

MODULE 6
ROCKS

Rocks

What is a rock?

- A rock is a naturally formed aggregate composed of one or more minerals
- Rocks are aggregates of one or more minerals

Which one is the best answer?

Rocks

**Granite
(rock)**



**Quartz
(mineral)**



**Hornblende
(mineral)**



**Potassium
Feldspar
(mineral)**



**Plagioclase
Feldspar
(mineral)**

Example of a rock, an aggregate of more than one minerals

Rocks

- Rocks are classified on the basis of **how they form**
- There are **3 major classes** of rocks:
 - Igneous rocks
 - Sedimentary rocks
 - Metamorphic rocks

IGNEOUS ROCKS

- *Igneous Rocks is formed by crystallization of molten rock material*
 - Molten rock material below Earth's surface is called magma
 - Molten rock material erupted above Earth's surface is called lava
 - The name changes because the composition of the molten material changes as it is erupted due to escape of volatile gases

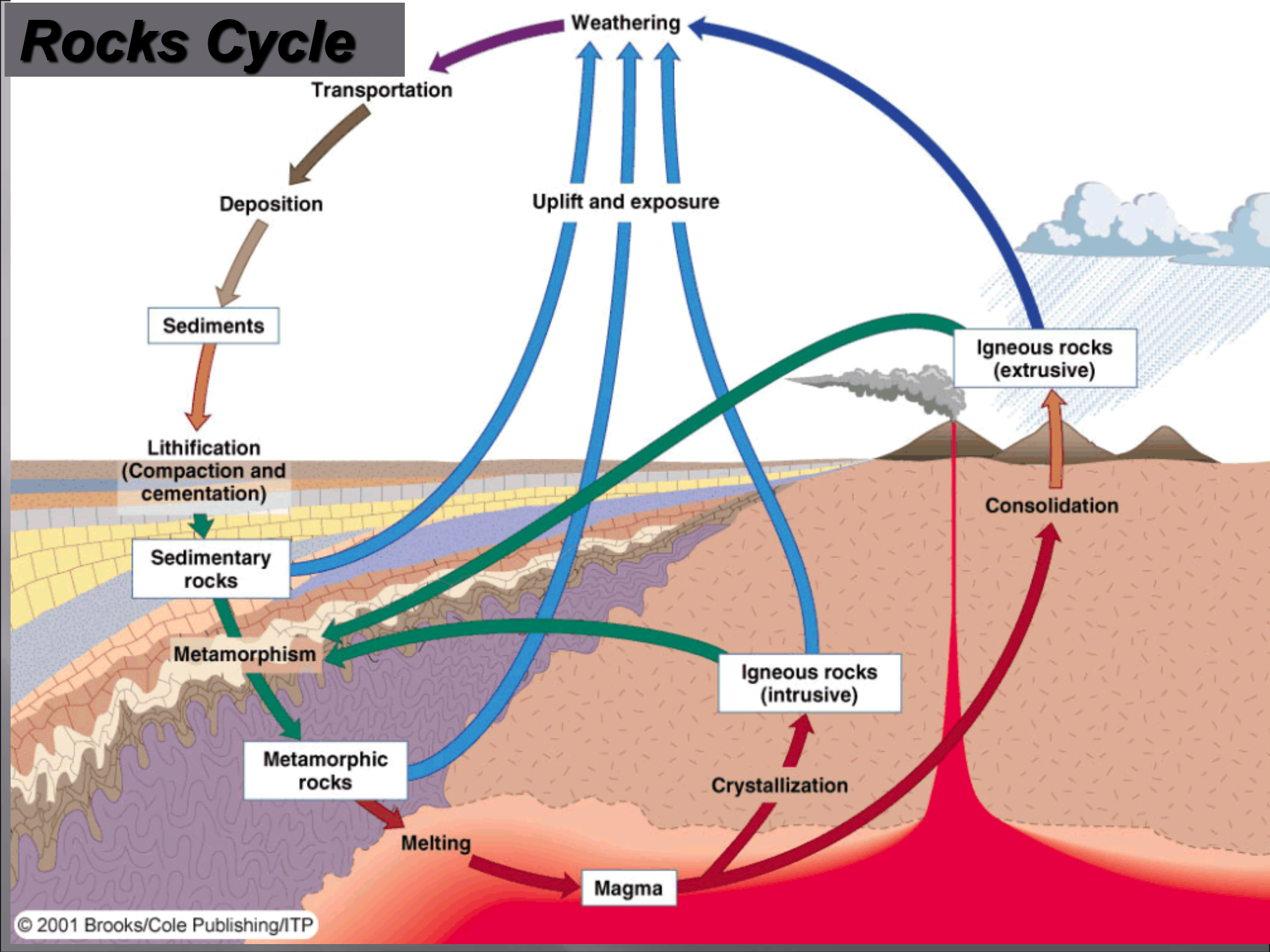
Metamorphic Rocks

- ▣ Metamorphic rocks are changed rocks
- ▣ They are formed in the solid state in response to the following agents of metamorphism:
 - Change in pressure
 - Change in temperature
 - Change in pressure and temperature

Sedimentary Rocks

- Rocks formed from material derived from preexisting rocks by surficial processes followed by diagenesis
- There are two main classes of sedimentary rocks
 - ***Clastic (detrital) sedimentary rocks***
 - ***Chemical sedimentary rocks***

