

# A SCIENTIST just like me



**Dr Susannah Bourne-Worster**  
**Theoretical Chemist**

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**Hi there! I am Dr Susannah Bourne-Worster – a theoretical chemist**



## **Where do I work?**

I work at the University of Bristol, where I do research to discover how plants turn energy from sunlight into energy that they can use.

## **What did I like doing when I was at school?**

I loved learning new things, especially about maths or science. I wanted to become a scientist or a teacher. I liked chemistry the best because it felt like magic!

## **What do I like doing in my spare time?**

I like singing, dancing, reading books, baking and crafts. I also love going for walks in the countryside with my husband.

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## What do I do as a theoretical chemist?

Theoretical chemists think about the tiny building blocks that make up everything in the world around us. Then we write computer programs to help us figure out how they work. The computer programs that I write help us learn about the systems that move energy around inside a leaf.



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

My job is to learn about how plants use energy from the sun. This will help humans work out how to use that energy too, e.g. we might find more environmentally friendly ways to make electricity. Or how to design faster-growing crops so everyone can have enough food.

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## What I like about my job



It is really exciting to find out things that nobody ever knew before. I also get to travel to fun places like India and the Arctic Circle, meet clever and interesting people, and I am always learning new things, which is what I love to do.

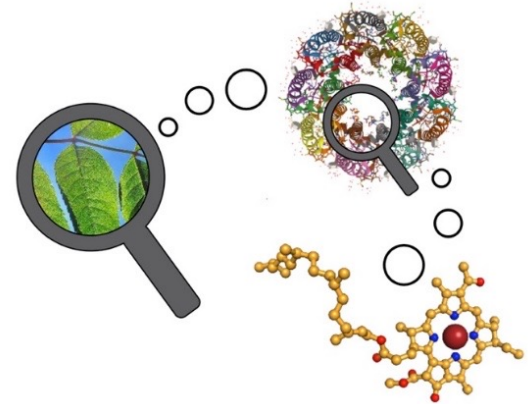
## Challenges I have faced

Part of my job is to go to big meetings where I tell other scientists about the things I have discovered. I find this scary as I am very shy. But it is important in science to share ideas and work together, so I do lots of practice beforehand!

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If you want to be a theoretical chemist, you need:

- ★ **to enjoy solving puzzles** because writing computer code is a lot like solving a puzzle. You have to be logical and think about how different bits fit together.
- ★ **a good imagination** so that you can picture things that are too small to see
- ★ **to be curious** about how things work
- ★ **patience** to keep trying new ideas



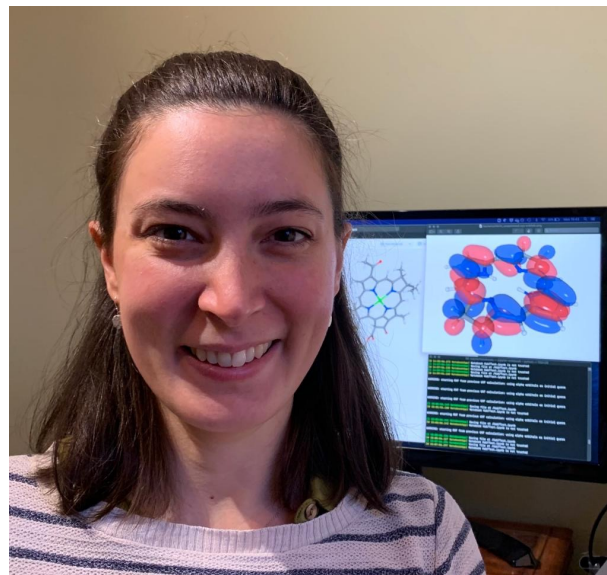
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## Discussion time

- ✦ Would you like to be a theoretical chemist like Dr Susannah Bourne-Worster?

**Why? Why not?**

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



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Dr Susanna Bourne-Worster is a STEM ambassador. Click [here](#) to access free STEM Ambassador support and resources.

## Free supporting resources for theoretical chemistry

**I bet you didn't know...** articles use cutting-edge science research as a context for learning. Teacher Guides describing the research and activities and investigations for children can be used as classroom presentations. See:

- Computers can measure the happiness of a city
- How plants know good microbes from bad ones
- Can plants hear and respond to sounds?

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