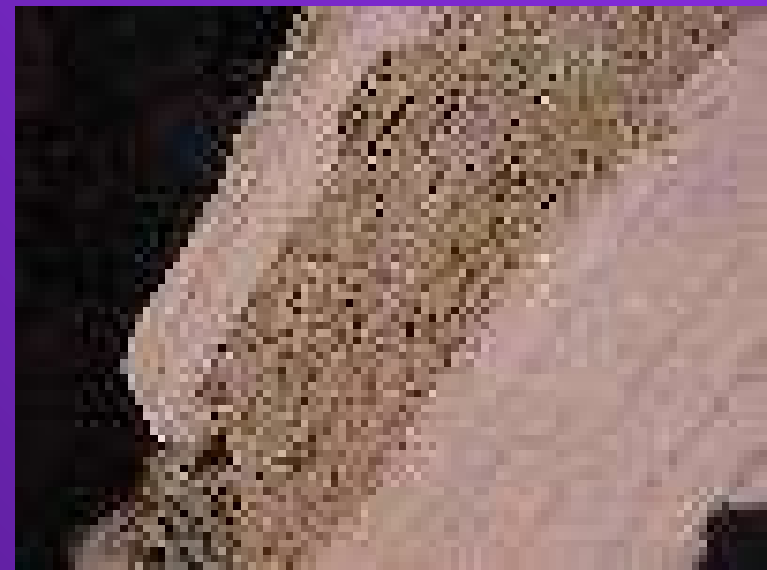


# Rocks & The Rock Cycle



# Rocks vs Minerals



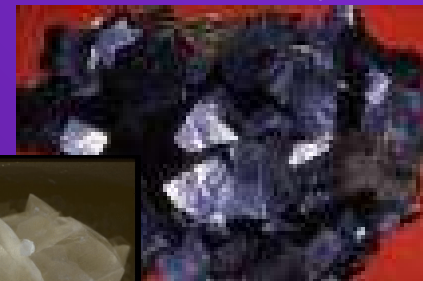
## • ROCKS

- SOLID MIXTURE OF MINERALS
- MAY BE ORGANIC



## • MINERALS

- NATURALLY FORMED OF ELEMENTS OR COMPOUNDS
- INORGANIC SOLID
- HAVE CRYSTALS
- NOT MADE OF ROCKS
- HAS A DEFINITE CHEMICAL MAKEUP



# Rocks vs Minerals

- ROCKS ARE
  - CLASSIFIED BY HOW THEY ARE FORMED



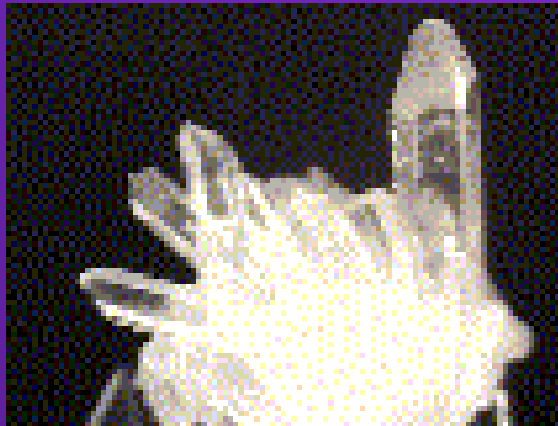
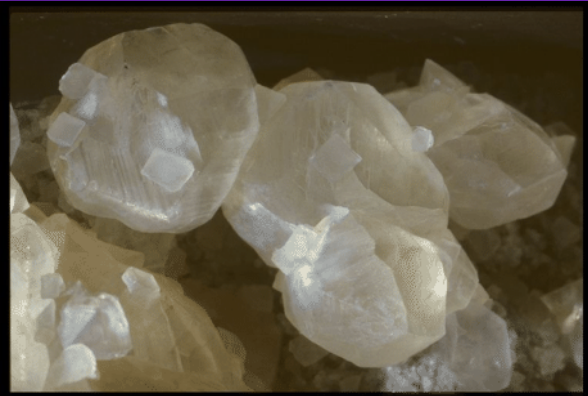
- EACH TYPE OF ROCK IDENTIFIED BY
  - COMPOSITION= what minerals the rock is made of.
  - TEXTURE=sizes, shapes and positions of grains in the rocks





