Planetary Health Report Card (Dentistry) 2026:

Bristol Dental School

2025-2026 Contributing Team:

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Summary of Findings

Overall Grade	A+

Curriculum	B-

- At Bristol Dental School, sustainability is increasingly being integrated throughout the curriculum in a wide range of lectures and clinical teaching. There is a strong emphasis on the materials used in dentistry and how we, as future clinicians, can practise in a more environmentally responsible and sustainable way. The school also offers valuable elective opportunities that allow students to explore environmental sustainability in greater depth. In addition, the dental school is actively working to further develop and enhance sustainability education, with an increasing number of lectures and learning resources being integrated into the curriculum.
- **Recommendations**: More teaching on the links between oral health outcomes/ infectious diseases and climate change. Would be valuable to explore how the impacts of climate change differ across different populations

Interdisciplinary Research	A+

- The University of Bristol demonstrates strong institutional engagement in planetary health research, with interdisciplinary collaboration and dedicated research initiatives supporting work in climate change and health.
- **Recommendations:** Bristol Dental School BDS programme should seek to take advantage of the wealth of planetary health researchers at the institution to offer more opportunities for students to engage with the topic, as well as fostering a stronger relationship between its research institutes, the local community and students to further interdisciplinary institutional engagement.

Community Outreach and Advocacy	A+

- The University of Bristol Dental School actively engages with local communities to promote planetary and environmental health. Through initiatives such as delivering oral health education and prevention programmes in care homes and community centres, dental students extend outreach to the wider community. Additionally, sustainability topics are regularly communicated to students through the Dental School Society's weekly bulletin, ensuring ongoing awareness of the environmental impacts on health.
- **Recommendations:** Bristol Dental School could further strengthen its planetary health engagement by creating more community-facing opportunities throughout the 5 years of dental school.

Support for Student-Led Initiatives	A+

- The University of Bristol integrates sustainability across its academic programmes and encourages students to engage in discipline-relevant initiatives. Through its Education for Sustainable Development scheme, the University supports student-led projects via the Green Apple Scheme. This year, funding has been allocated for Quality Improvement projects through the PHRC. The Dental School also has sustainability representatives on the Dental Society committee, who share sustainability education with students and staff.
- **Recommendations:** Bristol Dental School could further strengthen student engagement by encouraging more student-led initiatives and promoting sustainability in dentistry through support for attendance at sustainability conferences.

Campus Sustainability	A

- The University of Bristol has a comprehensive sustainability framework, including an Office for Sustainability and designated Climate Action Plan Coordinators for each school. The University is committed to achieving carbon neutrality, increasing the use of renewable energy, reducing its overall carbon footprint, and investing in renewable energy projects.
- **Recommendations:** The University could further engage with affiliated hospital academies and professional schools to enhance sustainability practices. The Dental School could also increase its focus on recycling and other campus-based sustainability initiatives.

Statement of Purpose

Planetary health is human health.

The Planetary Health Alliance describes planetary health as "a solutions-oriented, transdisciplinary field and social movement focused on analysing and addressing the impacts of human disruptions to Earth's natural systems on human health and all life on Earth." This definition is intentionally broad, intended to encompass the multitude of ways that the environment can affect health, including water scarcity, changing food systems, urbanisation, biodiversity shifts, natural disasters, climate change, changing land use and land cover, global pollution, and changing biogeochemical flows. The health of humanity is dependent on our environment, and our environment is changing rapidly and in disastrous ways. Although the World Health Organization has called climate change "the greatest threat to global health in the 21st century," many health professional school's institutional priorities do not reflect the urgency of this danger to human health.

As future health professionals, we must be prepared to address the impacts of human-caused environmental changes on our patients' health. This preparation is in the hands of the institutions providing our health professional training. It is imperative that we hold our institutions accountable for educating health professional students about the health impacts of climate change and other anthropogenic environmental changes, generating research to better understand health impacts and solutions, supporting related student initiatives, embracing sustainable practices as much as possible, and engaging with surrounding communities that are most affected by environmental threats. Because climate change and environmental threats disproportionately affect vulnerable populations (for example, communities of colour, older adults sensitive to health threats, and individuals in low-resource settings), these issues are inherently ones of equity and justice.

With the purpose of increasing planetary health awareness and accountability among health professional schools, we have created a Planetary Health Report Card that students internationally can use to grade and compare their institutions on an annual basis. This student-driven initiative aims to compare health professional schools nationally and internationally on the basis of discrete metrics in five main category areas: 1) planetary health curriculum, 2) interdisciplinary research in health and environment, 3) university support for student planetary health initiatives, and 4) community outreach centred on environmental health impacts 5) school campus sustainability.

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as "the health of human civilisation and the state of the natural systems on which it depends." For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional 'environmental health' examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of health professional education. Throughout this report card, we use the term planetary health to refer to this broad swath of topics, but resources do not need to explicitly include the term "planetary health" to satisfy the metric.

- **Sustainable Healthcare:** As defined by the Academy of Royal Colleges, sustainable healthcare involves ensuring the ability to provide good quality care for future generations by balancing the economic, environmental, and social constraints and demands within health care settings. A sustainable healthcare system maintains population health, reduces disease burden and minimises use of healthcare services.

- **Education for Sustainable Healthcare (ESH):** is defined as the process of equipping current and future health professionals with the knowledge, attitudes, skills and capacity to provide environmentally sustainable services through health professional education, thus working to decrease the enormous environmental impact of the healthcare industry. Planetary Health Education is an integral part of this education rather than an end in itself. This is because knowledge on Planetary Health is required to be able to fully understand the necessity of sustainable healthcare as well as being part of the broader knowledge needed to fully protect and promote health. In summary, ESH is covered by the three Priority Learning Outcomes of the Centre of Sustainable Healthcare below, and Planetary Health Education is embraced in the first learning objective and is a fundamental requirement to achieve learning outcomes 2 and 3:

    1. Describe how the environment and human health interact at different levels.
    2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.
    3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.

- **Medical School/Department vs. Institution:** When "Medical school" is specified in the report card, this only refers to curriculum and resources offered by the School/department of Medicine and does not include offerings from other parts of the university (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when "institution" is specified in the report card, we are referring to the university more broadly including all of its campuses. Any resource reasonably accessible by medical students, no matter where in the institution the resource comes from or if it is

specifically targeted for medical students, can meet this metric.

- **Environmental history (Curriculum Section):** This is a series of questions students are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mould after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution. Please be as specific as possible when providing evidence for this metric.

- **Elective:** The word "elective" refers to an optional course or lecture series that a student can opt to take part in but is not a requirement in the core curriculum. Generally, these elective courses take place in the preclinical curriculum but vary by school.

- **Core Curriculum:** This refers to the taught material that is delivered to the entire cohort of students in one year.

- **Clerkship / Outreach:** This is a term used in the USA to refer to placements that medical students go on e.g. Pediatrics, General medicine, Psychiatry. In the UK these are referred to as rotations, outreach or placements. This is a relatively short (approximately 4-8 weeks) period of study and patient-centred clinical experience that takes place as part of the undergraduate programme.

- **Clinical rotation:** This is a term used to refer to placements that students go on (e.g., ophthalmology, surgery, cardiology).

- **Physiotherapy vs Physical Therapy:** For the purposes of this report card these terms are considered interchangeable. However, physiotherapy will be used primarily.

- **Community organisations:** For most institutions, there are existing groups that are not directly affiliated with the university and exist as a product of what the community the institution exists in cares about or needs. These specific community organisations relevant to this report include those that are focused around some aspect of climate and health preservation. These community organisations can include but are not limited to local mutual aid initiatives, underserved-resource distribution groups, clean-up and nature conservation groups, community gardeners, and other environmental-related organisations. If your institution does not have access to local volunteerships with community groups, please report any community organisations your institution or school has collaborated with.

- **Climate justice:** The idea that certain population groups and geographical locations which are disproportionately more impacted by climate change are already economically and socially disadvantaged. This double vulnerability sits alongside pre-existing social justice concerns and should therefore shift policy and practice to mitigate the inequitable effects of the climate crisis.

- **Extractivism:** The removal of natural resources typically in large quantities. Within anthropology this term is often used in the context of colonialism to refer to the

historic seizing of natural resources, a practice which has developed business models tied to ecological degradation and loss of biodiversity.

- **Global South:** Nations that often have less economic and industrial development and are typically in the southern hemisphere. These nations have been found to be disproportionately impacted by the climate crisis.

- **Low socioeconomic status (SES):** An individual or geographical area that across a variety of socioeconomic factors (e.g., income, education, race/ethnicity) is considered vulnerable. This vulnerability has been correlated to more adverse health outcomes often as a consequence of encountering more barriers in accessing and receiving healthcare.

- **Low and Middle-Income Countries (LMIC):** Countries that have lower degrees of economic affluence.

- **Anthropogenic:** Created through human activity

- **Marginalized communities:** Groups excluded from mainstream economic, educational, social, and/or cultural experiences due to race, gender identity, sexual orientation, age, physical ability, language, and/or immigration status (Sevelius et al., 2020).

