

S.T.E.M. Definition and Examples

Science	Technology	Engineering	Math
<i>The intellectual and practical activity encompassing the systematic study of the structure and behavior of the physical and natural world through observation and experimentation.</i>	<i>Technology is the use of scientific knowledge for practical purposes or applications, whether in industry or in our everyday lives.</i>	<i>The application of science and mathematics by which the properties of matter and the sources of energy in nature are made useful to people.</i>	<i>The abstract science of number, quantity and space. It may be studied in its own right or as it is applied to other disciplines such as physics and engineering.</i>
Anatomy - the study of organisms and their parts.	Agricultural - uses machines and systems to raise and process food.	Aerospace -develop and design jets, helicopters, space shuttles, satellites and rockets.	Algebra - letters representing numbers are combined according to the rules of arithmetic.
Bacteriology - the study of bacteria, especially in relation to medicine and agriculture.	Assistive - uses various types of services and devices designed to help people with disabilities function in an environment.	Agricultural - develop ways to improve farms and our food supply.	Analysis - concerned with limits, continuity and infinite series.
Biochemistry - the study of the chemical substances and processes in living organisms.	Biotechnology - use of living systems and organisms to develop or make products.	Automotive -develop engines that improve fuel efficiency and reduce emissions.	Basic/Arithmetic - deals with nonnegative real numbers and application of operations (+, -, x, /).
Biology - the study of life and living organisms.	Construction - uses machines and systems to erect buildings and other structures.	Biological and Biosystems - deal with structures, machinery, energy, labor, land, water, waste and resource variables to create products and processes to fill human needs.	Calculus - finding and the properties of derivatives and integrals of functions.
Cardiology - the medical study of the heart	Communication - uses machines and systems to collect, process and exchange information.		
Chemistry - the science of the composition, structure, properties, and reactions of matter, especially of atomic and molecular systems.	Educational/Instructional - uses conventional media and more complex systems to design, carry out and evaluating the total process of learning and teaching.	Biomechanical -design artificial hearts, pacemakers, prosthetic limbs, improving glucose monitors and incubators & develop new physiotherapy.	Charts - a sheet giving information in a tabular form.
			Computation/Calculate -determine the amount or number of something.
Ecology - the study of organisms and their environment.	Electronic - uses electric circuits to achieve a goal. Includes "tools" that use electricity including computers, MP3 players, televisions, radios, washing machines and dryers to name a few.	Chemical -use chemistry, math and physics to design industrial equipment and methods of manufacturing products such as paints, plastics and soaps.	Cryptology - the study of codes, the art of writing and solving them.
Embryology - the student of the formation, early growth and development of living organisms.		Civil -design highways, municipal infrastructure and ensure availability of water and sewage	Economics - concerned with the production, consumption and transfer of wealth.

