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It was originally designed to be used as part of a STEM Careers display, however the creators would be very interested to hear about any other ways you find it useful to use.

I hope you will find the resource useful - please email topicalscienceupdates@gmail.com with any ideas, suggestions or corrections.



Read the short disclaimer on page 2 before using this resource.

Disclaimer

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Further information about the resource and a fully editable version can be obtained by emailing the author at <u>topicalscienceupdates@gmail.com</u>

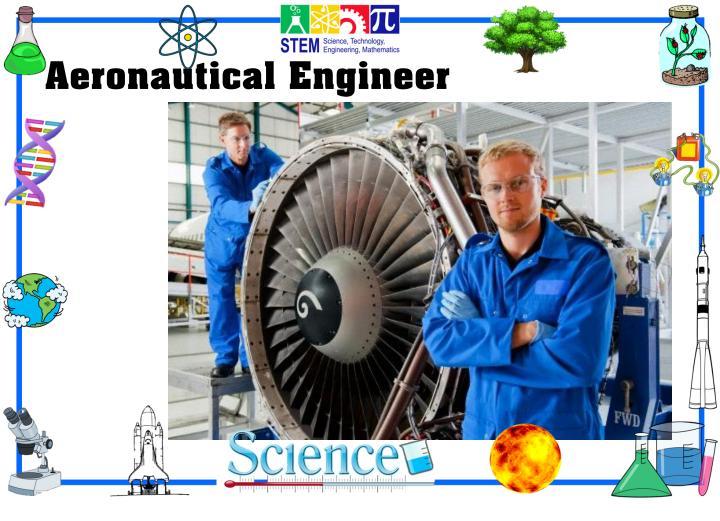
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The information about each career has been adapted and edited from the following websites where further information about the different careers can be found.

https://www.sokanu.com/

https://www.prospects.ac.uk/

https://www.sciencebuddies.org/



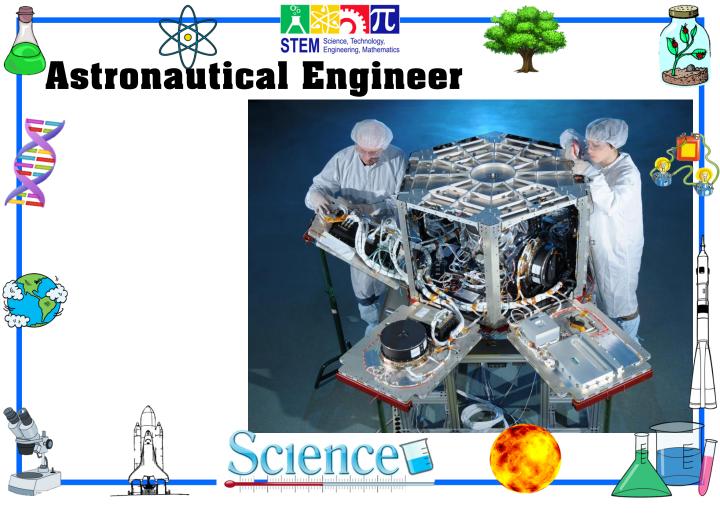
Aeronautical Engineer

Aeronautical engineers use their technical knowledge to improve flight safety and fuel efficiency, reduce costs and address the environmental impact of air travel.

They also work with aircraft that operate in space such as robots and satellites.

They are employed by a wide range of companies and may be office-based, or work in aircraft workshops, production hangars or aeronautical laboratories.

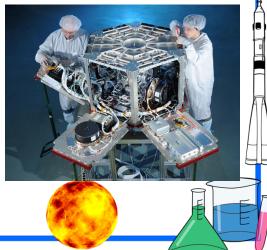




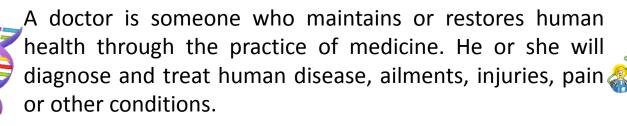
Astronautical Engineer

Astronautical engineers work with cutting-edge technology and international companies to design, develop, maintain and tests the performance of satellites and space vehicles.

The main focus is on improving flight safety, fuel efficiency, speed and weight, as well as reducing system costs and using advancing technologies to meet customer needs. the Increasingly, role addresses the environmental impact of space travel.







Science

STEM Science, Technolog Engineering, Mathe

Doctors can be found in many settings, including public health organizations, teaching facilities, private practices, and hospitals.

Docto

There are specific doctors for almost every major system located in the human body.





Nurse

Nurses plan and provide medical and nursing care to patients in hospital, at home or in other settings who are suffering from chronic or acute physical or mental ill health.

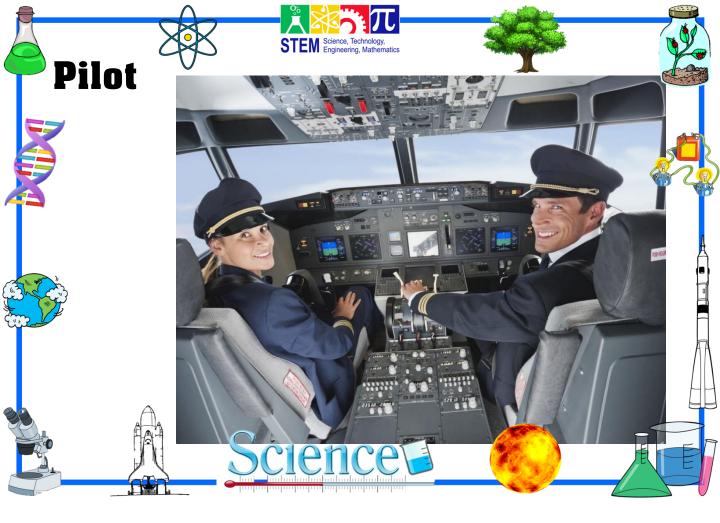
STEM Science, Technology Engineering, Mathem



They are employed in a wide range of environments and usually work as part of a team of professional and medical staff that includes doctors, social workers and therapists.







Pilot

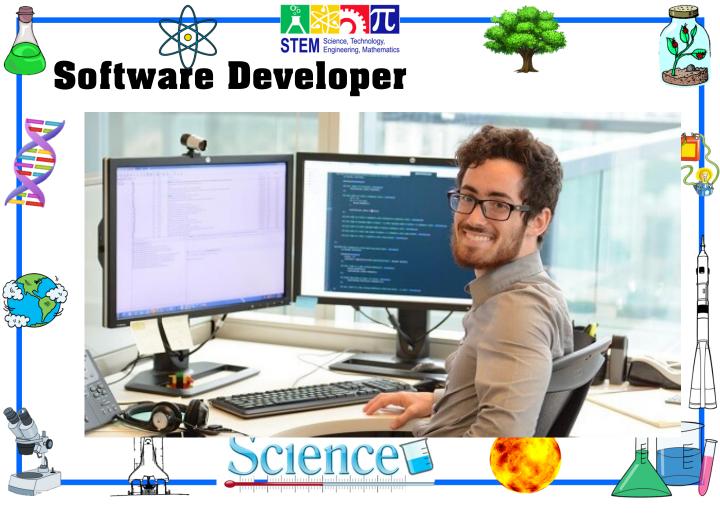
Pilots fly passengers or cargo on long or short-haul flights for leisure, business, military or commercial purposes.

EM Science, Technology, Engineering, Mathem

An aircraft is typically operated by two pilots; one will be the captain who is the pilot in command, while the other will be the supporting first officer.

Pilots have sole control over their plane while it is in the air and responsibility for the safety of their passengers.





Software Developer

Software developers are responsible for designing the computer programmes and operating systems that we use in everyday life.

Science

From word processors, games and websites, software developers are the people that design and programme these systems so we can use them easily and more efficiently.



Meteorologist

Meteorologists study weather patterns and predict the weather. They study the causes of particular weather conditions using information obtained from the land, sea and upper atmosphere.

clence

STEM Science, Technology Engineering, Mather

They use computerised and mathematical models to make short and long-range forecasts concerning weather and climate patterns. A variety of organisations use meteorological forecasts,





Surveyors update boundary lines and prepare sites for construction so that legal disputes are prevented.

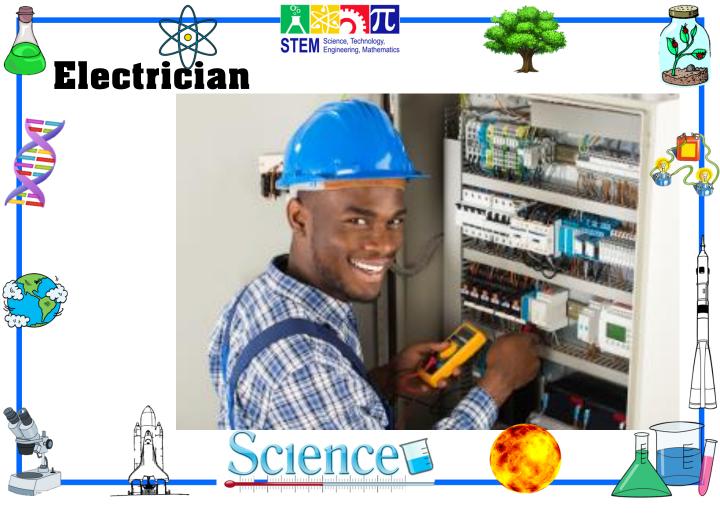
STEM Science, Technology, Engineering, Mathematic

Surveyorsmakeprecisemeasurementstodetermineproperty boundaries.

They provide data relevant to the shape and contour of the Earth's surface for engineering, mapmaking, and construction projects







Electrician

Electricians can specialise in construction or maintenance and are employed by major companies across the world.

EM Science, Technolog Engineering, Mathe

Electricians specialising in construction primarily install wiring systems into factories, businesses, and new homes.

Electricians specialising in maintenance fix and upgrade existing electrical systems and repair electrical equipment.