Scoring Matrix

- Elective coursework (1 point): This score applies to material that is actively selected by the students such as a module choice, or additional lecture series. By implication, only a given proportion of the cohort will receive this taught material.
- Brief coverage in the core curriculum (2 points): This score applies where a topic is covered only briefly in a core curriculum session. This implies that the entire cohort receives the same material. At minimum brief inclusion would qualify as inclusion in a single lecture slide in a single year.
- In depth coverage in the core curriculum (3 points): This score applies where a topic is taught in significant detail or where a topic is repeatedly brought up in different years. This might look like several dedicated lecture slides, or inclusion of the same topic in different lectures and teaching formats. **Other considerations:**
- If there are more than one “tracks” at your institution with two different curricula (for example, Harvard Medical School has a Pathways and HST curriculum track), you can choose to fill out a report card for each track, or fill out just one report card and average the scores received by each track in cases where the scores are different (see the 2021 Harvard or Oxford report cards as examples). Where possible please indicate the proportion of students that are on each track.

Updated in 2025, a complete literature review by metric is available for the 2024/25 Medicine Report Card Template. This largely translates across disciplines although we are hoping to expand this process across all of our covered disciplines. A link to the 2025 literature review by metric is available here.

Planetary Health Curriculum

Section Overview: ***This section evaluates the integration of relevant planetary health topics into the medical school curriculum.*** *Today's health professional students will be on the frontlines of tackling the health effects of climate and other environmental changes. Therefore, it is critical that students are trained to understand the health effects of these changes, as well as planetary health issues and principles more broadly. Topics like the changing geography of vector-borne diseases, the health consequences of air pollution, environmental health inequities, and disaster response principles must be part of every medical school's core curriculum.*

Curriculum: General

1.1. Did your dental school offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare (ESH) / Environmental Sustainability in Dentistry (ESD) or Planetary Health in the last year?	
Yes, the dental school has offered **more than one** elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the dental school has offered **one** elective whose primary focus is ESH/planetary health in the past year. (2 points)	
The dental school does **not** have any electives whose primary focus is ESH/planetary health, but there are one or more electives that include a **lecture** on planetary health. (1 point)	
No, the dental school has **not** offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	3

Score explanation: The University of Bristol dental school offers several elective opportunities for students to engage with this topic.

In Year 1 there is a Foundations of Dentistry (FoD) programme. Students have the freedom to explore any topic that interests them, including sustainability and planetary health. Outputs can include a poster, short talk or a creative piece. This allows students to engage with environmental and ethical aspects of dentistry.

In Year 3, there is a Sustainability Poster Conference, in which students work in groups on topics related to environmental sustainability in dentistry. For example, topics include:

- *"What types of waste are most significant in dentistry, and what environmental impacts do they generate?"*
- *"To what extent can digital dentistry support sustainability within the dental profession, and what limitations should be considered?"*

To complete these projects, students conduct literature reviews, collaborate in groups, and create a poster and presentation. They are provided with a range of websites and links to extend their knowledge and are encouraged to read widely beyond the curriculum, including articles from the WHO, resources on green dentistry, and publications such as Delivering a Net Zero NHS. This

activity helps develop critical thinking about the environmental impact of dental practice, encourages evidence-based discussions on sustainable solutions, and fosters independent learning. The project is spread over several months, giving students the opportunity to delve into their chosen topic in detail

Curriculum: Environmental Threats to the Planet

1.2. Does your <u>dental school</u> address the concept of climate change, its causes and its impacts on humankind and biodiversity?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective coursework** or **other learning experiences** (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	2

Score explanation: Sustainability was introduced as a helical theme into the course this academic year; it is currently being built into the course with targeted sessions being planned to be introduced each year.

In First year BDS students receive an introductory lecture on sustainable development which has a focus on climate change this was implemented in academic year 25/26) and therefore, at present the first-year lecture and the third-year introduction to sustainability have a lot of overlapping themes. However, in the future these two sessions will be able to be different and explore aspects of planetary health and look more at impacts on biodiversity as currently most of the focus is on impacts on humankind.

The theme of sustainability has a focus on sustainable development and looks at the UN sustainable development goals and how the dental profession links to these.

In 3rd Year, we have a long, in-depth lecture called "Sustainability in Dentistry", which covers a variety of topics related to climate change.

The pre- session material for this is watching a 5-minute video called, "climate change- the facts." This video addresses the fact that humans drive climate change through their greenhouse gas emissions. It also highlights that the effects of climate change will not be felt equally across the globe.

This lecture covers the global warming potential of different greenhouse gases, how emissions are calculated, and which gases contribute most to climate change. Students are also encouraged to calculate their own carbon footprint using tools such as WWF footprint calculator(https://footprint.wwf.org.uk/), allowing them to compare their personal contributions to the average UK citizen's carbon footprint.

Students also explore how climate change affects different regions differently, with articles such as "Europe's water reserves drying up due to climate breakdown" https://www.theguardian.com/environment/2025/nov/29/climate-crisis-depleting-europe-groundwater-reserves-analysis and "The world could experience a year above 2 degrees of warming by 2029." https://www.newscientist.com/article/2481945-the-world-could-experience-a-year-above-2c-of-warming-by-2029 linked for further reading.

Legislations and targets are also discussed. Students learn about the UK Climate Change Act (2008)(https://www.legislation.gov.uk/ukpga/2008/27/contents), including the original 2050 net-zero target and the revised goal of a 100% reduction in greenhouse gas emissions by 2050. We learn about the NHS targets to achieve net zero by 2040 for emissions directly controlled by the NHS and by 2045 for all emissions the NHS can influence, with further reading suggested through articles like "Delivering a Net Zero NHS".

Lastly, related to the concept of climate change, the lecture emphasises the benefits of action against climate change, highlighting how reducing emissions and promoting sustainability can improve both planetary and human health outcomes.

1.3. Does your dental school address the concept of pollution, its causes and its impacts on humankind and biodiversity?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective coursework** or **other learning experiences** (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	2

Score explanation: The dental school at the University of Bristol addresses the concept of pollution and dentistry's environmental impact at multiple points in the curriculum, although the teaching is primarily contextualised within dentistry rather than the broader environment.

In Year 1, pollution is introduced in the lecture "Amalgam and Material Properties". Students learn about the Minamata Convention on Mercury, including mercury's environmental toxicity, the hazards associated with sourcing and processing mercury, and the reasons for its global decline.

This provides an early understanding of how dental materials contribute to environmental pollution.

In Year 3, the topic is revisited in "Ten Minutes for Materials: Amalgam", where students learn about the hazards of obtaining, purifying, and disposing of mercury-containing products, as well as practical measures to reduce mercury pollution in dental practice.

Teaching on composite materials also touches on pollution, noting the extensive single-use plastic packaging and the challenges of disposal, highlighting how these materials can contribute to environmental contamination. These sessions help students understand the causes and consequences of pollution from dental practice on both human health and the wider environment.

1.4. Does your dental school curriculum address environmental citizenship, the impact of human choices and current and emerging environmental actions?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective coursework** or **other learning experiences** (1 point)	
This topic was **not** covered. (0 points)?	
Score Assigned:	2

Score explanation: The dental school at the University of Bristol integrates the concept of environmental citizenship throughout the curriculum, highlighting how human and professional choices in dentistry can impact the environment.

There is a sustainability section in each lecture on different dental biomaterials (year 1 BDS), and in each Ten Minutes for Materials (which are ~10 min recorded primers on specific materials paired with specific Clinical Simulation Suite sessions in year 2 and 3)

For example, in Year 1, students learn about amalgam in the lecture "Amalgam and Material Properties". We are taught how our individual actions as clinicians can reduce environmental harm, for example by phasing down amalgam use, safely handling materials, and disposing of waste correctly.

The topic of sustainability is further embedded in teaching about dental materials. In "Ten Minutes for Materials: Flowable Composites", students learn that composites are packaged in single-use plastics, and any excess material cannot be recycled or reused, highlighting the importance of taking only the material required. Control of Substances Hazardous to Health (COSHH) forms and safety information for all materials are made available via Radar for students to read and educate themselves about material-related risks to both human health and the environment.

Our dental curriculum also teaches us about the United Nations Sustainable Development Goals, particularly in relation to sustainable healthcare and responsible resource use. We are encouraged to consider the environmental impact of our clinical decisions, including waste management and

preventive care, and to act in alignment with the SDGs. This promotes environmental citizenship and raises awareness of current and emerging environmental challenges and actions. .

Curriculum: Health Effects of Climate Change

1.5. Does your dental school curriculum address the impacts of climate change, air pollution and extreme weather events (extreme heat) on individuals' general health?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective coursework** or **other learning experiences** (1 point)	
This topic was not covered. (0 points)	
Score Assigned:	2
Score explanation: *At the University of Bristol, the dental curriculum addresses the impacts of environmental factors, such as air pollution on general health in several modules.* *In Year 1, the "Taste and Olfaction" lecture covers how environmental pollutants, such as occupational exposure to methyl methacrylate, can contribute to hyposmia.* *In Year 2, lectures in the Human Disease module explore links between air pollution and diseases. For example, in "Asthma, COPD and Respiratory Tract Infections", we learn about links between air pollution and diseases such as COPD and asthma. In the lecture "Gastroenterology Overview", it is suggested that air pollution may contribute to conditions such as Crohn's disease and ulcerative colitis.*	

1.6. Does your <u>dental school</u> curriculum explore potential links or associations between <u>oral health</u> outcomes and climate change?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective coursework** or **other learning experiences** (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	0

Score explanation: The dental school does not include formal teaching on the links between oral health outcomes and climate change. However, given the growing impact of climate change, this is an important and emerging area that should be incorporated into the curriculum.

