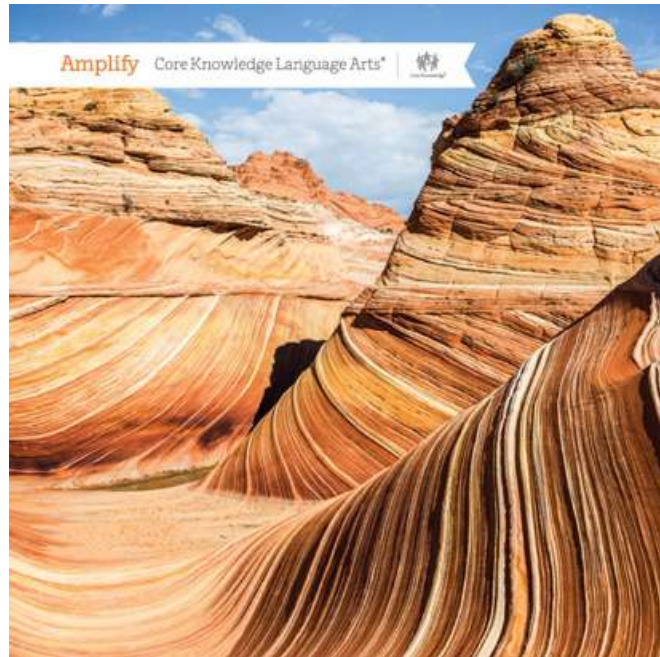


# Unit 5 Geology

## Focus Wall Posters



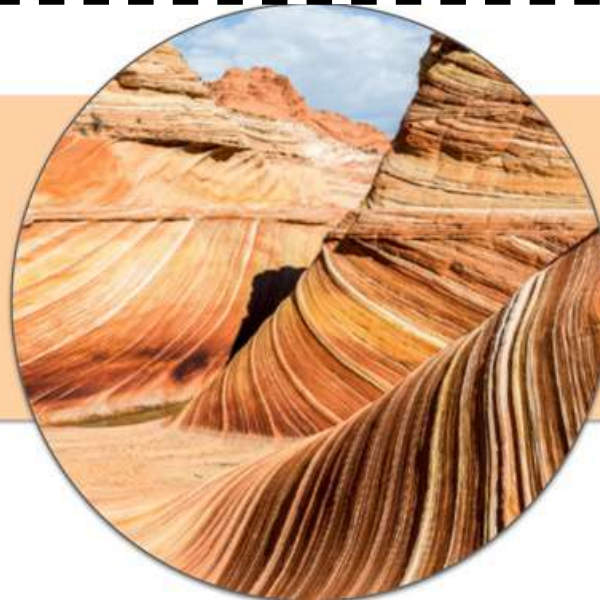
**Please reach out if you have any  
feedback or requests!**

# Knowledge Objective

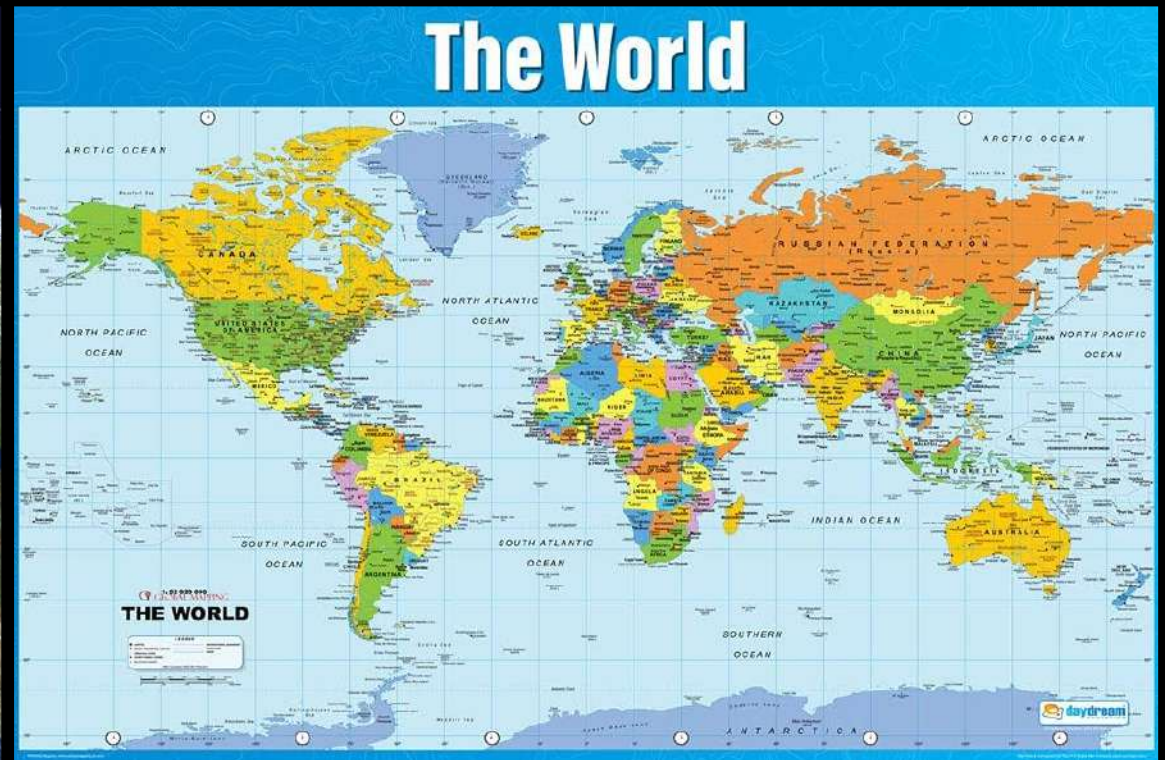
We will **be able to** read  
and write about  
geology.