# Rocks vs Minerals

- MINERALS ARE CLASSIFIED BY
  - CHEMICAL COMPOSITION



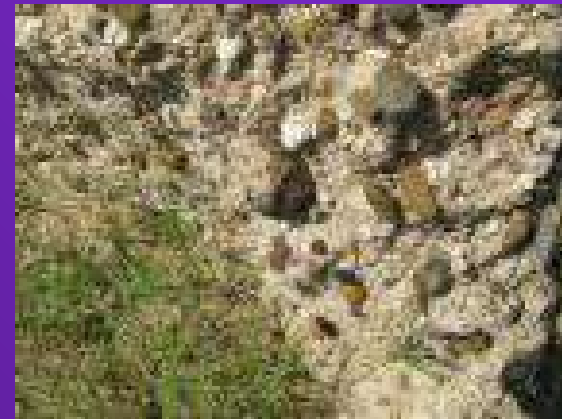
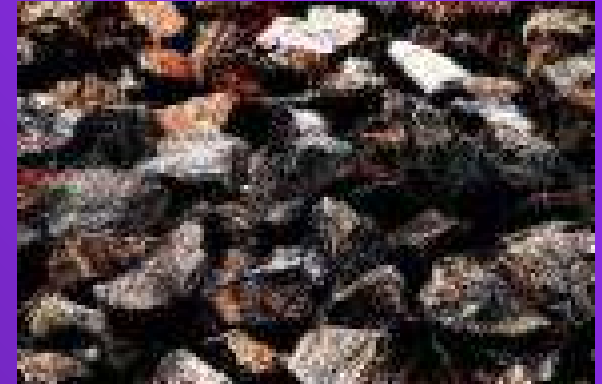
# TYPES OF ROCKS

- THE COMPOSITION OF ROCKS IS DETERMINED
  - BY THE KIND OF MINERALS &
  - THE AMOUNT MINERALS THAT MAKE IT UP



# TYPES OF ROCKS

- 3 TYPES OF ROCKS
  - IGNEOUS
  - SEDIMENTARY
  - METAMORPHIC



# IGNEOUS ROCKS

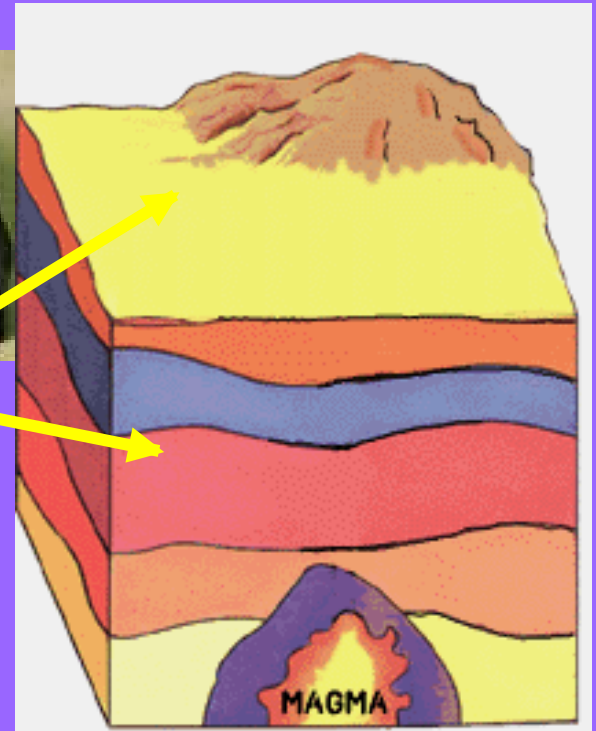
- FORMED WHEN MAGMA COOLS AND HARDENS (SOLIDIFIES)
- 2 TYPES

- INTRUSIVE

- MAGMA COOLS SLOWLY BENEATH EARTH'S SURFACE
- LARGER CRYSTALS
- COARSE GRAINED (TEXTURE)

- EXTRUSIVE

- LAVA COOLS QUICKLY ON THE SURFACE
- SMALLER CRYSTALS
- FINE GRAINED (TEXTURE)