1.7. Does your dental school curriculum address the impact of climate change on the changing patterns of infectious diseases?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective coursework** or **other learning experiences** (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	0
Score explanation: Currently there is no teaching in the curriculum or additional teaching about the impact of climate change on changing patterns of infected diseases. We will suggest implementation of some teaching regarding this because as future healthcare professionals, this is something that could have a very real impact on us in the future. Perhaps this would fit into year 2 well when covering human health and disease.	

1.8. Does your dental school curriculum address the impact of anthropogenic and/or industry-related environmental toxins on human health?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective coursework** or **other learning experiences** (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3

Score explanation: At the University of Bristol, the impact of anthropogenic and industry-related environmental toxins is addressed within the core curriculum.

In the Year 1 lecture "Amalgam and Materials Properties", the potential health and environmental impacts of mercury in dental amalgam are discussed. Students learn that mercury is a highly toxic metal and review associated health and safety considerations. Teaching explains that there is a sustained low-level release of mercury and other metals from amalgam, and that galvanic action between dissimilar metals can produce very small electrical currents in the oral cavity.

The lecture also addresses occupational exposure, noting that dental staff may be at greater theoretical risk due to repeated exposure during placement and removal of restorations. However, evidence shows no harm occurs when proper containment and disposal protocols are followed. Mercury levels released from restorations in most patients are well below thresholds recognised by the World Health Organization. Additionally, students learn about EU regulations restricting amalgam use in vulnerable groups, such as pregnant women, and about the Minamata Convention on Mercury.

In the Year 3 paediatric dentistry lecture "Fluoride in Paediatric Dentistry", students learn about fluoride from anthropogenic sources, such as toothpaste and mouthwash. The lecture covers both acute and chronic toxicity, including systemic effects such as hypocalcaemia, altered nerve function, cardiac disturbances, and dental fluorosis. Students are also taught about lethal doses of fluoride and the potential detrimental effects on overall health, highlighting the importance of safe use and prevention, particularly in young children.

In dental school, we are reminded to follow guidelines when prescribing fluoride to children to prevent any harmful effects on their health. We are also encouraged to reduce the use of amalgam, and when removing it, to do so safely to minimize the inhalation or swallowing of amalgam particles.

1.9. Does your dental school curriculum address the outsized impact of climate change, pollution & anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, Indigenous communities, children, homeless populations, and older adults?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective coursework** or **other learning experiences** (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	0

Score explanation: *The curriculum addresses global health inequalities and social determinants of health in relation to marginalised groups. However, it does not consider these inequalities within the context of environmental determinants of health. There is no teaching that explicitly examines how climate change, pollution, or environmental toxins disproportionately impact vulnerable populations.*

Curriculum: Sustainability

1.10. Does your <u>dental school</u> curriculum address the concept of environmental sustainability?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective coursework** or **other learning experiences** (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3

Score explanation: Yes, the dental curriculum addresses the concept of environmental sustainability, primarily through a lecture called "Sustainability in Dentistry" in Years 1 and 3.

These lectures introduce the concept of sustainable development, including its definitions and broader meaning. Students explore what sustainability means in healthcare and dentistry, including understanding about carbon footprints and why global sustainability is important for maintaining life.

The year one lecture has more time built in to explore preventative care. Students are shown the data of emissions from different dental procedures and then they discuss if and why preventative care is the solution. The importance of it is highlighted through the points below but the discussion also addresses examples and sustainability benefits of preventative care.

- *Preventative care reduces the need for resource intensive treatments.*
- *Early intervention improves patient outcomes and reduces long-term costs.*
- *Supports environmental goals by lowering energy use, waste, and emission*

Students are introduced to some of the Sustainable Development Goals (SDGs) relevant to dentistry, including:

- *SDG 3: Good Health and Well-being (oral health and preventative care)*
- *SDG 4: Quality Education (continuous learning and patient education)*
- *SDG 12: Responsible Consumption and Production (Biodegradable materials and waste management)*
- *SDG 13: Climate Action B (Energy efficiency and sustainable travel)*

The lecture also addresses Sustainable Development in Dental Care, emphasising that dentists have a dual responsibility: to provide high-quality patient care while minimising the environmental impact of their clinical practice. Sustainable development is presented as part of the broader social and environmental responsibility of oral health professionals. Students are provided with further reading, including an article titled "Sustainability in Dentistry" from the FDI World Dental Federation website, to deepen their understanding of sustainability within professional dental practice.

At the end of the year 3 sustainability lecture students take part in a poster conference where they are given questions such as the ones below. In groups students are tasked with producing an academic poster on their topic as well as a lay summary presentation. Groups share their findings with one another in a 3hr mini conference.

1. *What are the impacts of the waste produced by dentistry and what effective waste management strategies can help control this?*
2. *How does preventative dental care reduce the demand for treatments that are resource heavy and what strategies are effective in promoting preventative dental care?*
3. *Explore why not all dental professionals are adopting sustainable practices. Propose strategies to promote sustainability.*

Last academic year students were also asked to prepare three priority points from their research and experiences on clinics that they thought the e dental school should be working. This year in the groups we have incorporated an element of sustainable AI usage into the conference.

In Year 3, sustainability is also considered in relation to dental materials and resource use. For example, in the lecture "Ten minutes for materials – Simple ceramic veneers" students learn about lithium as an important and valuable material in lithium disilicate ceramics in dentistry. However, due to global shortages and poor recycling rates, there is growing interest in recovering lithium from waste dental ceramics to improve sustainability. In another lecture titled "Full metal crown preparation", students learn that precious metals e.g. gold can be reused and repurposed, and that non-precious biocompatible metals are used within the school as a more sustainable alternative.

1.11. Does your <u>dental school</u> curriculum address the concept & importance of sustainable healthcare?

This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective coursework** or **other learning experiences** (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	2

Score explanation:

In year 1 and Year 3 intro to sustainability lectures this is covered by addressing sustainable Development in Dental Care, emphasising that dentists have a dual responsibility: to provide high-quality patient care while minimising the environmental impact of their clinical practice. Sustainable development is presented as part of the broader social and environmental responsibility of oral health professionals. Students are provided with further reading, including an article titled "Sustainability in Dentistry" from the FDI World Dental Federation website, to deepen their understanding of sustainability within professional dental practice. It is also highlighted during these sessions that we all have something to gain from minimising our environmental impact and it is also highlighted that this is the right to the future generations to inherit a world with adequate natural resources.

There is teaching surrounding sustainable healthcare. In Year 3, students need to take part in a poster conference as part of the curriculum. During this poster conference, students must research topics surrounding sustainability in healthcare and present it. It requires students to think more actively about what can be done to improve sustainability not just in healthcare in general but also at Bristol Dental School. There are also 3 folders available on Blackboard which can be accessed at any time, which have links to various articles that talk about what sustainability is and how we can be sustainable in healthcare.

1.12. Does your dental school curriculum address the carbon footprint of healthcare systems?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective coursework** or **other learning experiences** (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3

Score explanation:

The year 1 sustainability teaching has a focus on carbon footprint by explaining that emission of GHGs drives climate change, that not all emissions of GHGs are equal and that emissions can be measured as Carbon dioxide equivalents.

Students are introduced to the concept of what carbon footprint is and how it can be measured as either production or consumption based. The lecture highlights that consumption based is often preferable.

Post lecture tasks include:

1. Calculate your individual carbon footprint: WWF Footprint Calculator ("https://footprint.wwf.org.uk/")

2. Explore carbon footprints across the globe: Per capita consumption-based CO_2 emissions, 2022 Our World In Data. (https://ourworldindata.org/grapher/consumption-co2-per-capita)

Students also explore the carbon footprint of an average UK citizen and the NHS as well as looking at the NHS's goals for NET zero, finally students look at dental practice emissions. Current teaching draws on evidence from Duane et al. (2017) to introduce students to the main sources of carbon emissions within NHS primary dental care. This work identifies travel (64.5%), procurement (19%), and energy use (15.3%) as the dominant contributors to the overall carbon footprint of dental practices. Students are also presented with treatment level emissions data from the Public Health England carbon modelling report (2018), which demonstrates the substantial environmental impact of common clinical procedures and highlights the role of preventive oral health strategies in reducing emissions across the system.

In Year 3, we have a compulsory Poster conference about environmental impact in dentistry which entailed delving into research, creating a poster, recording and presenting it. During the conference we had the opportunity to discuss our findings with our peers. Each group was given a different question so that we could learn from each other and expand our breadth of knowledge. Some of these questions included: 'What is the impact on the environment of single use plastic products in dentistry and how do reusables compare?' and 'What are the impacts of Waste produced by Dentistry and what Effective Waste Management strategies can help control this?". This project allows us as students to get a real insight of the impact dentistry has on the carbon footprint.

In our weekly bulletin that all students are highly recommended to read, there is a sustainability section every other week where the carbon footprint in healthcare has been discussed a few times as well as ways that we as a dental school community could do to reduce it such as commuting to and from by foot, cycling or public transport.