Rocks Cycle

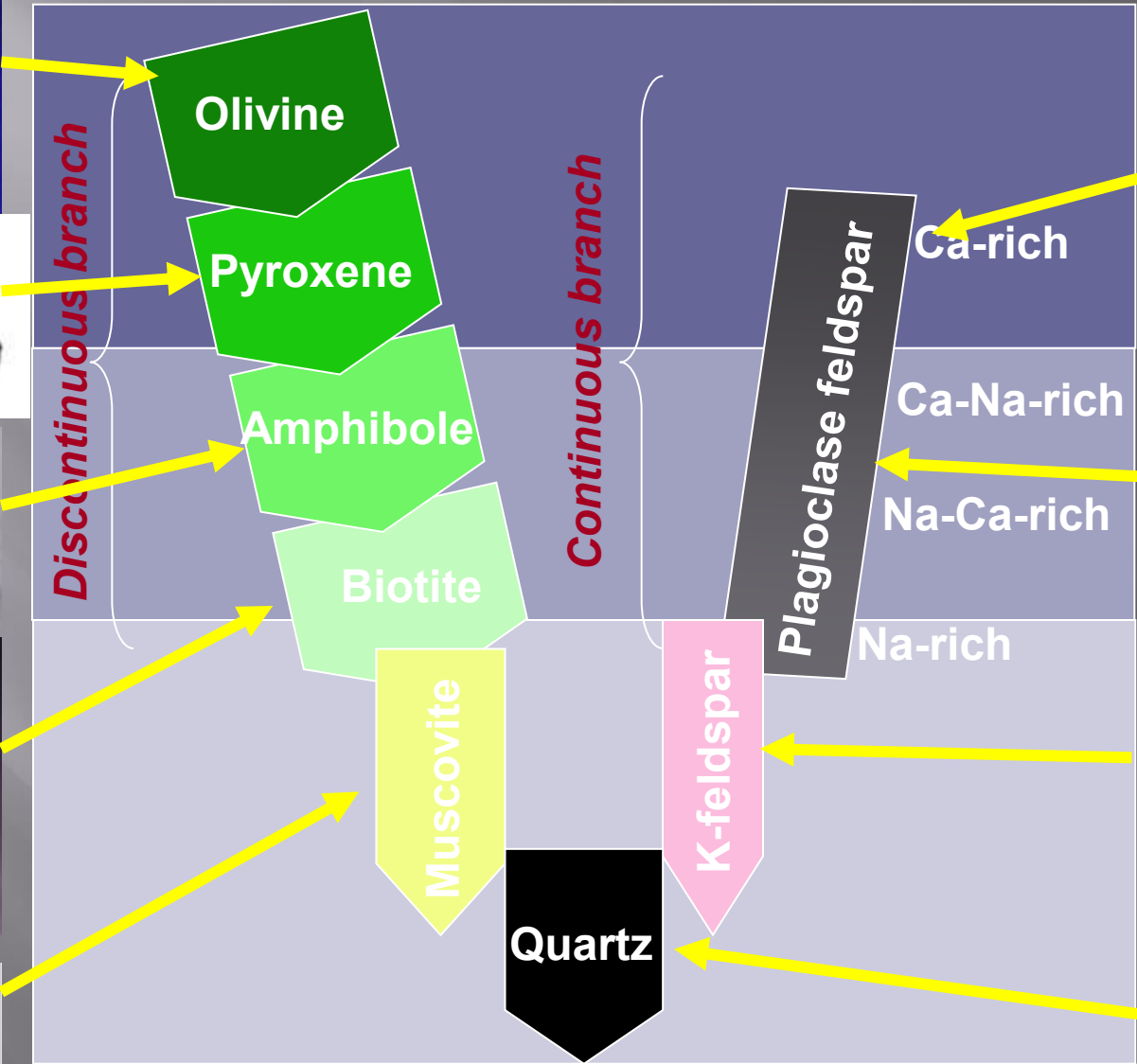


Rocks

■ How can you identify rocks megascopically?

- *Color*: the first guide to differentiate minerals, texture, and structure
- *Structure*: the relationship between different parts of a rock
