

# 8<sup>th</sup> grade Geology Intro Notes Week 28 Complete

Geology is the science comprising the study of solid Earth, the rocks of which it is composed, and the processes by which it evolves or changes

**Geology answers  
questions:**

**Why does the Earth's  
surface change?**

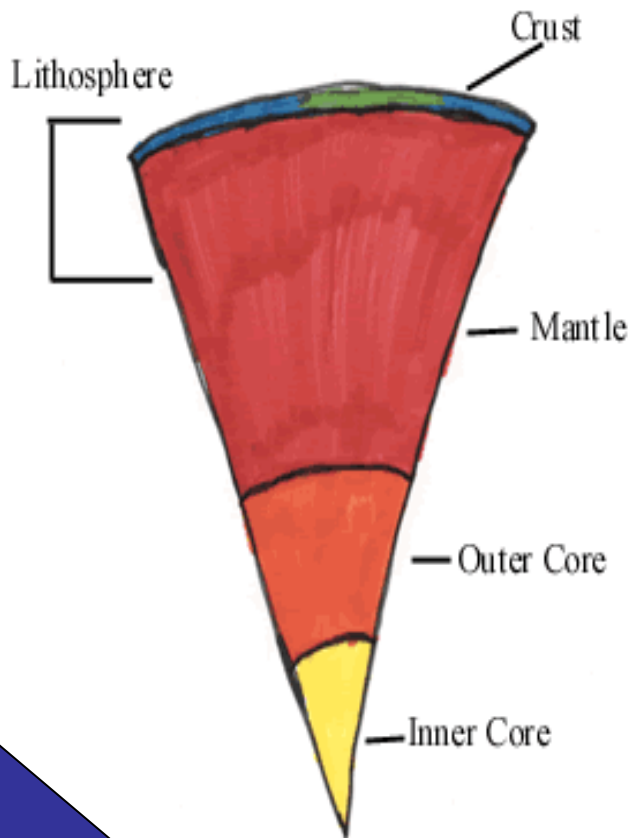
**How do mountains  
form?**

**What causes  
earthquakes?**

**How old is the Earth?**

# The “solid” Earth: Layers

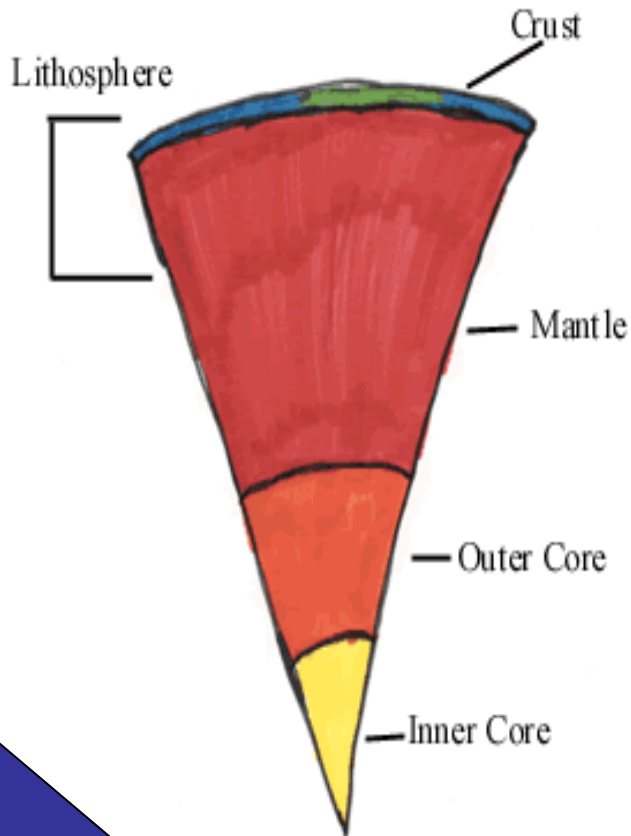
**C-notes**



**The solid Earth (Earth's Interior) is made up of layers: Crust- outermost layer, what we see, touch. This is where “rocks” are/form. Solid**

