



The Learning Program



CAREER CURIOSITY & INDUSTRY INSIGHTS

**Careers in science  
Jobs that save  
the world!**

# Breakthroughs in science

## The future of the planet depends on you!

SCIENCE DEFINES AND SHAPES THE WORLD - AND THERE'S A CAREER IN SCIENCE OUT THERE FOR YOU!

Picture the polar bear and her cub clinging to a dwindling iceberg as the world slowly heats up. Gaze at photographs from the James Webb telescope, capturing scenes at a distance of 13.6 billion light years away. Harness the power generated from acres of solar panels, wind farms and other renewable energy sources.

Science is breaking new grounds in medicine, nature and space every day, and you can be a part of it.

We hope this short guide will give you an overview of some of the many reasons for pursuing a career in science, inspire you to find the perfect role for the scientist in you, and show you how Tassomai can help get you there!



*"Better understanding of the natural world not only enhances all of us as human beings, but can also be harnessed for the better good, leading to improved health and quality of life"*

**Paul Nurse**, British Scientist

*"It all began with utter, indeed addictive, fascination with other forms of life. That led me through concern about what humanity is doing to the biology of the planet, to consideration of ecosystems and global cycles."*

**Thomas E. Lovejoy**, Ecologist and President of the Amazon Biodiversity Center



# ACE YOUR EXAMS AND BUILD THE FOUNDATIONS FOR A CAREER IN SCIENCE WITH TASSOMAI

Tassomai is an award-winning platform that works on the principle of little and often revision to embed learning and understanding. Feel motivated and confident for your studies with the adaptive learning app, the smarter way for you to learn and revise.

- Bite-sized multiple choice quizzes to reinforce learning
- Short explanation videos to deepen your understanding
- Daily goals and weekly challenges
- Track your knowledge progress journey using the Tassomai tree



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## Would a career in science suit you?

YOU'RE A CURIOUS, FEARLESS THINKER. YOU ASK QUESTIONS, AND YOU DON'T ALWAYS TAKE NO FOR AN ANSWER.

You want to know how the world works. And wonder why sometimes it doesn't!

You're an endless experimenter and constant learner.

Independent but collaborative.

A people person but also your own person.

You're happy to get a helping hand but don't need someone to hold you by the hand.

The world of science calls for those who are not just organised and analytical, but open-minded and imaginative: not mere box-tickers, but those who think outside the box. Someone with courage, grit, and resilience, who relishes a challenge and never gives up.

Most importantly, you don't take things at face value. You see beyond lazy "scientist stereotypes" of lab coats and clipboards, or TV's *The Big Theory*. You'll judge for yourself, thank you very much.

# A science degree opens doors

## WHY CHOOSE A SCIENCE DEGREE OR A CAREER IN SCIENCE?

It's worth putting out there, a science education doesn't limit you to a career in science. That may sound odd, but bear with us...

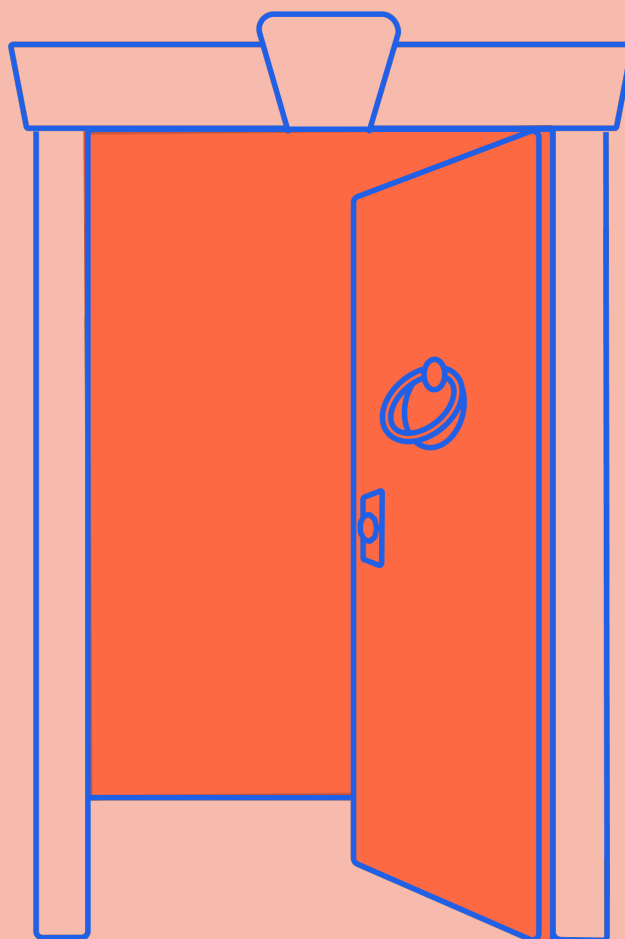
Science education is so highly respected that sectors such as finance and business are keen to recruit science graduates for their analytical and critical thinking skills. If you've done molecular biology to a high level, for example, a major accounting firm will be confident you'll master accountancy or tax law. So, rather than closing doors, an education in science opens many, many more.