Veterinarian

A veterinarian is a medical professional who protects the health and well-being of animals.

EM Science, Technology Engineering, Mather

They diagnose and control animal diseases and treat sick and injured animals. They also advise owners on proper care of their pets and livestock.

They might work with pets, farm animals or wild animals in a zoo or safari park.







Archaeologist

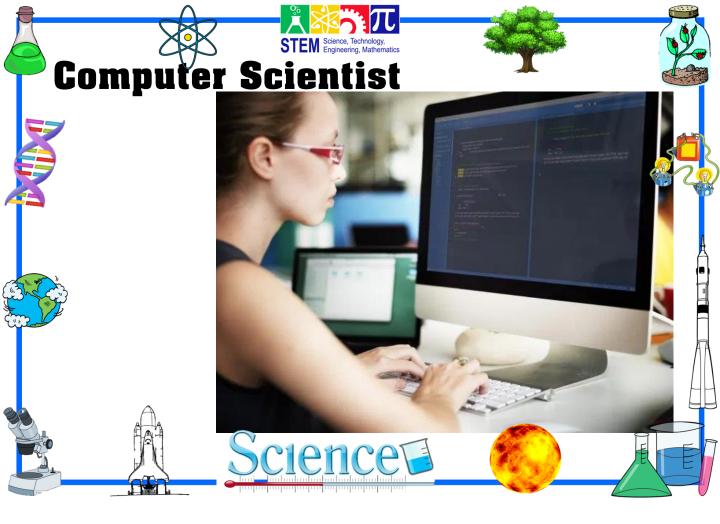
Archaeologists are the scientists who study artifacts, man-made objects that people have left behind.

EM Science, Technolog Engineering, Mathe

Archaeologists are scientific detectives. By piecing together clues from the artifacts they find, they try to figure out how long ago people lived.

They can work anywhere in the world.





Computer Scientist

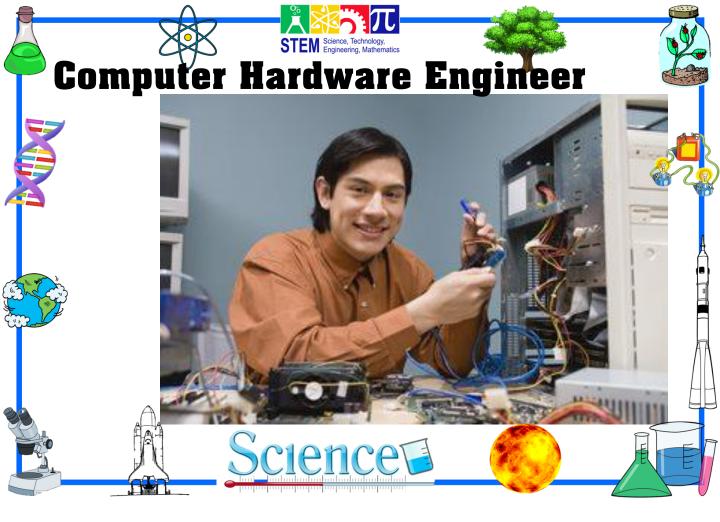
Computer scientists use technology to solve complex problems for businesses, scientists and governments.

STEM Science, Technology Engineering, Mather

They write software to make computers do new things or accomplish tasks more efficiently.

They create applications for mobile devices, develop websites, and program software. Almost all major companies will employ computer scientists.





Computer Hardware engineers research, design, develop,

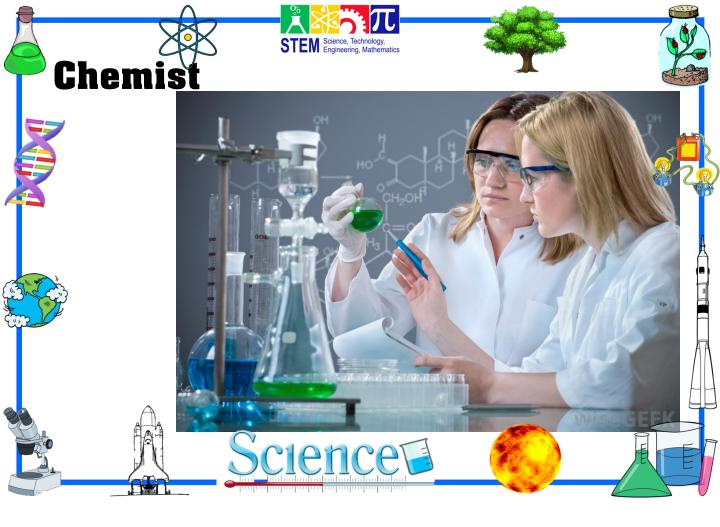
science

and test computer systems.

They design and build all components such as processors, circuit boards, memory devices, networks, and routers.

Every bit of your computer, laptop, tablet and phone was designed by a hardware engineer.





Chemist

from.

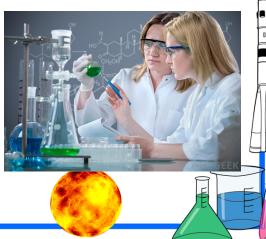
Chemists test ways to improve existing products and develop new products and materials.

STEM Science, Technology Engineering, Mather

Household cleaners, pharmaceutical drugs, plastics, road surfaces and many other products have been improved by chemists.

Chemists also analyze and test substances to find out what is in them and where they have come

Science







Dentists diagnose and treat problems with teeth and tissues in the mouth.

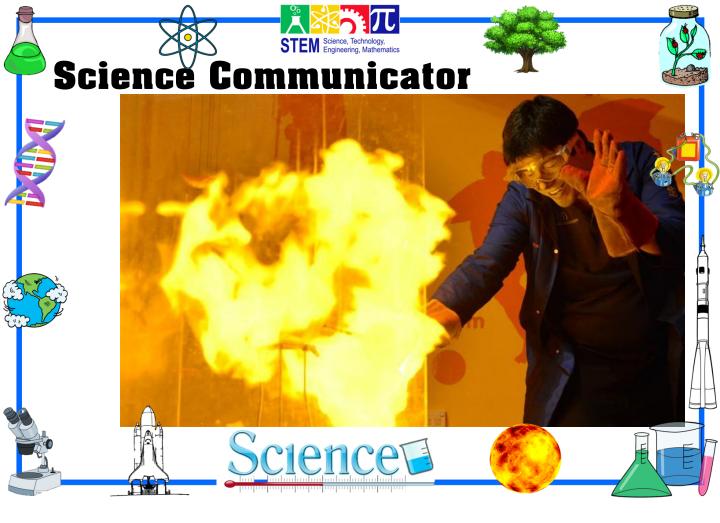
STEM Science, Technology, Engineering, Mathematic

Science

They also give advice and administer care to help prevent future problems.

They provide instruction on diet, brushing, flossing, the use of fluorides, and other aspects of dental care.





Stem Engineering, Mathematics

Science communicators talk for a living. They are usually professional scientists, although not always.

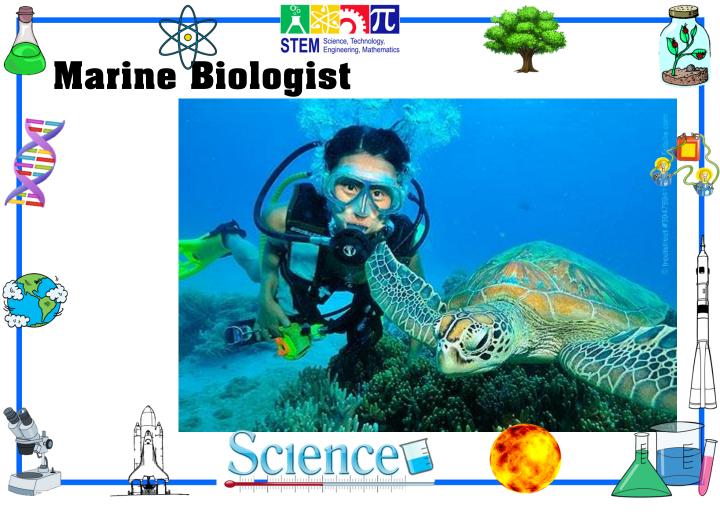
Their job is to make scientific research easy to understand for non-experts.

They give public talks and lectures about scientific research, speak to the media, appear on T.V. and radio and write books and blogs on



science





Marine Biologist

A marine biologist is someone who studies all types of sea life, how it interacts and how it's enviroment is changing.

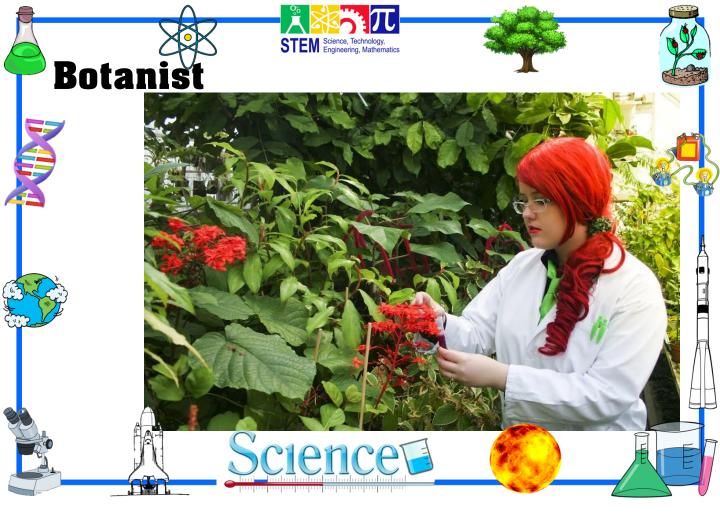
STEM Science, Technology, Engineering, Mathem

They can choose to specialize in studying large ocean animals, all the way down to microscopic organisms.

Everything from whales to the plankton they eat, and everything else in between, can be studied.







Botanist

Botanists study plants, from trees and flowers to algae, fungi, lichen, ferns, grasses and mosses.