# IGNEOUS ROCKS

- ALL TYPES OF ROCKS CAN BE CHANGED INTO IGNEOUS ROCK BY MELTING & COOLING OF ANY ROCK



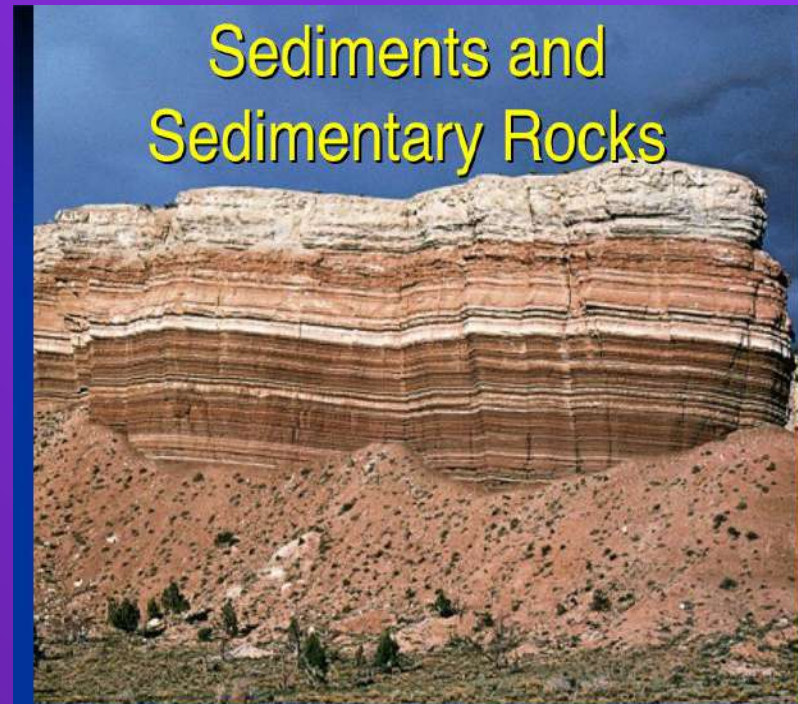


# Sedimentary Rocks

KEY WORDS

WEATHERING and  
EROSION

COMPACTING and  
CEMENTING



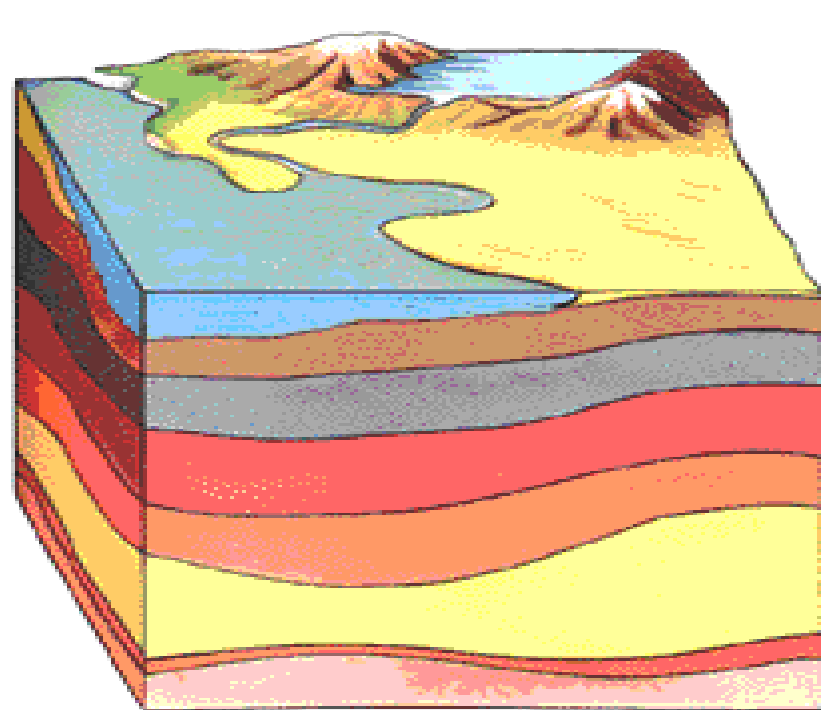
# SEDIMENTARY ROCKS

- FORMED WHEN ROCKS ARE WEATHERED AND ERODED, SEDIMENTS COMPACT AND CEMENT SOLID ROCK
- 3 TYPES
  - ORGANIC
    - FOSSILIZED REMAINS OF PLANTS OR ANIMALS
  - CLASTIC
    - FRAGMENTS OF OTHER ROCK ARE COMPACTED TOGETHER
  - CHEMICAL
    - SEDIMENTS ARE "GLUED" TOGETHER BY DISSOLVED MINERALS
    - TEXTURE IS DETERMINED BY THE SIZE OF PARTICLES OF SEDIMENT



# SEDIMENTARY ROCKS

- ALL TYPES OF ROCKS CAN BE CHANGED INTO SEDIMENTARY ROCK BY  
-WEATHERING, EROSION, & SEDIMENTS COMPACTING & CEMENTING TOGETHER



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# METAMORPHIC ROCKS

FORMED WHEN EXISTING ROCK IS CHANGED INTO NEW ROCK BY THE HEATING OF THE ROCK AND PRESSURE FROM OTHER ROCKS AROUND IT.

