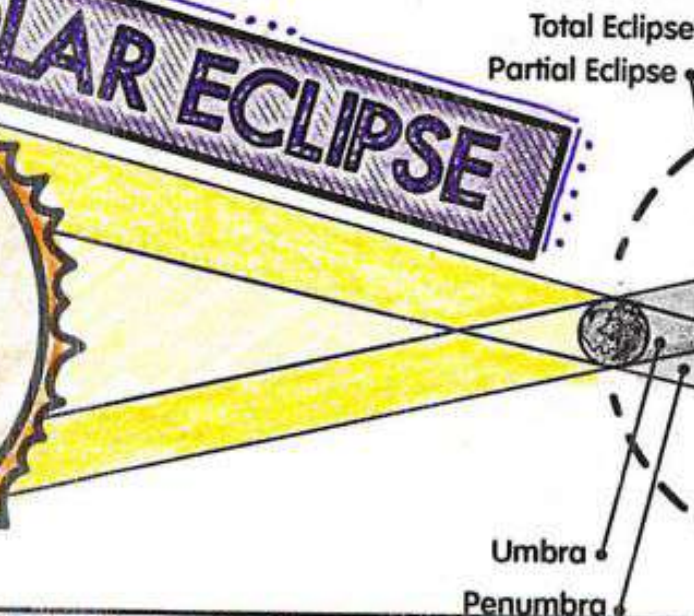
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April 8th 2024

SOLAR ECLIPSE

The phenomenon that occurs when the Earth passes into the moon's shadow.



Total Eclipse
Partial Eclipse

Umbra

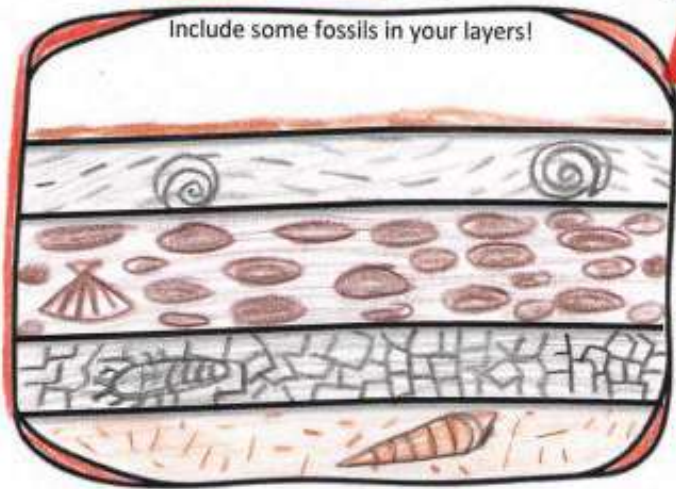
Penumbra

SEDIMENTARY ROCK

Rock made of layers of sand, clay, pebbles or shells cemented together.

DOODLE
IT

Include some fossils in your layers!



Fossils are mostly found in sedimentary rock. They are unlikely to survive the heat and pressure involved in forming igneous and metamorphic rocks.

tell a story of a
past event or living
organism.

THREE MAIN CLASSIFICATIONS OF ROCK

② Metamorphic
(heat + pressure)

③ Igneous
(cooling magma)

ROCK CYCLE

MS ESS2-1

- The process of rocks being formed, wearing down and being formed again over LONG periods of time.



We classify rocks based on how they are formed. ALL ROCKS can become another type of rock if they experience...

HEAT, PRESSURE, COMPACTION, MELTING, COOLING, SOLIDIFICATION, WEATHERING, EROSION, OR CEMENTATION

Use the words above to doodle and describe how each rock is formed inside the arrow.

IGNEOUS ROCK

A type of rock that forms when melted rock cools and hardens.

Melting
Cooling
Solidification



SEDIMENTARY

ROCK

A type of rock that forms when particles of other rocks settle and are pressed by gravity.

COMPACTION
Cementation

Weathering
and
EROSION

METAMORPHIC ROCK

A type of rock that forms when a previous existing rock experiences intense heat and pressure.

PRESSURE

HEAT

into another rock type!

all rocks can turn

WEATHERING

The breakdown of rocks into smaller fragments.

BREAK

WEAR

Give some examples

Chemical Weathering

Chemical reactions break down the bonds that hold rocks together, forming new substances.

NEW

RUST = water + iron + oxygen
(OXIDATION)

Acid Rain - carbonic acid
(Carbonation)

Physical Weathering

Rocks are broken down into smaller pieces, but the composition of the rock remains the same.

SAME

Give some examples

WIND blasts rock surfaces
WATER breaks apart rocks as it moves

The **MOVEMENT** of weathered rock material by wind, water, ice and gravity.

EROSION

The **MOVEMENT** of weathered rock material by wind, water, ice and gravity.