STEM Science, Technology, Engineering, Mathema

Science

They may work in field research – studying natural habitats and searching for new species. Or in conservation - protecting, managing and enhancing plant life. Or in Laboratory research - studying how genetic information (DNA) controls plant development.





Research Scientist

Research scientists work in almost every area of science. They plan and carry out experiments and investigations in a range of areas, including geoscience, medical research, meteorology and pharmacology.

EM Science, Technology Engineering, Mather

Research scientists are employed by a huge range of companies and they carry out a very wide range of specialisms. They often work in teams on large projects with specialists from different fields.





Pharmacologist

Pharmacologists aim to understand how drugs work so they can be used effectively and safely. They also conduct research to aid drug discovery and development.

EM Science, Technology, Engineering, Mathem

Their work involves investigating how drugs interact with biological systems to predict what effect the drug might have in humans.

There is a high level of collaboration with other scientists from different disciplines.







Pharmacist

Pharmacists distribute prescription drugs to individuals and advise patients and doctors on the selection, dosages, interactions, and side effects of medications.

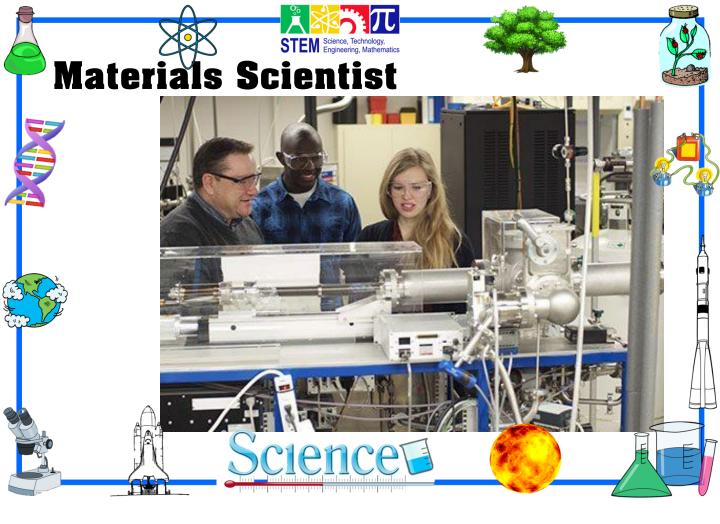
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EM Science, Technolog Engineering, Mathe

They monitor the health and progress of patients to ensure that they are using their medications safely and effectively.

Most pharmacists work in a community setting, such as a chemist, or in a healthcare facility, such as a hospital.



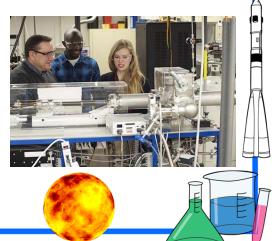


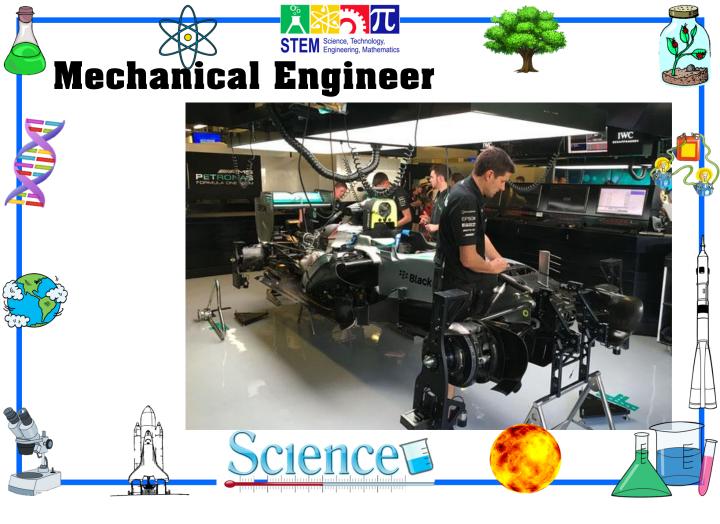
STEM Science, Technology, Engineering, Mathematics Materials Scientist

A materials scientist is someone who studies and analyzes the chemical properties and structure of different manmade and natural materials.

Glass, rubber, ceramic, alloys, polymers, and metals are all studied. They take this knowledge and devise ways to strengthen existing materials, combine materials, or create brand new materials with certain properties for use in different applications and products.







Mechanical Engineer

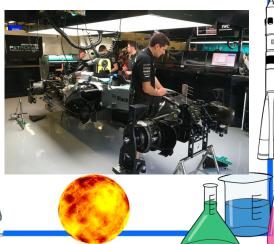
Mechanical engineering is one of the broadest engineering fields. Mechanical engineers design and oversee the manufacture of many products ranging from medical devices to new batteries.

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EM Science, Technology Engineering, Mathem

They design, build, test and improve anything that has moving parts in virtually any context.

They are employed by a huge range of companies including car manufacturers and the armed forces.





Sport Scientist

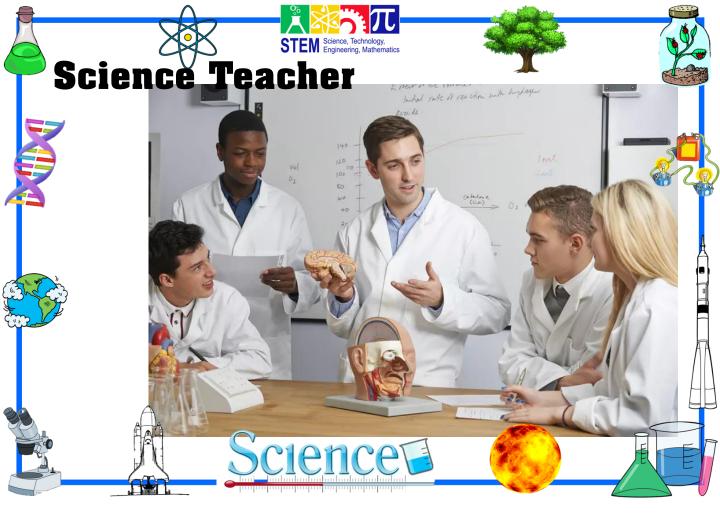
Sport Scientists are concerned with the testing, training and physical development of elite athletes.

They work in laboratories and wherever athletes train and compete. Their role is to assist the athlete and coach to improve performance.

They also conduct research in an attempt to improve sport equipment and training techniques.







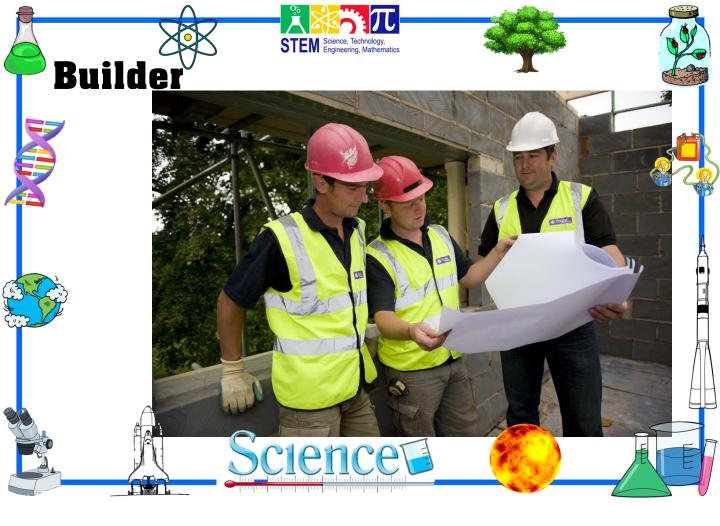
Science Teacher

Science teachers main role is to educate and inspire the next generation of scientists, engineers and inventors.

STEM Science, Technology, Engineering, Mathem

They have a passion for their subject and excellent communication skills to be able to explain complex scientific ideas in simple terms.

They have to keep up with current scientific research and make it accessible for their pupils.



Builder

Builders coordinate the different types of construction involved in building a house, office or other building.

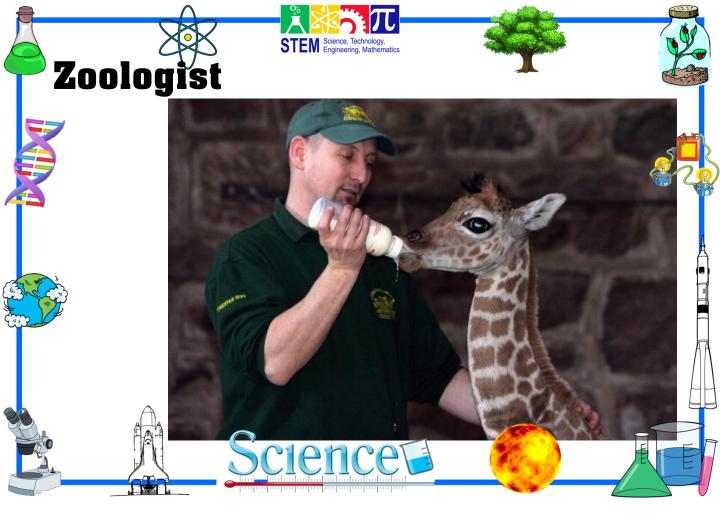
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STEM Science, Technology, Engineering, Mathematic

They take an architect's plans and oversee all aspects of the construction process.

They need to be able to problem solve and make decisions about structural changes that need to be made as construction progresses.





Zoologist

Zoologists study animals and their behavior. They may study a particular species or group of species, either in the wild or in captivity.

