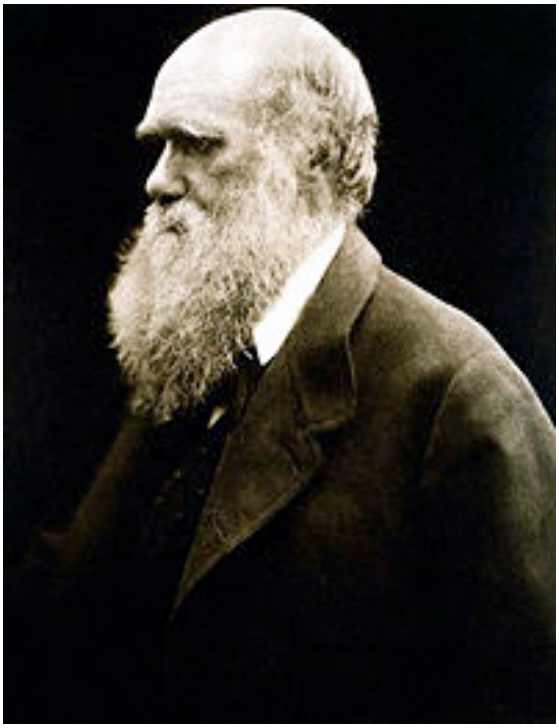
Charles Darwin (1809–82)



Charles Darwin (pictured right) was a British scientist, who laid the foundation of the modern evolutionary theory based on natural selection. Natural selection is the theory of “survival of the fittest.” His work had a major influence on *life and **earth sciences as well as the development of modern thought.

In 1831, a young Darwin was taken aboard the English survey ship HMS Beagle, as an unpaid intern on a scientific expedition around the world. It was on this expedition that Darwin made many observations about the natural world. These observations would later be published in his book, *On the Origin of Species.* Darwin’s theory of evolution by natural selection is essentially that the young born to any species intensely compete for survival. Those young that survive to produce the next generation tend to embody favorable natural variations and these variations are passed on by heredity.

Therefore, Darwin predicted, that each generation will improve its ability to adapt over the preceding (previous) generations, and this gradual and continuous process is the source of the evolution of species.

Darwin’s theory created a worldwide protest from religious groups who believed that his theory contradicted the belief that all organisms (from plants to animals to humans) are divinely created by God. Even today, many argue that our world is either a product of “creation by God” or gradual evolution.

Another theory that came from Charles Darwin’s writings was “Social Darwinism.” Here the theory of “survival of the fittest” is applied to human society. Those that are fittest for survival enjoy wealth and success and are considered superior to others. This theory was used during the time of European imperialism to justify the mistreatment of non-whites. Many Europeans claimed that because people in places like Africa had not created the technological or scientific advances like the Europeans, they were thus evolutionarily inferior. This belief that one race is better than another is called racism. Hitler and the Nazis were firm believers in Social Darwinism as they believed that many groups, including the Jews and Gypsies were inferior to those of Hitler’s Aryan Nation.

**Life Science is a broad field that studies life. It contains many other fields of study like: biochemistry, botany, cell biology, genetics, molecular biology,*

***Earth science is an all-embracing term for the sciences related to the planet Earth*