- *Texture*: the relationship between the grains of minerals forming a rock
- *Mineral composition*: names (with brief description) and percentage of individual mineral

Rock Forming Minerals



BOWEN'S REACTION SERIES

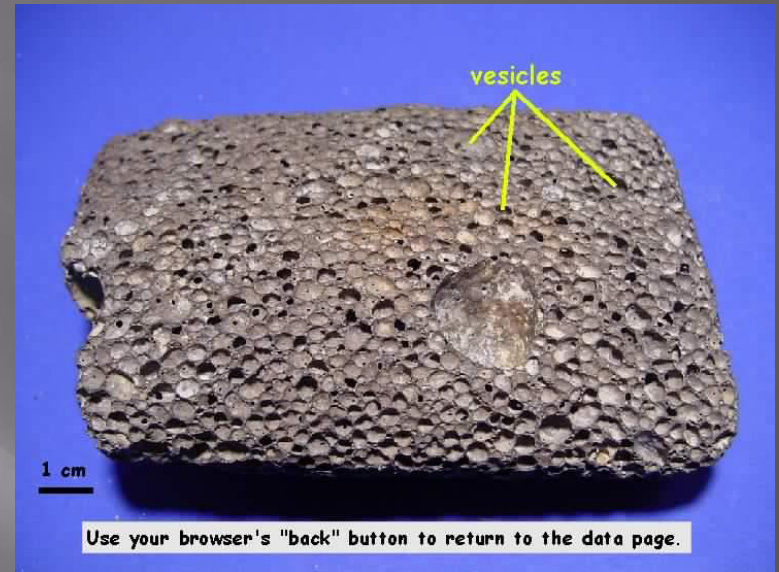
Igneous rock structures: Columnar Joint, Sheeting Joint