Furthermore, at the end of our Fixed Prosthodontics lecture slides, there is an emphasis that preserving healthy tooth tissue, minimally invasive approaches and prolonging the lifespan of restorations helps reduce the restorative treatment cycle for patients. This results in fewer dental appointments, reducing the carbon footprint associated with travel to and from dental clinics. It also contributes to lower overall clinical waste, reduced use of single-use plastics and decreases consumption of materials and energy in the clinical environment.

1.13. Does your dental school curriculum address the concept & importance of sustainable oral healthcare?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective coursework** or **other learning experiences** (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	2

Score explanation: The Year 3 Poster Conference not only describes the impact of dentistry on the environment but also tries to educate about alternatives. One of the Poster titles is as follows: 'Single use plastics and their alternatives'. Another title from the poster conference that is important to address is 'Why don't dental professionals adopt sustainable approaches? Which also details the barriers to sustainable oral healthcare to give us a well-rounded perspective. However, these ideas that we learnt in the conference have a profound effect on shaping our awareness and attitudes toward sustainability in dentistry.

At Bristol Dental School, we try to incorporate sustainable practices in practical dentistry wherever possible this includes the use of suction tips made from renewable resources and changing from plastic to paper patient cups. We continue to try and find more biodegradable/ recycled products that can be used in clinics and implement them where feasible. Sustainable oral healthcare is something that has also been mentioned in our weekly bulletin where it listed several different environmentally friendly oral healthcare products such as bamboo toothbrushes and silk/ biodegradable floss that we can use and encourage our patients to use.

1.14. Does your dental school curriculum address the environmental impact of oral healthcare systems and interventions?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective coursework** or **other learning experiences** (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	1

Score explanation: At Bristol Dental School, in Year 2 as part of our Preparing for Patients course, there are 10-minute videos explaining what different types of materials are available. One of the videos and presentation talk about the use of amalgam in clinical settings. The lecture mentions what amalgam is made from, when it can be used and what the advantages and disadvantages of it are. The Minamata treaty is also mentioned as part of the teaching, however it does not go into much detail of what the treaty is or the environmental impact of amalgam.

1.15. Does your dental school curriculum address the importance of measuring the environmental impact of oral healthcare to identify & reduce contributing factors?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective coursework** or **other learning experiences** (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	2
Score explained: As part of our Year 3 curriculum, we work in small groups to present our sustainability posters. We research a question that we are given about sustainability and present to different groups. Within our teaching of this, there is a folder available on our teaching platform 'Blackboard' which has links attached that students can use to access pages that allow us to calculate our individual carbon footprint and can compare it to carbon footprints across the world. Within this folder there are also other links to papers/ articles that we can read more about the topic of climate change and what can be done in the dental environment to be more sustainable. However, other than this there is no other teaching as part of our core curriculum.	

Curriculum: Sustainability through Good Oral Healthcare

1.16. Does your dental school curriculum address the importance of promoting good oral health and preventive care in the delivery of sustainable oral healthcare?
This topic was explored **in depth** by the **core** curriculum. (3 points)
This topic was **briefly** covered in the **core** curriculum. (2 points)
This topic was covered in **elective coursework** or **other learning experiences** (1 point)
This topic was **not** covered. (0 points)

Score Assigned:	3

Score explanation: At Bristol Dental School, preventative dentistry is a topic that is introduced from Year 1 and carried forward through all five years of our teaching. There is a particular focus in second and third year as part of our online teaching. In the Year 3 curriculum, there is a folder dedicated to 5 different lectures that go into detail about prevention and minimally invasive dentistry as part of our teaching on sustainability which we do as part of our sustainability poster presentation as well.

There are also links to papers and articles that explain environmental sustainability and how it links to good preventative oral healthcare. There is also access to how sustainability can be introduced into general practice. As part of our 'Whole Person Care' course in Year 3 there is a lecture on 'Prevention' which focuses on what prevention is and how we can carry it out through giving oral hygiene.

In Year 3, sustainability is integrated into Fixed Prosthodontics lectures, such as "Ten Minutes for Inlays and Onlays". Students learn that preserving healthy tooth structure reduces the restorative cycle, decreasing the number of dental appointments, which in turn reduces the carbon footprint from patient travel and lowers clinical waste. This impacts the treatment the student provides to their patients.

1.17. Does your dental school curriculum address the environmental significance of the delivery of high-quality (operative care) oral healthcare?

This topic was explored **in depth** by the **core** curriculum. (3 points)
This topic was **briefly** covered in the **core** curriculum. (2 points)
This topic was covered in **elective coursework** or **other learning experiences** (1 point)
This topic was **not** covered. (0 points)

Score Assigned	2

Score explanation: In teaching about composite, we learnt about the use of plastics that are single use and hard to dispose of when contaminated. As we currently don't have an alternative for this, we were taught about the restorative cycle. The lecture detailed how preserving natural, sound tooth tissue can slow down the restorative cycle and can reduce additional patient appointments. For e.g. Doing a filling that doesn't remove excess tooth structure, making sure there is no unsupported enamel and has a good seal will last and hopefully will reduce chance of secondary caries and needing a bigger restoration. This saves on equipment and patient travel and therefore reduces the environmental impact of oral healthcare.

High quality operative care is something that we are taught in the clinical skills suite and in clinics to deliver patients with the utmost standard of care. This is important to not only prevent the progression of disease which can negatively impact the patient, but also if treatment needs to be redone more materials are used and this in turn has an impact on the carbon footprint of the profession.

1.18. Does your dental school curriculum address the environmental significance of 'integrated oral care'?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective coursework** or **other learning experiences** (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	0

Score explanation: There is big emphasis on integrated treatment planning throughout the course, starting from Year 2. As part of our restorative teaching, we have small group tutorials that focus on specific topics for each session. In Year 2 the first tutorial that we have is on treatment planning, in this folder there are links to patient cases that we must treatment plan, as well as some links to British Dental Journal articles on the importance of treatment planning. This is built on in Year 3 with our 'Integrated Treatment Planning' session in which Year 3 dental students work alongside Year 2 Hygiene Therapist students to learn about integrated treatment planning and scope of practice. In year 4, there is also another clinical tutorial named 'Treatment Planning for complex restorative case'. There is also a strong focus on treatment planning, when we see our patients in clinics. Patients must know about what treatment they are receiving, the risks and benefits and alternatives to treatment before we proceed. This process allows patients to be more in control of their treatment. Despite there being a lot of teaching surrounding integrated treatment planning and care, there is no teaching with links to the environmental significance of it.

1.19. Does your dental school curriculum address the importance, environmental & oral health outcomes of individual & dental team's ownership of care?
This topic was explored **in depth** by the **core** curriculum. (3 points)
This topic was **briefly** covered in the **core** curriculum. (2 points)
This topic was covered in **elective coursework** or **other learning experiences** (1 point)

This topic was **not** covered. (0 points)	
Score Assigned:	1
Score explanation: The Bristol Dental School addresses this through its teaching on antibiotics, in Year 3 there are two lectures in our Human Disease teaching that are named 'Prudent Use of Antibiotics' and 'Antimicrobial Resistance'. The lectures focus on what antibiotic resistance is, what causes it and what can be done to prevent it. There is emphasis on our role as dental professionals to ensure we prescribe antibiotics correctly using guidelines such as Scottish Dental Clinical Effectiveness Programme (SDCEP) https://www.sdcep.org.uk/.	

1.20. In training for patient encounters, does your dental school's curriculum introduce strategies to have conversations with patients about the health effects of climate change?	
Yes, there are strategies introduced for having conversations with patients about climate change in the **core** curriculum. (2 points)	
Yes, there are strategies introduced for having conversations with patients about climate change in **elective** coursework. (1 point)	
No, there are **no** strategies introduced for having conversations with patients about climate change. (0 points)	
Score Assigned:	0
At present, there is no training for having conversations with patients about the health effects of climate change. While the Bristol Dental School does get feedback from patients in the format of an anonymous survey, there is no question or opportunity to discuss a patient's perspective on the effect of climate change as of yet.	

Curriculum: Administrative Support for Planetary Health

1.21. Is your dental school currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/Environmental Sustainability in Dentistry (ESD)/Planetary Health education?
Yes, the dental school is currently in the process of making **major** improvements to ESH/ ESD/ planetary health education. (4 points)

Yes, the dental school is currently in the process of making **minor** improvements to ESH/ESD/planetary health education. (2 points)	
No, there are **no** improvements to Planetary Health education in progress. (0 points)	
Score Assigned:	4

Score explanation:

In the academic year of 25/26 a new helical theme was introduced to the course called sustainability. At present the theme lead is doing an audit with the central Education for sustainable development team at the university to fully capture where sustainability is taught through the course and link it up.

Specific sustainability sessions have been introduced into year 1 and 3 currently but there are future plans to introduce a session into year 5 which will look at green impact practices, what they are, and how and why to become one. There are areas of development that will be undertaken in the future to have a climatic effect on health session in the year 2 human health and disease theme.

In the academic year 2025/2026, the role of Sustainability Representative was introduced to the Bristol Dental School Committee. Their role is to implement education about sustainable healthcare, raise awareness about our impact on the environment as a healthcare profession and suggest where further teaching can be implemented into the curriculum. Their job is also to attend committee meetings with staff, having someone on the committee shows that the Bristol Dental School is centring sustainability and is actively trying to make a difference. The weekly bulletin has a sustainability section every other week where it raises awareness about the impact we as a profession have on planetary health and different ways to combat this into our daily life and in Dentistry.

