

## **Paleontology Review - Test 2** **(Nov 7th)**

### **Physical History of the Proterozoic (Plate Tectonics)**

Terms: orogeny, stable platform, cratons, Laurentia, tillites, Wilson Cycle, mid-continental rift, continental crust, oceanic crust, mantle, granite, basalt, peridotite, continental dome, triple junction, subduction zone, midoceanic ridge, suture zone, orogeny, Pannotia, Rodinia, Snow Ball Earth

- The different rock types that appeared in the Proterozoic
- Major Proterozoic tectonic events
- how does a supercontinent break up?
- How a Wilson Cycle works

### **Life in the Proterozoic**

Terms: prokaryote, eukaryote, blue-green algae, stromatolites, organelles, chloroplasts, mitochondria, endosymbiosis, acritarchs, metazoans, Vendian Time, Edicara Fauna

- the differences between prokaryote and eukaryote cells
- the role of endosymbiosis in the evolution of eukaryotes
- where were the earliest metazoans discovered and how were they preserved?
- what is the event that marks the boundary between the Proterozoic and Phanerozoic Eons

### **Cambrian Explosion of Life**

Terms: Porifera, spicules, Mollusca, Gastropoda, Pelycepoda, Cephalopoda, Brachiopoda, Arthropoda, Echinodermata, Annelida, Hemichordata, Chordata, Bryozoa, bivalves, trilobites, snails, clams, graptolites, ammonoids, nautiloids, crinoids, graptolites

- know the major phyla that appeared during the Cambrian explosion of life
- why did invertebrates evolve hard shells ?

### **Physical History of the Paleozoic Era**

Terms: Epeiric seas, Sloss Sequences, transgression, regression, Sauk Sea, Tappan Sea, Kaskaskian Sea, Absarokan Sea, Taconic Orogeny, Acadian Orogeny, Ouachita Orogeny, Baltica, Laurasia, Laurentia, Siberia, China, Kazakhstan, Gondwana, mobile belts, Franklin mobile belt, Cordilleran mobile belt, Ouachita mobile belt, Alleghanian Orogeny, Appalachian mobile belt, Pangaea, Panthalassa, Pennsylvanian coal swamps, Walther's Law

- Identify the 6 continents formed by the breakup of Rodinia
- Identify the various parts of Laurentia (shield, platform, craton, mobile belts)
- What were the 4 major Sloss sequences and when did they occur?
- What sequence of rocks are deposited by a transgression? by a regression?
- Know when and what caused the major Paleozoic orogenies in Laurentia.
- What were the major rock types deposited by each of the four Paleozoic Sloss Seas?

### **Biological History of the Paleozoic**

Terms - Tommotian Fauna, Anomalocaris, trilobites, sponges, brittle star, brachiopods, conodonts, bryozoans, cephalopods, crinoids, graptolites, rugosa, tabulata, primitive fish, eurypterids, Cooksonia, lobe-finned fish, Devonian tetrapods, ammonoids, Carboniferous coal swamps, captorhinomorph, finned-back reptiles, amniotic egg, therapsids

- know the Periods in the Paleozoic Era
- the index fossils for the periods in the Paleozoic
- the significance of the conodont color index
- the evolution of the ammonoids
- evolution of the reptiles and amphibians
- possible causes for the Paleozoic extinction events