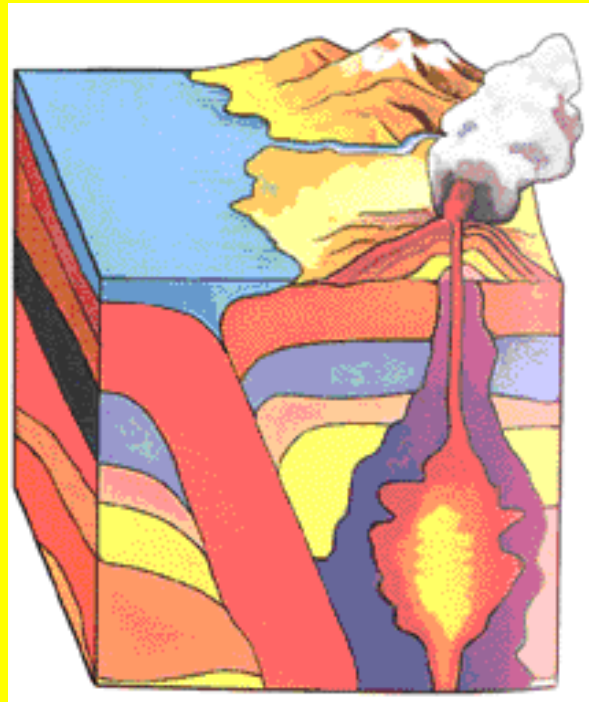
- 2 TYPES
  - FOLIATED
    - CRYSTALS ALIGNED IN STRIPES
  - NON-FOLIATED
    - CRYSTALS ARRANGED IN RANDOM MANNER





# METAMORPHIC ROCKS

- ALL TYPES OF ROCKS CAN BE CHANGED INTO METAMORPHIC ROCK BY HEAT AND PRESSURE



The color of rocks may be different because of the minerals or other substances that make it up.



*Breccia Sedimentary*



*Gneiss Metamorphic*



Quartzite

*Quartzite Metamorphic*



*Granite Igneous*

# THE ROCK CYCLE

- One of the cycles of nature that continually recycles rocks & materials that make up Earth's crust