Within our Clinical Skills Suite, (where we learn how to do fillings, indirect restorations and root canals), the handouts that we get that involve our teaching have also been extended to include some teaching on sustainability in dentistry. In Year 3, sustainability is integrated into Fixed Prosthodontics lectures, such as "Ten Minutes for Inlays and Onlays". Students learn about the restorative cycle and how being efficient with the number of appointments and hence patient travel can reduce the carbon emissions and their effect on the environment. This is a new addition to the curriculum which helps students think about how they're able to implement an environmental conscience into their practices as a future dentist.

A lecture series called 'Ten Minutes for Materials', where we learn about the materials we use in Dentistry is trying to include more education on planetary health in Dentistry. For example, in 'Ten Minutes for Materials: Amalgam' we learn about the effect of amalgam, which contains Mercury, can have on the environment and stresses the importance of proper waste disposal. When learning about composite materials, lectures mention the abundance of single use plastic used in packaging. These lectures highlight the issue of waste in dentistry, so students are conscious of the effects of what they use, and we are taught not to use in excess to preserve our resources.

1.22. How well are the aforementioned planetary health/Education for Sustainable Healthcare/ Environmental Sustainability in Dentistry (ESD) topics integrated longitudinally into the core curriculum?	
Planetary health/ESH/ESD topics are **well integrated** into the core dental school curriculum. (6 points)	
Some planetary health/ESH/ESD topics are appropriately integrated into the core dental student curriculum. (4 points)	
Planetary health/ESH/ESD is not integrated and is primarily addressed in **(a) standalone lecture(s).** (2 points)	
There is **minimal/no** education for sustainable healthcare. (0 points)	
Score Assigned:	4

Score explanation: Bristol Dental School has aimed to make sustainability integrated into the Dental curriculum.

In 1st year there is an intro to sustainability in dentistry lecture which has the following LO's

- *What is sustainable development*
- *Understanding our carbon footprint*
- *Why is sustainable development important to dental students*
- *How we can influence these as healthcare professionals*

In 1st year, the Foundations of Dentistry conference gives students the freedom to pick a topic that interests them. This time is scheduled and protected to research anything which could include sustainability.

'Amalgam and Material Properties' is a lecture given in year 1 for students to learn about the material amalgam but also the effect it can have on the planet. The Minamata Convention on Mercury is mentioned and how mercury can bioaccumulate and have a toxic effect on the environment. The hazards associated with sourcing and processing mercury, and the reasons for its global decline and teaches us how to handle it properly.

In Year 2, lectures in the Human Disease module explore links between air pollution and diseases. For example, in "Asthma, COPD and Respiratory Tract Infections". Across years 1-3, we have lectures from a series called 'Ten Minutes for Materials' which includes some information about sustainability in dentistry in terms of the materials and effect on the environment.

In 3rd year we have a sustainability conference where we each research and present a given question, this a compulsory module and is an extended project. There is also an in-depth lecture in year 3 "Sustainability in Dentistry", which covers a variety of topics related to climate change.

Concentration of greenhouse gases in the atmosphere and solar radiation changes are talked about extensively. It teaches how emissions are calculated which is good to build on after learning about the carbon footprint in the sustainability conference earlier in the year.

1.23. Does your dental school appoint a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?	
Yes, the **dental school** has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)	
No, the **dental school** does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)	
Score Assigned:	1
Score explanation: In the academic year of 24/25 the theme of sustainability was integrated into the BDS programme and Ffion Jones was appointed theme lead. *"https://www.bristol.ac.uk/people/person/Ffion-Jones-faabc98f-66d8-42f2-b07f-ef37ecde60b4/"* *Although the theme is relatively new, the year 1 introduction session and the year 3 poster conference which has the theme of sustainability have already been implemented.*	

Section Total (42 out of 70)	**60%**

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Interdisciplinary Research

Section Overview: ***This section evaluates the quality and quantity of interdisciplinary planetary health research at the broader institution.*** *Interactions between health and the environment are complex and multifactorial. While climate change has been extensively studied from an environmental science perspective, planetary health is an emerging field. As leading health institutions with talented researchers and research resources, institutions should fund research studying the health effects of climate change and anthropogenic environmental toxins. This obligation is particularly strong because the public and policymakers are more attentive to climate change when its implications for human health are emphasised.*

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your institution?	
Yes, there are faculty members at the **institution** who have a **primary** research focus in planetary health **or** sustainable healthcare/vetcare. (3 points)	
Yes, there are individual faculty members at the **institution** who are conducting research **related** to planetary health or healthcare sustainability, OR are part of a national/international sustainability working group, but it is not their primary research focus. (2 points)	
There are sustainability researchers at the **institution**, but not specifically associated with healthcare/vetcare. (1 point)	
No, there are **no** planetary health and/or sustainability researchers at the **institution** at this time. (0 points)	
Score Assigned:	3

Score explanation: The University of Bristol Medical School has several faculty members who have a primary research focus on planetary health research and healthcare sustainability:

- *Dr Eunice Lo*

Dr Eunice Lo - Our People

- *Dr Adam Trickey*

Dr Adam Trickey - Our People

- *Dr Dann Mitchell*

Professor Dann Mitchell - Our People

The Cabot Institute for the Environment and the Elizabeth Blackwell Institute for Health Research at the University of Bristol are collaborating on a project called the 'Climate Change and Health Research Programme". The programme brings together experts from different disciplines to understand and address the health impacts of climate change.

2.2. Is there a dedicated department or institute for interdisciplinary planetary health research at your institution?

There is **at least one** dedicated department or institute for interdisciplinary planetary health research. (3 points)
There is **not currently** a department or institute for interdisciplinary planetary health research, but there are **plans** to open one in the next 3 years. (2 points)
There is an **Occupational and Environmental Health department**, but no interdisciplinary department or institute for planetary health research. (1 point)
There is **no** dedicated department or institute. (0 points)

Score Assigned:	3

Score explanation: The Elizabeth Blackwell Institute for Health Research within the University of Bristol works alongside the Cabot Institute for the Environment to incorporate planetary health in research that is either being planned or conducted at the university.
Climate change and health | Cabot Institute for the Environment | University of Bristol

The Cabot Institute for the Environment is a diverse community of experts focusing on protecting the environment and identifying ways of living more cohesively with our planet. The institute delivers evidence-based solutions to tackle the challenges of food security, water, low carbon energy, city futures, environmental change, and natural hazards and disaster risk.
Cabot Institute for the Environment | University of Bristol
Elizabeth Blackwell Institute for Health Research | University of Bristol

2.3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your institution?
Yes, there is a process in which community members impacted by climate and environmental injustice have **decision-making power** in the climate + environmental research agenda. (3 points)
Yes, there is a process in which community members impacted by climate and environmental injustice **advise** the climate + environmental research agenda. (2 points)
No, but there are **current efforts** to establish a process for community members to advise or make decisions on the research agenda. (1 point)
There is **no** process, and **no** efforts to create such a process. (0 points)

Score Assigned:	3

Score explanation: The University of Bristol is involved in many schemes that engage members of local communities that are disproportionately impacted by climate change in research.

Bristol Medical School hosted a 'Research Inclusion Seminar' in June 2025 to share good practice on including underserved communities in research.

The Health Research Ambassador project involves 4 Health Ambassadors led by community partners CaafiHealth. They are a team of six individuals from minoritised ethnic communities who

effectively act as bridges between researchers and communities. Part of their work is building relationships with communities and having conversations about health and research. The other aspect of their work is working with researchers directly on individual projects, helping with different things across the research cycle e.g. bringing people together for patient and Public Involvement and Engagement (PPIE) activities pre-research bid so that communities can help develop research agendas. Some of them have roles on steering committees both for research and healthcare service organisations and have worked with researchers at the medical school.

There are community-led coffee mornings held at the UoB Barton Hill micro-campus which are open to all researchers locally. Researchers come along to chat about their projects and the community and researchers can share knowledge and ideas, allowing people from the local community in Barton Hill to feed in views.
Initiatives | NIHR Health Protection Research Unit in Evaluation and Behavioural Science

Several researchers are a part of the local Diverse Research Engagement Network - a space where community members, organisations and researchers can come together to share ideas, support research.
Diverse Research Engagement Network - Bristol Health Partners

The School of Business held an informal session in November 2025 sharing their sustainability-related research with members of the local community, allowing them to feed back on the research agenda.

The University of Bristol's Cabot Institute for the Environment has ongoing research projects which connect our researchers with those most impacted by climate change, who often do not have a say in policy decisions - for example, those from the poorest backgrounds, those who are disabled, and those who are from an ethnic minority background. These ongoing projects have influenced the Cabot Institute's focus on just transition, and we seek to ensure that no one is left behind as we transition to a low carbon economy. The position of those most vulnerable is a priority for this research strand.

The Cabot Institute for the Environment and the Brigstow Institute are currently working on a joint initiative called From the Personal to the Planetary, which is funding the appointment of ten fellows to bring together a community of environmental researchers, activists and artists to help inform future research strategies on environmental change.

In our work on Just Transition, our community members work with specific groups, including people living with disability and people working in lower paid jobs to understand how transitions in energy and shifts in skills should be designed in a way that ensures they benefit. This has included looking at the evidence of what interventions work best to ensure a just transition to green skills.

