

AIR POLLUTION WITH BIOAIRNET

TALKING POINTS

KNOWLEDGE

1. What is a bioaerosol?
2. What are some common sources of bioaerosols?

COMPREHENSION

3. Why is the BioAirNet team particularly interested in indoor environments?
4. How can bioaerosols be useful for the planet?

APPLICATION

5. Look at the information on the UK's Clean Air Strategy and BioAirNet's four themes. How do you think these themes might integrate into the UK Strategy?
6. Diagnoses of asthma have increased in the UK in recent years. Can you suggest some reasons why this might be the case?

ANALYSIS

7. Frederic states that energy-efficient buildings may be more prone to build-ups of air pollutants. Do you think this is a good reason to build houses with a lower energy efficiency? Why or why not?
8. The BioAirNet team is highly interdisciplinary. Can you think of any challenges this might lead to? How might the project design help address these challenges?

SYNTHESIS

9. Public transport vehicles can be susceptible to high concentrations of bioaerosols. What design features could you use to keep bioaerosol concentrations low?

EVALUATION

10. Think about how the world responded to the COVID-19 pandemic. Based on your knowledge of bioaerosols, do you think a higher or lower proportion of people would have been affected if the virus had emerged one hundred years ago? Explain your reasoning.

ACTIVITIES YOU CAN DO AT HOME OR IN THE CLASSROOM

1. Using the article and the internet as information sources, create an educational poster that explains:
 - a. Sources of bioaerosols
 - b. How bioaerosols enter and are dispersed around buildings
 - c. Some examples of common indoor bioaerosols
 - d. Possible dangers of bioaerosols
 - e. Measures to control levels of bioaerosols indoors

Think about how to make your poster as accessible and engaging as possible.

2. Go for a walk around your school, your home, or your local area. Record:
 - a. Sources of bioaerosols
 - b. Evidence of bioaerosol contamination
 - c. Likely air quality and any dangers to health

Once you have finished the walk, write a list of recommendations for how people might improve the air quality of the area based on your observations.

MORE RESOURCES

The BioAirNet website explains more about the project. The team is also keen to engage with schools and offer a range of outreach activities, such as talks and educational resources: bioairnet.co.uk

In this TEDx talk, Matthew Johnson has an innovative solution to tackle air pollution in urban areas: www.youtube.com/watch?v=nvH_sgnE268

This article from *The Lancet* takes a critical look at the UK's Clean Air Strategy. Think about whether you agree with its conclusions: [www.thelancet.com/journals/lanres/article/PIIS2213-2600\(19\)30025-6/fulltext](https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(19)30025-6/fulltext)