### DID YOU KNOW...

Science lessons are incredibly hands-on, so if you like a good mix of theory and practical application, science may be for you.

Looking a few years ahead, starting salaries where science is involved also compare favourably to other disciplines. It's always worth looking up the latest figures but, at the time of writing, Higher Education Authority figures show that nine months after graduation, natural science, statistics, and maths graduates have one of the highest average salaries, earning between £31,000 - £33000. And the same survey showed that 69% of science graduates were in employment and 24% engaged in further study.

Employment opportunities abound, with generous graduate schemes, on-the-job training, apprenticeships, internships, and sponsorships.



### TOP TIP

Visit [talent.com](https://www.talent.com) to easily find details on average salaries and opportunities in your area.



# Science gets you out and about

FORGET THE NOTION THAT IT'S ALL LAB, LIBRARY, AND LECTURES - AN EDUCATION AND CAREER IN SCIENCE IS ALL ABOUT VARIETY.

Scientists can be found underground excavating with archaeologists, underwater as marine biologists, or peering up into our solar system and beyond. Whether it's the great outdoors or outer space, science takes you places.

*"I became a field biologist out of love for animals and a preference for a quiet life in the wilderness. The animals I have observed, such as tiger, mountain gorilla, and giant panda, not only satisfied a sense of wonder by their beauty and elegance, but also they enabled me to become an explorer both in the intellectual and physical realms."*

**George B. Schaller**

Wildlife Conservation International  
New York Zoological Society



# Jobs in science changing the world

YOU'LL HAVE HEARD OF DOCTORS, VETS, AND ASTRONOMERS, BUT WHAT ABOUT AGRONOMISTS, AUDIOLOGISTS, OR ACOUSTIC CONSULTANTS, OR CARTOGRAPHERS, CONSUMER SCIENTISTS, OR COSMETICS CHEMISTS?

Let's break down some of those lesser known, equally impactful jobs in science that change the world:

**Agronomists** help farmers with soil management and crop production

**Consumer scientists** explore why people use and buy products, giving advice to retailers to change the world of commerce

**Cartographers** collect and analyse the changing geography of an area to design and produce maps and plans of the world

**Cosmetics chemists** develop formulas to create makeup and toiletries

**Acoustic consultants** help manage noise in the home and workplace, which is especially important in the construction industry

**Audiologists** help those with hearing loss, tinnitus, and loss of balance

There are hundreds of jobs in science that are changing the world, many you won't have even heard of! Science is at the heart of agriculture, the food and drink industry, energy, oil, renewables, mining and resources, environment and nature, transport, defence, aviation and space, health and medicine, ICT, AI, and multimedia, as well as the creative industries.

**Want to make a difference? It's the discoveries of scientists that drive change.**

## DAILY NEWS

**Climate scientists chase Arctic storms**



**James Webb telescope pushes deeper back in time**

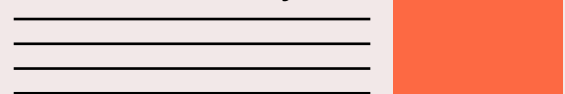


## TODAY MAIL

**Jurassic Park may be becoming reality**

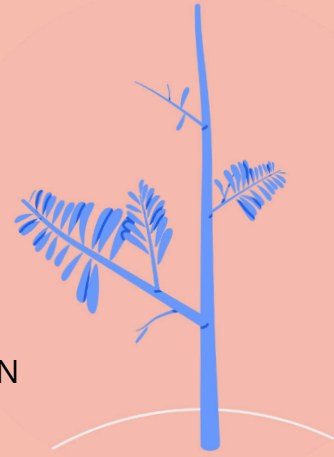


**Will Silicon Valley help us to live to 200 and beyond?**



Perhaps the role you'll play in science doesn't even exist yet!