In research we support modelling Leptospirosis transmission in slums in Brazil. Community engagement has been a central element to understand how exposure to contaminated water occurs and to understand what interventions, often based on direct community involvement, are needed to reduce exposure.

2.4. Does your institution have a planetary health website that centralises ongoing and past research related to health and the environment?

There is an **easy-to-use, adequately comprehensive** website that **centralises** various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities. (3 points)
There is a website that **attempts to centralise** various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive. (2 points)
The **institution** has an **Office of Sustainability website** that includes **some** resources related to health and the environment. (1 point)
There is **no** website. (0 points)

Score Assigned:	3

Score explanation: The University of Bristol website has a succinct subpage which is easy to use and centralises resources. It includes a section on what they're currently involved in across a variety of sectors including upcoming opportunities and projects for both students and staff . It also contains information on the Green Apple Scheme – which provides grants of up to £1500 for sustainability projects
Sustainability | University of Bristol

The Cabot Institute for the Environment has an extensive website featuring its six main research themes (water, low carbon energy, environmental change, food security, natural hazards and disaster risk, city futures), events, student opportunities and much more.
Cabot Institute for the Environment | University of Bristol

Additionally, Bristol Medical School developed our own Sustainability webpage last year.
Sustainability | Bristol Medical School

Furthermore, the medical school internal SharePoint now has a main sustainability page featuring the Sustainability Team within the medical school, contacts, how to get involved with a list of ongoing projects, Carbon Literacy Training information, publicly uploaded planetary health lectures (MedAll) and volunteering opportunities in and around Bristol University.

2.5. Has your institution recently hosted a conference or symposium on topics related to planetary health?
Yes, the **institution** has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)
Yes, the **institution** has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)
Yes, the **institution** has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points)

The **institution** has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)
No, the **institution** has not hosted a conference on topics related to planetary health in the past three years. (0 points)

Score Assigned:	4

Score explanation: The Population Health Science Institute (PHSI) at the University of Bristol often holds external and internal conferences.
Events

The 5th National Meeting on Climate Impacts and Risks was hosted in September 2025 at the University of Bristol.
National Climate Impacts & Risks Meeting (NCI-RM)

The Cabot Annual Lecture, 'Rethinking food and nutrition for the planet', was held in October 2025 - focusing on how we can secure sufficient quantity and quality of food in the face of increasing global challenges.

2.6. Is your institution a member of a national or international planetary health or ESH/ESV organisation?
Yes, the institution is a member of a national or international planetary health **or** ESH/ESV organisation. (1 point)
No, the institution is **not** a member of such an organisation. (0 points)

Score Assigned:	1

Score explanation: In February 2024, The University of Bristol Medical School became a member of the Planetary Health Alliance (PHA).

Professor Trevor Thompson presented at the Medical Schools Council - Education for Sustainable Healthcare Conference in March 2025 and Prof. Thompson, Lucy Westover and Lakshmi Aggarwal wrote two chapters for a book on ESH that is launching at the MSC ESHA Conference in March 2026.

Section Total (17 out of 17)	**100%**

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Community Outreach and Advocacy

Section Overview: ***This section evaluates a school's engagement in community outreach and advocacy efforts associated with planetary health.*** *Researching and teaching planetary health is necessary but not sufficient. It is critical that institutions also directly engage with communities most affected by environmental health harms. Although climate change is a problem largely created by those with power and resources, its impacts fall disproportionately on under-resourced populations and communities of colour. Institutions should partner with local communities affected by climate change and pollution to share information about environmental health threats, advocate together for change, and provide opportunities for students to be a part of this work.*

3.1. Does your institution partner with community organisations to promote planetary and environmental health?	
Yes, the **institution** meaningfully partners with **multiple** community organisations to promote planetary and environmental health. (3 points)	
Yes, the **institution** meaningfully partners with **one** community organisation to promote planetary and environmental health. (2 points)	
The **institution** does not partner with community organisations, but participates in community focused events relating to planetary health. (1 point)	
No, there is **no** such meaningful community partnership. (0 points)	
Score Assigned:	3
Score explanation: Bristol Medical School are continuing with their partnership for the second year with the local Facts4Life organisation on the project 'Healthy Planet, Healthy People'. It is delivered by second and third-year medical students in schools all around Bristol. The project involves going into local primary schools and teaching children about health, disease and wellness. In the 'Healthy planet, healthy life' module, they focus on 'The Importance of Nature and Environmental Awareness', 'The Environment as a Living Ecosystem' and 'Looking to the Future - Integrating Sustainability into Daily Life'. In its inaugural year, five schools were recruited with 7 students participating. The project received amazing feedback, with the 'Healthy planet, healthy life' module being particularly well-received as the children had been learning about climate change and renewable energy in geography and could understand the link between the health of the planet and the health of individuals. *Prof. Trevor Thompson also runs a Y3 student choice project called 'Migration and health', in which involvement in community organisations such as 'The Phoenix Project' and 'Care4Calais' forms a key part of the project.* *The University of Bristol partners with multiple community organisations regarding planetary and environmental health on projects such as 'From the Personal to the Planetary' and '(de)Bordering' run by the Brigstow Institute, as well as several projects within The Cabot Institute for the Environment.*	

3.2. Does your institution offer community-facing courses or events regarding planetary health?	
The **institution** offers community-facing courses or events at least once every year. (3 points)	
The **institution** offers courses or events open to the community at least once per year, but they are not primarily created for a community audience. (2 points)	
The **institution** has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point)	
The **institution** has not offered such community-facing courses or events. (0 points)	
Score Assigned:	3

Score explanation: The Cabot Institute for the Environment and the Elizabeth Blackwell Institute for Health Research have been running a series of Climate Change and Health seminars, open to staff, students and a wider external audience. Several seminars have run so far, entitled 'Interlinked: temperature, species and health'; 'People, heat and health: heat exposure and health risks in low income communities'; 'Health implications of climate action planning: trade-offs, co-benefits and research gaps'; 'UK Heat Health: modelling and lived experiences'.

The institution also hosted an open lecture called 'From Data to Stories: Communicating Science in a Climate of Change', drawing on case studies such as urban wetland change in Patagonia and habitat risk models for pudú deer.

The University of Bristol also hosted the fifth National Climate Impacts & Risks Meeting in September 2025, which focused on climate impacts and health-related climate impacts.
National Climate Impacts & Risks Meeting (NCI-RM)

The University of Bristol's Cabot Institute for the Environment has run several other events, such as 'Rethinking food and nutrition for the planet', 'From the Personal to the Planetary: Bridging Racial and Climate Justice', and 'Carbon Markets, forests and Indigenous alternatives.'
2025 | Cabot Institute for the Environment | University of Bristol

The University of Bristol held an event in July 2025 on 'Civic engagement for climate change and Sustainability', aimed at school sustainability leaders and governors with sustainability link roles.
2025: Civic engagement for climate change and sustainability | School of Education | University of Bristol

Bristol Medical School has continued its partnership with the local organisation Facts4Life, sending medical students into primary schools to teach about planetary and individuals' health.

3.3. Does your institution have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?
Yes, all students **regularly** receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)

Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to **some courses**. (1 point)
Students **do not** receive communications about planetary health or sustainable healthcare. (0 points)

Score Assigned:	2

Score explanation: The Bristol Medical School Sustainability Blog is shared with all students and linked on the BMS Sustainability webpage.
Bristol Medical School | Sustainability | Blog

The Cabot Institute for the Environment has a weekly newsletter - one for the public and one for staff/students - that anyone can subscribe to.

3.4. Does the institution or main affiliated hospital trust engage in professional education activities targeting individuals post-graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career?

Yes, the **institution** or **main affiliated hospital trust** offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health. (2 points)
Yes, the **institution** or **main affiliated hospital trust** offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers. (1 point)
There are **no** such accessible courses for post-graduate providers. (0 points)

Score Assigned:	2

Score explanation: The Bristol Medical School currently holds a bronze accreditation as a Carbon Literacy educator, and will soon be silver-accredited with the Y1 Carbon Literacy Training in March 2026. So far over 450 members of staff and students have been certified with Carbon Literacy. The training consists of two three-hour face-to-face seminars. To become certified, participants also have to commit to two pro-climate pledges. Between March 2025 and now, 195 Y1 students and 78 individuals post-graduation received their certification.
The Carbon Literacy Project

Over 60 postgraduates have participated in a Climate Fresk since March 2025. Participants work together to identify causes and effects related to climate science, based on facts from the scientifically-backed IPCC reports. They are taught the fundamental science behind climate change and empowered to take action. Many of the participants have subsequently undergone facilitator training and have facilitated Fresks for other postgraduates, undergraduates and even secondary school pupils.