**Geology**

Unit 5



# Geography



**The study of the  
characteristics of the  
Earth's surface.**



# Ecology



**The study of the relationships  
between living things and  
their environment.**

# Archeology



**The study of past human life and activities by examining bones, tools, and other objects left behind.**



# Geology



**The study of the Earth's characteristics, what it is made of, and the forces and processes that shape and change it.**

# Earth





# Grand Canyon



# Fossils





# Cappadocia Houses



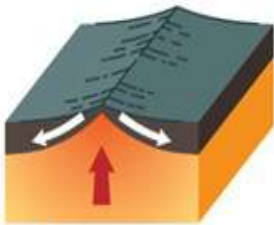
# Volcano



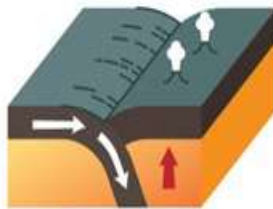
# Tectonic Plate Theory

## PLATE BOUNDARIES

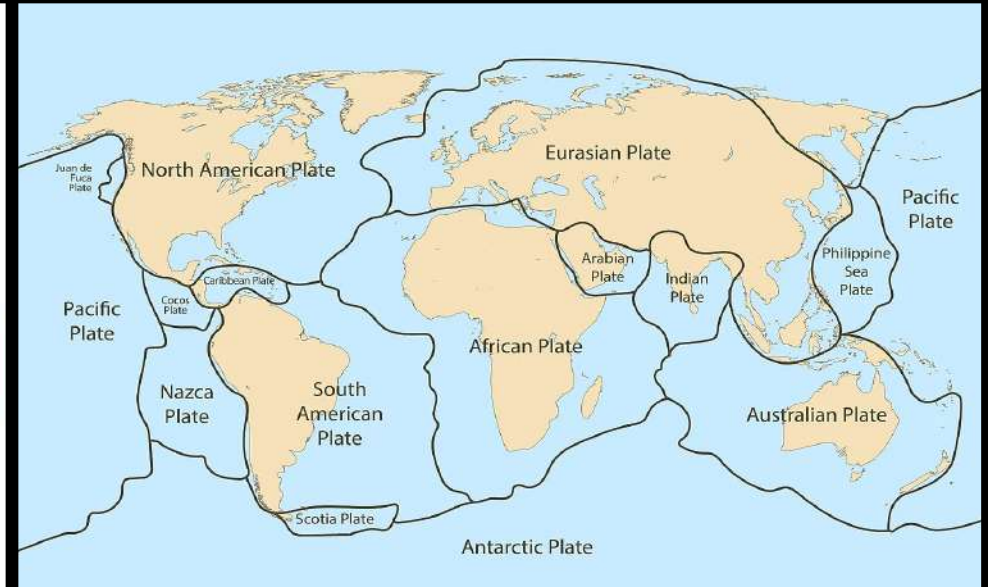
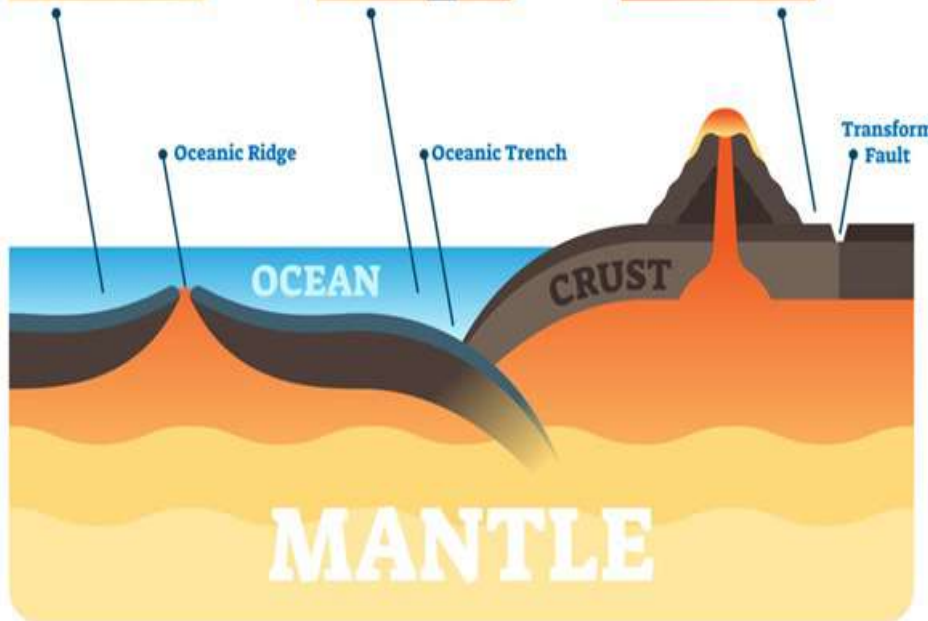
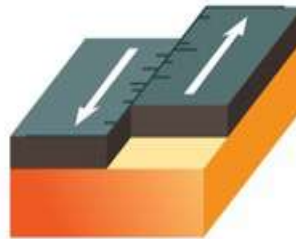
DIVERGENT  
PLATE BOUNDARY