STEM Science, Technology, Engineering, Mathem

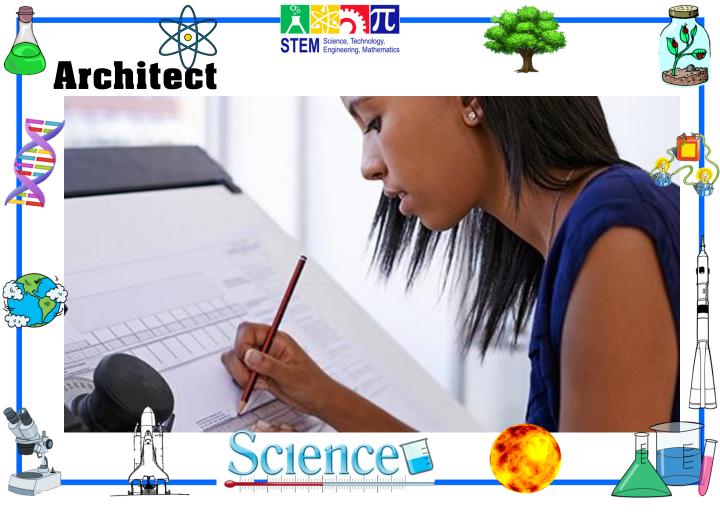
study animals and their They interactions with ecosystems, their characteristics, physical diets, behaviors, and the impacts humans have on them.

They study all kinds of animals, both their natural habitats and in in captivity











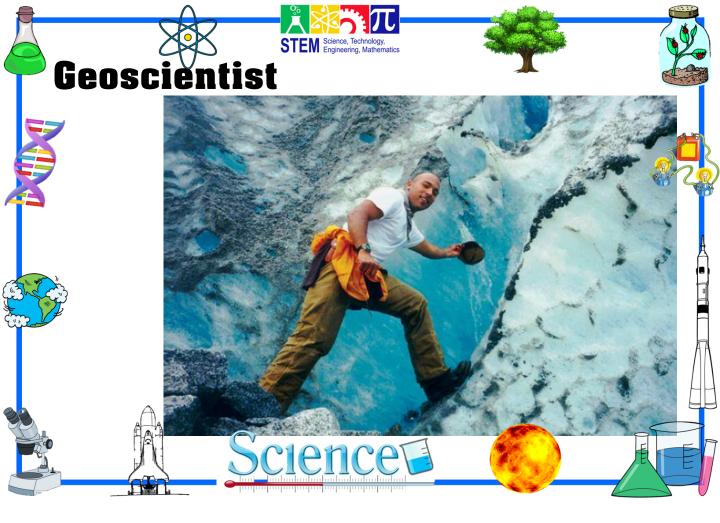
Architects design all kinds of buildings. They design schools, skyscrapers, hospitals, hotels, churches, train stations and houses.

EM Science, Technolog Engineering, Mathe

Before constructing a building, an architect draws a plan. Sometimes they build cardboard or plastic models of the building.

The architect will closely supervise the construction to make sure that it is built according to the plans.





Geoscientist

A geoscientist studies the composition, structure and other physical aspects of the Earth and other planets.

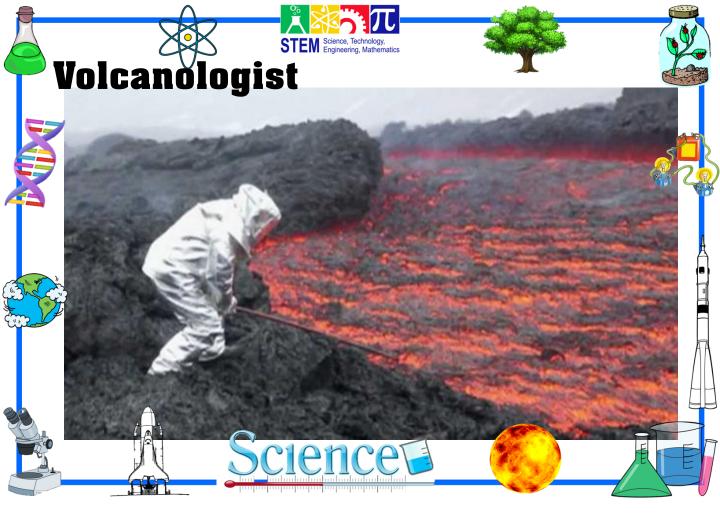
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EM Science, Technology Engineering, Mather

They may search for natural resources like groundwater, metals, and petroleum, or help environmental scientists clean up and preserve the environment.

They mostly work in the field and are employed by a wide range of energy and environmental organisations.





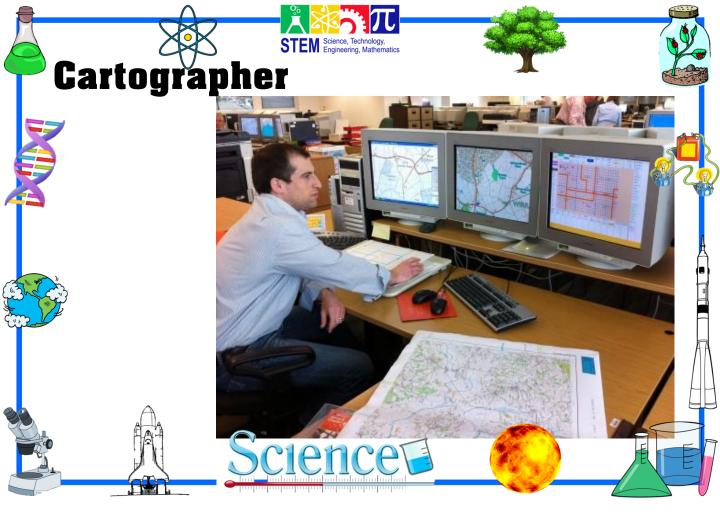
Volcanologist

The goal of a volcanologist is to understand how and why volcanoes erupt, how to predict future eruptions, their impacts on the history of our earth, and how they may affect humans and their environment.

cience

Most of their work is done by either studying dead or dormant volcanoes, or by keeping track of active or reawakening volcanoes. They publish their findings in an easy to understand way for the general public.





Cartographer

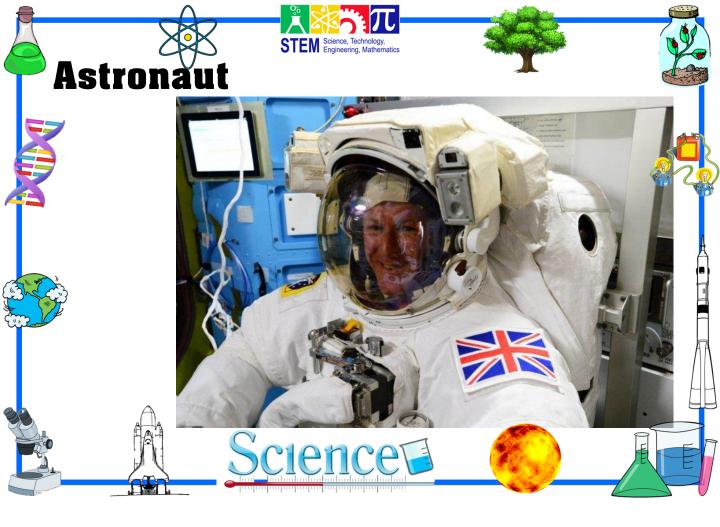
Cartographers measure, analyze, and interpret geographical information to create maps and charts for political, cultural and educational purposes.

EM Science, Technology Engineering, Mathen

They collect and analyze geographical data, such as population density, demographic characteristics, and annual precipitation patterns.

They examine data from ground surveys, reports, aerial photographs, and satellite images to prepare thematic maps for different purposes.





Astronaut

Astronauts are trained to pilot and travel in a spacecraft, work in space, and do activities related to human space exploration.

STEM Science, Technology, Engineering, Mathem

Science

The job is very varied, they might pilot the space craft, launch and maintain satellites or carry out experiments – these are mostly connected to extended human space flight. They have a wide variety of backgrounds and specialisms.



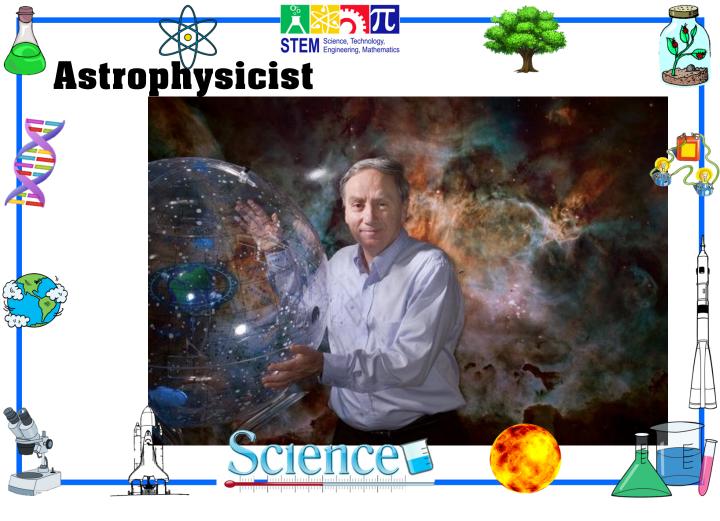


STEM Science, Technology Engineering, Mather Palaeontologist

Palaeontologists study the fossilised remains of all living things, they are interested in knowing the history of organic life on earth.

They study fossils to put together pieces of history that made up the earth and life on it. In trying to understand extinction events of the past, they hope to apply their conclusions to extinction today as environments and global climates change.





Astrophysicist

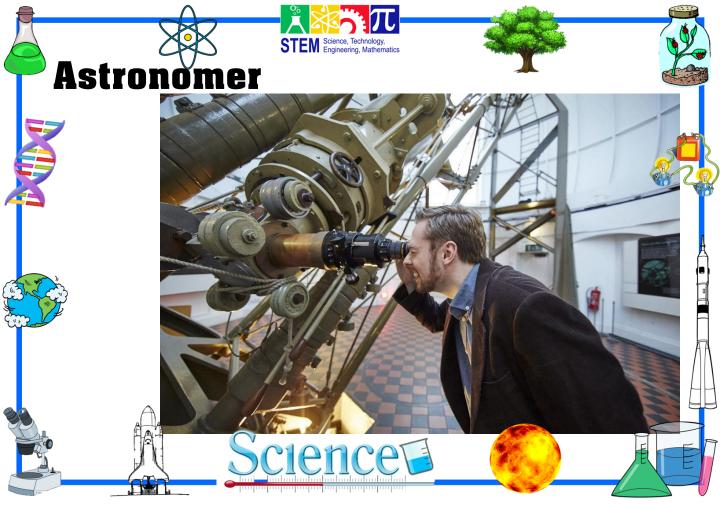
Astrophysicists study and interpret astronomical phenomena to increase knowledge of how the universe works.

