

Have on a 5-year  
long voyage which  
started

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Have you ever wondered how animals who are better adapted to their environment tend to survive longer and produce more offspring than animals who aren't? It's all part of something we call natural selection. Natural Selection is the process whereby organisms better adapted to their environment tend to survive and produce more offspring. The theory of its action was first fully discovered by Charles Darwin and is now believed to be the main process that brings about evolution. Charles Darwin was a naturalist who went on a 5-year long voyage which started in 1831 to observe and study the natural world in South America and on the Galapagos islands.

The theory of Natural Selection states that Organisms produce more offspring than can survive and that Variations exist in all populations. Darwin's theory also states that Organisms best suited to environments will have more offspring. Over time, organisms with certain advantageous variations make up most of the population. (info found in pink packet). Overproduction, Variation, and Competition are all factors that affect the process of Natural Selection (found on page 172). There is also a theory called Artificial selection, where only the organisms with the desired characteristic, such as color are bred. (pg 170).

Overproduction is when species produce far more offspring than can possibly survive, which Darwin predicted before he went on his journey. In some cases, a certain species will have so much offspring that MOST offspring won't survive. In most species, so much offspring is produced that there are not enough resources, food, water and living space for all of them. This is a common occurrence.

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Overproduction is what kills most offspring. (pg 172) Variation is any difference between individuals of the same species. For example, Some turtles will be faster than others from the same offspring. Same with shell hardness, ability to swim quickly, color, and size. Any difference within the same offspring is an example of Variation. Members of a species differ from one another in many of their traits. (pg 173) Competition is basically animals competing with other animals from the same offspring in a battle to survive.

Since food, space, and all other resources are limited, the members of an offspring must compete to survive. Competing does not mean they are fighting physically most times the fights are indirect. For example, some fish may not be able to find enough food to survive. Only a few fish will survive and reproduce. (pg 173) Charles Darwin's theory of Natural Selection still exists today. The natural selection consists of 3 components.

Overproduction, Variation, and Competition. Natural Selection is the process by which individuals that are better adapted to their environment are more likely to survive and reproduce.