

COMPUTER SCIENCE WITH PROFESSOR ZHIGANG ZHU

TALKING POINTS

KNOWLEDGE:

1. According to the World Health Organisation, how many people in the world have a visual impairment?
2. Of those, how many people have low vision and how many are blind?

COMPREHENSION:

3. Why is it important to help blind and visually impaired people navigate around their homes and cities? How is Zhigang modifying the principles of other navigation systems to help these people?

APPLICATION:

5. What are the two different models (prototypes) of Zhigang's Assistive Sensor Solutions for Independent and Safe Travel (ASSIST) innovation?

ANALYSIS:

6. What do you think about the core aims behind Zhigang's project? In what ways can computer science be used as a force for good and help people with impairments or specific requirements?

SYNTHESIS:

7. Can you think of other novel ways that AI and computer science could improve the lives of people around the world?

EVALUATION:

8. To what extent do you think that AI and machine learning could lead to problems in the future? Can you think of some of the ways scientists could prevent these problems happening?

ACTIVITIES YOU CAN DO AT HOME OR IN THE CLASSROOM

- Fast forward 20 years and imagine you are a successful researcher in computer science. Use Zhigang'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 computer scientist? What top tips will you offer students looking to follow in your footsteps?
- Do some research into the field of computer science and write down five developments that are at the forefront of current research. What could these developments lead to in the future? How might they shape the lives of people years from now?

MORE RESOURCES

Watch the YouTube video showing the Smart and Accessible Transportation Hub (SAT-Hub) 3D modelling and testing:

<https://www.youtube.com/watch?v=KXZnyA30KM>

COMPUTER SCIENCE FOR FUN

STEM Learning has put together a wide range of different resources relating to computer science. Take a look through and explore some of the activities that are fun to do – and will teach you some important principles behind computer science!

<https://www.stem.org.uk/resources/collection/4311/computer-science-fun>