MOVE

COMPRESS

SEDIMENT

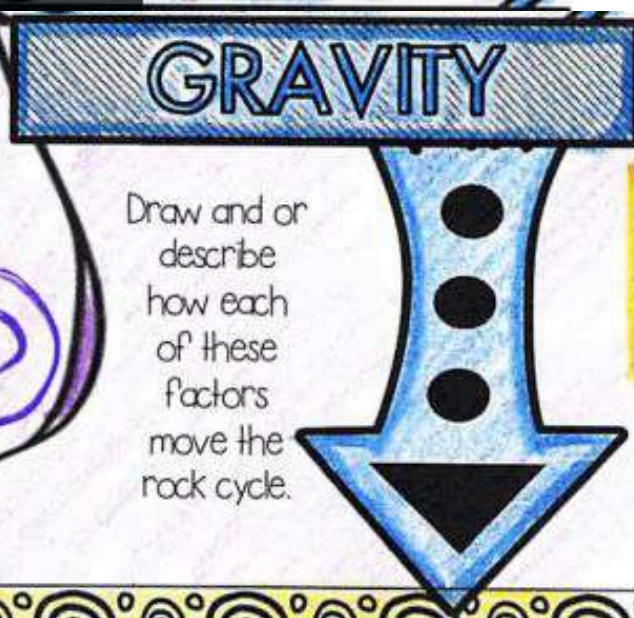
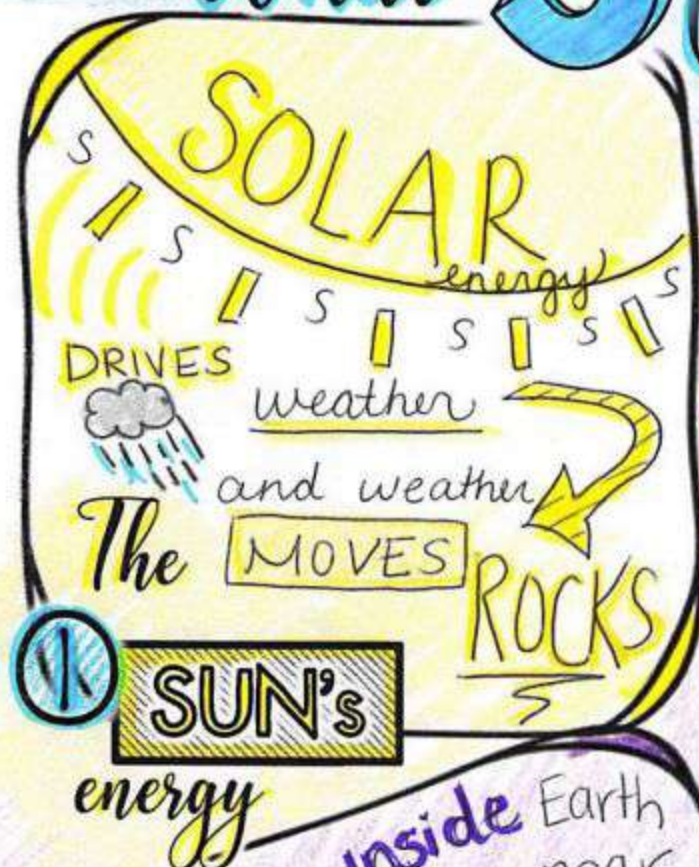
SEDIMENTATION

COMPACT
cement

Compacting, compressing and cementing sediment into sedimentary rock.

Doodle the KEY words from the definition in the space above.

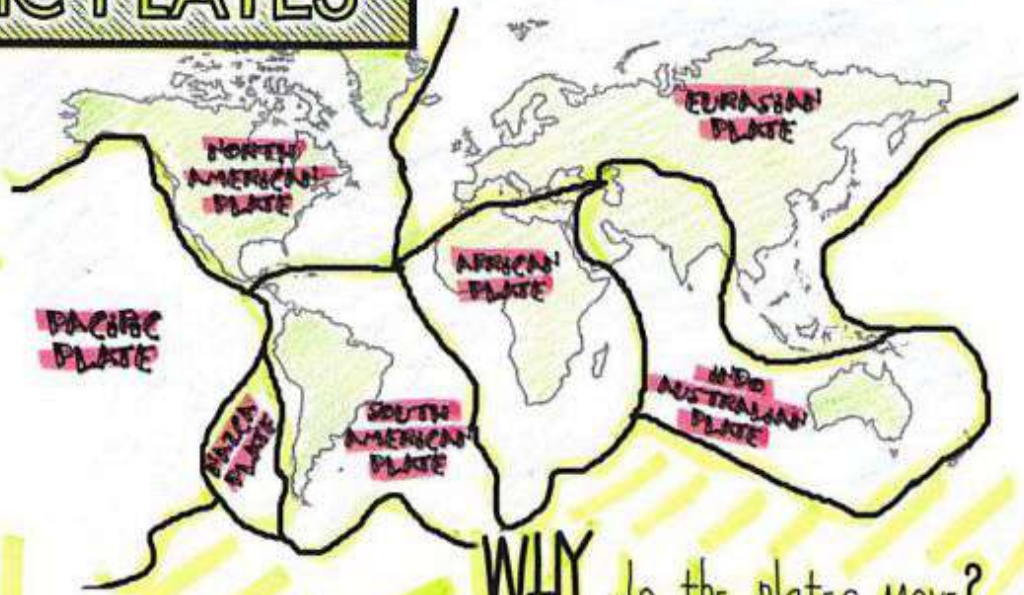
What 3 factors drive the rock cycle?



TECTONIC PLATES

MS ESS2-2

Giant pieces of the Earth's crust that move over long periods of time. Here are 7 of the major plates labeled!



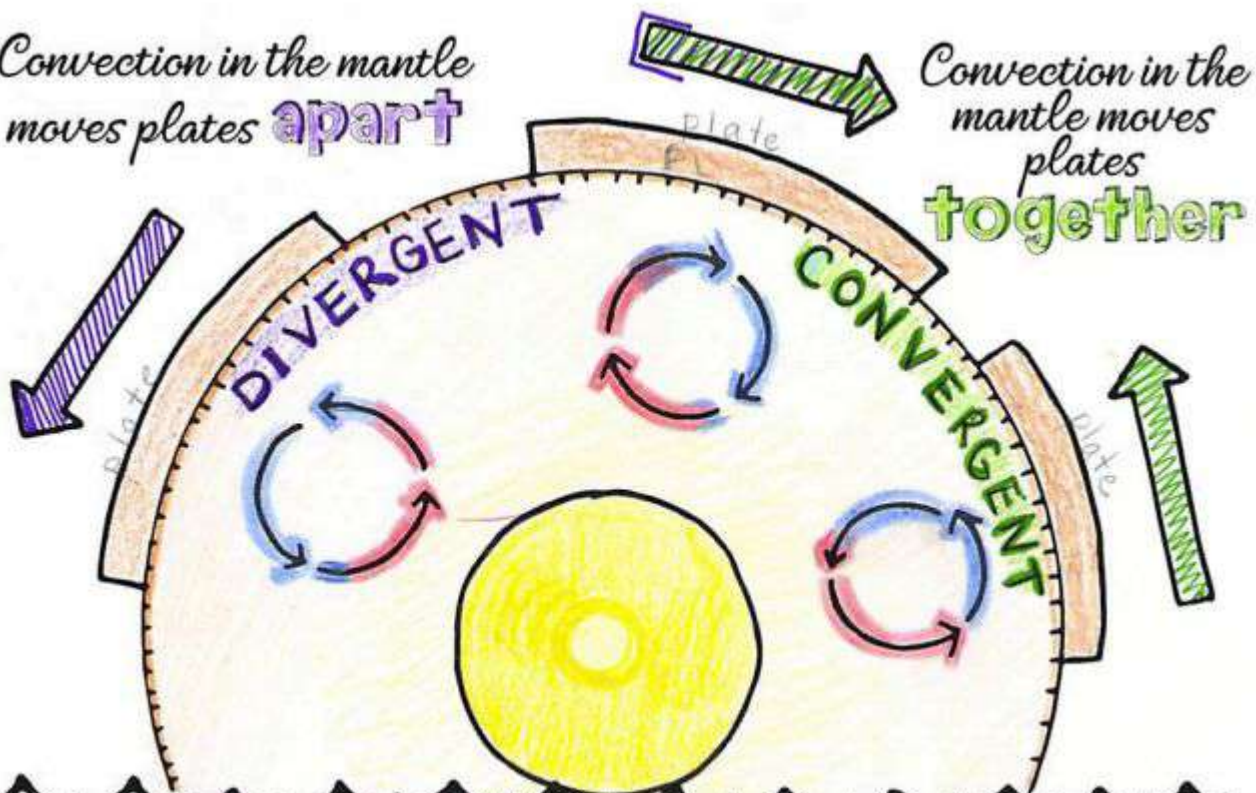
WHY do the plates move?