CONVERGENT  
PLATE BOUNDARY



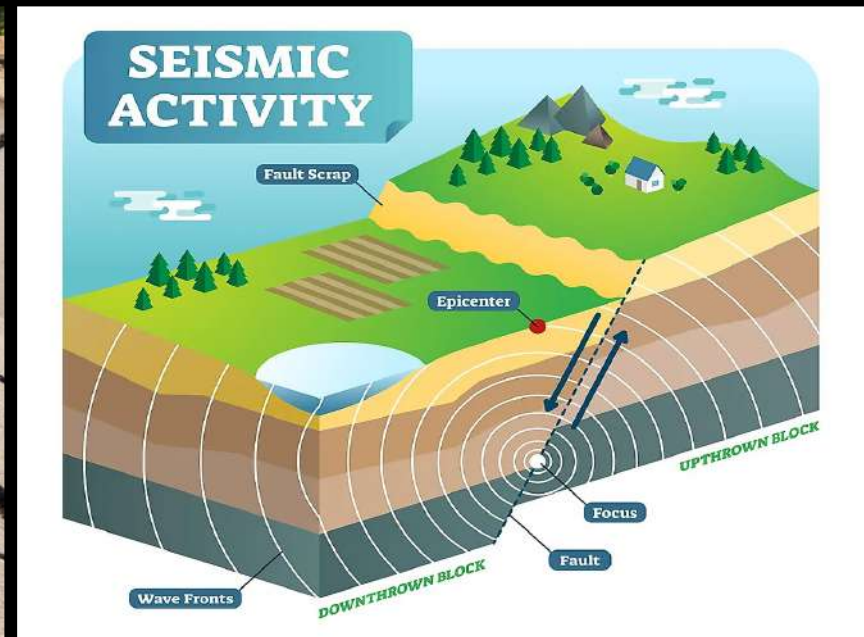
TRANSFORM  
PLATE BOUNDARY



**Tectonic plate theory explains how mountains, volcanoes, and trenches are created on land and under the sea.**

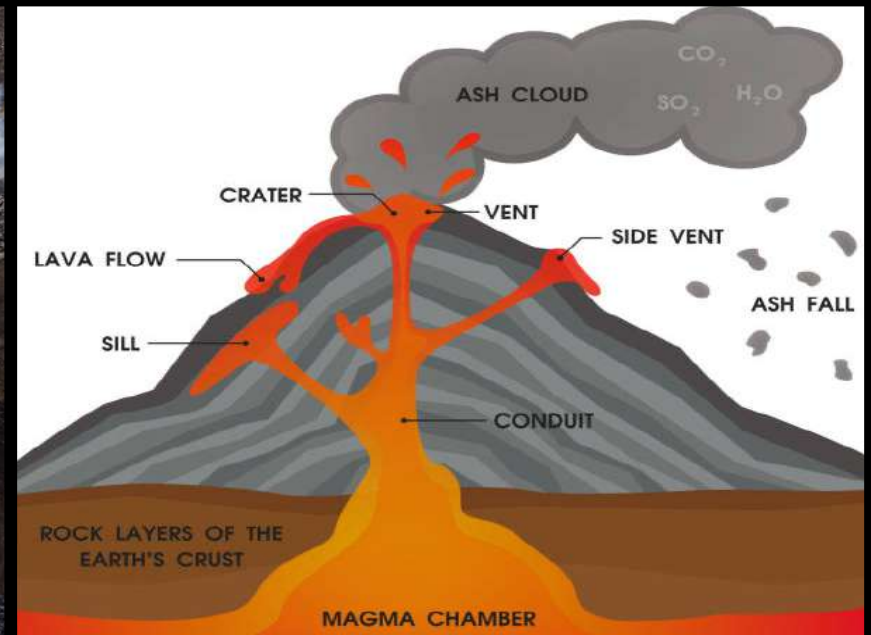


# Earthquakes



**Earthquakes occur when the HUGE tectonic plates of the Earth's crust suddenly move because of heat and pressure.**

# Volcanoes



**Volcanoes are hills or mountains that form over a crack in the Earth's crust from which lava erupts.**

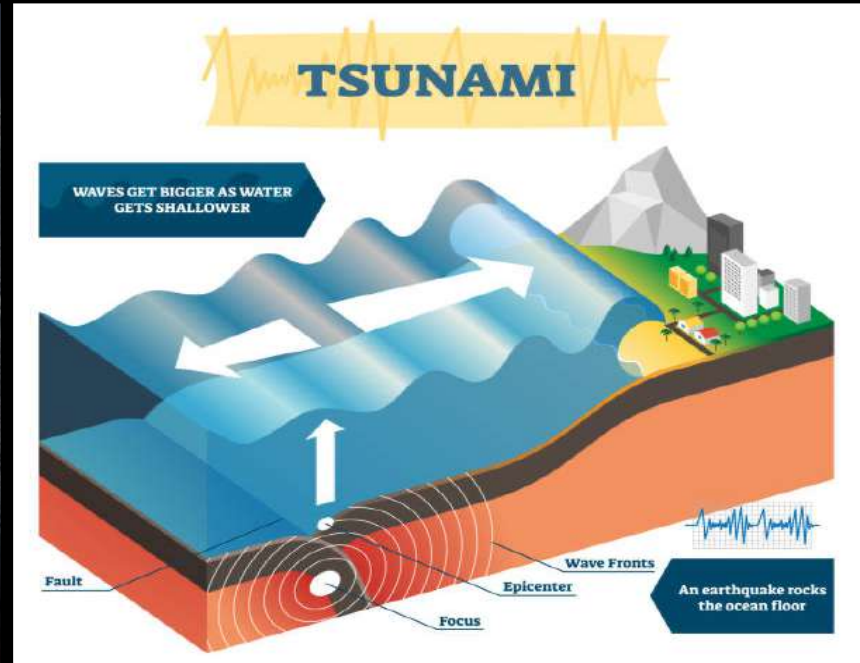


# Landslides



**Landslides occur when a mass of earth or rock from a cliff or mountain slides down a slope. It can happen suddenly or slowly.**