Lava structures



Igneous Rocks



Sedimentary rock structures



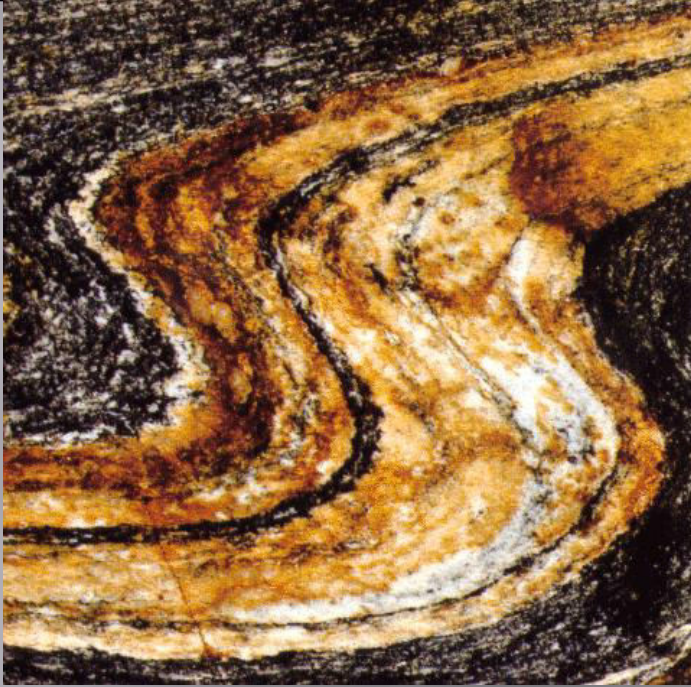
Sedimentary Rocks

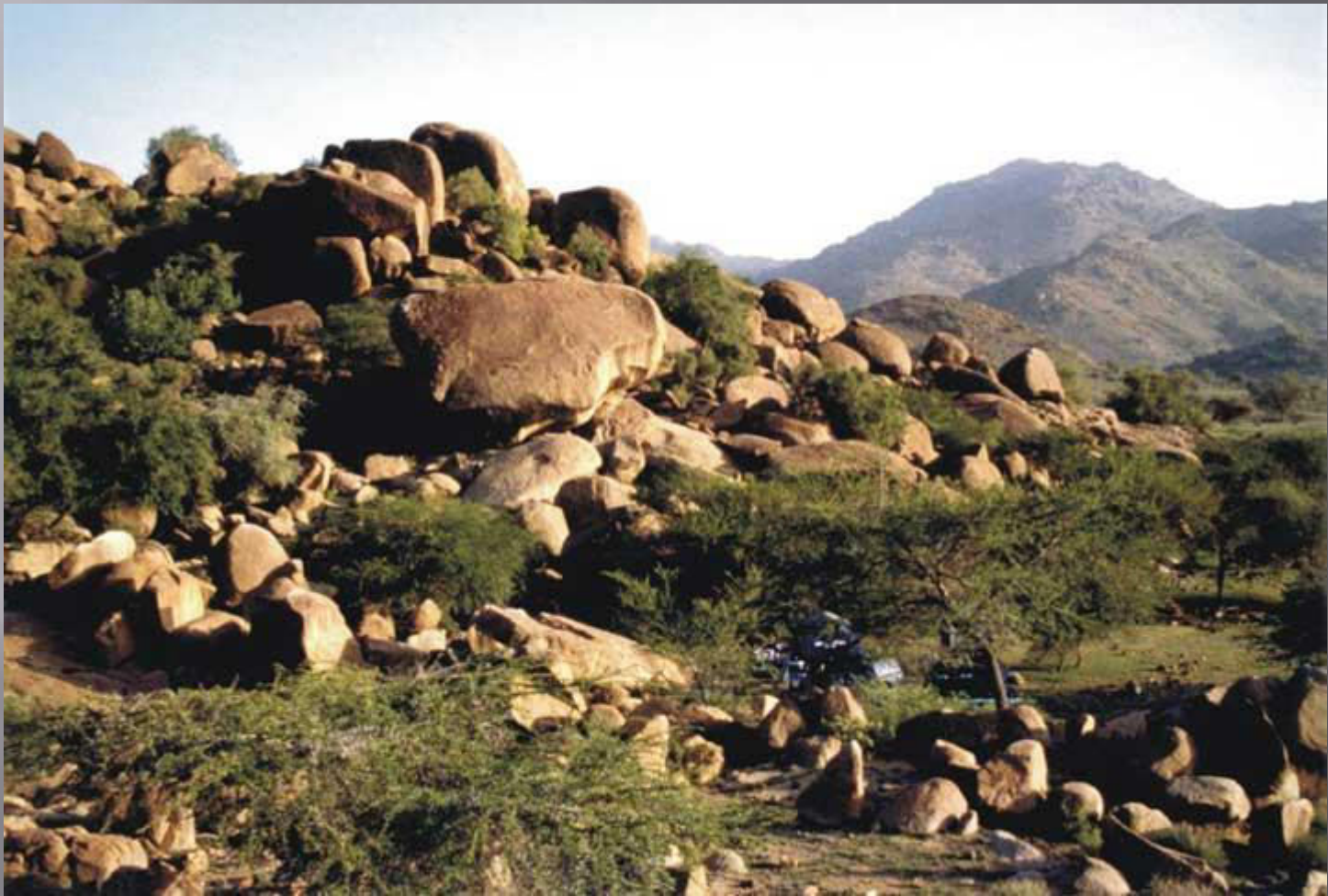


Metamorphic Rocks Structures



Metamorphic Rocks









**THANKS FOR YOUR
ATTENTION**

