|  |  |  |  |
| --- | --- | --- | --- |
| **Science** | **Technology** | **Engineering** | **Math** |
| ***The intellectual and practical activity encompassing the systematic study of the structure and behavior of the physical and natural world through observation and experimentation.*** | ***Technology is the use of scientific knowledge for practical purposes or applications, whether in industry or in our everyday lives.*** | ***The application of science and mathematics by which the properties of matter and the sources of energy in nature are made useful to people.*** | ***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.*** |
| **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 treatment facilities. | **Economics-** concerned with the production, consumption and transfer of wealth. |
| **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 and vision. | **Mechanical**- uses wheels, cams, levers, gears, belts and engines to allow motion in one direction to cause a different kind of motion. | **Materials**-study the properties of existing and find new ways to work with and develop new materials. | **Number Systems-** a way of 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 that development of new resources does not disrupt natural processes and water tables. |  |

<https://www.merriam-webster.com/dictionary/>

<http://mistupid.com/science/fields.htm-> science areas

<http://mistupid.com/science/fields.htm-> engineering areas

<http://www.aboriginalaccess.ca/adults/types-of-engineering-> engineering areas

<https://prezi.com/mh8nvw6t3qy4/7-major-areas-of-technology/-> technology areas

<http://curriculum.vexrobotics.com/curriculum/intro-to-robotics/what-is-robotics>

<http://study.com/academy/lesson/what-is-technology-definition-types.html>

<http://tam.uky.edu/basics/techtypes.html>

<https://en.wikipedia.org/wiki/Areas_of_mathematics>

<https://www.physicsforums.com/threads/complete-list-of-math-branches.466170/>