



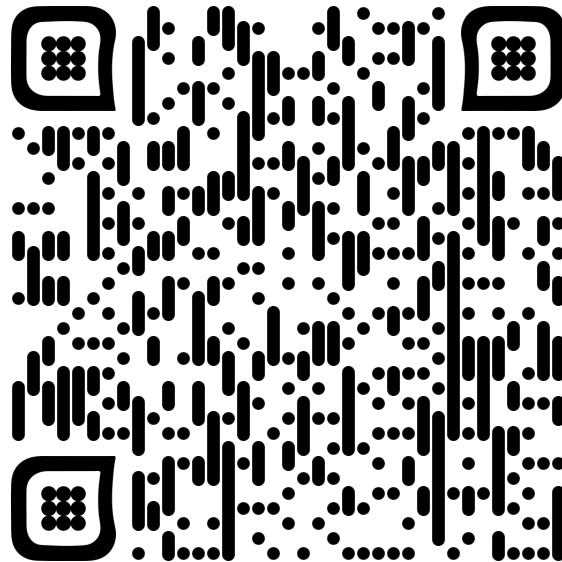
ADVANCING EDUCATION  
AND ORAL HEALTH



# GED in practice: Sustainable Practice

James Field  
Julia Davies  
Jonathan Dixon  
Sibylle Vital





## Curriculum content for Environmental Sustainability in Dentistry

Jonathan Dixon<sup>a,\*</sup>, James Field<sup>b</sup>, Emma Gibson<sup>a</sup>, Nicolas Martin<sup>a</sup><sup>a</sup> School of Clinical Dentistry, University of Sheffield, UK<sup>b</sup> School of Dentistry, Cardiff University, UK

## ARTICLE INFO

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## ABSTRACT

**Objective:** (i) To identify suitable strategies and opportunities to embed Environmental Sustainability (ES) within an existing Oral Health Professional (OHP) curriculum through a series of focus groups with students and academic staff and (ii) To create high-level evidence-based and subject-specific ES content through an approach grounded in evidence and collaboration with key stakeholders in OHP education.

**Methods:** Focus groups were used to explore academic staff and student views on appropriate teaching and assessment methods for ES. Content statements were developed from an extensive literature search, mapped to curriculum subjects, and validated through consultation with students, discipline-experts and education-experts.

**Results:** Five themes were identified from the focus groups: ES transcends all disciplines of dentistry and oral healthcare; baseline knowledge transmission with relevant practical application; viewing and modifying existing teaching and assessment events through a different lens; normalising the topic of ES to support attitude and behaviour change and safeguarding against misinformation and disinformation. Forty-four content statements were developed and mapped to nineteen curriculum subjects.

**Conclusions:** This study identifies for the first time a comprehensive strategy for the inclusion and delivery of ES (method and content) in the curriculum. A novel method to define and map curriculum content has been explored and validated using a range of complementary methodologies. A comprehensive and robust list of evidence-based and subject-specific educational content statements have been defined in the field of Environmental Sustainability in Dentistry and oral healthcare.

**Clinical Significance:** Oral healthcare has a significant environmental impact, the key to all mitigation strategies is educating the profession at all levels.

## Introduction

Oral health professional (OHP) curricula must be responsive to the changing societal and educational landscape to ensure graduates can meet the demands of the profession for the present and the future. As a regular quality assurance measure, a curriculum should have in-built sustainability achieved through a development process to allow appropriate periodic review of material content and delivery [1,2]. Curricula typically develop over time in response to three principal drivers: new developments in the discipline (dentistry and oral healthcare), changing educational rationales and innovations and pressures from wider stakeholders [3–8].

Environmental Sustainability (ES) and climate change are challenges that transcend all sectors. The United Nations Brundtland Commission defined Sustainability as: “Meeting the needs of the present without compromising the ability of future generations to meet their own needs” [9].

The significant environmental impact of oral healthcare, particularly in relation to carbon dioxide equivalent emissions, pollution and waste generation has been highlighted and quantified in the literature [10–12]. These impacts principally relate to staff commute, patient travel, procurement, energy and water consumption and waste generation.

## Introducing Environmental Sustainability into Oral Health Professional education

The need to embed ES within OHP education at all levels (undergraduate, postgraduate, and continuing professional development) has been established [13–16]. The Association for Dental Education in Europe (ADEE) has been at the forefront of this drive with the ‘Sustainability in Dentistry’ Special Interest Group activities, that have been reported in two published consensus reports [13,14]. These reports (i)



## Educational resources on Sustainability in Dentistry

Ready to include sustainability in your lectures?

Alongside staff and students, the FDI World Dental Federation recognizes the need to introduce Environmental Sustainability into Oral Health Professional education. We now provide a gallery of user-friendly slide sets on core sustainability topics. Lecturers can use these slides freely to help embed key concepts of sustainable practice in various courses within the curriculum.