3.5. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about environmental health exposures?	
Yes, the **institution** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated medical centres have accessible educational materials for patients. (0 points)	
Score Assigned:	2
Score explanation: Lakshmi Aggarwal and Manjote Sahota have created accessible patient materials on environmental health exposures for the Bristol Medical School Sustainability Blog. *The University of Bristol has made some of the lectures about environmental health exposures including 'The harms of air pollution (and the solutions)' by Dr George Nava available on MedAll.* *MedAll | The Harms of Air Pollution and the Solutions*	

3.6. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?	
Yes, the **institution** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated hospitals have accessible educational materials for patients. (0 points)	
Score Assigned:	2
Score explanation: Lakshmi Aggarwal and Manjote Sahota have created accessible patient materials on the health impacts of climate change for the Bristol Medical School Sustainability Blog. *Bristol Medical school has uploaded a three-part series by Prof. Thompson on the health effects of climate change - available to everyone on MedAll.* *MedAll | University of Bristol* *Whilst they were originally designed for medical students, they are pitched at a level appropriate and accessible for an average member of the population.* *The lecture series features on the blog that is linked on the external medical school sustainability webpage.*	

Section Total (14 out of 14)	**100%**

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Support for Student-Led Planetary Health Initiatives

Section Overview: ***This section evaluates institutional support for student-led planetary health initiatives, such as funding, fellowships, programming, and student groups.*** *Planetary health is a young field and, as young people facing a future deeply shaped by climate change, students are often some of the first at an institution to engage with it. Institutions should provide support for students to engage in sustainability quality improvement (QI) initiatives, discover mentors in their area of interest, and receive funding for planetary health projects.*

4.1. Does your institution offer support for students interested in enacting a sustainability initiative/QI project?	
Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum. (2 points)	
The **institution** encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, **but** there is no student funding available and there is no requirement to participate. (1 point)	
No, the institution does not offer opportunities or support for sustainability initiatives or QI projects. (0 points)	
Score Assigned:	2

Score explanation: The University of Bristol provides funding for sustainability initiatives through its Green Apple Scheme. Both staff and students can apply for £500-£1500 for projects such as talks on sustainable careers, the development of course materials, student-led outreach and organising interdisciplinary events.

Bristol Medical School advertised an opportunity for Y5 students to apply to be academy sustainability representatives, working with the Sustainability Advocates to roll-out initiatives - as well as assisting on projects being carried out by trust sustainability teams and clinical teaching fellows e.g. reducing single-use plastic waste in catheter teaching at the BRI.

BMS also funds x2 student Sustainability Advocates within the Medical School who effectively carry out a Quality Improvement Project through initiatives like the PHRC.

Y5 medical students also have to complete a guided audit/quality improvement project; BMS has pushed for students to implement sustainability into the focus of their nine-week projects during their primary care block. Students are given a guide with sections on "Sustainability in Healthcare', 'Health inequalities and Sustainability' and 'Sustainability Quality Improvement - SusQI'. The guide discusses the carbon footprint of the NHS, the disproportionate impacts of climate change on the most deprived communities and examples of areas to investigate e.g. overprescribing and medication waste recycling.

4.2. Does your institution offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?	
The **institution** has a **specific** research program or fellowship for students interested in doing planetary health/sustainable healthcare/vetcare research. (2 points)	
There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these **require student initiative** to seek them out and carry them out in their spare time. (1 point)	
There are **no opportunities** for students to engage in planetary health/sustainable healthcare research. (0 points)	
Score Assigned:	2

Score explanation: There are student choice projects facilitated by Bristol Medical School which offer this. The majority of these occur in Y3:

- *'Sustainable Diets' - an introduction to overall sustainable healthcare*
- *'Sustainability in Theatre'*
- *'Sustainability in Paediatric Theatres'*
- *'Nutrition for clinical conditions'*
- *'An evaluation of healthcare carbon footprints'*

There is also potential for this in the audit/QI project during the primary care block in year five.

Bristol Medical School advertised an opportunity for Y5 students to apply to be academy sustainability representatives, working with the Sustainability Advocates to roll-out initiatives - as well as assisting on projects being carried out by trust sustainability teams and clinical teaching fellows e.g. reducing single-use plastic waste in catheter teaching at the BRI.

4.3. Does the institution have a webpage where students can find specific information related to planetary health and/or sustainable healthcare/vetcare activities and mentors within the institution? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.	
The institution has a webpage with specific information related to planetary health or sustainable healthcare/vetcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. (2 points)	
There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the institution, but it lacks key information. (1 point)	
There is **no institution** specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. (0 points)	
Score Assigned:	2

Score explanation: Bristol Medical School has a public-facing Sustainability webpage on its main medical school website. *Sustainability | Bristol Medical School* *Furthermore, the medical school internal SharePoint has a main sustainability page featuring the Sustainability Team within the medical school, contacts, how to get involved with a list of ongoing projects, Carbon Literacy Training details, sustainability-related student choice projects, publicly uploaded planetary health lectures (MedAll) and volunteering opportunities in and around Bristol University.*

4.4. Does your institution have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?	
Yes, there is a student organisation **with faculty support** at my institution dedicated to planetary health or sustainability in healthcare. (2 points)	
Yes, there is a student organisation at my institution dedicated to planetary health or sustainability in healthcare but it **lacks faculty support.** (1 point)	
No, there is **not** a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)	
Score Assigned:	2
Score explanation: The University of Bristol employs 11 Sustainability Advocates from eight schools across the institution - including two from Medicine - to work on embedding sustainability throughout all aspects of the academic experience. They are supported by the Education for Sustainable Development Team - Josie Maskell and Chris Preist - as well as specific faculty advisors. For Medicine, these are Prof. Thompson and Prof. Tilling. *There are also several sustainability-related student societies affiliated with Bristol SU, such as Bristol University Conservation Group, Climate Conversations, Earth Justice Society, ESG Society and Bristol Sustainability Finance Society.*	

4.5. Is there a student liaison representing sustainability interests who serves on a department or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?	
Yes, there is a student representative who serves on a department or institutional decision-making council/committee. (1 point)	
No, there is no such student representative. (0 points)	
Score Assigned:	1

Score explanation: *For the second year, Bristol Medical School has employed two student Sustainability Advocates (Lakshmi Aggarwal, third-year clinical medical student and Manjote Sahota, second-year pre-clinical medical student).*

These students collaborate with the medical school in multiple ways, offering perspectives from both ends of the course. Lakshmi has attended the programme management committee meeting, which is one of the highest-level decision-making committees involving the most senior members of the medical school, and presented on the theme of sustainability. She has proposed several ideas to integrate sustainability even further into the curriculum.

Lakshmi has also attended the CEAG (climate action group) meetings, where various members of the medical school come together and discuss ways in which to lead and provoke change within the school, and work together on the Climate Action Plan.

4.6. In the past year, has the institution had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)	**Score**
Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.	1
Panels, speaker series, or similar events related to planetary health that have students as an intended audience.	1
Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.	1
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	1
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	1
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1

Score explanation:

1. *Bristol Medical School offers many student choice projects in Y2 and Y3 involving agriculture: a placement at Pipers Farm; volunteering at a community garden; trips to Bristol Botanical Gardens and Hippocratic Botanical Gardens.*

2. *The University of Bristol's Cabot Institute for the Environment has run several panels and lecture series for students. One example is the Climate Change and Health seminars, open to staff, students and a wider external audience. Several seminars have run so far, entitled 'Interlinked: temperature, species and health'; 'People, heat and health: heat exposure and health risks in low income communities'; 'Health implications of climate action planning: trade-offs, co-benefits and research gaps'; 'UK Heat Health: modelling and lived experiences'.*

3. *Bristol Medical School held a 'Safe Space' talk on politicising medicine, featuring a doctor who has been involved with environmental activism.*

4. *The University of Bristol held the 'MSc in Science Communication for a Better Planet 2026' art showcase exhibition in February 2026. Students created powerful art pieces on climate change, taking you on a journey from eco-anxiety to eco-hope.*

5. *The University of Bristol promotes many volunteering opportunities related to building community resilience: community farms and gardens that aim to tackle food insecurity by supplying fresh vegetables to local charities (as well as delivering social prescribing); nature nurture sessions restoring natural green spaces at sites of nature conservation interest to boost biodiversity; litter picking in the community.*

6. *Bristol Medical School offers many student choice projects in Y2 and Y3 involving wilderness or outdoor programmes:*

- *'Explore the role of portable ultrasound in low resource and wilderness settings'*
- *'What strategies can be employed in the remote and expedition setting to decrease the risk of exertional heat injury?'*
- *'Expedition Medicine in the High Atlas Mountains'*
- *'Prehospital Emergency Medicine in the Alps'*
- *'Preparing for a diving expedition'*
- *'A breath of fresh air: what does it mean to be well?'*
- *'Nature and Me': child and adolescent psychiatry, film and story telling with young people'*
- *'Exploring Yoga, Complementary Health, and Wellbeing Practices in Coastal North Devon' They all include practical components such as hiking, diving and nature-based outdoor activities*

Section Total (15 out of 15)	**100%**

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Campus Sustainability

Section Overview: ***This section evaluates the support and engagement in sustainability initiatives by the institution.*** *The healthcare industry is a major contributor to greenhouse gas emissions as well as pollution that harms local, regional, and global ecosystems. While healthcare is, by nature, a resource-intensive endeavour, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinising every aspect of how our systems operate, from where we source our energy, to how we build our infrastructure, to what companies we invest in. Our institutions, clinics, and hospitals must set the standard for sustainable practices, and show other sectors what is possible when it comes to minimising environmental impact.*