# Tsunamis

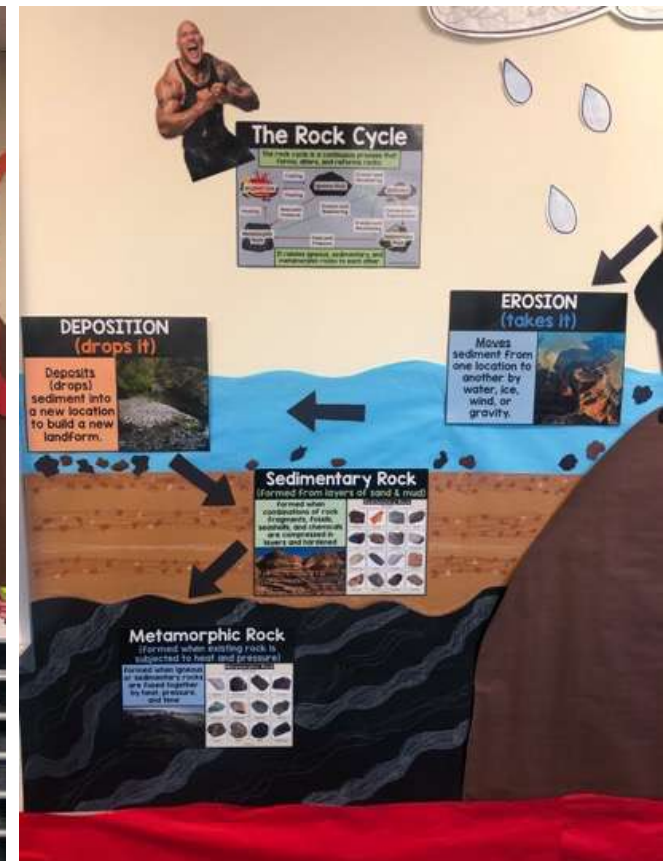


**A tsunami is a series of long waves caused by an earthquake, volcanic eruption, or landslide that occurs below the sea.**



# Unit 5 Geology

## The Rock Cycle Posters



# Mapping Out Rock Cycle Display

**WEATHERING**  
(breaks it)

Breaks down rocks, minerals, or other parts of the Earth's crust into smaller pieces called sediment.




**DEPOSITION**  
(drops it)

Deposits (drops) sediment into a new location to build a new landform.




**EROSION**  
(takes it)

Moves sediment from one location to another by water, ice, wind, or gravity.



**Sedimentary Rock**  
(formed from layers of sand & mud)

