Honors Biology Chapter 15 Section 1 Student Notes

Darwin on the HMS *Beagle*

* Darwin’s role on the ship was as naturalist and companion to the captain.
* His job was to collect biological and geological specimens during the ship’s travel.

The Galápagos Islands

* Darwin began to collect mockingbirds, finches, and other animals on the four islands.
* He noticed that the different islands seemed to have their own, slightly different varieties of animals.
* Almost every specimen that Darwin had collected on the islands was new to European scientists.
* Populations from the mainland changed after reaching the Galápagos.

Darwin Continued His Studies

* Darwin hypothesized that new species could appear gradually through small changes in ancestral species.
* Darwin inferred that if humans could change species by artificial selection, then perhaps the same process could work in nature.

Natural Selection

* Individuals in a population show variations.
* Variations can be inherited.
* Organisms have more offspring than can survive on available resources.
* Variations that increase reproductive success will have a greater chance of being passed on.

*The Origin of Species*

* Darwin published *On the Origin of Species by Means of Natural Selection* in 1859.
* Darwin’s theory of natural selection is not synonymous with evolution.
* It is a means of explaining how evolution works.