THERMAL CONVECTION

Heat in the Earth that causes molten rock in the mantle to move. This hot rock rises, cools and then sinks again creating convection currents.

Convection in the mantle moves plates **apart**

Convection in the mantle moves plates **together**



Earth's
surface is
always
changing!

WEATHERING

The breakdown of rocks
into smaller fragments.

Give 3 examples of weathering:

- WIND BLOWING -
- WATER FLOWING -
- FREEZE/THAW CYCLES -

teNGSSVocabularyGlossary.pdf

Open with ▾

All erosion involves the force of...

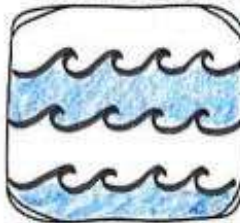
GRAVITY

Most erosion is caused by...

WATER



WAVES



GLACIERS



WIND



EROSION

The removal of
weathered rock
from one location
and transporting to
another.

MOVE

DEPOSITION

Occurs when sediment that has
eroded is **DROPPED** in a new location.



PLATE BOUNDARIES

types of boundaries

The locations where two tectonic plates interact. They either move together, move apart or slide past each other.

CONVERGENT



The place where two tectonic plates are moving **TOWARD** each other.

Name 3 types of convergent boundaries.

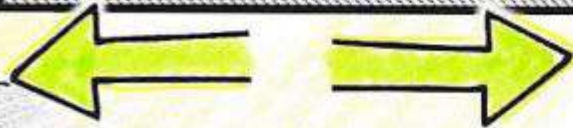
- ① Ocean / Continent
- ② Ocean / Ocean
- ③ Continent / Continent

In the space below, doodle or describe a possible result of this type of boundary.

Mid-ocean ridges form at **DIVERGENT** PLATES



DIVERGENT



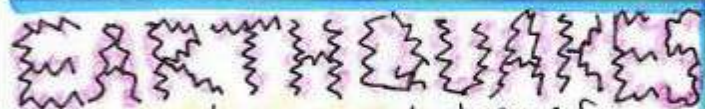
The place where two tectonic plates are moving **APART** from each other.

In the space below, doodle or describe a possible result of this type of boundary.

TRANSFORM



The place tectonic plates can slide horizontally past one another in opposite directions.



can happen at transform boundaries.
ex San Andreas Fault in California.



LANDFORMS

MS ESS2-2

Natural features of Earth's surface that are created by plate tectonics, weathering, erosion and/or deposition.

How do landforms form?

A landform that rises high above its surroundings, often with steep slopes.

Mountains are

Formed by folding crust, plate activity, and other volcano eruptions.

Name 3 famous mountain peaks and their locations and elevations.

① Mount Rainier Washington, State, USA 14,411 ft (4,392 m)

② Mount Everest, Nepal 29,029 ft (8,848 m)

③ Mount Whitney California, USA 14,494 ft (4,418 m)

MOUNTAIN

How do most canyons form? DOODLE and/or describe below:
Weathering, erosion and tectonic activity
River canyons are formed from water pressure and erosion.



Moving water carves out and carries sediment away over time leaving a canyon shape.

CANYON

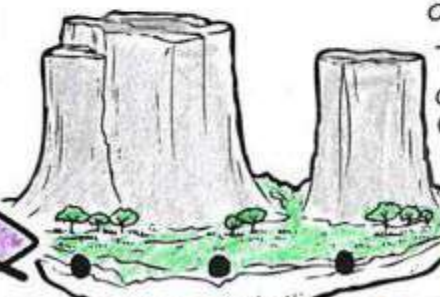


A deep valley with steep sides.

A flat area of land that is higher than surrounding land.

How does a plateau form? DOODLE and/or describe >>>>>>

Many form when magma deep in the Earth pushes toward the surface but doesn't break through the crust. It lifts a large flat rock up above it.



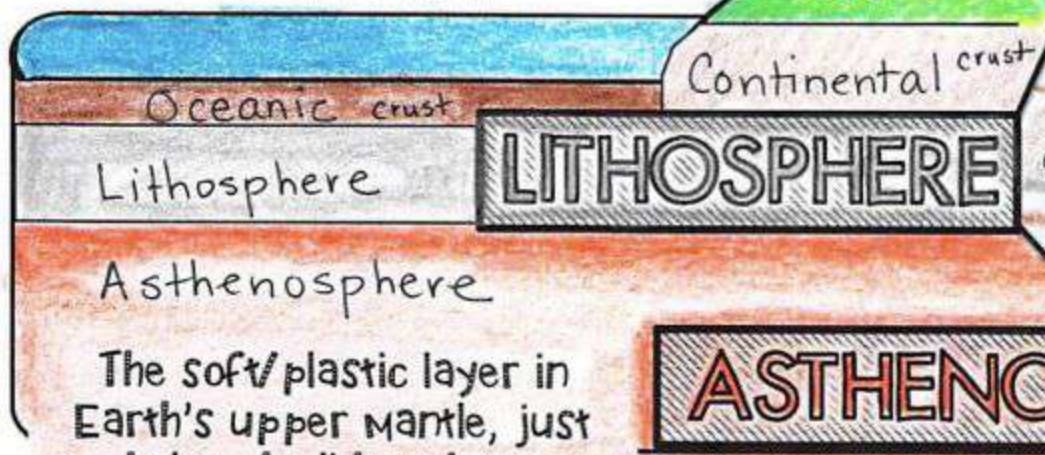
PLATEAU

TECTONIC PLATE

A massive, slow-moving piece of Earth's crust that floats on the mantle.