Formed when combinations of rock fragments, fossils, seashells, and chemicals are compressed in layers and hardened.



**Igneous Rock**  
(formed from magma)

**extrusive (volcanic)**  
formed when molten rock reaches the Earth's surface and cools

**intrusive (plutonic)**  
formed when crystallized magma, cooled over time, is solidified deep in the Earth



Cools & Hardens

Heat & Pressure

**Metamorphic Rock**  
(formed when existing rock is subjected to heat and pressure)

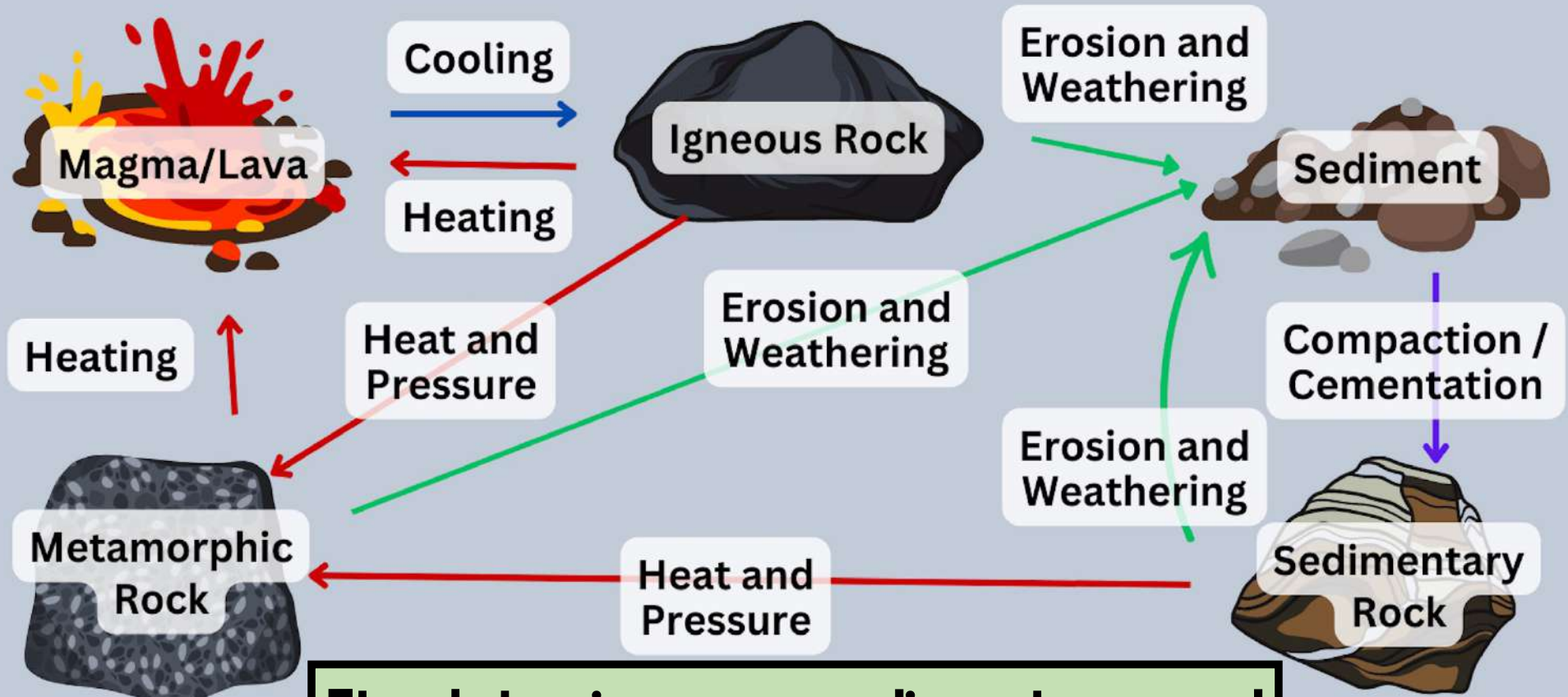
formed when igneous or sedimentary rocks are fused together by heat, pressure, and time