STEM Science, Technology, Engineering, Mathem

Science

They study and make theories about a range of topics including; how stars are made and how they interact, how galaxies form and evolve, the origin of cosmic rays and general relativity.





Astronomer

Astronomers study planets and the sun in our own solar system, as well as other stars, solar systems, galaxies, and the whole universe

STEM Science, Technology, Engineering, Mathematic

There are several specialisations such as; solar astronomy, planetary astronomy, or the study of stars and/or galaxy formations.

Astronomers use telescopes either on Earth or in space to collect data from distant objects and test theories or answer questions.







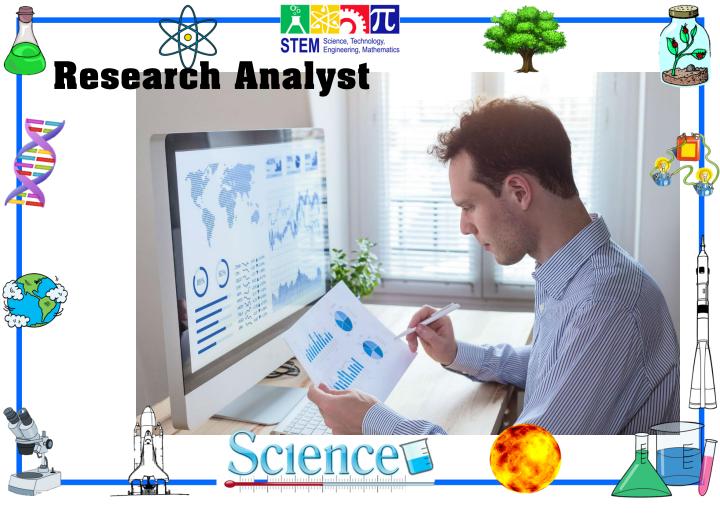
Mechanics maintain, repair, and service mechanical equipment – which often means dismantling and rebuilding it.

STEM Science, Technology, Engineering, Mathematic

They work in any field that relies on mechanical equipment and it is there job to diagnose problems and repair them.

They often work in difficult conditions fixing dangerous machines.



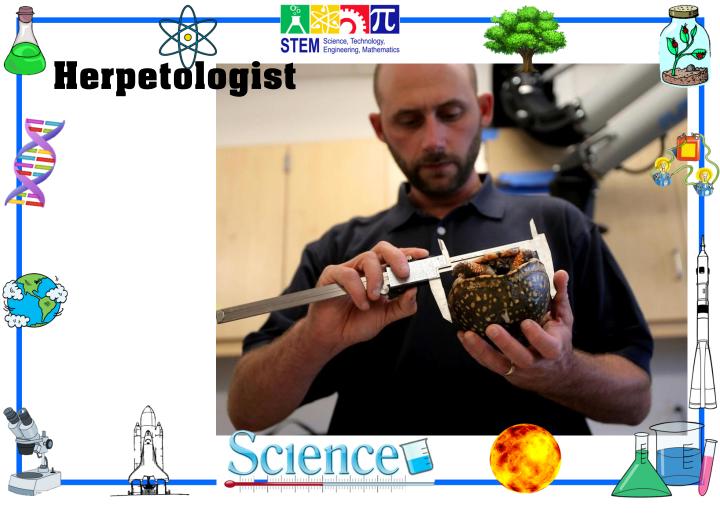


Research Analyst

Research Analysts study research from a wide range of scientists and look for trends and patterns emerging from that research.

They then publish their findings which helps scientists gather data from beyond their initial study. They also help investors and the media make sense of scientific research.



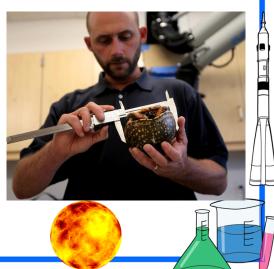


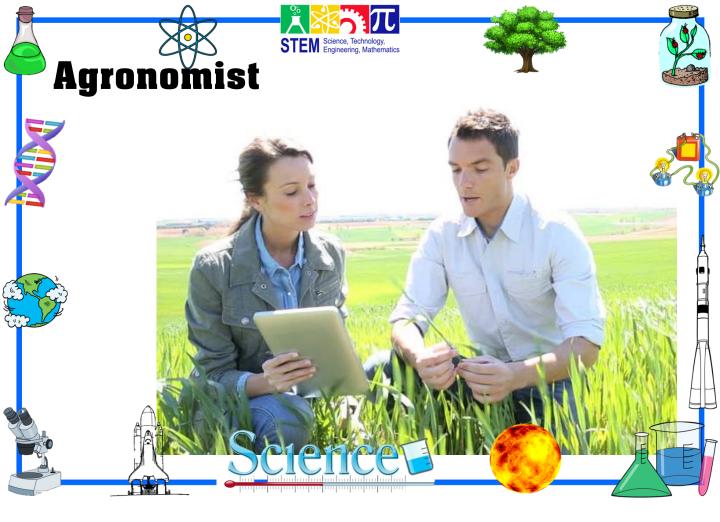
Herpetologist

A herpetologist is a zoologist who studies reptiles and amphibians such as frogs and salamanders. Many herpetologists focus on conservation of these species.

STEM Science, Technology, Engineering, Mathematic

They study animals in the wild, where they assess potential threats from pollution, invasive species, disease, and other factors. They study their behavior, development, genetics, and distributions to understand their ecological niches and the challenges they face.





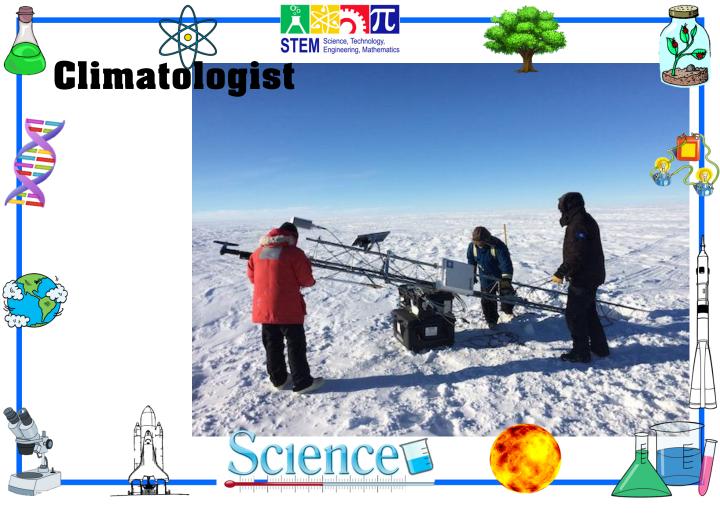
Agronomist

Agronomists are scientists who look for ways to increase soil productivity, in other words, to grow more food on the same amount of soil.

clence

STEM Science, Technology, Engineering, Mathem

They conduct experiments to develop the best methods for increasing the quality and production of crops. Based on their experiments, agronomists work with farmers to help them grow the best possible crops, such as corn, cotton, soybeans, and wheat.

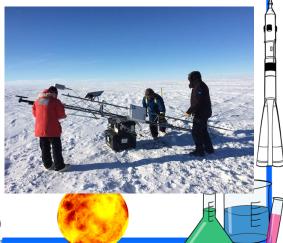


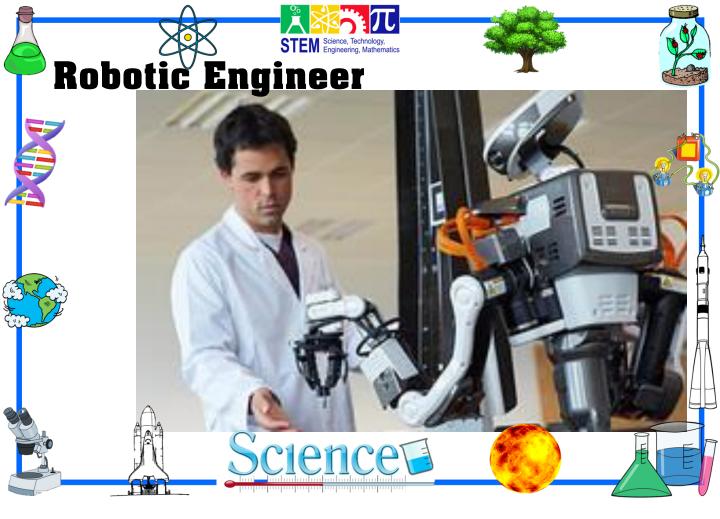
Climatologist

Climatologists study long-term trends in the Earth's climate. They use data from the past to predict what might happen to the climate in the future.

EM Science, Technology, Engineering, Mathem

They collect and analyze data from sources such as ice cores, soil, water, air, and even plant life to find patterns in weather and learn how those patterns affect the Earth and its inhabitants. Research might be used for agricultural planning, building design, and weather forecasting.