Color and label the oceanic crust, continental crust, lithosphere and asthenosphere in this diagram

I feel the Earth move under my feet!



The layer of Earth made up of oceanic crust, continental crust and the outer layer of the mantle.

The soft/plastic layer in Earth's upper mantle, just below the lithosphere.

ASTHENOSPHERE

Add color, labels and notes to show what you know about Earth's Layers!

CRUST

outermost layer of Earth - Includes the entire surface from mountain tops to the ocean floor

MANTLE

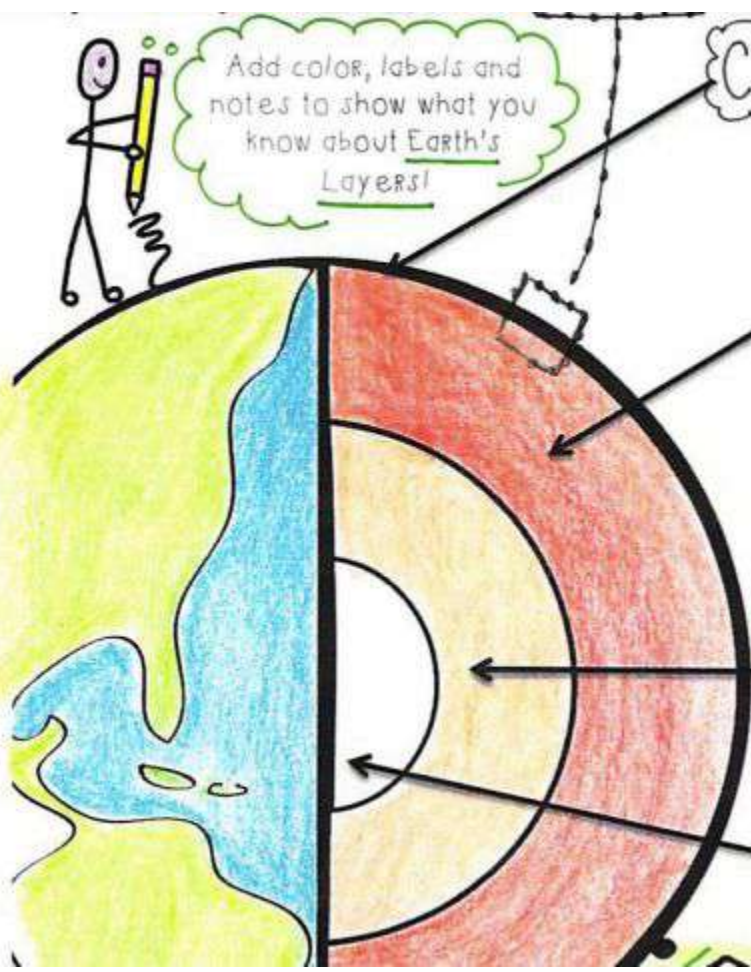
The layer of rock between Earth's crust and core that flows allowing plates on the surface to move.

OUTER CORE

made of liquid iron, nickel sulfur and oxygen.

INNER CORE

center and hottest part of Earth



CONTINENTAL DRIFT

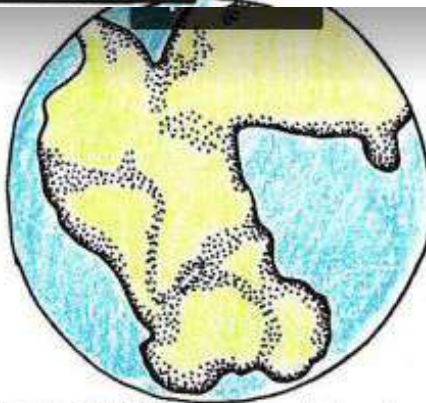
The movement of Earth's continents relative to one another. Scientists have evidence that over millions of years the continents have slowly moved.

How fast are plates drifting?

The Earth's tectonic plates move about 2 inches per year!

PANGAEA

The scientific theory that at one time, all of Earth's landmasses existed as one large supercontinent. Scientists believe the continents drifted together and then drifted away to where they are today.



Imagine that it is the early twentieth century and you are Alfred Wegener (the scientist who proposed continental drift theory). You are trying to convince other scientists that the continents had once been joined and over time had drifted apart. Describe your claim, evidence and reasoning below.

Claim

Continents once existed as one large land mass.

Evidence

Fossils

- Found on different continents across oceans and nowhere else on Earth.

Continent Shapes - similarities in the shapes of the coastlines

Rock Strata - identical

rock layers found on both sides of the Atlantic Ocean

Reasoning

→ Supports idea that the continents were connected b/c it is unlikely the animals would swim across the ocean!

→ Shows that the continents fit together like a jigsaw puzzle.

→ Supports idea - rock formed first then separated.

FOSSIL EVIDENCE

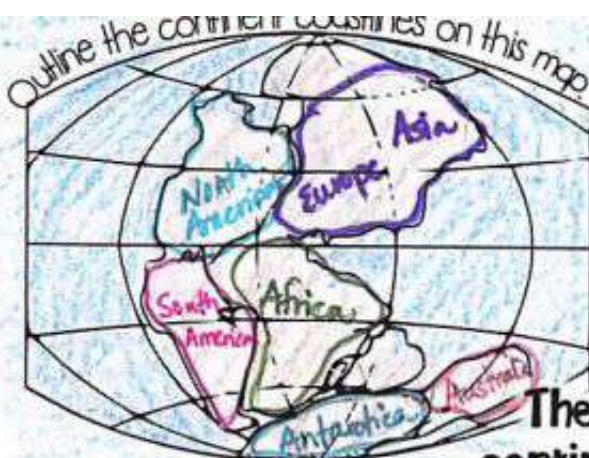
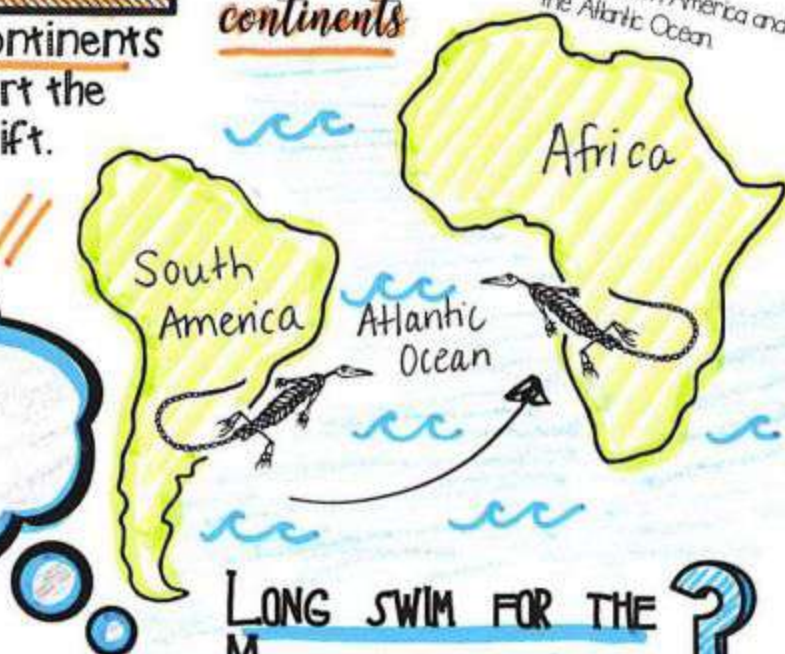
Fossils found on different continents (and no where else) support the theory of continental drift.

