

Haydn Francis Research Scientist



Hi there! I am Haydn Francis– A research scientist



Where do I work?

I work in the Department of Chemistry at the University of Cambridge.

What did I like doing when I was at school?

At school I liked most subjects, particularly maths, science and history.

What do I like doing in my spare time?

I like to go hiking, bouldering and camping, as well as playing squash and football. I also play the drums in a band with a few friends from university.

What do I do as a research scientist?

My work focuses on improving batteries (the kind you find in your phone, laptops and electric cars), so that they last as long as possible. Day to day, that means running experiments to try and understand why batteries tend to lose their power the more you use them, so that we can try and fix it.



How does what I do make the world a better place?

Making batteries as good as possible is the key to getting as many electric vehicles on the road as possible. Electric vehicles can run on renewable electricity from sources like wind and solar power. That means they are more environmentally friendly than cars that burn petrol or diesel and release greenhouse gases.

What I like about my job

I like that I get to do something new every day. My whole job is trying to figure things out that no one else has tried yet, so you get lots of chances to be creative and try slightly wacky things.



Challenges I have faced

The flipside of being able to try new things every day, is that it can sometimes take a lot of time and effort to get things to work. There are no instructions when you are doing something that hasn't been done before, which I'd say is a blessing and a curse.

If you want to be a research scientist, you need:

- Enthusiasm: You are always going to have moments when things are tough, and you've got to stick at it
- Creativity: Being creative with the knowledge you have is the key to solving new problems
- Focus: It's not about being able to sit at a desk for hours without a break, but you do have to care about getting the details right
- Communication: It is important to be able to explain your work to others. Moreover, learning from others is all about taking in information and asking the right questions





Discussion time

Would you like to be a research scientist like Haydn Francis?
Why? Why not?



- What skills and interests do you already have that would help you become a research scientist?
- What new skills and knowledge would you need to develop?



Haydn Francis is a STEM ambassador. Click <u>here</u> to access free STEM Ambassador support and resources.

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