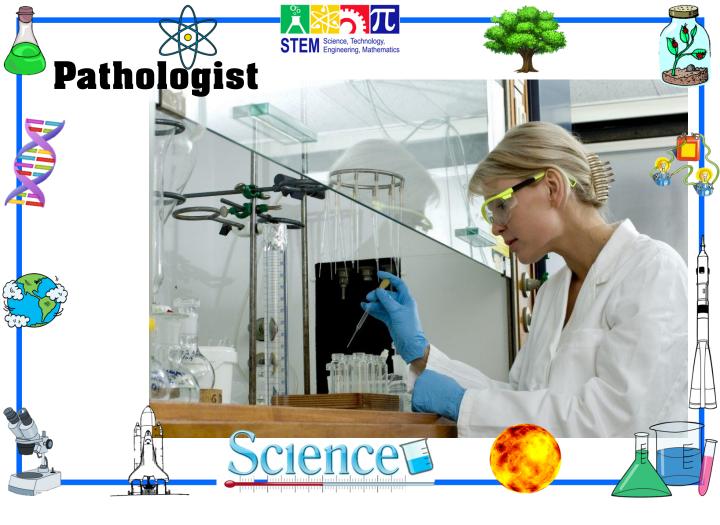


Robotic Engineer Robotic Engineer

Robotics engineers are behind-the-scenes designers, who are responsible for creating robots and robotic systems that are able to perform duties that humans are either unable or prefer not to complete.

Through their creations, a robotics engineer helps to make jobs safer, easier, and more efficient, particularly in the manufacturing industry.





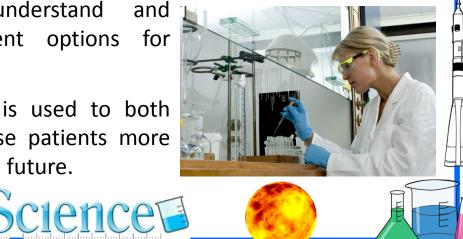
Pathologist

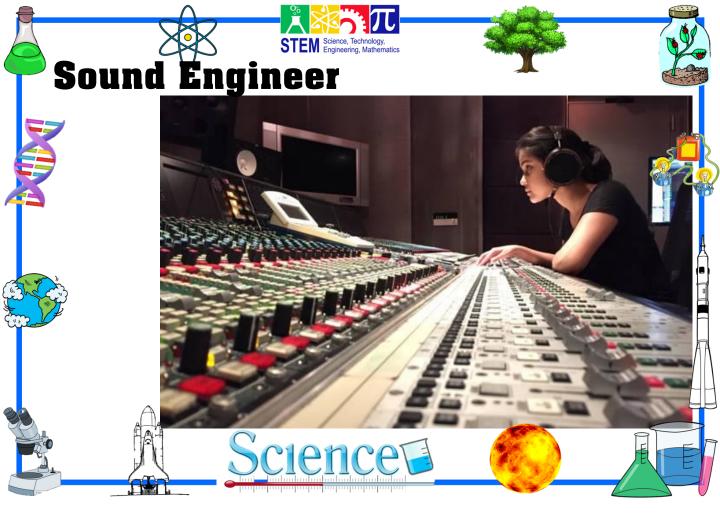
A pathologist is a specialist doctor who studies the causes, nature, and effects of disease.

STEM Science, Technology, Engineering, Mathem

They use disease models, clinical studies, and other experimental programs to understand and improve treatment options for various diseases.

This information is used to both treat and diagnose patients more aggressively in the future.





Sound Engineer

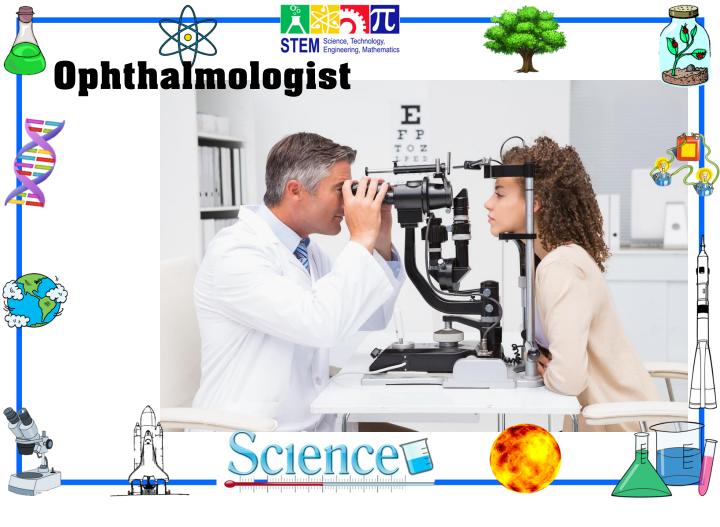
A sound, or audio, engineer works with the mechanics of recording, mixing, and reproducing sound.

EM Science, Technology Engineering, Mather

Sound engineers assist record producers and musicians to help give their work the sound they are hoping to achieve. They piece together parts of a song, use auto-tune on a recording, and/or add synthetic sounds to a track. They also work at live concerts to enhance the sound.







Ophthalmologist

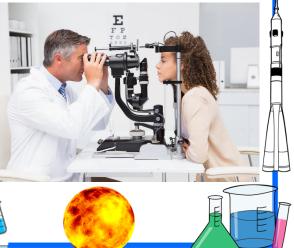
Ophthalmologists are doctors who specialise in eye and vision care.

STEM Science, Technology Engineering, Mathem

They perform eye examinations, diagnose and treat disease, prescribe medications and perform eye surgery.

They also write prescriptions for glasses and contact lenses.







Nutritionist

A nutritionist is an expert in the field of food and nutrition. They advise people on what to eat in order to lead a healthy lifestyle or achieve a specific health-related goal.

Science

STEM Science, Technolog Engineering, Mathe

Some provide customized information for specific individuals such as diabetics. Others work with groups of people who have similar needs such as weight loss groups. They work in many settings, including hospitals, cafeterias, nursing homes, and schools



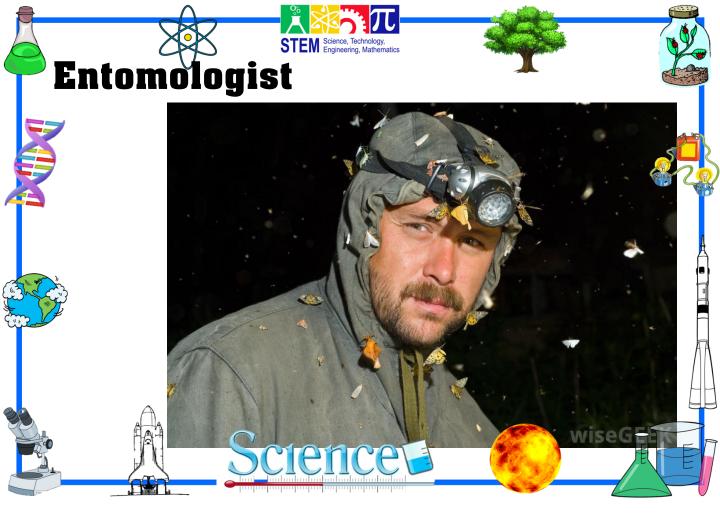


Ecologists study the relationships between living things and their environment. Ecologists often have to study and explain how human actions affect other living things and their environment.

STEM Science, Technology Engineering, Mather

Ecologists can be teachers or research scientists. They can work for environmental organizations like The Nature Conservancy or for the government. They spend a lot of time working outdoors in different environments.





Entomologist

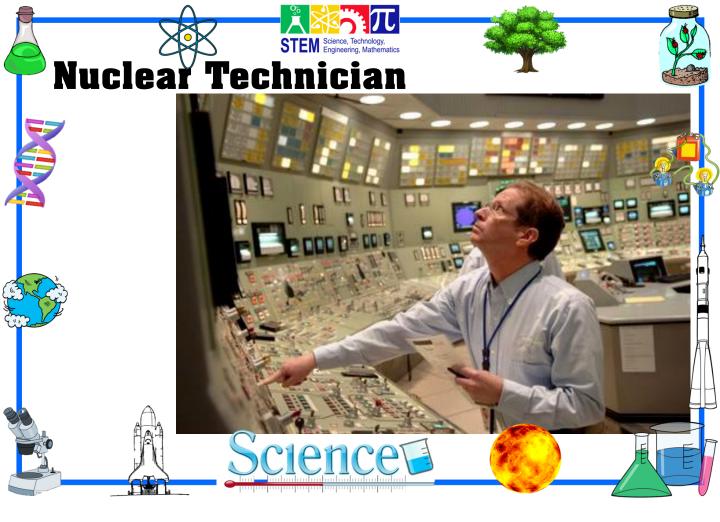
Entomologists study insects, such as ants, bees, and beetles. They also study arthropods, a related group of species that includes spiders and scorpions.

EM Science, Technology, Engineering, Mathem

Most entomologists focus on a specific type of insect. For instance, an entomologist who focuses on bees is called an apiologist, one who studies beetles is called a coleopterist and one who studies butterflies is known as a lepidopterist.







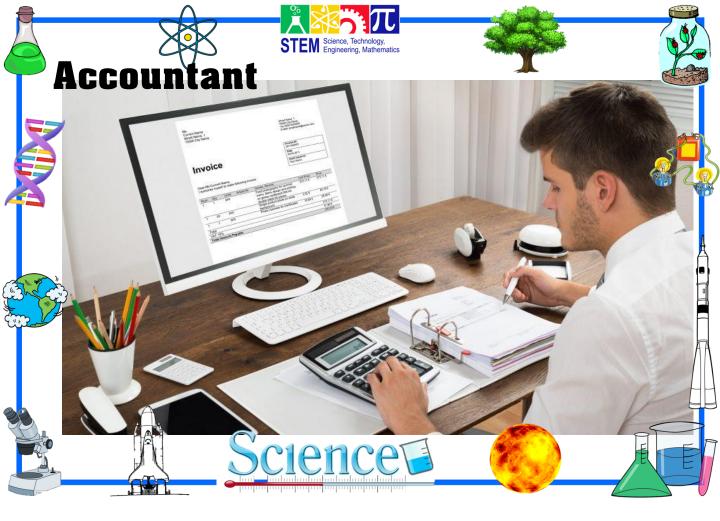
STEM Science, Technology, Engineering, Mathematics

Nuclear technicians use instruments, such as geiger counters, to monitor radiation levels.

