Astrophysicist



MY SKILLS & INTERESTS

- Enjoy math and science;
- Have a good imagination;
- Work well on your own;
- Enjoy working with computers;
- Enjoy solving mysteries or problems;
- Enjoy learning about new things
- Do well in math and science, physics, chemistry, astronomy and electronics.

WHAT I DO

I study celestial objects like galaxies, stars and planets in order to understand what they are made of, what their surface features are and how they were formed. Astrophysicists spend most of their time in observatories, laboratories using instruments like telescopes, satellites, sensors and probes. They also spend time in their offices analysing the information gathered by these instruments. Theoretical astrophysicists also spend time forming theories about how objects in space are formed or structured. Astrophysicist's involved in observational astrophysics mostly spend time making observations with instruments. This may require travel to faraway locations. Astrophysicists work a lot with computer simulations and computer programming.

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Geoscientist



MY SKILLS & INTERESTS

- Like to collect rocks:
- Interested in earthquakes;
- Interested in what goes on inside the Earth;
- Like using computers;
- Enjoy the open air and four-wheel-drive travel;
- Like camping;
- Find it fun to play with maps and various devices;
- Enjoy solving mysteries;
- -Like physics, earth sciences, math and other science courses

WHAT

Geophysicists and Geologists study the terrain and geological activity and other physical features (e.g. gravity magnetic field, internal heat and energy) of Earth and other planets. They collect data and take measurements and they use the laws of physics to explore deep within a planet's interior and to examine a planet's surface and atmosphere. They also use their knowledge to search for minerals and petroleum. They often work in laboratories using data and imagery returned by space crafts. Planetary geologists often work in space science in conjunction with government groups such as NASA.

Students specializing in this field study topics such as astrobiology and remote sensing within geology programs.

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Astrobiologist



MY SKILLS & INTERESTS

- Enjoy doing experiments;
- Interested in how animals and plants function;
- Curious about whether there is other life in the universe;
- Work well on your own and within a team;
- Enjoy investigating mysteries or problems;
- Enjoy science, laboratory research and fieldwork and math.



Astrobiologists study life in the universe. They basically study how life began and evolved, they search for life elsewhere in the universe and they try to predict the future for life on Earth and beyond. Astrobiologists need to understand how many different kinds of science work together. These kinds of science may include biology microbiology, botany, physiology, zoology, chemistry, physics, geology, paleontology, and astronomy. They usually work in laboratories and use microscopes, computers, and other equipment. Some use plants and animals for experiments.

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Mathematician



MY SKILLS & INTERESTS

- Enjoy working with math and technology;
- Good at math:
- Good at reasoning and logic;
- Like to solve problems;
- Work well with a team;
- Keep working at a problem until you find a solution;
- Enjoy working with computers;



WHAT I DO

Mathematicians and statisticians use math to help solve scientific and engineering problems. Applied Mathematicians for example help to create new models of aerodynamic behaviour of a spacecraft. They use math rules and processes to solve scientific, engineering and business problems. These problems might include studying and designing computer models that help to create faster and higher aerospace vehicles and systems.

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Atmospheric Scientist



MY SKILLS & INTERESTS

- Read and understand charts with special symbols easily;
- Perform calculations quickly with great accuracy;
- Curious about your surroundings and what processes shape them;
- Patient when it comes to completing forms requiring detailed information
- Enjoy math (algebra, trigonometry, calculus); physics; meteorology; statistics; computer modelling and geography.



WHAT I DO

Meteorologists study the weather and climate. They assist air traffic control by making predictions about the weather. This is very important for launches of spacecraft.

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Information source: NASA

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Biologist



MY SKILLS & INTERESTS

- Enjoy science;
- Enjoy doing experiments;
- Interested in how animals and plants function;
- Work well on your own, work well with a team;
- Enjoy solving mysteries or problems; enjoy biology, chemistry, physics, biochemistry with laboratory research and fieldwork and math.



WHAT I DO

Biologists study living things and their relationship to their environment. Their research often focuses on how space environments affect living things, how to support life in space and how life began and changed over time. They usually work regular hours in laboratories and use microscopes, computers and other equipment. Some use plants and animals for experiments.

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Psychologist



MY SKILLS & INTERESTS

- Good listener:
- Enjoy doing research;
- Pay close attention to details;
- Work well on your own and with a team;
- Express yourself clearly when speaking and writing;
- Enjoy science (biology, psychology), math (statistics) and research methods.



Social scientists study how people behave and function in aerospace environments.

Astronauts working on long missions face stressful work conditions and a cramped living environment, so predicting where problems might arise and minimizing them is an important task.

STORIES THAT INSPIRE





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Information source: NASA

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Project manager



MY SKILLS & INTERESTS

- Manage your time well;
- Good at making decisions;
- Organized;
- Good at leading and persuading people;
- Get along well with others;
- Express yourself clearly when speaking;
- Good at inspiring or motivating others; enjoy science, Engineering or computer science;
- Enjoy math;
- Enjoy speech and leadership.



Project managers make sure a project runs according to schedule and budget, and achieves its goal. They lead a team of people, dividing tasks, making a planning, reviewing and assessing the project.

