

STEM Careers Links by Topic

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Introduction

This list was created to help develop pupils' science capital by highlighting the range of STEM careers available to them. It is intended for use by teachers to **select careers linked to their current science topic and discuss these with pupils**, perhaps even having them take on the roles of these scientists in lessons. You could, for example, challenge students to be meteorologists in their seasons lessons, or horticulturalists in their lessons on plants. It would also be helpful to **add the names for these different types of scientists to your vocabulary lists, displays and knowledge organisers**.

Each career has a brief sentence about what it entails, although these are reductive and by no means encompass everything these scientists do. I strongly suggest downloading and using the **STEM Careers posters** created by Paul Tyler (link below) to present more information about these careers to your pupils in a child-friendly way.

Plants

Agricultural engineer (studies agricultural production and processing)

Arborist (cares for and manages trees)

Biochemist (investigates chemical processes that take place inside living things)

Botanist (studies plants)

Conservationist (works for the protection and preservation of living things and the environment)

Ecologist (studies interactions between living things and their environments)

Farmer (grows crops and raises animals for food)

Forester (works to deliver wood products to the market)

Gardener (creates and maintains gardens and green spaces)

Horticulturist (an expert in garden cultivation and management)

Irrigation engineer (creates and develops water systems)

Microbiologist (studies tiny living things)

Oceanographer (studies the physical and biological aspects of the oceans)

Paleobotanist (studies plant fossils)

Park ranger (maintains parks)

Plant geneticist (studies genetics in plants – many work on developing crops to be more robust or provide more nutrition)

Taxonomist (classifies animals and plants)

Tree surgeon (plants, maintains and manages trees)

Animals (not including humans!)

Agricultural engineer (studies agricultural production and processing)

Animal behaviourist (studies animal interactions)

Biochemist (investigates chemical processes that take place inside living things)

Conservationist (works for the protection and preservation of living things and the environment)

Farmer (grows crops and raises animals for food)

Geneticist (studies genes)

Herpetologist (studies amphibians and reptiles)

Ichthyologist (studies fish)

Lepidopterist (studies butterflies and moths)

Marine biologist (studies living things in oceans)

Mammalogist (studies mammals)

Microbiologist (studies tiny living things)

Nematologist (studies worms)

Ornithologist (studies birds)

Parasitologist (studies parasites)

Park ranger (maintains parks)

Phenologist (studies life cycles)

Taxonomist (classifies animals and plants)

Veterinarian/Vet (looks after unwell animals)

Wildlife filmmaker (creates films and documentaries about wildlife)

Wildlife photographer (takes pictures of animals and plants)

Zoologist (studies animals)

Humans

Anaesthetist (a doctor whose role is to anaesthetise patients)

Biochemist (investigates chemical processes that take place inside living things)

Biomedical engineer (designs biomedical equipment, including artificial organs)

Cardiologist (a doctor specialising in the heart and circulatory system)

Dentist (looks after teeth and gums)

Doctor (works to keep people healthy and cure disease)

Dietician (develops nutrition advice to improve people's diets)

Exercise physiologist (a doctor who helps people improve their fitness)

Geneticist (studies genes)

Haematologist (studies blood and its diseases)

Midwife (helps with the delivery of babies)

Neurologist (a doctor specialising in the brain and nervous system)

Nurse (cares for patients and has a broad spectrum of responsibilities)

Nutritionist (studies nutrition in food and how it affects our bodies)

Oncologist (a doctor specialising in cancer treatment)

Ophthalmologist (a doctor specialising in vision and eye health)

Optician (a doctor specialising in vision and eye health)

Orthodontist (a doctor who looks after people's teeth and gums)

Paediatrician (a doctor specialising in children's medicine)

Pathologist (a doctor who specialises in body fluids and tissues)

Pharmacist (dispenses medicines and gives advice on medicines)

Pharmacologist (studies the effects of drugs and other chemicals)

Physiologist (a scientist who studies how plants and animals function)

Physiotherapist (helps people affected by illness, injury or disability through movement and exercise)

Podiatrist (a doctor specialising in feet and the way people walk)

Proctologist (a doctor specialising in the colon, rectum and anus)

Psychiatrist (a doctor who specialises in mental health)

Psychologist (a doctor who studies mental processes and human behaviour)

Sport scientist (works with sportspeople to help them achieve the best possible performance)

Obstetrician (a doctor who specialises in pregnancy and childbirth)

Toxicologist (studies the affects of chemicals on living things)

Urologist (a doctor specialising in the urinary system)

Materials

Architect (designs buildings)

Biochemist (investigates chemical processes that take place inside living things)

Builder (builds structures)

Chemical engineer (solves problems involving chemicals)

Chemist (studies chemistry. Can focus on a broad range of disciplines within chemistry)

Geologist (studies the Earth and what it is made of, including rocks)

Materials scientist (researches structures and properties of materials)

Mechanical engineer (designs, analyses and manufactures mechanical systems)

Nanoscientist (studies incredibly small things, such as atoms)

Seasonal Changes (including weather)

Agricultural engineer (studies agricultural production and processing)

Climatologist (studies climate patterns)

Horticulturist (an expert in garden cultivation and management)

Meteorologist (studies the atmosphere and weather)

Park ranger (maintains parks)

Rocks, Fossils & Soils

Agricultural engineer (studies agricultural production and processing)

Agronomist (studies soil)

Archaeologist (studies history using artefacts)

