



Note-taking Worksheet

Geologic Time

Section 1 Life and Geologic Time

A. Geologic time—Earth's history is divided into time units that make up a **geologic time scale**.

- Time units on the scale are based on the appearance or disappearance of types of organisms such as Trilobites, index fossils that lived during specific periods of time.
- Geologic time is divided into four major Subdivisions.
 - Eons—longest subdivision; based on abundance of fossils
 - Eras—marked by significant worldwide changes in the types of fossils present in rock
 - Periods—based on types of life existing worldwide at a particular time
 - Epochs—characterized by differences in life-forms, but differences can be regional rather than global
- Geologic time can be subdivided only if fossils are present in rock records.

B. Organic **evolution**—Organisms have changed over time, most likely because of environmental changes.

- Species**—organisms that normally Reproduce only with other members of their group
- Darwin's theory of **natural** Selection—organisms more adapted to an environment are more likely to reproduce
- Natural selection within a species occurs only if characteristics present in some numbers increase their Survival.
- Artificial selection—breeding individuals with desired characteristics; humans use this type of selection when breeding domestic animals
- New species can evolve from natural selection.

C. Trilobites—have an exoskeleton with three lobes; lived in oceans for more than 200 million years

- Trilobite eye position changed as the species adapted to various environments.
- Trilobite bodies and tails changed in response to changing environments.