

	Topic:
Charles Darwin	<p>1. Noted _____ and _____ among the finches and tortoises on the Galapagos Islands with those in South America.</p> <p>2. Hypothesized the animals _____ to local conditions on the islands after their arrival.</p> <p>3. Proposed his theory of evolution: _____ over _____</p> <p>4. Important note: A scientific _____ is a well-supported _____ explanation based on measureable events in the natural world.</p> <p>5. Darwin published his book, _____ in 1859.</p>
Darwin's Observations	<p>1. _____ -Why did different continents with similar habitats had very different animals?</p> <p>2. _____ - Why were so many species extinct and why do they seem related to living species?</p> <p>3. _____ - The islands were close together, yet each had different climates. As a result, each island had its own unique animal life, such as tortoises, finches, etc.</p>
Influences on Darwin	<p>_____ proposed first hypothesis of evolution (1809).</p> <p>1. _____ - Organisms "willed" themselves to change by using or not using certain body parts.</p> <p>2. _____ - Organisms acquired traits during their life by the use or disuse of organs.</p> <p>3. _____ - Traits acquired during life were passed on to offspring.</p> <hr/> <ul style="list-style-type: none"> • If human population allowed to grow unchecked, there would be insufficient living space and food for everyone. • Believed the only forces that worked against growth were _____, _____, and _____

4. _____ and _____ were early geologists who helped scientists realize that Earth is _____ of years old, and the processes that changed Earth in the past are the _____ processes that operate in the present.

Natural Selection

1. _____: differences in traits among a population of organisms are passed from parent to offspring.

- Plant and animal breeders use heritable variations to improve crops and livestock by choosing to breed those organisms that have the traits they want
- It is _____ that provides the variation; humans select the variations they find most useful
- This is artificial selection

2. _____ - More offspring are born than can survive. Organisms must compete to survive & reproduce.

- _____, living space, mates, and other necessities must all be _____ for

3. _____ of the _____: the ability to survive and reproduce.

- _____: any inherited trait that aids survival.
- Over time, natural selection causes changes in the traits of a population.
- Adaptations can be _____, functional (physiological) or _____.
- Successful adaptations allow an organism to become better suited to their _____, Those with the best traits survive to reproduce and pass on those desirable traits.

4. _____ - offspring vary from the parents and over time the differences increase.

- Over time species of today look _____ from their ancestors
- It also implies " _____ " - similar organisms have similar traits because they were inherited from a common ancestor.

Evidence of Evolution:

1. _____ - shows groups of plants and animals being replaced by other types over time. Most often, major changes come after mass extinction events.

- Darwin argues this showed living things had been evolving on Earth for _____ of years.

2. _____ - Darwin found different animals on different continents that had similar anatomies and behaviors. These animals were living under similar ecological conditions and were exposed to similar pressures of natural selection. They ended up evolving certain features in common.

- Scientists today call this _____

3. _____ - common structures are inherited from common ancestors.

Ex: _____

_____ - Features that are reduced or useless, but functional in far distant ancestors. It infers evolutionary change.

Ex: _____

4) _____ - vertebrate embryos repeat the major evolutionary features of ancestral embryos during development.

- The same groups of embryonic cells develop in the same order and in similar patterns to produce the _____ and _____ of all vertebrates.

Ex: _____