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ANIMATION SCRIPT

AIR POLLUTION WITH BIOAIRNET
TAKE A DEEP BREATH: INVESTIGATING AIR QUALITY

TO MAKE THE MOST OUT OF THIS SCRIPT, YOU COULD:

- Stick it in your book as a record of watching BioAirNet's animation
- Pause the animation and make notes as you go
- Add your own illustrations to the sheet
- Create your own animation to accompany it
- Add notes from classroom discussions
- Make notes of areas you will investigate further
- Make notes of key words and definitions
- Add questions you would like answered – you can message the BioAirNet team
  through the comment box at the bottom of their article:
  https://futurumcareers.com/take-a-deep-breath-investigating-air-quality

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SCRIPT:

Air pollution is a major risk to public health.

It is estimated that between 28,000 and 36,000 deaths a year can be attributed to long-term exposure to particulate pollution.

Smoke and exhaust fumes are the most common suspects for these deaths, but scientists and policy makers want to understand the impact of biological particulate matter, also known as BioPM.

BioPM or bioaerosols are particles suspended in the air that come from a biological origin. This can include single-celled organisms such as bacteria and viruses, and cells from larger organisms such as pollen, fungal spores or shed skin cells.

Bioaerosols enter the air from a wide variety of sources. They can come from natural origins such as wind blowing over soil, rain falling on water or decomposing organic matter. They can also come from industry, such as animal farming facilities, food processing and sewage treatment. Household items such as carpets, pets, houseplants or heating systems can also produce bioaerosols.

BioAirNet is an interdisciplinary project that brings together experts from different fields to tackle air pollution and its associated health risks. Led by Professor Frederic Coulon at Cranfield University, the project's focus is bioaerosols.

The range of expertise in the team means they can explore different ways to improve air quality, including human behavioural changes and technology interventions.

BioAirNet has four interconnected themes:

1. Investigating the range of BioPM sources in different indoor/outdoor environments and identifying where research is needed.

2. BioPM sampling, to characterise different microbial systems.

3. Exploring effects of exposure to BioPM on human health, and how to prevent this.

4. Policy and public engagement, which includes communicating about how to create healthy environments.

The outcomes of this project will influence the UK Government's Clean Air Strategy, which was published in 2019. The findings will also be shared with stakeholders from other countries, who can share findings of their own with the UK. BioAirNet will also inform the UK's foreign aid spending to help make positive changes in regions that suffer from poor air quality.

BioAirNet is highly interdisciplinary and its researchers come from a range of different scientific backgrounds.

Studies in chemistry, microbiology, engineering, the social sciences and others could all lead to a career improving air quality.

Are you studying a subject that could help tackle air pollution? Which of BioAirNet's interconnected themes would interest you?