For example:

Mesosaurus was a freshwater crocodile-like reptile. It lived about 250 million years ago. Fossils of the Mesosaurus are found in southern Africa and South America. It would have been physically impossible for it to swim between the continents!

of moving continents

Label Africa, South America and the Atlantic Ocean



JIGSAW EVIDENCE

of moving continents

The similarity in the coastlines of the continents indicate that they fit together much like a jigsaw puzzle.



Rock evidence suggests that rocks on both sides of the Atlantic were formed at the same time and then separated when the continents drifted apart.

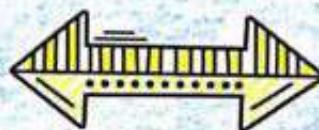
ROCK EVIDENCE

of moving continents

Identical rocks of the same age and same type can be found on both sides of the Atlantic Ocean.



ATLANTIC OCEAN



Color the rock layers to show how they are the same on both sides of the Atlantic Ocean.

Water Cycle

Volcanic Steam

Evaporation

Condensation

Transpiration

Precipitation

Run off

Groundwater

Spring

WATER CYCLE

The continuous movement of water between the land, ocean and air.

Label the following concepts in the picture of the water cycle. Transpiration, Evaporation, Condensation, Precipitation, Run Off, Groundwater, Spring, Volcanic Steam.

Doodle and/or describe the role that gravity plays in the water cycle.

**G
R
A
V
I
T
Y**

Gravity is the force that keeps the water moving in the water cycle.

- * Precipitation
- * Runoff
- * Infiltration
- * Groundwater flow

Doodle and/or describe the role that the sun plays in the water cycle.

SUN

The sun's radiation is the **ENERGY** that drives the water cycle.

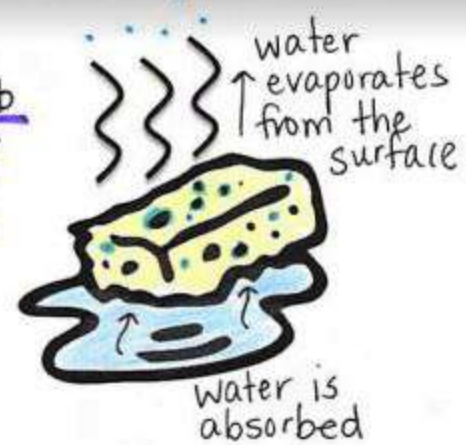
- * condensation
- * evaporation

TRANSPIRATION



The process by which plants absorb water through roots and release it through stomata as water vapor.

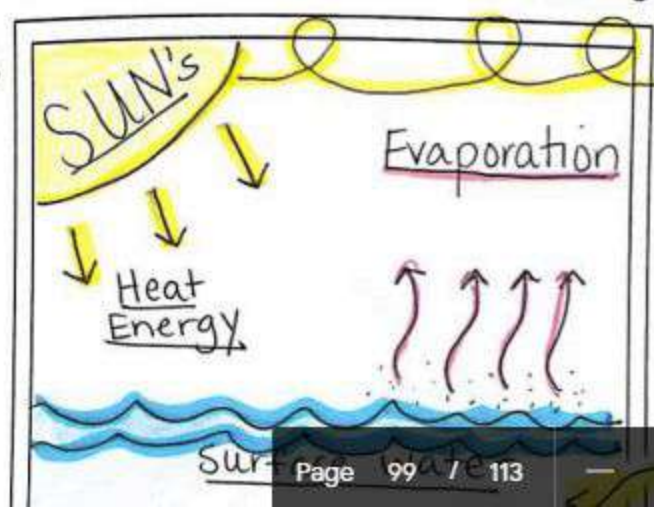
Plants absorb and release water similar to a sponge. Add color, details and labels to these pictures to show you understand transpiration.



EVAPORATION

The process by which water changes from its liquid state to its gaseous state (water vapor).

↑ OPPOSITES



Energy Added!

DOODLE a picture that matches this description: The sun's heat energy warms surface water causing it to evaporate. Be sure to label the underlined words in your picture.

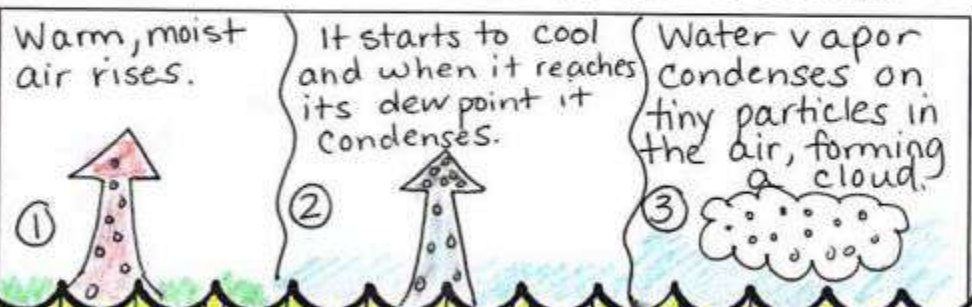
CONDENSATION

Energy Lost!
The process by which water vapor in the air cools and is turned into liquid water.

It is responsible for the formation of clouds.



Draw or describe how clouds are formed.



