

# Metamorphic Rocks Notes

Name: \_\_\_\_\_

## Examples of metamorphic rocks:

- \_\_\_\_\_ (Tough building material)
- \_\_\_\_\_ (Creates lots of energy when burned, high quality)
- \_\_\_\_\_ (used for buildings, statues, and countertops)
- \_\_\_\_\_ (used for chalkboards, billiards, roofing, and landscaping)
- \_\_\_\_\_ (contains garnets)
- \_\_\_\_\_ (looks striped= Foliated)

■ “\_\_\_\_\_” = to change

■ “\_\_\_\_\_” = form

■ Metamorphic rocks are formed from \_\_\_\_\_ (pre-existing rocks)

■ Parent rocks can be \_\_\_\_\_, \_\_\_\_\_, or other \_\_\_\_\_ rocks. YES, they can be re-metamorphosed and still be metamorphic rocks.

■ **Metamorphism** → The process through which a rock’s structure is changed by \_\_\_\_\_ and \_\_\_\_\_.

## PARENT ROCKS + HEAT and PRESSURE = Metamorphic Rock

- Sandstone → heat and pressure = \_\_\_\_\_
- Limestone → heat and pressure = \_\_\_\_\_
- Shale → heat and pressure = \_\_\_\_\_
- Granite → heat and pressure = \_\_\_\_\_

## Classifying Metamorphic Textures: Foliated OR Non-foliated

1. \_\_\_\_\_ Rock: \_\_\_\_\_ of \_\_\_\_\_ in parallel layers  
These rocks look striped or banded (if the minerals are similar colors the bands may be hard to see)  
Foliated Metamorphic Rock Examples: \_\_\_\_\_, \_\_\_\_\_, & \_\_\_\_\_.

2. \_\_\_\_\_ Rock: \_\_\_\_\_ bands.  
Non-foliated Metamorphic Rock Examples: \_\_\_\_\_ & \_\_\_\_\_.

## Metamorphic Environments:

Metamorphic rocks form where there is **HEAT and PRESSURE**

Magma and Friction make \_\_\_\_\_

Collisions and Gravity produce \_\_\_\_\_

M-E-T-A

MET-A-MORPH-IC

Heat and Pressure

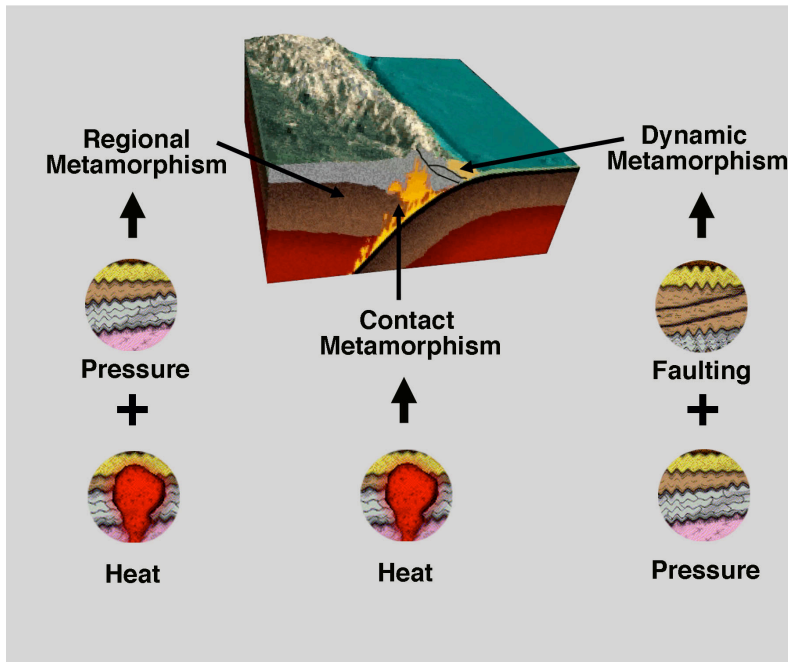
Heat, Heat, and PRESSURE

Go..... FOLIATION



## Rock type Review:

- **Igneous**-formed from the *cooling and crystallization of magma or lava*
- **Sedimentary**-formed by the *compacting and cementation of layers of sediment*
- **Metamorphic**-formed by *structural/chemical change due to heat and pressure*

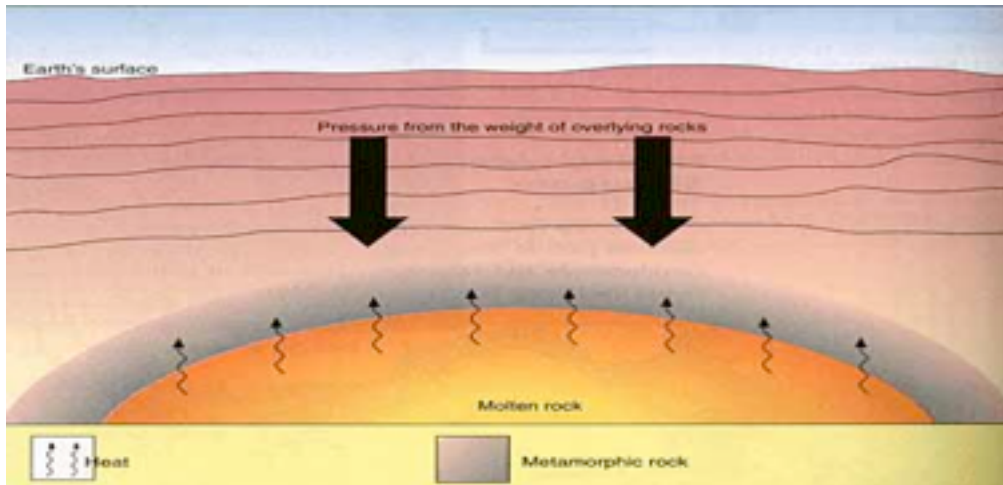


**Regional Metamorphism**

occurs when rocks are exposed to **heat and pressure** generated by nearby colliding, subducting tectonic plates and the **heat from the mantle**. This **changes** preexisting rocks into metamorphic rocks.

**Contact metamorphism**

occurs when **rocks are directly exposed** to the contact areas of subducting tectonic plates (**pressure**) and the molten mantle/magma (**heat**)



**Pressure** may build as gravity increases the weight of the rocks above.

**Heat** is produced by underground chambers of magma.

**Heat + Pressure = METAMORPHIC**

**Rock forming environments in Earth's crust**

