

## Teacher's Guide

### Evolution and Heredity Greatest Human Achievements

**Grade Levels:**

5-12

**Subject Areas:**

STEM

**Synopsis:**

Charles Darwin traveled to the Galapagos Islands and completely redefined human life and development. Although met with great controversy, his published findings in *The Origin of Species* outlined the evolution of all species. From there humans went on to discover DNA and nanotechnology to begin the process of completely understanding human beings.

**Learning Objectives:** Students will:

- Understand Darwin's impact on science and humanity
- Explore cell division, DNA strands, and genes
- Consider the implications of this type of scientific advancement

**Vocabulary:**

Charles Darwin, Evolution, Galapagos Archipelago, Galapagos Islands, Origin of Species, Natural Selection, Nucleus, Cells, Cell Division, Francis Crick, Jim Watson, DNA, Double Helix, Reproduction, Genes, Nanotechnology

**Pre-Viewing Discussion:**

What does "survival of the fittest" mean?

Have you ever heard of nanotechnology before? Where?

**Post-Viewing Discussion:**

What did Charles Darwin discover? Why was his discovery so important?

Who discovered DNA? What did they realize about DNA? How did this help us in the future?

Why is nanotechnology so important? What does it allow us to do?

**Further Activities:**

Further research the Human Genome Project and the controversies that extend from it. Consider their validity.

Find one project that has developed due to nanotechnology.