

PHYSICS AND NANOSCIENCE WITH YASHASWI NALAWADE

TALKING POINTS

KNOWLEDGE:

1. How long ago did the field of nanoscience start?

COMPREHENSION:

2. Why are nanomaterials attractive to scientists – what properties give them potential?
3. Why is nanotechnology important to the development of inks for printing electronic devices?

APPLICATION:

5. What has Yashaswi's research paper helped to demonstrate? What are the next steps for her findings?

ANALYSIS:

6. What do you make of Yashaswi's attitudes towards physics and nanoscience? Can you see how it is possible to combine personal aims and ambitions with different branches of science? What branches of science would enable you to achieve your ambitions?

SYNTHESIS:

7. Nanoscience is achieving things that were thought impossible not that long ago. Can you think of any other important discoveries and scientific advances that would have been unimaginable to previous generations? How does this shape your view of science in general?

EVALUATION:

8. Read through Yashaswi's top tips and then relate them back to her experiences as a researcher in a lab. Can you see the ways in which she has taken her own advice? Is there anything you would do differently if you were given the opportunity? If so, why?

ACTIVITIES YOU CAN DO AT HOME OR IN THE CLASSROOM

- Imagine you are interviewing Yashaswi for your school's website. Write a list of 10 questions you would like to ask her. You might want to find out more about her career path, motivations, how she conducts her research and where her research will lead in the future.
- Fast forward 20 years and imagine you are a successful researcher in your chosen field. Use Yashaswi's article as a template and write about your own achievements:
- What is the 'dream' research project you have worked on?
- What key information do students need to know about your field of research?
- How did you become a ...?
- What top tips will you offer?

MORE RESOURCES

TEDX TALK

The head of the laboratory that Yashaswi is part of, Professor Jonathan Coleman, has given a TedX Talk where he discusses the magic of nano. We highly recommend you pull up a chair, get comfy and prepare to be dazzled by the enormous potential this talk describes:

https://www.youtube.com/watch?v=SZfBIQIKz9Q&ab_channel=TEDxTalks

The US's National Nanotechnology Initiative provides a range of links for educational resources so you can learn more about the fascinating world of nanoscience:

<https://www.nano.gov/education-training/k12>