# The Rock Cycle

The rock cycle is a continuous process that forms, alters, and reforms rocks.



It relates igneous, sedimentary, and metamorphic rocks to each other.

# Igneous Rock

## (formed from magma)

### extrusive (volcanic)

formed when molten rock reaches the Earth's surface and cools

### intrusive (plutonic)

formed when crystallized magma, cooled over time, is solidified deep in the Earth



### Igneous Rock

Examples



Basalt



Pumice



Obsidian



Rhyolite



Scoria



Dacite



Granite



Gabbro



Diabase



Diorite



Pegmatite



Peridotite



# Sedimentary Rock

(formed from layers of sand & mud)

formed when combinations of rock fragments, fossils, seashells, and chemicals are compressed in layers and hardened



## Sedimentary Rock

Examples



Breccia



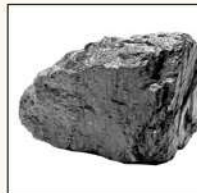
Caliche



Chalk



Chert



Coal



Conglomerate



Diatomite



Limestone



Sandstone



Shale



Dolomite



Siltstone



Rock Salt



Gypsum



Ironstone



Coquina

# Metamorphic Rock

(formed when existing rock is subjected to heat and pressure)

formed when igneous or sedimentary rocks are fused together by heat, pressure, and time



## Metamorphic Rock

Examples



Marble



Anthracite



Gneiss



Hornfels



Mariposite



Novaculite



Quartzite



Phyllite



Schist



Skarn



Slate



Soapstone



# WEATHERING (breaks it)

**Breaks down  
rocks, minerals,  
or other parts  
of the Earth's  
crust into  
smaller pieces  
called sediment.**



# EROSION (takes it)

Moves  
sediment from  
one location to  
another by  
water, ice,  
wind, or  
gravity.





# DEPOSITION (drops it)

Deposits  
(drops)  
sediment into  
a new location  
to build a new  
landform.





# Weathering (breaks it)

Breaks down rocks, minerals, or other parts of the Earth's crust into smaller pieces called sediment.



# Erosion (takes it)

Moves sediment from one location to another by water, ice, wind, or gravity.



# Deposition (drops it)

Deposits (drops) sediment into a new location to build a new landform.





# Core Vocabulary

## observation

the act of paying careful attention to something to gather information

## hypothesis

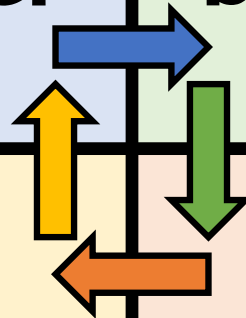
an idea that has been suggested and may be true, but has not yet been proven

## conclude

to decide something or form an opinion based on information you have

## evidence

proof; information and facts that are helpful in forming a conclusion



Unit 5 Lesson 10

# Spelling Words

archrival  
paragraph  
rupture  
hierarchy  
biographer  
abrupt

matriarch  
anarchy  
autograph  
eruption  
calligraphy  
uninterrupted



Unit 5 Lesson 15

# Spelling Words

**molten**

**fault**

**geyser**

**epicenter**

**seismograph**

**conclusion**

**glacier**

**tsunami**

**erosion**

**tectonic**

# Unit 5: Suffix

## -ly (in a way)

**just add -ly**

slow**ly**  
quick**ly**  
quiet**ly**  
loud**ly**  
proud**ly**  
careful**ly**