limestone



marble



siltstone



shale



slate

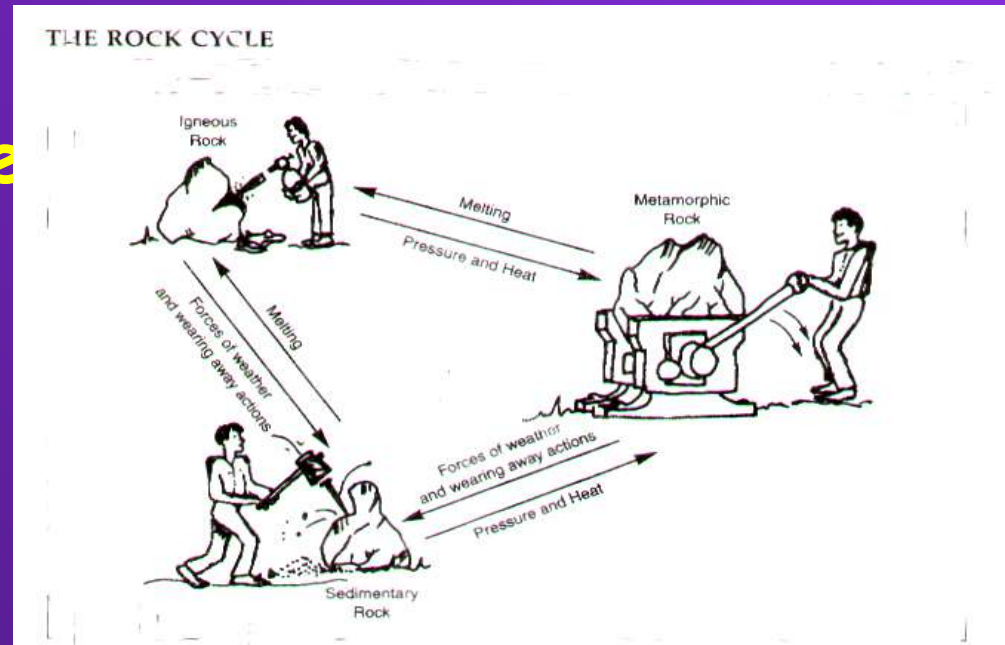
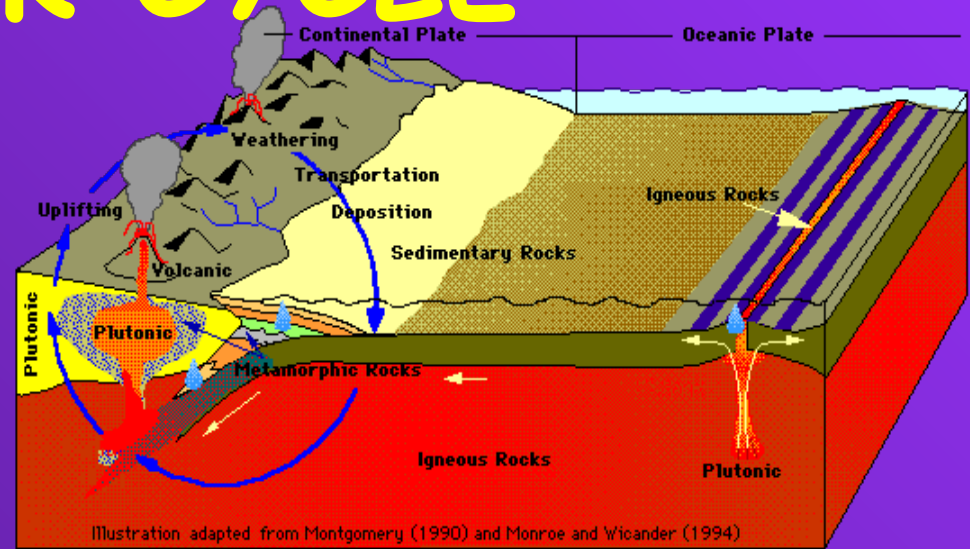


gneiss



# ROCK CYCLE

- There are many different paths a rock may follow to go through the process of changing from one type of rock to another





# The ROCK CYCLE

- Rocks forming
- Rock Cycle Diagram

# Rock Key

## Metamorphic rocks

– Gneiss

– Marble

– Quartzite *Sedimentary rocks*

– Schist *breccia*

– Slate *conglomerate*

– phyllite *limestone*

– *sandstone*

*siltstone*

*shale*

## Igneous rocks

• Basalt

• Granite

• Obsidian

• Rhyolite

• Pumice

# THE ROCK CYCLE



Gneiss

(m)



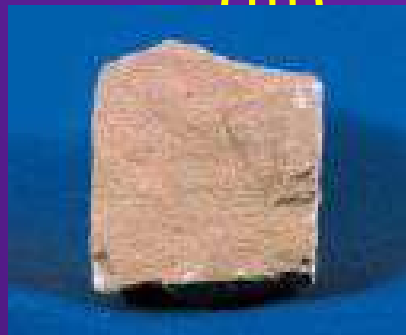
Schist

(m)



Phyllite

(m)



Siltstone

(s)



Shale

(s)



Slate

(m)



# THE ROCK CYCLE



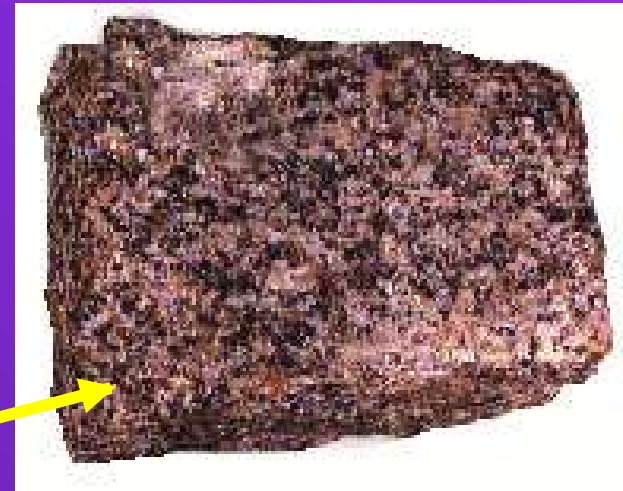
Sandstone

(s)



Quartzite

(m)



Granite

(i)