PRECIPITATION

WONDERFUL
WATER
CYCLE

MS ESS 2-4

G
R
A
V
I
T
Y

After water vapor cools to form clouds, drops of water come together and become heavy. They fall as rain, snow, sleet or hail.

Add your
thoughts



There is more RUN OFF on steep hills and less RUN OFF on gentle hills....Why?

RUN OFF

On gentle hills the water moves slowly allowing more time for it to absorb into the soil.

Precipitation that does not get absorbed into the soil or evaporate will make its way from the surface down into places where water collects.

(streams lakes, groundwater)

GROUNDWATER

Draw water stored under ground

Water that seeps through the soil and is stored in underground aquifers.

Aquifers are reservoirs for groundwater made of rock that lets water pass through.



Air masses interact to change the... weather!

MS ESS2-5

WEATHER

The way the atmosphere behaves over

M T W T H F



SHORT periods of time!

weather vs. climate

short term

reported as
a forecast

day / week

long term

reported as
averages

data over
many years

How are weather and climate different?

The average weather over long periods of time is used to determine a region's climate.

TEMPERATURE

This thermometer is missing the labeled units. Label the side of the thermometer in degrees Celsius. THEN Show which numbers represent the human body temperature and the freezing point of water in Celsius.

What temperature scale do scientists use? most

Celsius is used by scientists.

The Kelvin scale is used by physicists who need very precise measurements.



A measurement of how hot or cold a substance is. A thermometer measures the heat energy in a substance.

Fahrenheit and Celsius units can be used to measure temperature.

HUMIDITY

The amount of **water** vapor in the air. Humidity affects both weather and climate. Relative humidity is the amount of water vapor in the air "relative" to what it can hold.

★ **WARM** air can hold more water vapor than **COLD** air. Water vapor in the air also helps protect our planet from harmful UV rays!

Think about how you feel on a hot humid day. Create an EMOJI for humid!



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AIR MASSES

Air masses form when air spends days to weeks over the same part of Earth.

HUGE volumes of air with specific characteristics.
(Temperature, humidity, pressure)

2 types

Doodle and describe the 2 types of air masses and 3 source regions.

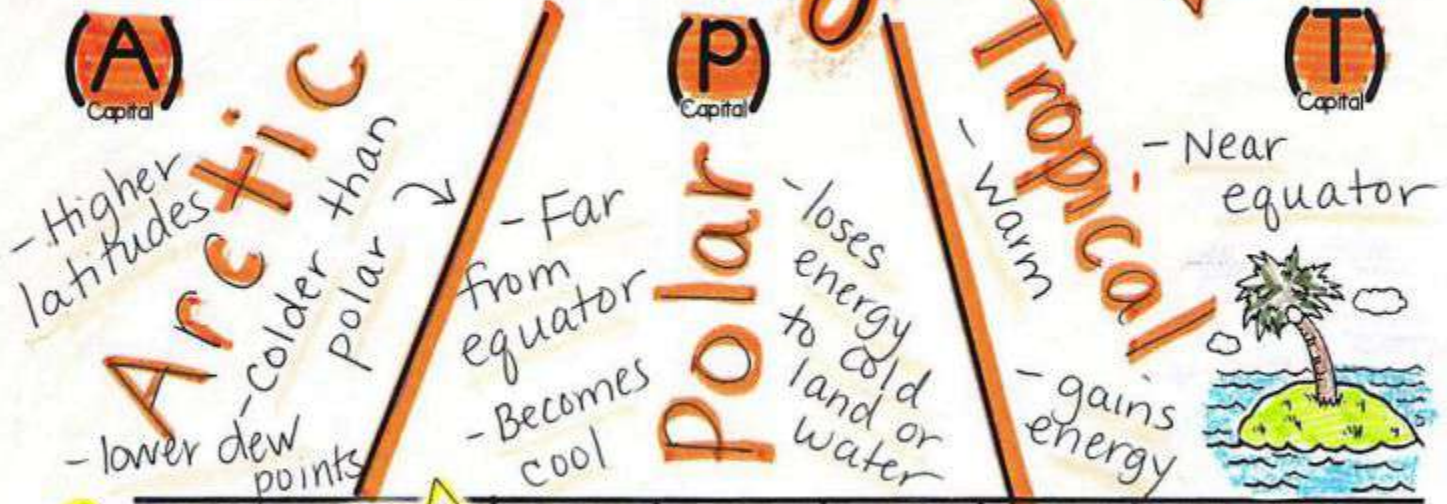
CONTINENTAL AIRMASS

- * Forms over land (c) lowercase
- * Air becomes dry as it ~~loses~~ moisture to land below it.

MARITIME AIRMASS

- * Forms over water (m) lowercase
- * Air becomes moist as it gains water vapor from water below it.

3 Source Regions



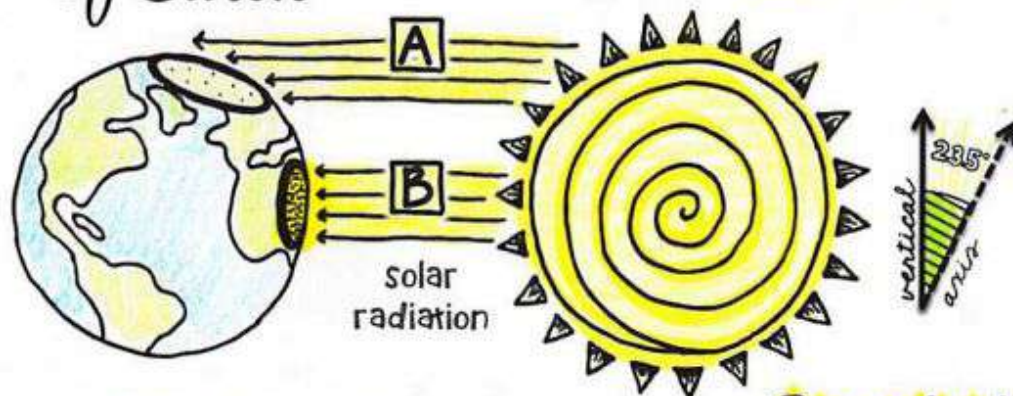
6 combinations

cA	cP	cT	mA	mP	mT
----	----	----	----	----	----

UNEQUAL HEATING

of Earth

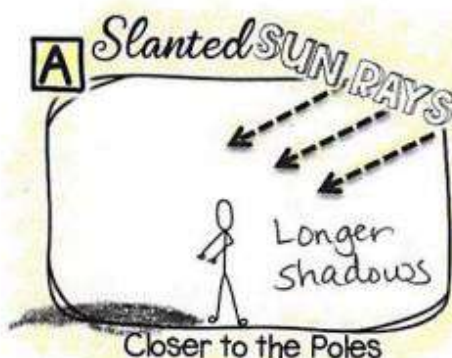
from the equator impacts climate due to the **TILT** and **ANGLE** of solar radiation



