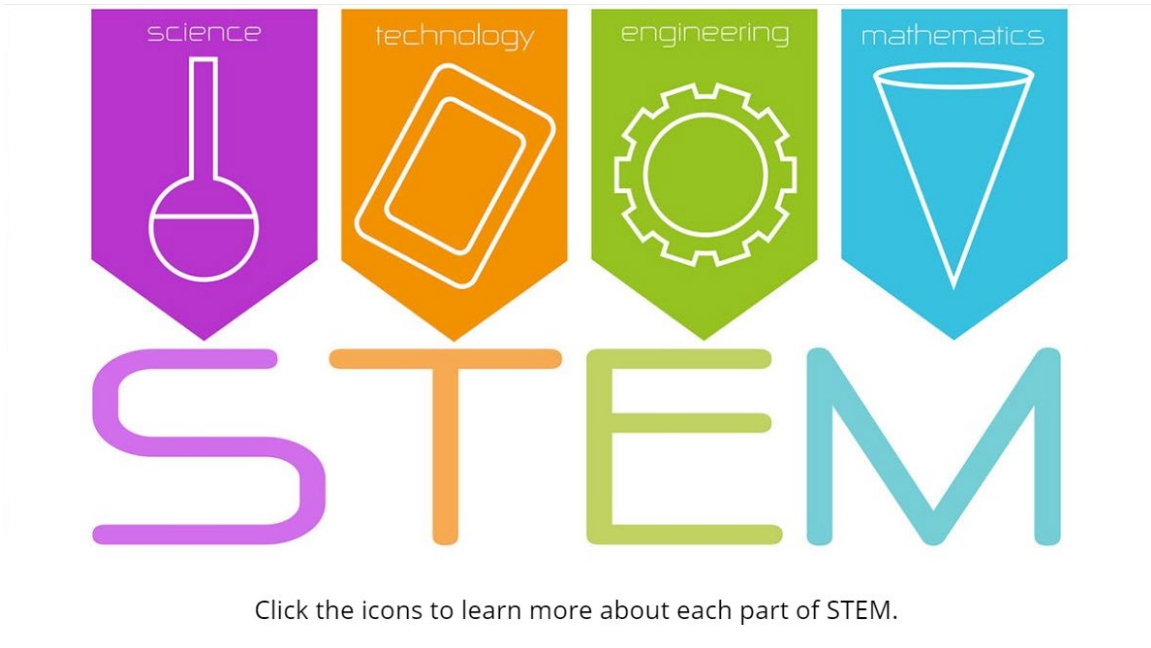


Middle School Career Investigations

STEM Basics

Menu



The menu features four colored icons in a row, each representing a component of STEM. From left to right: a purple icon with a round-bottom flask labeled 'science'; an orange icon with a tablet labeled 'technology'; a green icon with a gear labeled 'engineering'; and a blue icon with a funnel labeled 'mathematics'. Below these icons, the word 'STEM' is written in large, bold, sans-serif letters, where each letter is colored to match its corresponding icon: 'S' is purple, 'T' is orange, 'E' is green, and 'M' is blue.

Click the icons to learn more about each part of STEM.

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.

Middle School Career Investigations

STEM Basics

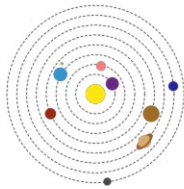
Science

SCIENCE

WHAT IS IT? The study of the natural world; a way of discovering how things work today, worked in the past, and will work in the future

EXAMPLES: Biology, Chemistry, Earth Science, Physics, and many more!

PAST



Planets Revolve Around Sun

PRESENT



Human Impact on Global Climate

FUTURE



Changing Plant, Animal, and Human Genetics

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.

Middle School Career Investigations




STEM Basics

Technology

TECHNOLOGY

WHAT IS IT? The development of tools, machinery, and equipment to help solve human problems

EXAMPLES: Computer Science, Information Technology, Information Architecture, and many more!

PAST	PRESENT	FUTURE
		
First Home Computer	Advancement of Mobile Devices	Development of AI

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.

Middle School Career Investigations




STEM Basics

Engineering

ENGINEERING

WHAT IS IT? The design, operation and maintenance of structures, machines, and materials

EXAMPLES: Aerospace Engineering, Electrical Engineering, Mechanical Engineering, and many more!

PAST	PRESENT	FUTURE
		
Home Electricity	Alternative Forms of Energy	Development of Strong Materials

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.

Middle School Career Investigations

STEM Basics

Mathematics

MATHEMATICS

WHAT IS IT? The study of numbers, shapes and patterns to form rules

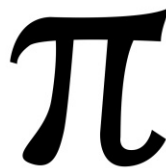
EXAMPLES: Data Science, Research Mathematics, Statistics, and many more!

PAST



Calculation of Gravity

PRESENT



Pi to 22.4 Trillion Digits

FUTURE



Prediction of Events

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.