

- f. Charles Darwin studied evolution and developed the Theory of Organic Evolution
- i. Natural Selection - individuals that have traits that better suit them to their environment would survive longer and produce more offspring
- g. fossils show evidence of evolution.
- h. Humans are one of the most complex life forms to have evolved - over 4 million years ago.
- i. Humans evolved from a common ancestor of apes.
- j. From fossil evidence, humans have been around for just 1% of geologic time.

VIII. Unconformities

- a. unconformities - are buried erosional surfaces.
- b. They are gaps in the rock record due to missing rock layers.

IX. Radioactive Dating

- a. actual/absolute age - is the age of a rock unit, fossil or an event expressed in units of time (the exact age)
- b. The regular rate of nuclear decay (half-life) of a radioactive isotopes allows us to find the absolute age of rocks and fossils.
- c. Radioactive dating is a way to determine the absolute age by comparing the amounts of isotope to the amounts of decay product.
- d.

	# of half-lives			
	0	1	2	3
Isotope unstable	100	50	25	12½
Decay Product Stable	0	50	75	87½