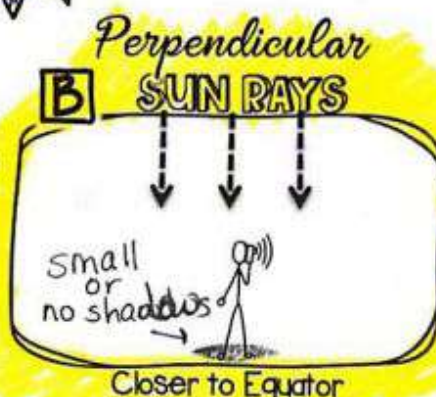
The Earth's axis is not vertical, but tilted 23.5 degrees.

SEASONAL CHANGE

is caused by Earth's tilt paired with Earth's revolution around the sun.



Draw a shadow for the person in each box, showing how sun ray angle and shadow length at 12 noon vary by latitude.



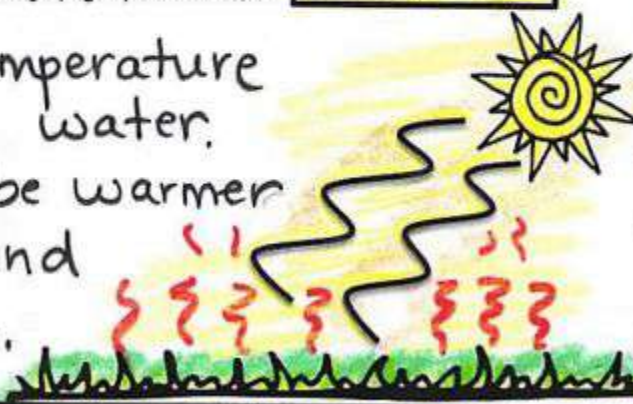
How do geographic features impact Weather, Temperature and Precipitation?

MS ESS2-6

INLAND

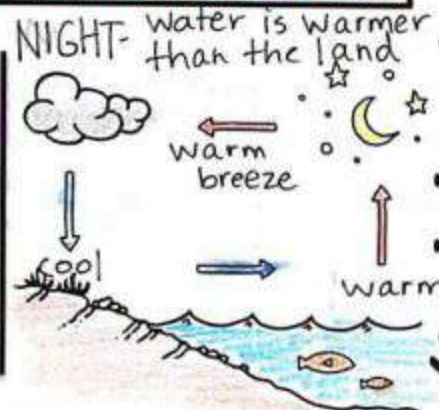
Add labels the pictures and descriptions to explain how geography impacts weather.

Land changes temperature more quickly than water.
Land areas can be warmer during the day and cooler at night.



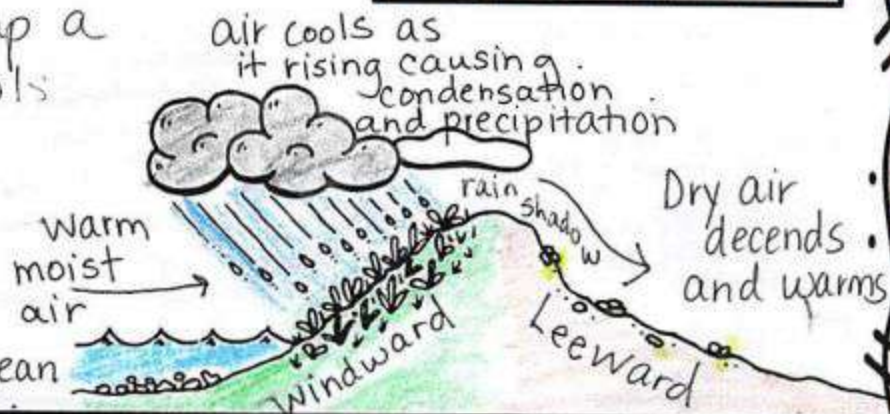
COASTAL

- Water has a high heat capacity so it changes temperature slower than land. Sea Breezes Keep coastal temperatures comfortable →



MOUNTAINS

- As air moves up a mountain it cools and condenses and causes precipitation.
- When it reaches the other side it has little moisture.



Understanding Medicines and What They Do

Sometimes it seems like there are more medicines than there are diseases, and it can be hard to keep them straight. Some can be bought over the counter at pharmacies or other stores. Others require a doctor's prescription. Some are available only in hospitals.

What Are Medicines?

Medicines are chemicals or compounds used to cure, halt, or prevent disease; ease symptoms; or help in the diagnosis of illnesses. Advances in medicines have enabled doctors to cure many diseases and save lives.

These days, medicines come from a variety of sources. Many were developed from substances found in nature, and even today many are extracted from plants.

Some medicines are made in labs by mixing together a number of chemicals. Others, like penicillin, are byproducts of organisms such as fungus. And a few are even biologically engineered by inserting genes into bacteria that make them produce the desired substance.

When we think about taking medicines, we often think of pills. But medicines can be delivered in many ways, such as:

- liquids that are swallowed
- drops that are put into ears or eyes
- creams, gels, or ointments that are rubbed onto the skin
- inhalers (like nasal sprays or asthma inhalers)
- patches that are stuck to skin (called transdermal patches)
- tablets that are placed under the tongue (called sublingual medicines; the medicine is absorbed into blood vessels and enters the bloodstream)
- injections (shots) or intravenous (inserted into a vein) medicines

No medicine can be sold unless it has first been approved by the U.S. Food and Drug Administration (FDA). The makers of the medicine do tests on all new medicines and send the results to the FDA.

The FDA allows new medicines to be used only if they work and if they are safe enough. When a medicine's benefits outweigh its known risks, the FDA usually approves the sale of the drug. The FDA can withdraw a medicine from the market at any time if it later is found to cause harmful side effects.

Different Types of Medicines

Medicines act in a variety of ways. Some can cure an illness by killing or halting the spread of invading germs, such as bacteria and viruses. Others are used to treat cancer by killing cells as they divide or preventing them from multiplying. Some drugs replace missing substances or correct low levels of natural body chemicals such as some hormones or vitamins. Medicines can even affect parts of the nervous system that control a body process.