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Information source: NASA

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Chemical Engineer



MY SKILLS & INTERESTS

- good at math;
- creative; work detailed;
- like to solve problems;
- interested in how things work;
- like working with computers;
- good at working with a team;
- good at mathematics (algebra, geometry, trigonometry, precalculus, calculus);
- good at science (physics, biology, chemistry);
- enjoy engineering (thermodynamics, fluid mechanics);
- enjoy computer programming, good at English (writing).

STORIES THAT INSPIRE



WHAT I DO

Chemical Engineers use chemistry, engineering and physics to develop chemical products such as propulsion gases. When designing a new product, engineers first figure out what it needs to do. They then design and test the product. They also write reports on the product. Most Chemical Engineers work in office buildings or laboratories. Some must travel to different work sites.

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Information source: NASA

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Aerospace Engineer



MY SKILLS & INTERESTS

- Good at math:
- Good at working with your hands;
- Work detailed:
- Like to solve problems;
- Interested in how things work;
- Like working with computers;
- Like to take things apart and put them back together;
- Like mathematics (trigonometry, calculus), science (physics, chemistry).
- Computer programming and engineering (fluid dynamics, aerodynamics, thermodynamics, propulsion dynamics, mechanical).



Aerospace engineers design, develop, test and oversee the building of aircrafts, space crafts, propulsion systems and space flight mission paths.

When designing a new product, engineers first figure out what it needs to do. Then they design and test the parts, fit the parts together and test to see how successful it is.

They also write reports on the product. Most engineers work in office buildings or laboratories.

Some work outdoors at construction sites. Some must travel to different work sites.

STORIES THAT INSPIRE





INFORMATION





Information source: NASA

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Computer Engineer



MY SKILLS & INTERESTS

- Good at math:
- Creative:
- Work detailed:
- Like to solve problems;
- Interested in how things work;
- Working with computers;
- Good at working with a team;
- Like science (physics), engineering (computer electronics, electrical, mechanical, systems engineering), computers programming;
- Enjoy social studies (history) and english (writing).



WHAT I DO

Computer Engineers design and develop computers or robots. When designing a new product, engineers first figure out what it needs to do. They then design and test the parts, fit the parts together, and test to see how successful it is. They also write reports on the product. Most engineers work in office buildings or laboratories. Some must travel to different work sites.

STORIES THAT INSPIRE



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Information source: NASA

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Software engineer



MY SKILLS & INTERESTS

- Like logic puzzles and games;
- Patiently sit for hours while trying to figure something out;
- Enjoy working on a team;
- Identify the steps it will take to do or make something;
- Enjoy building things and seeing them operate;
- Enjoy play with numbers; enjoy math, science, statistics, English, computer programming and electronics.

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WHAT I DO

A software engineer writes the software that is used in automated systems. Automated systems help people do their jobs by providing them with information, giving them advice, performing repetitive tasks or in some cases, by controlling actual systems. The computer software contains the instructions that tell the system what to do. The first job of a Software Engineer is to understand the tasks that are going to be automated. Then, a Systems Analyst will decide how the automation system can assist or enhance the performing of those tasks. After that the Software Engineer, usually working in a team, will create programs to perform the functions desired by the users of the system. The Software Engineer will test the system to make sure it works the way it is supposed to work.

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Information source: NASA

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Mechanical Engineer



MY SKILLS & INTERESTS

- creative:
- work detailed:
- like to solve problems;
- interested in how things work;
- like working with computers;
- good at working with a team;
- good at mathematics:
- like science (physics, biology, chemistry);
- like engineering (thermodynamics, fluid mechanics),
- computer programming, social studies (history) and English (writing).



WHAT I DO

Mechanical engineers generally plan and design engines, machines and other equipment. They construct and test the parts of machines and make sure that the final product works properly. Among other things, they are also responsible for the scientific equipment and the wiring in aircraft and robots.

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Information source: NASA

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Electric engineer



MY SKILLS & INTERESTS

- good at math;
- work detailed:
- like to solve problems;
- interested in how things work;
- like working with computers;
- like to take things apart and put them back together;
- like science (physics, biology, chemistry);
- like computers and engineering (thermodynamics, fluid dynamics, mechanical, electronics).



WHAT I DO

Electronics Engineers are responsible for the design and production of electrical and electronics. Some of the parts that Electronics Engineers are responsible for are scientific instruments, motors, wiring in buildings, aircraft, radar, computers, robots and video equipment.





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Astronaut



MY SKILLS & INTERESTS

Many astronauts have advanced degrees. Interests in space-related focus, such as math, biology or some other form of science, engineering, or even psychology; must be in excellent physical shape; be able to train in simulation exercises. Initial and on-going training is extremely important.





WHAT I DO

An astronaut boards a spacecraft to fly on missions for very specific purposes. Astronauts work as part of a crew and therefore have specific responsibilities aboard the spacecraft. Astronauts fly to various destinations to conduct research and experiments. Before doing so however, they must pass certain physical requirements as well as comprehensive academic and mental exams and go through intense training to prepare for these space missions. Astronauts' focus and responsibilities change according to the mission they get and the role they will play as a part of the spacecraft's crew. Responsibilities range from a mission specialist to a commander and they include the safety of the spacecraft and the crew.

As missions always vary in focus and environment, astronauts must go through different training for each mission. For all missions however training involves certain preparation that ensures that astronauts will maintain appropriate physical shape.

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Information source: NASA

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