# The "solid" Earth: Layers

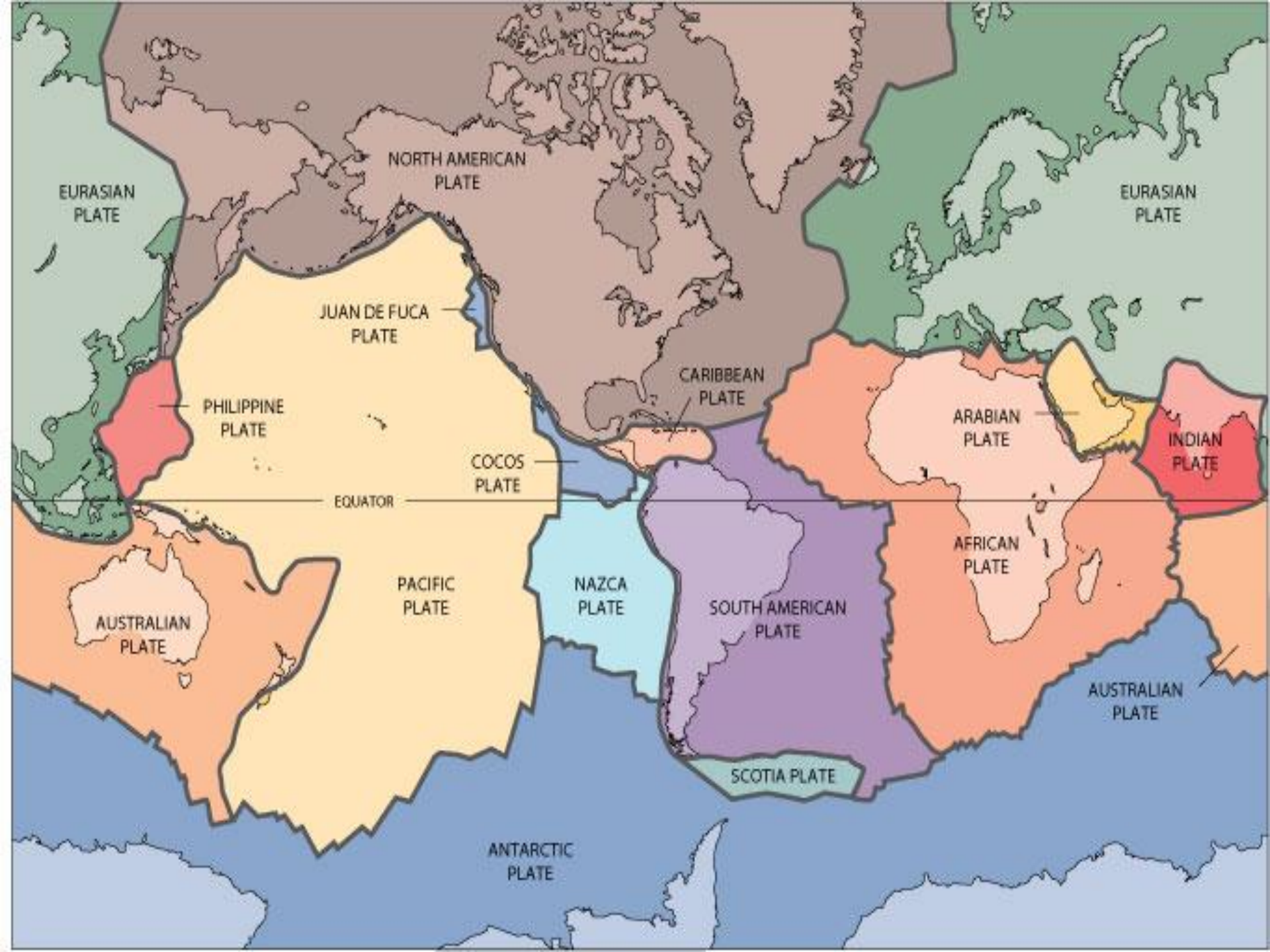
**C-notes**



**Mantle- largest layer, semi-liquid, hot (870-4400 C)**

**Outer Core- very hot (4400-6100 C), liquid metal**

**Inner Core- hottest (7000-8000 C), solid, mostly nickel and iron**



# **Earth's Crust- is cracked**

**The Earth's crust is cracked into parts that are called tectonic plates  
They are named usually by their geographical location**

# Earth's Crust- is cracked **C-notes**

**Two types of “crust”:**  
**Oceanic-** under oceans,  
thinner but more dense  
**Continental-** the  
“land” part, it is  
thicker but less  
dense



**1- CRUST-  
Earth's  
surface,  
solid,  
changes  
over time**

**2-  
MANTLE-  
THICKEST  
LAYER,  
magma,  
semi-  
liquid**

**3-OUTER  
CORE-  
HOT,  
LIQUID**

**4- INNER  
CORE- VERY  
HOT, SOLID  
IRON AND  
NICKEL.  
PRODUCES  
OUR  
MAGNETIC  
FIELD**

**5-  
ASTHENOSPHERE-  
REGION  
BETWEEN  
CRUST AND  
MANTLE**

**6-  
LITHOSPHERE-  
"rock sphere", it  
is the CRUST  
AND UPPER  
PART OF  
MANTLE**

## Looks like

- Eye contact
- Nodding
- Not DOING anything else

## Sounds like

- “silent” – while other is speaking
- Asking questions
- responsive

# C-NOTES

## Rocks: three types

**There are three types of rock according to HOW the rock forms:**

**IGNEOUS (ig-  
knee-us**

**SEDIMENTARY**

**METAMORPHIC**

# C-NOTES

## Rocks: three types

**Igneous Rock-** formed from *melted rock* that *cools*. The melted rock can cool **UNDERGROUND** or on the surface.

**Examples: granite and basalt**

# C-NOTES

## Rocks: three types

**Sedimentary rock-formed when pieces of rock settle (usually in water) and the *layers are pressed together* over time.**

**Examples: sandstone, limestone, coal**

# C-NOTES

## Rocks: three types

**Metamorphic rock-formed underground when existing rock is changed by *heat* and *pressure*.**

**Examples: marble, slate, gneiss (pronounced “nice”)**

# **C-NOTES**    **C-notes: What to write**

**For this class you are expected to write:**

**EVERY. SINGLE.WORD. IN. THIS. PART.**

**This is not a part to summarize the information- all the info is necessary and required to be written down.**

**All the words, ideas are well thought out and edited. All is necessary**

# C-NOTES

## Why is Earth's interior hot?

### Reason 1

**The Earth was extremely hot when it was formed.**

**Since then the outside (crust) has cooled.**

**That solid crust has slowed and trapped the cooling of the inside....**



# **C-NOTES**    **Why is Earth's interior hot?**

## **Reason 2**

**Radioactive materials in the Earth's crust emit (put out) heat.**

## **Reason 3**

**The pressure and weight of the layers above the cores, increases the temperature.**