Nearly everyone has taken an antibiotic. This type of medicine fights bacterial infections. Your doctor may prescribe an antibiotic for things like strep throat or an ear infection. Antibiotics work either by killing bacteria or halting their multiplication so that the body's immune system can fight off the infection.

Sometimes a part of the body can't make enough of a chemical. That can also make you sick. Someone with insulin-dependent diabetes, for instance, has a pancreas that can't produce enough insulin (a hormone that regulates glucose in the body). Some people have a low production of thyroid hormone, which helps control how the body uses energy. In each case, doctors can prescribe medicines to replace the missing hormone.

Some medicines treat symptoms but can't cure the illness that causes the symptoms. (A symptom is anything you feel while you're sick, such as a cough or nausea.) So taking a lozenge may soothe a sore throat, but it won't kill that nasty strep bacteria.

Some medicines relieve pain. If you pull a muscle, your doctor might tell you to take ibuprofen or acetaminophen. These pain relievers, or analgesics, don't get rid of the source of the pain — your muscle will still be pulled. What they do is block the pathways that transmit pain signals from the injured or irritated body part to the brain (in other words, they affect the way the brain reads the pain signal) so that you don't hurt as much while your body recovers.

As people get older, they sometimes develop chronic or long-term conditions. Medicines can help control things like high blood pressure (hypertension) or high cholesterol. These drugs don't cure the underlying problem, but they can help prevent some of its body-damaging effects over time.

Among the most important medicines are immunizations (or vaccines). These keep people from getting sick in the first place by immunizing, or protecting, the body against some infectious diseases. Vaccines usually contain a small amount of an agent that resembles a specific germ or germs that have been modified or killed. When someone is vaccinated, it primes the body's immune system to "remember" the germ so it will be able to fight off infection by that germ in the future.

Most immunizations that prevent you from catching diseases like measles, whooping cough, and chickenpox are given by injection. No one thinks shots are fun. But the diseases they prevent can be very serious and cause symptoms that last much longer than the temporary discomfort of the shot. To make life easier, now you can get immunizations at many pharmacies.

Although some medicines require a prescription, some are available in stores. You can buy many medicines for pain, fever, cough, or allergies without a prescription. But just because a medicine is available over-the-counter (OTC), that doesn't mean it's free of side effects. Take OTC medicines with the same caution as those prescribed by a doctor.

Taking Medicines

No matter what type of medicine your doctor prescribes, it's always important to be safe and follow some basic rules:

- If you feel worse after taking a medicine, tell your doctor right away.
- Double-check that you have the right medicine. If you get the same prescription filled more than once, check that it's the same shape, size, and color as the last time. If not, be sure to ask the pharmacist about it.

- Read the label and follow directions. Ask if you have questions.
- Take medicines exactly as prescribed. If the instructions say take one tablet four times a day, don't take two tablets twice a day. It's not the same.
- Ask if the medicine is likely to affect everyday tasks such as driving or concentrating in school.
- Don't take more medicine than is recommended. It won't make you heal faster or feel better quicker. In fact, an overdose of medicine can make you sick.
- Always follow your doctor's or pharmacist's instructions. For instance, he or she may tell you to take a medicine with food to help lessen the stomach upset it can cause or instead to take the medicine on an empty stomach so as not to interfere with the medicine's absorption into your body.
- Never share prescription medicine with anyone else, even if that person has the same thing as you do. Today's medicines are very complex, and the dosages tend to be precisely prescribed for each person's needs. Either under-dosing or overdosing can be harmful. Additionally, someone else's body may react differently to the same medicine (for example, if the person has an allergy to one of the components of the medicine).
- If you're already taking a medicine but also want to take something you can buy over-the-counter, ask the pharmacist. There could be a bad interaction between the medicines.
- Always tell your doctor and pharmacist if you're taking any other medicines or any herbal supplements so that he or she can check for any interactions between the medicines.
- Be sure to tell your doctor if you are pregnant or might be pregnant. Some medicines can be harmful to the baby. Also, let your doctor or pharmacist know if you are breastfeeding, as some medications can cause problems with nursing.
- Remember that drinking alcohol can dramatically worsen the side effects of many medicines.
- Even if you get sick with what you think is the same old thing, don't decide on your own that you know what's wrong and take some leftover medicine. Taking that medicine for a different disease might not work — and it can even be harmful. Talk to your doctor first.
- Take antibiotics for the full length of the time prescribed, even if you start to feel better, so that all the germs are killed and the infection doesn't bounce back.
- Keep medicines in their original labeled containers, if possible.
- Don't use medicine that has expired, especially prescription medicine.
- Medicines should not be stored in your bathroom because heat and humidity can affect the potency of the drug. Most medicines should be kept at room temperature and away from sunlight. Some must be refrigerated. Check with your pharmacist or doctor if you aren't sure.
- Make sure all medicines are stored safely and out of the reach of younger brothers or sisters and pets.
- If you have any allergies, tell your doctor and pharmacist before they start you on a new medicine.
- If you get a rash, start itching, vomiting, or have trouble breathing after starting a medicine, tell your parents immediately. Breathing difficulty, breaking out in hives, or suddenly developing swelling of the tongue, lips, face, or other body parts may be signs of a severe allergic reaction — get emergency medical care right away.

Taking medicines may feel like a hassle sometimes. But medicines are the most effective treatments available for many illnesses. If you ever have any questions about what a medicine does or how you should take it, talk with your doctor or a pharmacist.

Reviewed by: Elora Hilmas, PharmD, BCPS
 Date reviewed: October 2018

Note: All information on TeensHealth® is for educational purposes only. For specific medical advice, diagnoses, and treatment, consult your doctor.

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Understanding Medication Article

* Required

Medications can be in the form of pills, liquids, shots, and many other forms. *

2 points

- ☐ True
- ☐ False

No medicine can be sold unless it has first been approved by the U.S Food and Drug Administration. *

2 points

- ☐ True
- ☐ False

What types of medicines keep you from getting sick? *

2 points

- ☐ Pain Relievers
- ☐ Antibiotics
- ☐ Immunizations (Vaccines)



If you feel worse after taking a medication, you should tell your doctor right away. *

2 points

- ☐ True
- ☐ False

You should only take medicines exactly as prescribed. *

2 points

- ☐ True
- ☐ False

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