# Middle School Career Investigations: STEM Basics

## Menu

STEM stands for science, technology, engineering, and mathematics. Click on the icons shown here to learn more about each part of STEM. Make sure to visit each one.

## Science

Science is the study of the natural world. Science is a way of discovering how things work today, how they worked in the past, and how they will work in the future. Examples of science include biology, chemistry, Earth science, physics, and many more. Notable studies in science include discovering that the planets revolve around the Sun, determining the impact of human activity on global climate, and exploring how scientists can change human genetics.

## Technology

Technology is the development of tools, machinery, and equipment to help solve human problems. Examples of technology fields include computer science, information technology, information architecture, and more. Notable studies in technology include the creation of the first home computer, creating smaller and more efficient mobile devices, and developing artificial intelligence, or AI, which is the ability of a computer to think or learn on its own.

## Engineering

Engineering is the design, operation and maintenance of structures, machines, and materials. Examples of engineering fields include aerospace engineering, electrical engineering, mechanical engineering, and more. Notable studies in engineering include developing home electricity, exploring alternative and renewable forms of energy, and developing new materials that can withstand natural events, like earthquakes, tornadoes, and floods.

## Mathematics

Mathematics is the study of numbers, shapes and patterns to form rules. Examples of mathematics fields includes data science, research mathematics, statistics, and more. Notable studies in mathematics include the discovery and calculation of gravity, the calculation of pi to 22.4 trillion digits, and developing new mathematical models to predict financial and even social events.