

2011 Barge Earth Science 1st Semester Final Review Questions

Use the chapters in the textbook *Earth Science* by Tarbuck & Lutgens as a resource. Not everything in every chapter will be on the final.

Maps (pages 630 – 631 in *Earth Science* Tarbuck & Lutgens)

Be able to read Topographic maps. Know what contour lines and contour intervals mean.

Weather (Selected parts of Chp 14, 15, 16 & 17 in *Earth Science* Tarbuck & Lutgens)

Compare and contrast how Heat is transferred through the following processes:

Conduction Convection Radiation

Describe the Composition (key gases) of the atmosphere.

What is the relationship between temperature and height (or layers)?

What is the relationship between pressure and height?

What is the Coriolis Effect? How does air along the Earth's surface move because of it?

Explain what a Low pressure system is and what a High pressure system is. Be sure to include what is happening to air at the surface of the earth and the type of weather that is associated with each system.

Using a diagram and words, explain how pressure differences cause wind.

Draw a diagram of a sea breeze and a land breeze indicating how air is moving in each instance.

Using a diagram and words to explain how clouds form.

Describe the water cycle

Using a weather map (such as USA Today or maps at weather.com), identify fronts, high & low pressure systems and weather associated with each. Reasonably predict weather for different cities using the map.

What are the four types of air masses, and the properties of these air masses?

Weather Fronts

Warm / Cold / Occluded / Stalled

What does each front mean in terms of the movement of air? Where is air rising? What air is rising?

What happens in terms of weather with each kind of front? What kind of weather (precipitation & temperature) do you get with each type of front?

Minerals & Rocks (Chp 1 & 2 in *Earth Science* Tarbuck & Lutgens)

What is a mineral? What are the four parts of the definition of a mineral (NOT properties of minerals)?

Explain how the following properties are used to identify minerals:

Color; luster; streak; hardness; specific gravity; magnetic; acid

Given a sample of minerals, use your database chart of mineral properties to identify a mineral.

Describe the rock cycle – the major types of rocks and the processes that rocks go through move through the cycle (a diagram may be helpful).

Compare or contrast the following terms:

Igneous rocks – extrusive & intrusive

Sedimentary rocks – weathering (sediments), deposition, lithification, cementation

Sedimentary rocks – clastic, chemical, organic

Metamorphic rocks – foliated & nonfoliated

Geologic Time (Chp 10 & 11 in *Earth Science Tarbuck & Lutgens*)

What are the 3 Laws of Relative Dating (original horizontality, superposition, cross-cutting relationships)

Can you identify different types of unconformities?

Disconformity, nonconformity and angular unconformity

What are the different Types of Fossils? How can you use fossils to date the rocks?

Absolute Dating:

Radioactivity – can you explain what radioactive dating is?

Half Life – can you explain what a half life is? Can you use a half life to figure out how old a fossil or rock is?

Constellations (Use your star chart; There are links to a star chart and a practice chart on our class website)

Be able to identify on a star chart and describe where in the sky (northern sky or southern sky) you can find the following constellations and their brightest stars:

Fall

Summer Triangle – Cygnus (Deneb), Lyra (Vega), Aquila (Altair)

Cassiopeia, Ursa Major, Ursa Minor