

Daily Routine

- ▣ Sit in your appropriate seat quietly
- ▣ Have all necessary materials out
- ▣ All back packs on the floor
- ▣ All cell phones on silent and away in backpacks
- ▣ All iPods off and headphones out of your ears
- ▣ Hats off
- ▣ No food or drink except for water

Bell Work

- ▣ What is deposition?
- ▣ What is lithofication and what two processes help form sedimentary rocks?

METAMORPHIC ROCKS

Today, we will be able to:

- ▣ Describe how metamorphic rocks form
- ▣ Define how metamorphic rocks change with heat and/or pressure in large and small scaled settings
- ▣ Identify metamorphic rocks by foliation or lack of foliation

Metamorphic Rocks

BIG IDEA

- ▣ Heat and pressure change rocks

SUPPORTING DETAIL

- ▣ Heat and pressure change rocks
- ▣ Metamorphism – process which rocks change

Metamorphic Rocks

BIG IDEA

- ▣ Heat and pressure change rocks

SUPPORTING DETAIL

- ▣ Metamorphic rocks come from a parent rock
- ▣ Recrystallization:
 - Minerals crystals can grow larger
 - New minerals can form and rearrange

Metamorphic Rocks

BIG IDEA

- ▣ Metamorphic Changes occur over large and small areas

SUPPORTING DETAIL

- ▣ Large scale = mountain building
- ▣ Rocks are buried
- ▣ Deeper rocks change more; more heat and pressure

Metamorphic Rocks

BIG IDEA

- ▣ Metamorphic Changes occur over large and small areas

SUPPORTING DETAIL

- ▣ Small scale = magma contact changes minerals
- ▣ Earthquakes = pressure by grinding

Metamorphic Rocks

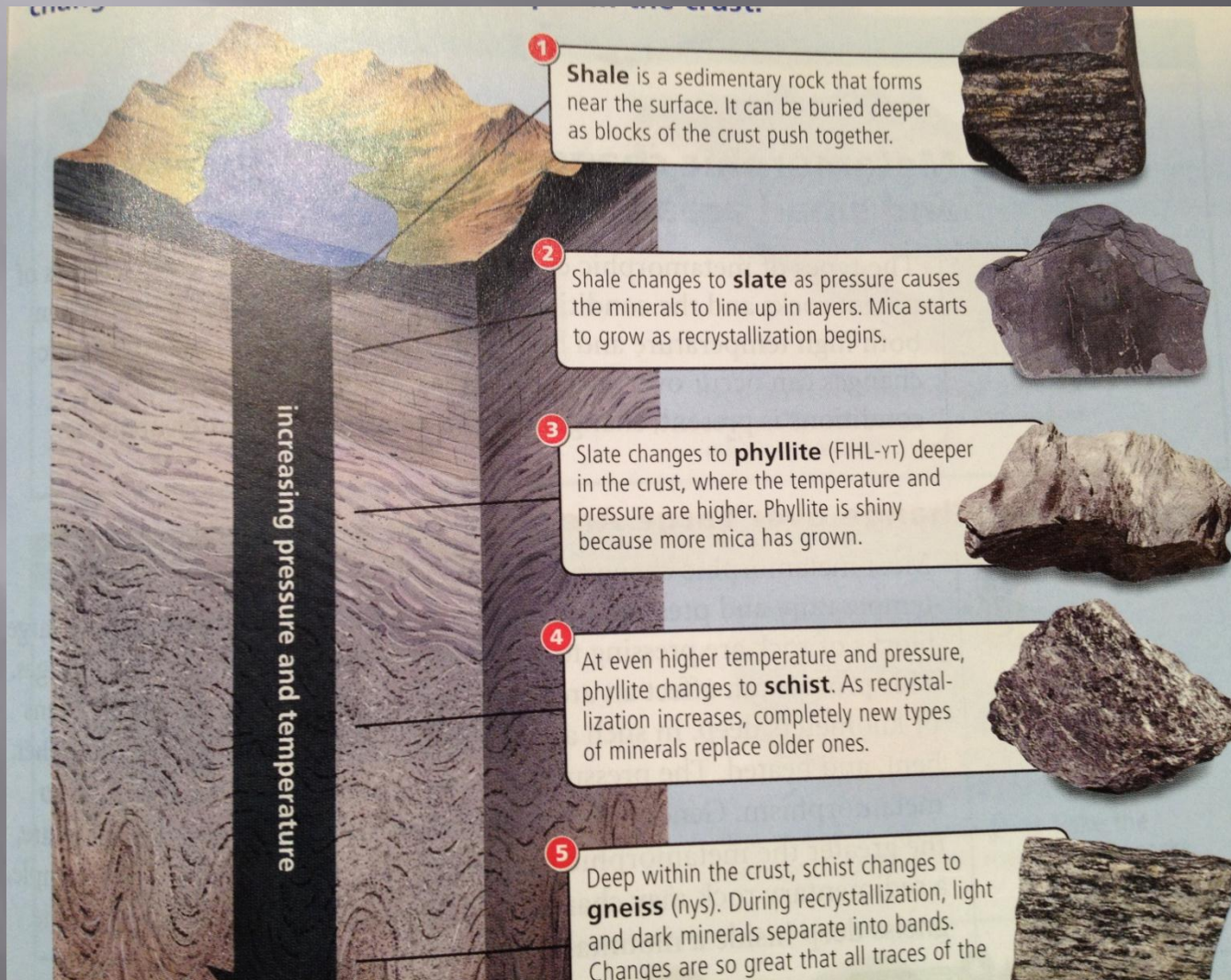
BIG IDEA

- ▣ Most metamorphic rocks develop bands of minerals

SUPPORTING DETAIL

- ▣ Foliation = develop with pressure
- ▣ Develop when minerals flatten out or line up
- ▣ More pressure and heat = larger foliation

Foliated Metamorphic Rocks



Foliation in Gneiss



Metamorphic Rocks

BIG IDEA

- ▣ Most metamorphic rocks develop bands of minerals

SUPPORTING DETAIL

- ▣ Non-Foliation:
 - Made of one mineral
 - Minerals can't separate or line up
- ▣ Sometimes there isn't enough pressure

Today's activity

- ▣ Today we will classify different metamorphic rocks by foliation
- ▣ In the paper chart, write down your observations about foliation, parent rock and how deep below the surface the rock formed
- ▣ Use the chart on the next page to help you identify
- ▣ Metamorphic rocks are labeled with numbers 6-10

Types of Metamorphic Rocks

Rock Name	Foliation or None	How deep?	Parent Rock	Description
Slate	Foliated	Shallow	Shale	Very fine minerals; flat and black
Phyllite	Foliated	Medium	Shale	Wavy, flakey, more visible layers, greenish
Schist	Foliated	Medium	Shale	Very flakey, looks like mica, light brown, garbage rock
Gneiss	Foliated	Deep	Shale or Granite	Large white and black bands
Marble	None	Depends	Limestone	Usually white or gray and crystal like; reacts with acid
Quartzite	None	Depends	Sandstone	Hard, gray or reddish