# Growing industries



UK SCIENCE AND TECHNOLOGY SAW A RECORD £24.9 BILLION INVESTMENT IN 2021, AND 50 PER CENT MORE VACANCIES.

**Energy.** Investment in renewables such as sunlight, wind, water, and geothermal heat continues to grow, as the UK aims for 100 per cent renewable energy by 2035.

**Food.** There's the growth of plant-based food alternatives, which nearly doubled from 2008 to 2019, jumping from 6.7 to 13.1 per cent. The meat substitute market generated £4 billion in 2021, over double the amount for 2017. Vegan cosmetics sales grew 38% in the UK in 2019. The industry, some predict, will be worth \$20 billion by 2025.

**Entertainment.** The UK video games market grows from strength to strength. Worth more than video and music combined, and accounting for more than half of the UK's entire entertainment market, it is now worth over £2 billion annually! It employs a high proportion of physics graduates, often paying them more than their non-physics counterparts.



*"Heroes—Leonardo da Vinci, Charles Parsons, Ernest Rutherford, in particular—excited me because they were giants who straddled the present and the future, and changed the world."*

**David Gordon Wilson**

Professor of mechanical engineering at Massachusetts Institute of Technology (MIT)

*"Science is really only about two questions, one of which is 'how does it work?' and the other is 'how can I make it better?'"*

**Professor Dame Ottoline Leyser**

British plant biologist and Regius Professor of Botany at the University of Cambridge





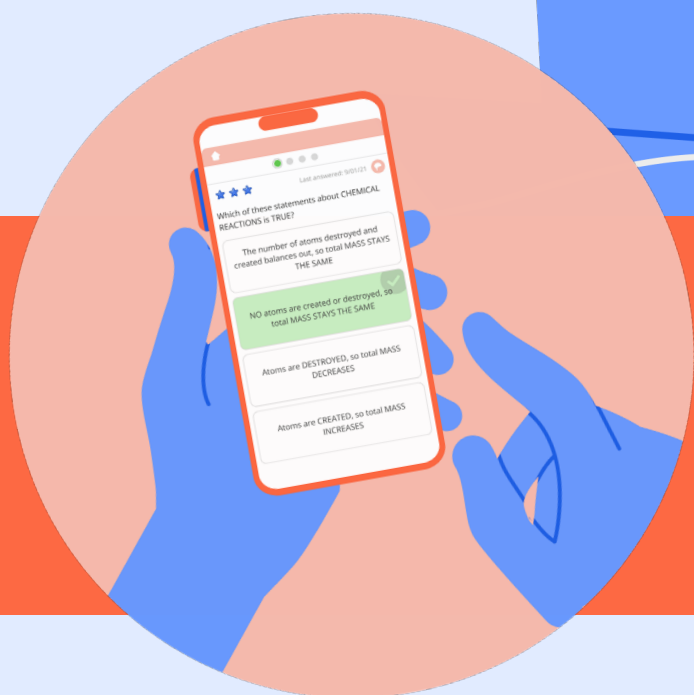
# Passion vs Skill

HAVE YOU GOT AN INDUSTRY YOU'RE PASSIONATE ABOUT BUT WORRIED YOU DON'T HAVE THE SKILL SET TO PURSUE A CAREER?

Don't let that put you off, in actual fact, some employers value personality and passion over skill. You train skills but you can't change a person's drive and attitude.

However, of course, having both of these will really make you stand out from the crowd in today's competitive market.

Studies have shown people learn more when they work for concentrated, short bursts every day, frequently switching between topics and returning to them at strategically timed intervals.