**drop -e first**

bubb**ly**  
horrib**ly**  
wigg**ly**  
affordabl**ly**  
miserabl**ly**  
impossibl**ly**

**change y to i**

easy**ly**  
temporari**ly**  
speedi**ly**  
happi**ly**  
angri**ly**  
busi**ly**



# Unit 5: Root Words

**arch**

**ruler**

archduke  
archrival  
hier**archy**  
an**archy**  
matri**arch**  
patri**arch**

**graph**

**write/draw**

auto**graph**  
geo**graphy**  
para**graph**  
bio**graphy**  
tele**graph**  
photo**grapher**

**rupt**

**break/burst**

rupture  
abrupt  
eruption  
disruption  
corrupt  
interrupted

# Unit 5: Root Word

The root word arch  
means “ruler”

archduke

a chief duke

archrival

a main rival; opponent

hierarchy

an organized system  
that ranks things  
according to power or  
importance

anarchy

a situation not  
controlled by rules

matriarch

a woman who rules a  
family or tribe

patriarch

a man who rules a  
family or tribe



# Unit 5: Root Word

The root word graph means “to write/draw”

## autograph

a written signature

## photographer

a person who takes photos, especially as a job

## geography

the study of places on a map

## paragraph

a piece of writing

## biography

a story about a real person's life written by someone else

## telegraph

a system for transmitting messages

# Unit 5: Root Word

The root word **rupt** means “break or burst”

**rupture**

a break or burst

**abrupt**

unexpected or  
suddenly

**eruption**

the process or sending  
out rock, lava, and ash  
in a sudden explosion

**uninterrupted**

continuing without  
breaking or being  
stopped by something

**disruption**

an interruption during  
an activity or process

**corrupt**

break someone's trust



# Comma Llama

Where do I put my commas?

Commas in a Series

red, white, and blue

Month Day, Year

November 27, 1991

City, State

Lincoln, Nebraska



# Direct Quotes vs. Paraphrasing

**Direct Quote**

**Paraphrasing**

According to the text, **“Tectonic plates fit tightly together.”**

Tectonic plates are merged extremely close to one another.

**Direct Quote**

**Paraphrasing**

The text says, **“Eventually the top of the volcano may rise above the ocean’s surface and form an island.”**

One fact is that an island can form once the peak of a volcano erects over the top of the sea’s surface.