S.T.E.M. Definition and Examples

		treatment facilities.	
Endocrinology - the study of the glands and hormones of the body.	Energy - uses machines to convert, transmit and apply energy.	Communication - design, create and manage communications systems and networks such as the internet.	Estimation - rough calculation of the value, number, quantity or extent of something.
Genetics - the study of heredity and inherited traits.	Environmental - also known as clean/green technology designed to conserve natural resources and the environment and curb the negative impacts of human involvement.	Computer -design, analyze and manufacturing of electronic circuits and devices.	Fractions - a numerical quantity that is not a whole number.
Hematology - the student of the blood and blood-producing organs.		Electrical -involved with generation, production, transmission and distribution of electrical energy.	Game Theory - analysis of strategies for dealing with competitive situations.
Histology - the study of the microscopic structure of animal and plant tissues.	Food - deals with the production processes that make food and includes such pasteurization, freeze drying and canning.	Environmental -work to prevent pollution and solve problems affecting the welfare of humans and nature.	Geometry - concerned with the properties and relations of points, lines, surfaces, solids and higher dimensional analogs.
Immunology - the study of the immune system of the body.	GIS - Geographic information system; designed to capture, manipulate, analyze, manage and present spatial or geographic data.	Food -work in the areas of food handling, processing, packaging and distribution of safe consumer food products.	Graphs - a diagram showing the relation between variable quantities.
Medicine - the science of diagnosing and treating disease and damage to the body.			
Metrology - the science of measurement.	Health - use of knowledge, skills and devices, medicines, procedures and systems to solve health problems and improve the quality of life.	Forestry -study the effects of industrialization on nature, hydrology and renewable resources.	Logic - reasoning conducted or assessed according to strict principles of validity.
Microbiology - the study of microorganisms and their effects on other living organisms.			
Neurology - the study of the nervous system and disorders affecting it.	Industrial/Manufacturing -uses machines and systems to covert natural materials into products with the goal of producing large scale products or processes.	Gas -explore, recover and process natural gas reserves.	Measurement - the size, length or amount of something.
Nutrition - the study of food and nourishment.		Geological -use geological data to determine suitable locations for buildings and structures.	Modeling - art or activity of making three-dimensional models.
Oncology - the study of the development, diagnosis, treatment and prevention of tumors.	Information - use of computers to store, study, retrieve, transmit and manipulate data or information in business or other enterprise.	Industrial/Manufacturing -work to improve efficiency, effectiveness and productivity.	Number Theory - deals with the properties and relationships of numbers.
Optics - the study of light	Mechanical - uses wheels,	Materials -study the	Number Systems - a way of

S.T.E.M. Definition and Examples

and vision.	cams, levers, gears, belts and engines to allow motion in one direction to cause a different kind of motion.	properties of existing and find new ways to work with and develop new materials.	representing (expressing or writing) numbers of a certain type. Ex. Base 10, decimals and roman.
Pathology - the study of disease and its causes, processes, development and consequences.	Medical - uses machines and systems to treat diseases and maintain the health of living beings	Mechanical -design, manufacture and maintain mechanical equipment from appliances to vehicles.	Percentages - a rate, number or amount in each hundred.
Physics - the science of matter and energy and interactions between the two.	Nano -the manipulation of matter on an atomic, molecular or supramolecular scale.	Metallurgical - develop processes for extracting metals, develop new alloys and metals and produces metal products.	Probability - the likelihood of occurrence, measured by the ration of the favorable cases to the whole number of cases possible.
Physiology - the study of functions of living organisms.	Robotics - create a programmable mechanical device that can perform tasks and interact with its environment without the aid of human interaction.	Mining - discover, extract and prepare minerals from the earth's crust to be used by manufacturing and energy industries.	Proportions - a part, share or number considered in comparison with a whole
Systematics - the science of systematic classification.	Space -used in spaceflight, satellites and space exploration and may include equipment, support infrastructure, procedures, spacecraft, stations and satellites.	Oil - explore, recover, development and processing of oil reserves.	Set Theory - deals with the formal properties of sets as units and the expression of other branches of math in terms of sets.
Thermodynamics - the study of relationships and conversions between heat and other forms of energy.	Transportation - uses machines and systems to move people and cargo.	Plastics -study the properties of polymer materials and design machine used to manipulate and shape plastics.	Statistics - collecting and analyzing numerical data in large quantities, especially for inferring proportions in a whole.
Toxicology - the study of poisons and the treatment of poisoning.		Production -design, control and improvement of integrated systems of personnel, materials, machinery and money that produce goods and services.	Trigonometry -dealing with the relations of the sides and angles of triangles and with the relevant functions of angles.
Virology - the study of viruses and viral diseases.		Software -design, develop and maintain software systems and products.	
Zoology - the study of the structure, physiology, development and classification of animals.		Systems - assist and support policy-making, planning, decision-making and associated resource allocation or action deployment.	
		Water Resource - protect water supplies and ensure	

S.T.E.M. Definition and Examples

		that development of new resources does not disrupt natural processes and water tables.	
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