**IGNEOUS ROCKS
FIRE ROCKS**

http://www.youtube.com/watch?v=scGvM_
VoPwk

How do we CLASSIFY Igneous Rocks?

How do Igneous Rocks Form?

- http://www.youtube.com/watch?NR=1&v=xExdEXOaA9A&feature=endscreen

- http://www.youtube.com/watch?v=aAymSMrOlOQ&feature=related
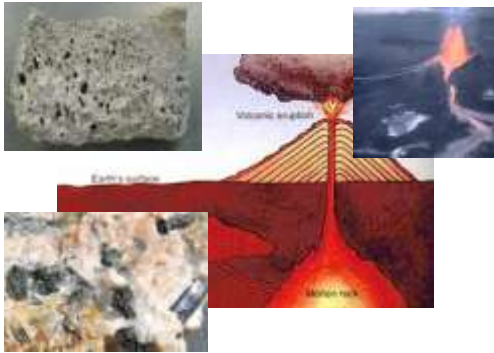
IGNEOUS ROCK Formation:

-Form from cooling & solidification of MAGMA (molten, liquid rock).

-Form from ANY rock that is MELTED and Solidifies.

-Composed of Intergrown Crystals !
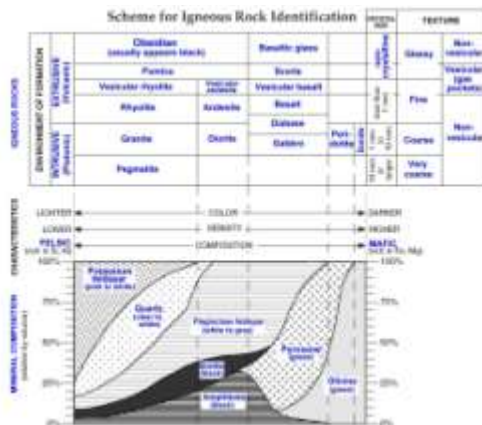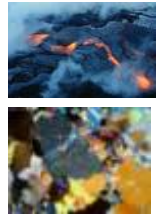
Classification
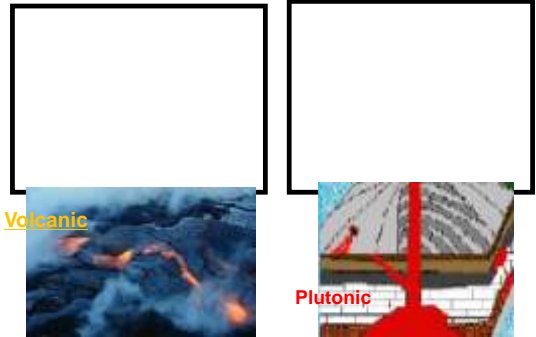Turn to ESRT page 6

- **Environment of Formation**
- **Crystal size**
- **Texture**
- **Mineral composition**
- **Characteristics**
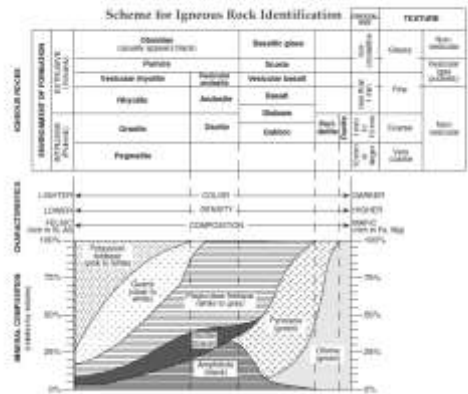 **(color, density, composition)**

Environment of Formation

Environment of Formation:
Extrusive or **Intrusive**?

Volcanic

Plutonic

Extrusive Vs. Intrusive

Scheme for Igneous Rock Identification

CRYSTAL SIZE & TEXTURE
Non Crystalline – Cooled Very, Very Fast

Obsidian / volcanic glass

CRYSTAL SIZE & TEXTURE
Vesicular – Cooled Very Fast

Pumice   Vesicular Basalt

CRYSTAL SIZE & TEXTURE

Fine Crystals – Cooled Fast

Example:

CRYSTAL SIZE & TEXTURE

Coarse/Large Crystals   Cooled Slow =

Example:

CRYSTAL SIZE & TEXTURE

Very Coarse/ Very Large Crystals   Cooled Very, Very, Slow
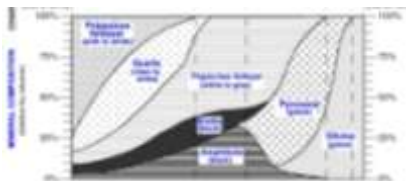

MINERAL COMPOSITION

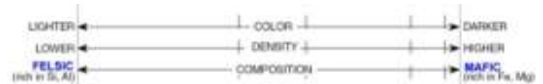Percent of each mineral within an igneous rock varies.
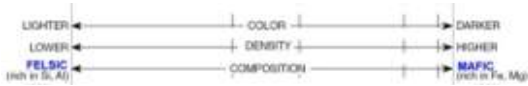

MINERAL COMPOSITION

What is the mineral composition of Granite? List % of each mineral.
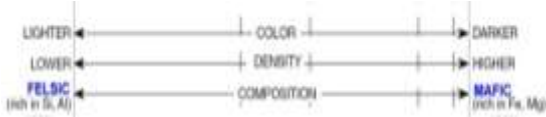

CHARACTERISTICS

CHARACTERISTICS

Density:

CHARACTERISTICS

Composition:

Felsic	or	Mafic
Light Color		Dark Color
Low Density		High Density
Aluminum,Silicon		Magnesium, Iron
Al, Si		Mg, Fe

CHARACTERISTICS

What characteristics do all Mafic rocks exhibit?

Classify Igneous Rocks 1 and 2 using the ESRT and your notes.

Texture
Crystal Size
Composition
Color
Environment of
   Formation

_____

Texture
Crystal Size
Color
Composition
Environment of
   Formation

_____
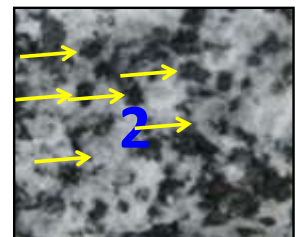
Igneous Rock Identification

Use your ESRT: Igneous
  Rock Identification Chart
  to answer the questions
  on your handout.

HOMEWORK

Mineral Fact Sheet &
  Handout

Castlelearning

Quiz Friday

Check Website