

ENGINEERING AND PHYSICAL SCIENCES WITH DR HELEN BRIDLE

TALKING POINTS

1. What is antimicrobial resistance?
2. How much does the World Health Organization estimate that will be additionally spent on health every year by 2050 because of antimicrobial resistance? Why do you think this much money is needed?
3. Can you name one of the major factors behind increased incidence of antimicrobial resistance?
4. Why is Helen and her team focusing on specific pollutants, such as heavy metals and additives?
5. What are the team using to explore the relationship between antimicrobial resistance and pollutants?
6. What do the sensors need to be able to do in order to target the antimicrobial resistant genes in a water sample?
7. **FILL IN THE BLANK:** It is known that [] plays a significant role in the spread and transfer of antimicrobial resistance.
8. Doctors always tell their patients to finish the full course of antibiotics. Why is it important for patients to do this?

ACTIVITIES YOU CAN DO AT HOME OR IN THE CLASSROOM

- The Microbiology Society is one of the largest microbiology societies in Europe with a worldwide membership based in universities, industry, hospitals, research institutes and schools. On the website, you will find some amazing information, including what antibiotics are, how they work and why they are so important.
- The World Health Organization is typically interesting and informative about the subject of antimicrobial resistance. Read through their dedicated website sections at your leisure.
- e-Bug has loads of fun games and teaching resources about microbes and antibiotics, including Bacteria Combat, a digital card game that shows you the battle between good and bad bacteria, and Superbugs, an action game that challenges you to destroy mutant bacteria until new antibiotics can be discovered.

IF YOU HAPPEN TO BE IN THE AREA!

Heriot-Watt has a dedicated team called Heriot-Watt Engage which 'promotes, stimulates and supports public engagement activities by the research community'. The team there helps academics engage with a range of different audiences through schools and science festival activities. "This year I provided four high school students with work experience placements in my lab," says Helen. "I have previously hosted Nuffield summer scholars as well."

Interested? Why not get in touch? Contact HWEngage@hw.ac.uk or follow them on Twitter, Facebook and Instagram: [@HWEngage](https://www.instagram.com/HWEngage)