[Access to the resources](#)



**SUSTAINABILITY IN  
DENTISTRY SUMMIT**  
5TH AND 6TH JUNE 2025 | VIRTUAL EVENT



## Sustainability in Dentistry Summit

World Environment Day is celebrated every year on 5th June by millions of people across the globe. It serves as a rallying call, urging governments, industries, and individuals to unite in safeguarding the future of our planet. This year, the virtual Sustainability in Dentistry Summit will take place from **June 5th to 6th** from 4PM to 5:30PM CEST.

[View the Summit Agenda \(.pdf\)](#)

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## Oral Medicine and Pathology

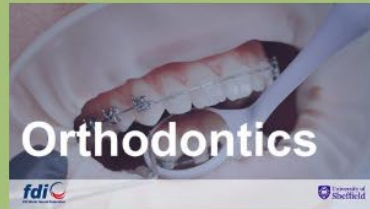


Sustainability

## Oral Medicine and Pathology

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Sustainability

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## Paediatric Dentistry



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## Periodontology



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## Preventive Dentistry



## Prosthetic Dentistry



## Restorative Dentistry



## Special Care Dentistry





# Sustainability statements and curriculum subject mapping

## Table: Content statements and curriculum subject mapping results

The slides were based on the following table, adapted from 'Curriculum content for Environmental Sustainability in Dentistry' (2024)<sup>1</sup>.

Please note this is the original subject mapping from the paper. Several subjects have been adjusted for the slide decks provided.

**Green = Clinical subjects**

**Blue = Statements linked to a small number of subjects**

Code	Content statements	Subject Applicability
Raise awareness		
A1	The delivery of oral healthcare is currently environmentally unsustainable. We need to take responsibility as a profession to mitigate these impacts.	Ethics, Professionalism, Information Literacy, Social Accountability and Behavioural Sciences

Behaviour Change		
<b>B1</b>	Environmental sustainability requires a culture change across the profession and supply chain.	Dental Public Health & Community Dentistry, Ethics, Professionalism, Information Literacy, Social Accountability and Behavioural Sciences, Dental Practice Management
<b>B2</b>	Effective patient education will benefit their oral health and mitigate environmental impacts.	<p><i>ALL clinical subjects</i> and Ethics, Professionalism, Information Literacy, Social Accountability and Behavioural Sciences</p> <p>Less relevant to: Oral and Maxillofacial Radiology</p>
<b>B3</b>	The formulation of action plans and policies will result in more environmentally sustainable practice.	Dental Practice Management
<b>B4</b>	Avoid waste: high-quality and efficient patient care will mitigate environmental impacts.	<p><i>ALL clinical subjects</i> and Dental Technology, Ethics, Professionalism, Information Literacy, Social Accountability and Behavioural Sciences, Dental Practice Management</p>

# MOOC

The Massive Open Online  
Course on Sustainability  
in Dentistry



## Sustainability in Dentistry MOOC

The FDI World Dental Federation's 3-hour MOOC on Sustainability in Dentistry helps oral health professionals understand their role in sustainable practice. Participants learn about the environmental impact of oral healthcare and how to apply evidence-based dentistry sustainably. A final assessment offers a printable certificate upon completion.

[Access the MOOC](#)



## Sustainability in Dentistry Toolkit

The Sustainability in Dentistry interactive toolkit was made to help dentists and their teams drive their activities towards more sustainable practices. Take the leap towards reducing your dental practice's environmental impact and earn sustainability stripes.

[Go to the Sustainability Toolkit](#)



## Sustainability Award

The FDI Sustainability Award promotes sustainability in dental practice by providing the opportunity for individuals or dental practices to receive global recognition. Each year four awards will be granted. Two for dental practice and two for individuals. Winners will be announced at the FDI World Dental Congress.

[Read more](#)

## **Association for Dental Education in Europe (ADEE) outputs**

Embedding environmental sustainability within the modern dental curriculum – Exploring current practice and developing a shared understanding:

<https://pubmed.ncbi.nlm.nih.gov/33230919/>

Embedding environmental sustainability within oral health professional curricula – Recommendations for teaching and assessment of learning outcomes:

<https://onlinelibrary.wiley.com/doi/10.1111/eje.12852>

Environmental Sustainability in Oral Health Professional Education: Approaches, Challenges, and Drivers – ADEE Special-Interest Group Report:

<https://onlinelibrary.wiley.com/doi/10.1111/eje.13033>

Current practice, barriers and drivers to embedding environmental sustainability in undergraduate dental schools in the UK and Ireland:

<https://www.nature.com/articles/s41415-024-8011-6>