

Animation Script

A world of opportunity in dental research

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To make the most out of this script, you could:

- Stick it in your book as a record of watching Jennifer'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.

SCRIPT:

Oral health plays an integral part in our overall health.

However, oral diseases are prevalent worldwide, and health inequities mean that not everyone has access to the oral healthcare they need.

Dental researchers like Dr Jennifer Webster-Cyriaque, Deputy Director of the National Institute of Dental and Craniofacial Research in the US, are tackling these challenges through innovative research projects.

There is so much more to our oral health than a bright smile and much more to careers in dentistry than cleaning and fixing people's teeth.

Oral health is important because without it, we cannot be truly healthy. For example, gum disease can make other conditions like diabetes or heart disease worse. Likewise, conditions like diabetes or HIV can make gum disease worse.

Oral health can be seen as a 'barometer' for the rest of the body, signaling health issues that might otherwise go undiagnosed. For example, saliva is a wonderful diagnostic tool. It can inform us about many systemic processes, is readily available and its collection is painless. Equally, oral diseases can affect other parts of our bodies, leading to illness.

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Researchers across the dental field are conducting research that aims to ensure that everyone, regardless of background and social-economic position, can have good oral health and optimal overall health.

Many dentists focus on treating patients. Some are generalists who treat everyone. Others specialize on a particular area of study. For example, pediatric dentists specialize in working with children.

Oral health is complex, so some dentists pursue a career in dental research. Cariologists research the causes and potential treatments of tooth decay.

As we come to understand what causes decay, some dental researchers use this information to address health inequality, working with vulnerable and marginalized communities.

Some researchers focus on craniofacial development, looking at how teeth and the skull form and addressing dental birth defects.

Others aim to understand the causes of gum disease.

Others conduct lab research to explore how to best treat oral issues. For example, they investigate how stem cell-based therapies can regrow gum, teeth, or bone tissues to treat gum disease or birth defects.

Many diseases, such as HIV and tuberculosis, affect the whole body, including the mouth. Researchers look for clues in the mouth to diagnose some of these diseases.

It is a fascinating time to be entering the world of dental research, where data science and computational tools are being used to look at 'big data', answering important questions in oral health.

Dental research – and the range of career opportunities it offers – is wide and varied.

What could you achieve in this rewarding field?