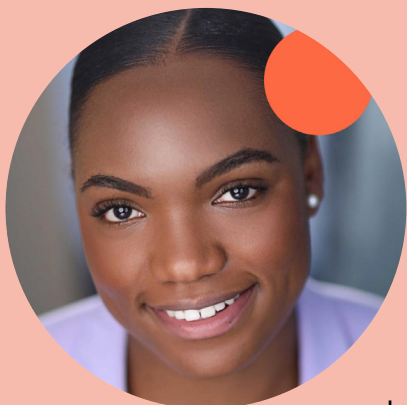


With Tassomai you can start developing these skills now at your own pace, through a combination of bite-size interactive quizzes, and short videos available on your phone.

Learn more at [tassomai.com/students](https://tassomai.com/students)

# What does a scientist look like?

## SCIENTISTS LOOK LIKE...



### Healthcare and life sciences consultant Kayisha Payne

BROMLEY HIGH SCHOOL-EDUCATED KAYISHA HAS HAD A RANGE OF ROLES AND ENJOYED WIDE RECOGNITION.

As Associate Scientist at AstraZeneca PLC, one of the world's largest pharmaceutical companies, she played a leading part in bringing a very popular product to market.

Recognised by the Financial Times as one of The Top 100 Most Influential BAME leaders in Diversity and Technology in 2018, she went on to receive the STEM Rising Star Award at The Black British Business Awards in 2019. In 2020 she was awarded one of the Top 50 Women in Engineering.

Passionate about diversity and inclusion, she founded BBSTEM, an organisation supporting the young black community, and campaigning for balance and representation of black individuals in STEM.

It wasn't all plain sailing, however. She once said, *"On AS Level results day, I thought my life was ending. I did terribly, absolutely terribly. And I thought, 'how am I going to get into uni to study chemical engineering and I got a D in chemistry?"*

She then had the wit to get creative with a compelling personal statement, winning herself a place to study chemical engineering at Aston University. Four years later, she was doing a Master of Science in Advanced Chemical Engineering at Imperial College London.

## Physicist and former musician Brian Cox

Brian Cox got a D in his maths A Level. He's now known and loved for his BBC "Wonders of..." series. His infectious enthusiasm and sharp insight shine a light on the world of particle physics and astronomy.

Educated in Oldham, Brian Cox said on The Jonathan Ross Show that he performed poorly on his maths A-level exam: *"I got a D. I was really not very good. I found out you need to practise."*

Now a lecturer at Manchester University, he sees his television work as a sideline. He said, *"I always say my students are probably a bit starstruck for the first few minutes, but then they are there to learn physics and they're extremely serious about the subject. It doesn't take long before they tell me: 'I can't read your writing!'"*



## The scientists behind the Oxford AstraZeneca vaccine, Professor Sarah Gilbert and Dr Catherine Green

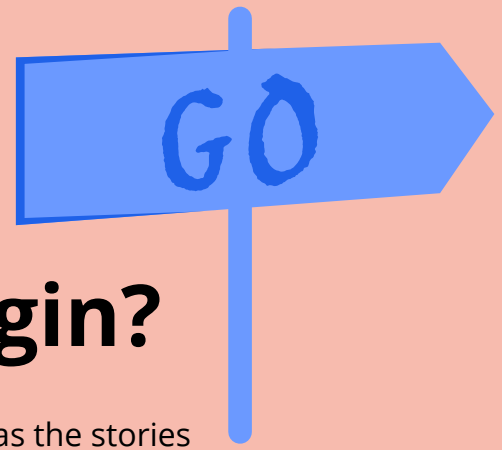
Science saves lives. And very often time is of the essence. While others were recovering from Christmas, on New Year's Day 2020 Oxford University Professor of Vaccinology Sarah Gilbert was reading an article about four people in China with a strange pneumonia. Within two weeks, she and her team had designed a vaccine against a pathogen that no one had ever heard of. Less than 12 months later, vaccination was rolled out across the world to save millions of lives from Covid-19.

Eighteen months. Half a billion doses in 178 countries. Countless lives saved. The rest is history.

They were commended with the heroes of the year prize at the 2021 GQ Men of the Year Awards, where they were introduced by the Duke of Sussex, who made a surprise virtual appearance at the event.

You may like to read their book *Vaxxers: A Pioneering Moment in Scientific History*, or other reading suggestions at the end of this guide.





# Where does your journey in science begin?

Scientists come from all backgrounds and walks of life. And, as the stories on the previous pages show, you don't have to be "top of the class" in science to be a scientist. If you're interested enough, you'll become good enough.