They typically work in nuclear energy production or assist physicists, engineers, and other professionals in nuclear research.

They test, maintain and repair nuclear systems and monitor equipment for safety.





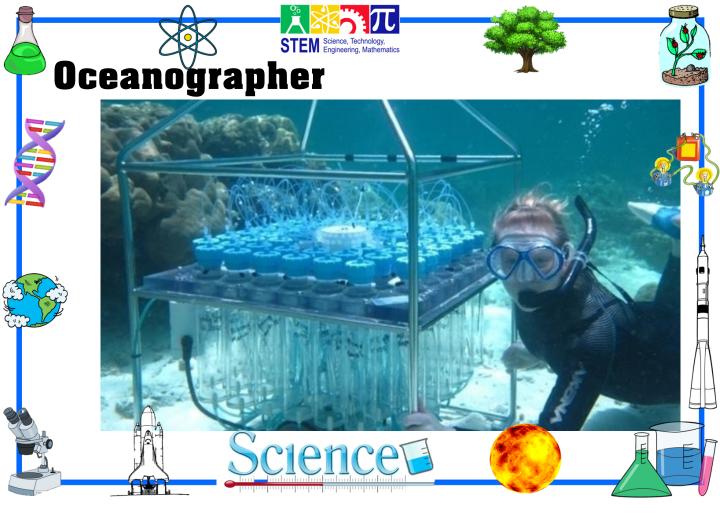
Accountant

Accountants prepare and examine financial records for companies and individuals. They make sure that records are accurate and that taxes are paid properly and on time.

STEM Science, Technology, Engineering, Mathematic

Accountants perform overviews of the financial operations of a business in order to help it run efficiently.

They also provide the same services to individuals, helping them create plans of action for improved financial well-being.



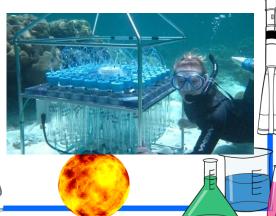
Oceanographer

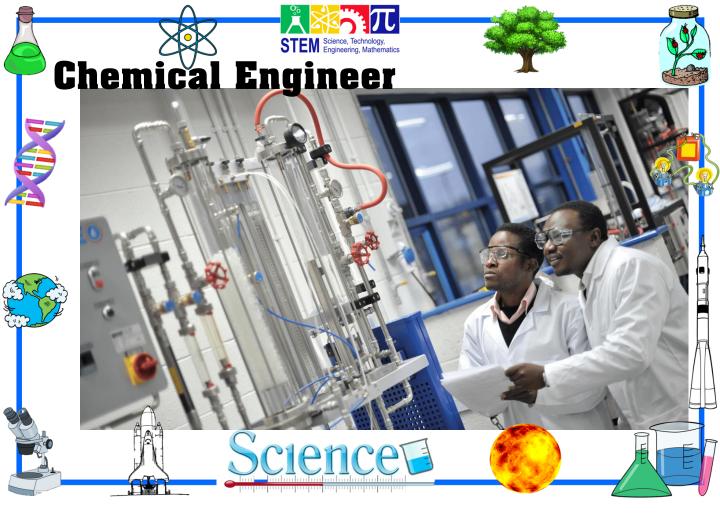
Oceanographers study a wide range of topics, including marine life and ecosystems, ocean circulation, plate tectonics and the geology of the seafloor, and the chemical and physical properties of the ocean.

STEM Science, Technology Engineering, Mathem

They study ocean life, geology, composition of seawater, effects of climate change and pollution among others.

All of these fields are linked so oceanographers must have an understanding of all sciences to understand ocean processes.





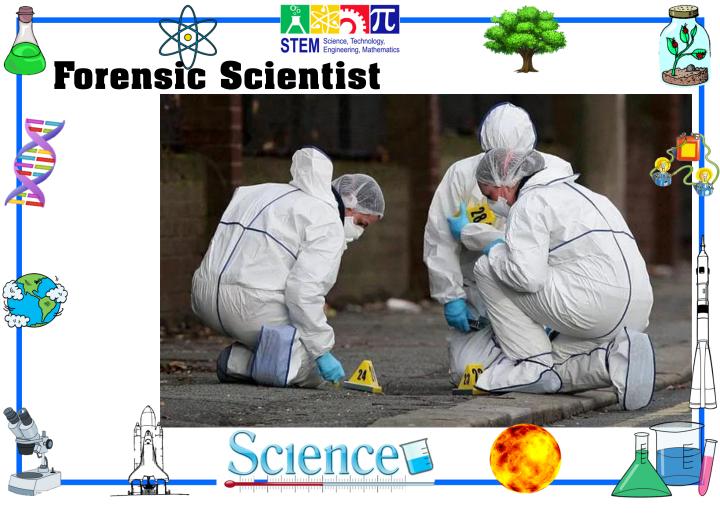
Chemical Engineer

Chemical engineers are behind the creation and manufacture of a wide range of products, such as plastics, paper, dyes, medicines, polymers, fertilizers, petrochemicals, and even many foods.

They often work in manufacturing, designing machines and plants. It is their job to ensure that the processes run smoothly.

Often called "universal engineers" because their knowledge base and abilities are so broad.





Forensic Scientist

Forensic scientists help investigate crimes by collecting and analyzing physical evidence. Most specialize in either crime scene investigation or laboratory analysis.

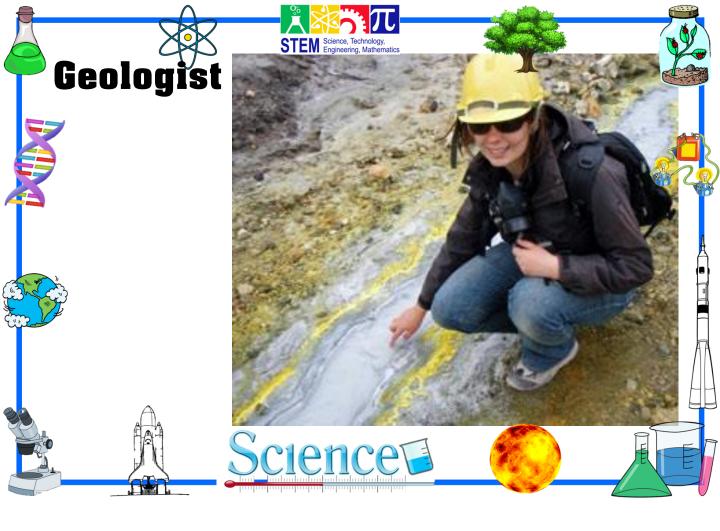
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They carefully reconstruct crime scenes by studying evidence gathered by investigators and conduct scientific tests on physical evidence.

They write detailed reports and often present complex evidence in

court.



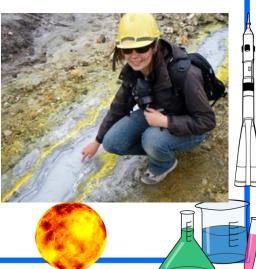


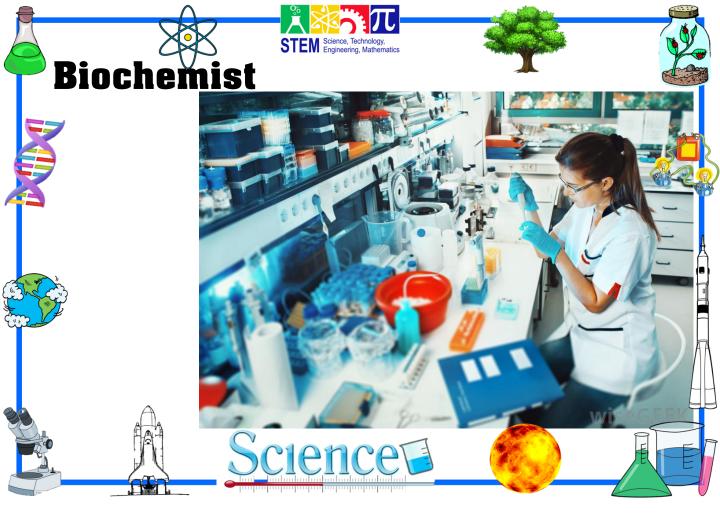


Geologists study earth processes such as earthquakes, landslides, floods, and volcanic eruptions to survey land and draw up safe building plans.

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When they investigate earth materials, not only do they investigate metals and minerals, but they also look into oil, natural gas, water and methods to extract these. They also study changes of the Earth over time, such as climate change and land formation.





Biochemist

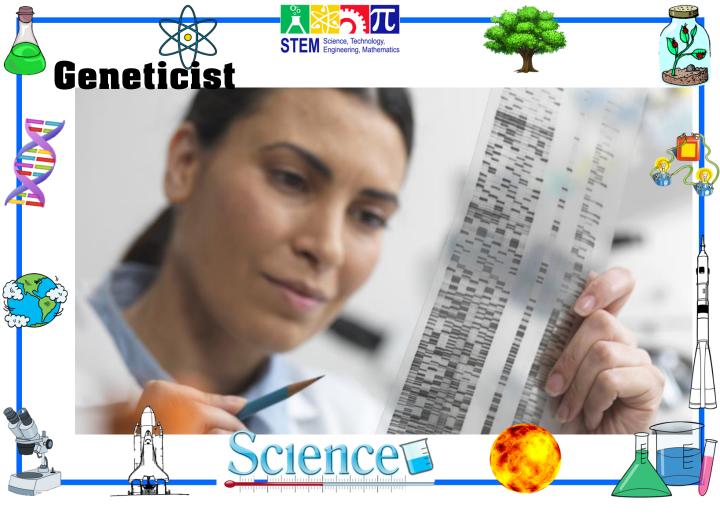
Biochemists study the chemical and physical principles of living things and of biological processes such as cell development, growth, and heredity.

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Biochemists play a key role in developing new medicines to fight diseases such as cancer. They study the chemical and physical principles of living things and of biological processes, such as cell development, growth, heredity, and disease.