# Simile



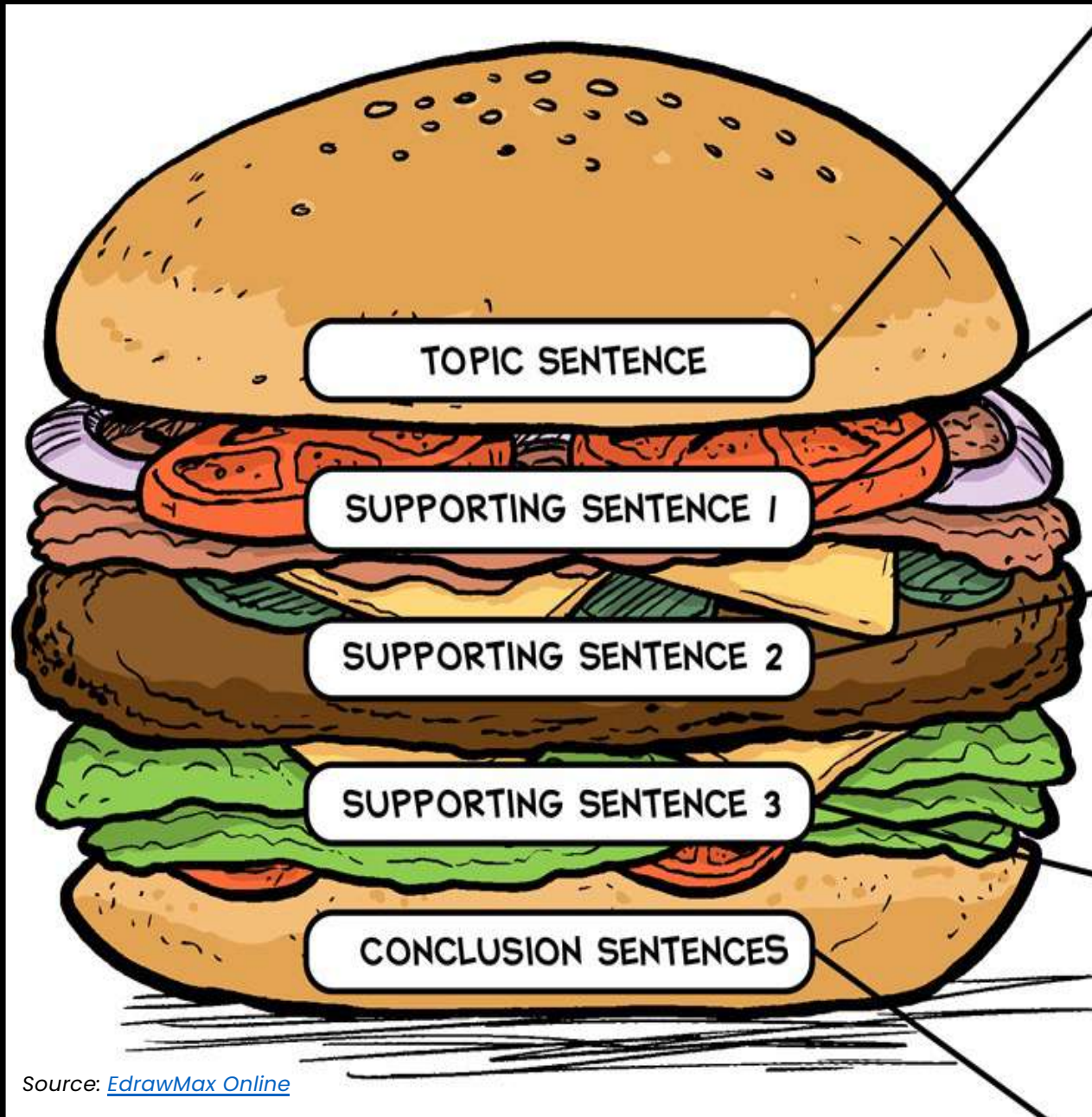
The volcanic ash looked like a cloud of pollution from a fossil fuels factory.

The rock was as cold as ice.

The tsunami's waves rose high over the ocean like a powerful beast preparing to pounce on its prey.

**a literary device that  
compares two unlike things  
using the words “like” or “as”**

# Descriptive Paragraph



Introduce Rock

Describe what  
it feels like

Describe what  
it looks like

Describe how it  
formed

Finish with 3 or  
more detailed  
sentences





# Descriptive Paragraph



Hello, my name is Obsidian O'Brian and I'm an igneous rock! If you try to hug me, you'll notice I'm as smooth as glass. When you look at me, you'll see that I look as black as a prowling jungle panther. The reason I am here is because Vicky Volcano gave birth to me. I used to be one mean mini-magma baby, but my teacher Ms. Weathering taught me cool down strategies until I became who I am today. I love hanging out with my mom, but boy does she have a fiery temper at times! My mom says someday she's going to help me become metamorphic rock!



# Descriptive Paragraph



Hello, my name is \_\_\_\_\_ and I'm \_\_\_\_\_  
\_\_\_\_\_. If you try to \_\_\_\_\_,  
you'll notice I'm \_\_\_\_\_.  
When you look at me, you'll see \_\_\_\_\_  
\_\_\_\_\_. The reason I  
am here is because \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# Writing Examples

## Students typed in Google Docs!

### WIKI ENTRY

#### AN INCREDIBLE VOLCANO

CREATED BY (NAME)



**TAMBORA or MAUNA LOA**

Insert a complete sentence using the volcano's name.

#### LOCATION

Insert sentence(s).

#### VOLCANO TYPE & LAST ERUPTION

Insert sentence(s).

#### VOLCANO DESCRIPTION

Insert sentence(s).

#### OTHER FACTS

##### 1. FACT #1

Insert Fact Sentence

##### 2. FACT #2

Insert Fact Sentence

#### REFERENCE

Book - Geology: The Changing Earth (2017)

### MY DESCRIPTIVE PARAGRAPH

By (Insert Name)



Hello, my name is (alliteration name)! If you try to (high five/touch/hug me), you'll notice I'm (insert what surface feels like). When you look at me, you'll see (insert what it looks like). The reason I am here is because (insert how it is formed). (Finish with 3 or more detailed sentences.)

### Google Docs Links:

[Volcano Wiki Entry Link](#)

[Descriptive Paragraph Link](#)