Architect (designs buildings)

Builder (builds structures)

Crystallographer (studies the structures and properties of crystals)

Geologist (studies the Earth and what it is made of, including rocks)

Palaeobotanist (studies plant fossils)

Palaeontologist (studies fossils)

Seismologist (studies earthquakes)

Volcanologist (studies volcanoes)

Light

Architect (designs buildings)

Astronomer (studies space)

Astrophysicist (studies the physics of space and objects in space)

Ophthalmologist (a doctor specialising in vision and eye health)

Optician (a doctor specialising in vision and eye health)

Forces

Aeronautical engineer (designs, develops, manufactures and maintains aircraft)

Architect (designs buildings)

Astronautical engineer (develops spacecraft)

Astronomer (studies space)

Astrophysicist (studies the physics of space and objects in space)

Builder (builds structures)

Mechanical engineer (designs, analyses and manufactures mechanical systems)

Physicist (studies physics)

Pilot (pilots planes)

Renewable energy engineer (works on environmentally-conscious energy production)

Seismologist (studies earthquakes)

Sound

Audiologist (studies sound and its properties)

Audio technician (responsible for using sound recording equipment)

Physicist (studies physics)

Sound engineer (deals with sound for broadcasts or musical performances)

Electricity

Electrical engineer (works with equipment that uses electricity)

Electrician (installs and maintains electrical equipment)

Physicist (studies physics)

Renewable energy engineer (works on environmentally conscious energy production)

Space

Astronaut (travels to space to carry out research)

Astronautical engineer (develops spacecraft)

Astronomer (studies space)

Astrophysicist (studies the physics of space and objects in space)

Physicist (studies physics)

Earth Science & the Environment

Agricultural engineer (studies agricultural production and processing)

Agronomist (studies soil)

Archaeologist (studies history using artefacts)

Meteorologist (studies the atmosphere and weather)

Conservationist (works for the protection and preservation of living things and the environment)

Ecologist (studies interactions between living things and their environments)

Geologist (studies the Earth and what it is made of, including rocks)

Geophysicist (studies processes that change and shape the Earth)

Horticulturist (an expert in garden cultivation and management)

Marine biologist (studies living things in oceans)

Meteorologist (studies the atmosphere and weather)

Oceanographer (studies the physical and biological aspects of the oceans)

Park ranger (maintains parks)

Renewable energy engineer (works on environmentally conscious energy production)

Seismologist (studies earthquakes)

Surveyor (examines the condition of land and buildings)

Volcanologist (studies volcanoes)

Evolution & inheritance

Archaeologist (studies history using artefacts)

Geneticist (studies genes)

Geologist (studies the Earth and what it is made of, including rocks)

Oceanographer (studies the physical and biological aspects of the oceans)

Paleobotanist (studies plant fossils)

Paleontologist (studies fossils)

General Science Careers

Builder (builds structures)

Forensic scientist (analyses evidence at crime scenes)

Mechanic (repairs and maintains machinery)

Nanoscientist (studies incredibly small things, such as atoms)

Physicist (studies physics)

Research analyst (analyses research)

Research scientist (carries out research in their particular field)

Science communicator (informs others about scientific research and developments in an accessible way)

Science teacher (teaches others about science)

Computer science & big data

Computer hardware engineer (researches, designs, develops and tests computer hardware)

Computer scientist (studies computers and their use)

Data analyst (analyses data to come to conclusions)

Games designer (creates computer games)

Research analyst (analyses research)

Software developer (creates and develops software for computers)

Web developer (a programmer who specialises in the internet)

Geography

Cartographer (creates maps)

Climatologist (studies climate patterns)

Demographer (studies statistics relating to human populations)

Ecologist (studies interactions between living things and their environments)

Geophysicist (studies processes that change and shape the Earth)

Irrigation engineer (creates and develops water systems)

Oceanographer (studies the physical and biological aspects of the oceans)

Seismologist (studies earthquakes)

Surveyor (examines the condition of land and buildings)

Urban planner (works on the development and design of land use)

Engineering

Aeronautical engineer (designs, develops, manufactures and maintains aircraft)

Agricultural engineer (studies agricultural production and processing)

Astronautical engineer (develops spacecraft)

Automotive engineer (works on the design and development of automobiles)

Biomedical engineer (designs biomedical equipment, including artificial organs)

Chemical engineer (solves problems involving chemicals)

Civil engineer (designs and maintains roads, dams, bridges and other similar structures)

Electrical engineer (works with equipment that uses electricity)

Mechanical engineer (designs, analyses and manufactures mechanical systems)

Renewable energy engineer (works on environmentally-conscious energy production)

Robotic engineer (designs, develops and maintains robots)

Sound engineer (deals with sound for broadcasts or musical performances)

Maths

Accountant (manages financial accounts for individuals and businesses)

Actuary (analyses statistics and applies findings to insurance quotes)

Demographer (studies statistics relating to human populations)

Financial analyst (looks at business finances to make investment decisions)

Statistician (analyses statistics)

Further Support

An introduction to science capital:

<https://www.youtube.com/watch?v=A0t70bwPD6Y>

STEM Careers Posters by Paul Tyler (@Glasgow):

<https://www.tes.com/teaching-resource/stem-careers-11819394>

STEM Ambassador Support:

<https://www.stem.org.uk/stem-ambassadors>

Spotted something we've missed? Get in touch at k-horan@outlook.com