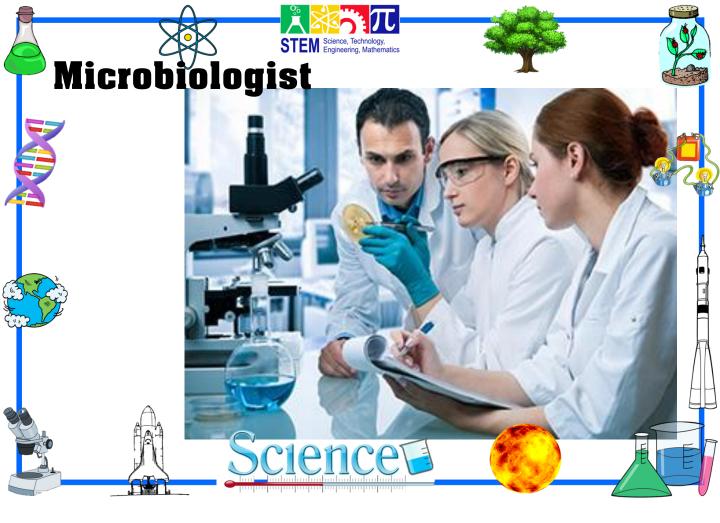


Geneticists study genes from different organisms, including how they are inherited, mutated, activated, or inactivated. They often study the role that genes play in disease and health.

Science

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They identify the genes responsible for specific traits or that cause specific conditions. They try to understand how these genes interact and whether certain conditions can be predicted.



Microbiologist

Microbiologists are scientists who study tiny microscopic organisms including bacteria, algae, and fungi.

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They study organisms that cause disease and environmental damage or are of industrial or agricultural interest. They also study the characteristics of nonliving pathogens, such as viruses and prions.





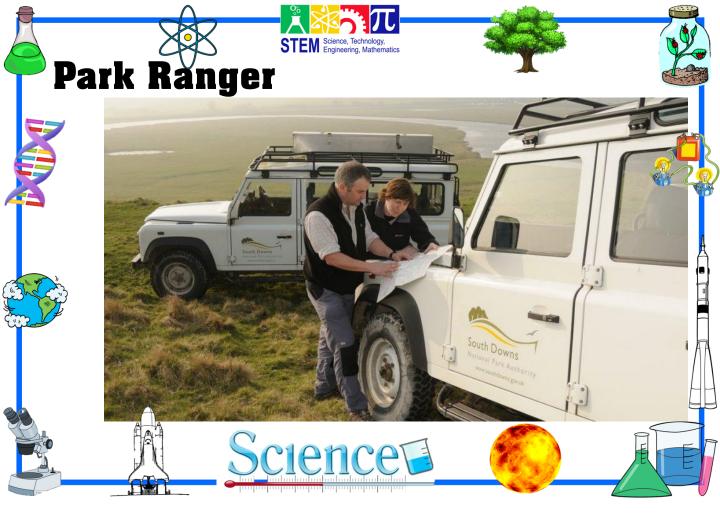
Wildlife Filmmaking

Wildlife filmmakers spend most of their time in remote parts of the world filming and photographing wild animals to help us better understand the world around us.

They often spend weeks or months in difficult conditions to film very rare animals so we can learn about their behaviour.

They have an important role in highlighting how human activity affects animals in the wild.







Park rangers work with other staff and volunteers to maintain footpaths, gates, stiles and bridges in parks across the UK. They are the eyes and ears of the national park authority as they are out and about in the parks most of the time.

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They provide a contact between visitors, local people and use their local knowledge to tell people what to see, where to go, and about the wildlife and history of the park

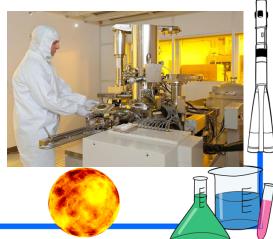




Nano Scientist

Nano scientists study the infinitely small – the atoms and sub-atomic particles that make up all matter in the universe. To give you an idea of the scale there are a million nanometres in a millimetre.

They study the properties of substances on this scale to create new types of materials for different uses. Possible developments could be mobile phones that never need to be charged or materials that can withstand a rocket's re-entry into the earth's atmosphere.





Physiotherapist

A physiotherapist is a health care professional who helps patients achieve maximum range of movement and physical ability, either by developing it in the first place or restoring it after loss of physical ability due to illness, injury or aging.

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They work in hospitals, with recovering patients, with babies and small children, to correct developmental problems, and with sports teams to keep athletes fit.





Psychiatrist

Psychiatrists are medical doctor who specialise in mental health, including substance use disorders. They assess both the mental and physical aspects of psychological problems.

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They treat a wide variety of mental disorders ranging from mild and temporary to severe and chronic. For example, depression, which is a mental disorder that involves intense feelings of sadness and lack of motivation, may be effectively treated through psychotherapy.





Psychologist

Psychologists work directly with those experiencing difficulties, such as mental health disorders including anxiety and depression.

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They help people to overcome relationship problems, eating disorders, learning problems, substance abuse, parenting issues, or to manage the effects of a chronic illness.





Physiologist

Physiologists study the anatomy of the human body. They are interested in how organs and systems work together and what effects outside agents have on the human body.

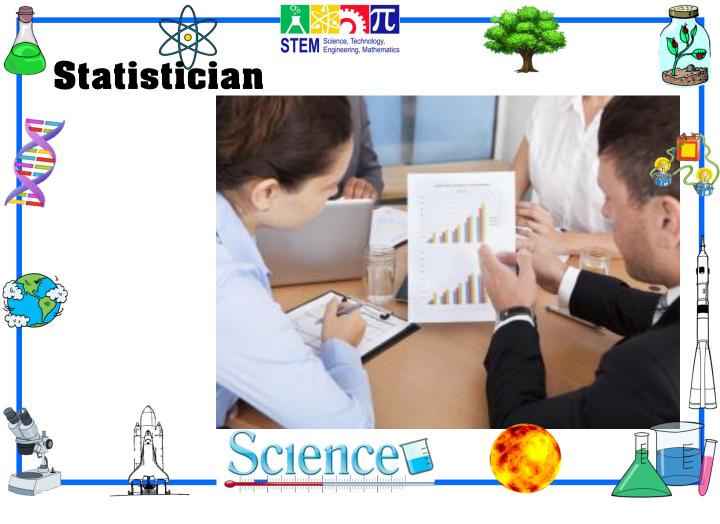
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They study how the human body responds in different situation such as during exercise. They then plan exercise regimes that will improve patients lives.

They mostly work as part of biomedical teams in hospitals of healthcare settings.





Statistician

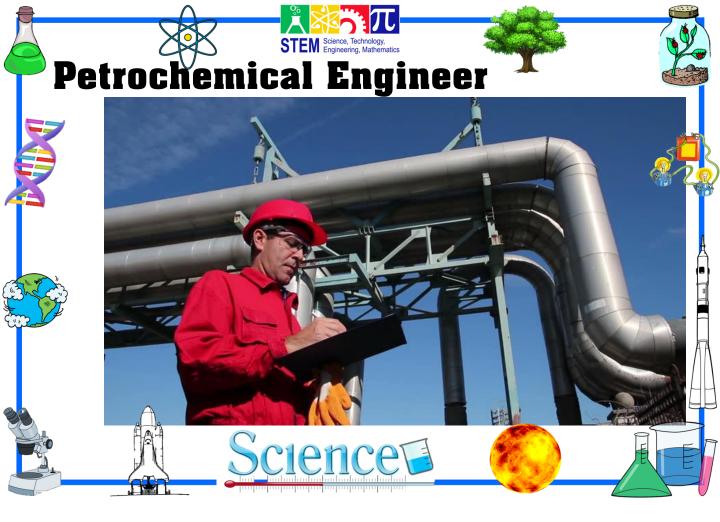
Statisticians use mathematical techniques to analyse and interpret data and draw conclusions. Although they work mostly in offices, they may travel in order to supervise surveys or gather data.

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They design surveys, experiments, and opinion polls to collect data. Some surveys, such as the national census, include data from nearly everyone. They analyse the data and present it in clear formats.





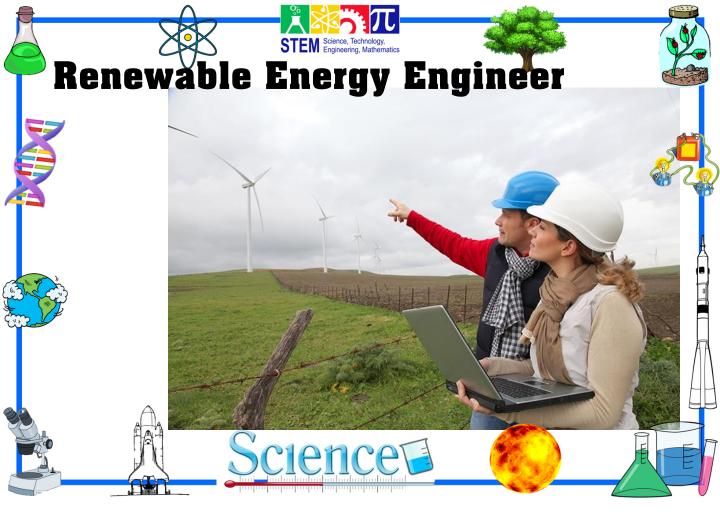


Petrochemical Engineer

Petrochemical engineers deal with operations involved in refining petroleum or crude oil by the use of advanced technology.

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They break down oil or natural gas into its base components and then reconstruct it as specific products such as auto fuel, plastics, polymers and other compounds found in many everyday products, from dishwasher-safe containers to artificial carpet fibers.



Renewable Energy Engineer

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Science

Renewable energy engineers are part of the growing sector of green STEM jobs that involve environmentally conscious energy production.

They maximise the energy potential of clean energy sources including wind, solar, geothermal and hydropower. Renewable energy engineers monitor and develop alternative energy outputs