

III. Evidence of Evolution from Fossils

- A. _____ or _____ of an organism that _____
 B. Types: Imprints, molds _____), _____ (filled impression), tracks, hard parts, actual remains.

C. Dating Fossils

- a. _____ Dating- measure **radioactive isotopes** (elements) in rocks that _____
 b. _____ Dating _____
 1. Sediments are laid down in _____
 2. Lowest layers are _____
 3. A fossil's position in _____ rock gives its _____ relative to other fossils.

D. The Fossil Record

- a. Creates the _____
 b. Oldest fossils found are 3.5 billion years old and are prokaryotic cells (_____).
 c. Fossils show the earth's changes (_____) and common ancestry _____

E. Index Fossil

- a. Unique fossil that lived during a _____
 b. Specific _____ fossils for every time period help date other fossils _____

F.

- a. Give clues to transitional species
 b. Transitional species show how organisms gradually change over time _____

GEOLOGIC TIME SCALE

ERA	PERIOD	EPOCH	SUCCESSION OF LIFE	INDEX FOSSILS
CENOZOIC Recent Life	QUATERNARY 0-1 Million Years Rise of Man	Recent Pleistocene		PECTEN, NEPTUNEA CALYPTROPHORUS, VENERICARDIA
	TERTIARY 62 Million Years Rise of Mammals	Pliocene Miocene Oligocene Eocene Paleocene		
MESOZOIC Middle Life	CRETACEOUS 72 Million Years Modern Seed Bearing Plants, Dinosaurs			SCAPHITES, INDCERAMUS
	JURASSIC 40 Million Years First Birds			NERINA, PERISPHINCTES
	TRIASSIC 49 Million Years Cycads, First Dinosaurs			TROPHITES, MONOTIS
PALEOZOIC Ancient Life	PERMIAN 60 Million Years First Reptiles			LEPTODUS, PARAPUSULINA
	PENNSYLVANIAN 30 Million Years First Insects			DICTYOCCLOSTUS
	MISSISSIPPIAN 35 Million Years Many Crinoids			CACTOCKINUS, PROLECANITES
	DEVONIAN 60 Million Years First Sped. Fishes Cartilage Fish			FALMATOLEPUS, NUCROSPIRIFER
	SILURIAN 20 Million Years Earliest Land Animals			HEXAMOCERAS, CRYSTIPHYLLUM
	ORDOVICIAN 75 Million Years Early Bony Fish			BATHYRUS (Trilobite), TETRAGRAPTUS
	CAMBRIAN 100 Million Years Invertebrate animals, Brachiopods, Trilobites			BILLINGSSELLA, PARADOXIDES (Trilobite)
PRECAMBRIAN Very few fossils present (bacteria-algae-pollen?)				