

Review Sheet for Exam III

EPSC 1370

Lectures – Minerals

Terms to Know:

Silicates	Non-Silicates	Silicon-oxygen Tetrahedron	
Ions	Cations	Ferromagnesium Silicates	
Carbonates	Sulfates	Non-ferromagnesium Silicates	Halides
Oxides	Sulfides	Native Elements	Luster
Hardness	Crystal Form	Cleavage	Streak Color
Fracture	Color	Specific Gravity	Polymorph

Concepts to Know:

What is the complete definition of a mineral

Know what elements are present in a silicate mineral and what fundamental structure do they form?

Know the elements associated with the ferromagnesium and non-ferromagnesium silicates

Know an example of a mineral for each of the silicate groups (e.g. ferromagnesium)

Know an example of a mineral for each of the non-silicate groups (e.g. native elements)

Know the physical properties that can be used to identify a mineral

What is the full definition of a mineral with metallic luster, non-metallic luster

Why do not all minerals form large crystals?

How do you tell the difference between a cleavage and fracture surface?

For minerals with what type of luster is streak color a useful property?

KNOW MOHR'S HARDNESS SCALE!

Lecture – Rock Cycle

Terms to Know:

Melting	Crystallization	Weathering	Erosion
Deposition	Lithification	Compaction	Cementation
Metamorphism			

Concepts to Know:

Know the materials present in the rock cycle

Know in detail the processes that affect materials in the rock cycle

Be able to reproduce the simple rock cycle illustrated in lecture.

Lecture – Igneous Rocks

Terms to Know:

Magma	Lava	Extrusive	Intrusive
Fine-grained	Course-grained	Glassy	Pyroclastic
Porphyritic	Phenocrysts	Groundmass	Granite
Andesite	Basalt	Rhyolite	Diorite
Gabbro	Obsidian	Tuff	

Concepts to Know:

What makes up magma/lava?

How does the location in which the molten rock material influence the texture of the igneous rock?

What are the different types of textures that can be exhibited by an igneous rock?

What is the special significance of a porphyritic texture?

Know the classification of igneous rocks - how they are named!

What is the significance of a glassy texture?

Lecture – Sedimentary Rocks

Terms to Know:

Detrital	Chemical	Clay	Silt
Sand	Gravel	Limestone	Fossils
Dolostone	Chert	Gypsum	Rock Salt
Coal	Cross-Bedding	Ripple Marks	Mud Cracks

Concepts to Know:

What is the difference between a detrital and chemical sedimentary rock?

What are the different types of detrital sediment and what is the basis for the classification of these different sediment types?

What is the difference between a sediment and sedimentary rock?

How does a chemical sedimentary rock form?

What features can help you interpret the depositional environment of a sedimentary rock?

What is sorting? Be able to describe a well versus poorly sorted sediment.

Lecture – Metamorphic Rocks

Terms to Know:

Protolith	Foliated Texture	Metamorphism	Marble
Slate	Phyllite	Regional Metamorphism	Quartzite
Metamorphic Grade	Schist	Contact Metamorphism	Gneiss

Concepts to Know:

In general, what conditions are necessary for metamorphism to occur?

What type of texture is associated with contact metamorphic rocks?

What type of texture is associated with regional metamorphic rocks?

What are the protoliths associated with a marble, quartzite, schist, and gneiss?