

# QUANTUM SCIENCE WITH DR THOMAS VOLZ

## TALKING POINTS

### KNOWLEDGE:

1. What does light consist of?
2. In what way does quantum light differ from sunlight and laser light?

### COMPREHENSION:

3. What does Thomas use to generate quantum light?
4. Why is it important for scientists to generate quantum light?

### APPLICATION:

5. Can you think of some of the potential quantum technologies that could be developed in the future?
6. It is often said that quantum technologies could revolutionise the world we live in. In what ways could the above quantum technologies change our lives?

### EVALUATION:

7. What do you make of Lyra's experiences in her student profile? Why do you think it is important for women and underrepresented groups to get involved in physics and quantum optics?
8. Thomas mentions some key traits he believes are important for a career in science. Do you agree with his viewpoint? Can you see why these traits might be of benefit to those interested in pursuing a scientific career? Are there any other traits and characteristics you think are important? What skills and characteristics do you have that might help you become a scientist?

## ACTIVITIES YOU CAN DO AT HOME OR IN THE CLASSROOM

- Imagine you are a researcher in this field. Write a letter to your funder persuading them to fund your research. You will need to explain what the next steps of your research will aim to investigate, the methods you will use and the long-term implications of your research.
- Create a poster that summarises this research. Include key facts and figures and diagrams, where possible. Try and use simple words to communicate the research in a similar way to the ones detailed below.

## MORE RESOURCES

### QMAPP OUTREACH

The team at QMAPP is actively involved in sharing their love for science with the world. There are some outreach activities coming soon and two posters that introduce some of the research they do, using only the 1,000 most common words in the English language!

You can view them here:

<https://www.qmappmq.org/outreach>

### QMAPP FACILITIES

You can also go on a virtual tour of the QMAPP lab. You will be impressed!