And your journey in science has already begun. It begins with early play, with bucket, spade, and sand, or Lego and Meccano. Or a walk in the woods with friends, or pond dipping at forest school.

Picasso once famously said, *"Every child is an artist. The problem is how to remain an artist once we grow up."* The same goes for scientists.

Perhaps you've always been interested in how things work, sharing a love of nature with your family. Or you've enjoyed "experiments" cooking at home, agonising about soggy bottoms or why that first cake didn't rise. Perhaps you've thought long and hard about how to train a pet. Or yourself. We are all our own experiments as we try to stay in shape, improving our diet and exercise accordingly.

All this leads to experiments in the school lab or a love of science on television, radio, podcast, YouTube, and TikTok.

## Identify possible pathways with the Tassomai Tree



A great place to start is identifying which areas of science you have a natural flair for. If you're a Tassomai user, your Tassomai tree is a great visual representation of your natural strengths per topic.

Do you have a branch that has more green leaves than the others? This could be a possible career pathway you might want to explore further.

See [tassomai.com/tree](https://tassomai.com/tree) to find out more.

*"To be perfectly honest, I don't see myself as a scientist (not in the present-day sense of the word, that is). I was shown while still quite young that the world was so much more than just what we see and hear and sense. Science was shown to be a means through which we could know of another greater world that lies just beneath the surface of our everyday lives."*

**Ian Shelton**, Astronomer



# The life scientific – a life less ordinary!

IF THE LIFE OF SCIENCE IS THE LIFE FOR YOU, IT'S NEVER TOO SOON TO TELL A TEACHER.

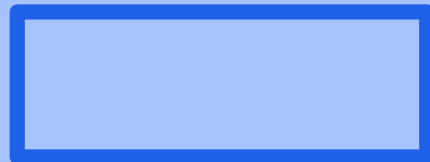
Teachers are many things, but they're not mind-readers. They'll want to know and help. They'll be full of good advice about your GCSEs, which A-Levels to take, and your many options even later, at university.

They may also have some book recommendations.

**We love the following books but, as with jobs in science, there are too many brilliant ones to mention:**

## Human Universe

Brian Cox



## A Short History of Nearly Everything

Bill Bryson

## The Body: A Guide for its Inhabitants

Bill Bryson

## Vaxxers: A Pioneering Moment in Scientific History

Catherine Green & Sarah Gilbert

## Homo Deus: A Brief History of Tomorrow

Yuval Noah Harari

## WE'D ALSO RECOMMEND KEEPING UP WITH SCIENCE IN THE NEWS.

The BBC and Guardian post new science stories online every day. Radio 4 has an excellent series showcasing the life and works of leading scientists. It's called The Life Scientific, and you'll find it on BBC Sounds.

### You may enjoy the following on YouTube:

SmarterEveryDay,	Mark Rober,
VSauce,	Kurzgesagt,
TheBackyardScientist,	Veritasium,
AsapSCIENCE,	Steve Spangler,
Physics Girl,	Bill Nye the Science Guy
Simone Giertz,	

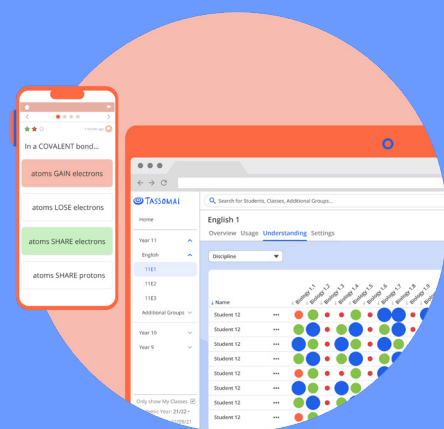
### Or, if you're on TikTok (!), explore:

#sciencetok,  
#tiktokscience,  
#officialtiktokscience

## Track your way to your future career path with Tassomai

Tassomai's intuitive algorithm adapts to help you get the most out of your learning but as with everything, practice makes perfect (or permanent as we like to say!). Your daily and weekly goals are a great way to help you keep on top of your progress. Watch as you grow your knowledge and expand your Tassomai tree.

[www.tassomai.com](http://www.tassomai.com)





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