5.1. Does your institution have an Office of Sustainability?	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is **at least one designated staff member** for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but **no specific staff member** in charge of hospital sustainability. (2 points)	
There are **no salaried sustainability staff,** but there is a sustainability task force or committee. (1 point)	
There are **no** staff members **or** task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	3
Score explanation: *The institution has an office for sustainability with multiple full-time staff. The Sustainability Team comprises Transport, Circular Economy, Estates, Energy and Sustainable Science sub-teams, who work towards reducing carbon emissions across all of the institution's operations and buildings.* *The hospital academies that partner with Bristol Medical School also have sustainability staff but they are under the National Health Service and are not directly associated with the Medical School. However, the university does have a CAP (Climate Action Plans) Coordinator for each school - for the Medical School this is Paul Savage.* *Bristol Medical School also employs a Specialist Sustainability Officer - Lucy Westover - who leads on greening labs and delivering Carbon Literacy Training to staff and students.* *Contacts | Sustainability | University of Bristol*	

5.2. How ambitious is your institution's plan to reduce its own carbon footprint?
The institution has a **written and approved plan** to achieve carbon neutrality by **2030** (5 points)
The institution has a **written and approved plan** to achieve carbon neutrality by **2040** (3 points)

The institution has a stated goal of carbon neutrality by **2040** but has **not created a plan** to reach that goal or the **plan is inadequate** (1 point)
The institution does **not** meet any of the requirements listed above (0 points)

Score Assigned:	5

Score explanation: The University of Bristol has pledged to become a net zero carbon campus by 2030 - making significant and rapid changes to reduce carbon emissions to the lowest amount and offsetting as a last resort. Every School and Division across the University is developing and implementing bespoke Climate Action Plans to outline the steps they are taking and will take to cut their carbon footprint. The institution has also pledged to decrease the transport footprint, ensure students have the opportunity to undertake education for sustainable development, and develop a strategy to include social and environmental considerations into the procurement process.
Climate action and net zero carbon | Sustainability | University of Bristol
Our pledges | Sustainability | University of Bristol

Many NHS hospital academies that partner with the University of Bristol such as the Bristol Royal Infirmary have also set similar goals to be net-zero/carbon-neutral by 2030.

5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy?
Yes, institution buildings are **100%** powered by renewable energy. (3 points)
Institution buildings source **>80%** of energy needs from off-site and/or on-site renewable energy. (2 points)
Institution buildings source **>20%** of energy needs from off-site and/or on-site renewable energy. (1 point)
Institution buildings source **<20%** of energy needs from off-site and/or on-site renewable energy. (0 points)

Score Assigned:	1

Score explanation: The institution's average renewable energy use is just over 20%, with off-site wind forming the majority of this and on-site solar contributing ~0.6%. The University of Bristol is on track to meet its targets of capping grid gas use at the 2014/15 total of 83.5GWh and reducing kWh use from grid gas and electricity per staff and student in full-time education by a third by 2030.

The Building Energy Management Systems, upgraded in 2021, enables the institution to reprogram the control systems to review, identify and eliminate energy waste. For example, making sure that a building is not being cooled when it is also being heated. It also helps to reduce both gas and electricity consumption through actions including control changes, building system optimisation measures and additional metering. Implementing these controls at the Arts and Social Science

Library (the biggest library on campus) across one year reduced gas use by enough to heat 25 homes a year. *The new Temple Quarter Enterprise Campus will connect to one of the UK's most innovative heating systems, delivered by Vattenfall and the University. The project plans to export heat from its own computer servers and cooling system back into a citywide heat network, helping to heat other local buildings and reduce carbon emissions.* *Affordable and clean energy evidence | About the University | University of Bristol*

5.4. Are sustainable building practices utilised for new and old buildings on the institution's campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?	
Yes, sustainable building practices are utilised for new buildings on the institution's campus and the **majority** of old buildings **have been retrofitted** to be more sustainable. (3 points)	
Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have **not been retrofitted.** (2 points)	
Sustainable building practices are **inadequately or incompletely** implemented for new buildings. (1 point)	
Sustainability is **not considered** in the construction of new buildings. (0 points)	
Score Assigned:	2
Score explanation: The University of Bristol requires a minimum rating of BREEAM Excellent for all new-build construction projects. While we aspire to high levels of environmental performance in all of our buildings, the same standard is not always achievable on refurbishment projects due to the diverse range of building types and functions of the university, and there is no set standard for retrofitting old buildings. *How Does BREEAM Work?*	

5.5. Has the institution implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?
Yes, the institution has implemented strategies to encourage and provide **environmentally-friendly transportation options** such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)
The institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised. (1 point)

The institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)

Score Assigned:	2

Score explanation: *The University of Bristol's sustainable transport initiatives include:*

- *cycle to work scheme for staff*
- *free cycle basic repair and service clinics*
- *student discount on cycle locks and lights*
- *staff bus fare discounts*
- *interest-free loans for bus and train season tickets for staff*
- *car share parking permits for staff*

Transport | Sustainability | University of Bristol

Bristol Medical School provides free accommodation for clinical years students who are on placement outside of Bristol, to reduce commutes. Travel is reimbursed to GP placements and BMS encourages any students who drive to carpool. Students declare annually whether they will be driving a car in Bristol and this information is used to group students together for GP placements.

5.6. Does your institution have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?
Yes, the institution has **both** compost **and** recycling programs accessible to students and faculty. (2 points)
The institution has **either** recycling **or** compost programs accessible to students and faculty, but not both. (1 point)
There is **no** compost or recycling program at the institution. (0 points)

Score Assigned:	2

Score explanation: *The University of Bristol has both compost and recycling programs accessible to students and staff.*

Waste and resource management | Sustainability | University of Bristol

5.7. Does the institution apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?
Yes, the institution has a**dequate s**ustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points)
There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)

There are sustainability guidelines for food and beverages, but they are **insufficient or optional.** The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point)	
There are **no** sustainability guidelines for food and beverages. (0 points)	
Score Assigned:	3
Score explanation:The University of Bristol has sustainability requirements for catering, such as 'Meat-free Mondays', with a sustainable food and beverage strategy put in place. The strategy takes an innovative approach to catering practices, such as repurposing banana peels and coffee grounds, banning plastic bottles, stopping selling plastic drink containers and converting all cooking oil into biofuel. *Food | Sustainability | University of Bristol* *Vegan or vegetarian food is provided as the default at all medical school events, conferences and meetings.*	

5.8. Does the institution apply sustainability criteria when making decisions about supply procurement?	
Yes, the institution has **adequate** sustainability requirements for supply procurement **and** is **engaged** in efforts to increase sustainability of procurement. (3 points)	
There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The institution is **engaged** in efforts to increase sustainability of procurement. (2 points)	
There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The institution is **not engaged** in efforts to increase sustainability of procurement. (1 point)	
There are **no** sustainability guidelines for supply procurement. (0 points)	
Score Assigned:	3
Score explanation: The University of Bristol has a procurement policy, valid from 2023-2028, that includes a section on sustainable sourcing - involving considering the life cycle impacts of goods, giving a preference to Fairtrade or equivalent goods and ensuring all procurement tenders contain sustainability specifications. *Procurement Policy* *The institution's procurement team has earned the CIPS Ethical Mark and appears on its ethical register.* *Sustainable procurement | Sustainability | University of Bristol*	

5.9. Are there sustainability requirements or guidelines for events hosted at the institution?

Every event hosted at the institution **must** abide by sustainability criteria. (2 points)
The institution **strongly recommends or incentivizes** sustainability measures, but they are **not required.** (1 point)
There are **no** sustainability guidelines for institution events. (0 points)

Score Assigned:	1

Score explanation: Bristol Medical School has a sustainability strategy that was last updated in 2024. Vegetarian or vegan food is provided as the default at all events, conferences and meetings. There is reimbursement available for travel via public transport, such as for first class rail journeys that are longer than 3 hours.

The University of Bristol has a Sustainable Events Guide, giving guidance on venues and travel, food and drink, waste reduction, promotional materials, energy efficiency and communicating sustainable practices.
Sustainable Events Guide | Sustainability | University of Bristol

There are also several University of Bristol sustainability policies and strategies, some of which are relevant to hosted events
University of Bristol | Sustainability | Policy - Compliance

5.10. Does your institution have programs and initiatives to assist with making lab spaces more environmentally sustainable?
Yes, the institution has **programs** and **initiatives** to assist with making lab spaces more environmentally sustainable. (2 points)
There are **guidelines** on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)
There are **no** efforts at the institution to make lab spaces more sustainable. (0 points)

Score Assigned:	2

Score explanation: There are multiple cross-disciplinary initiatives being run by sustainability technicians within the University to make lab spaces more environmentally sustainable. They are focused on building greener labs from inception to completion, retrofitting and altering lab infrastructure, encouraging users to switch off equipment or lower fume hoods when not in use and ensuring that inductions for new members include sustainability principles alongside existing health and safety training.
Sustainable Science and Green Labs | Sustainability | University of Bristol

Bristol Medical School has achieved Gold Certification with LEAF in 100% of our labs. This is a tool designed by University College London that drives improvements in lab efficiency and

sustainability. We have also taken part in the Freezer Challenge which teaches users how to be more energy efficient with their lab cold storage.

5.11. Does your institution's endowment portfolio investments include fossil-fuel companies?	
The institution is **entirely divested** from fossil fuels **and** has made a **commitment to reinvest divested funds** into renewable energy companies or renewable energy campus initiatives. (4 points)	
The institution is **entirely divested** from fossil fuels. (3 points)	
The institution has **partially divested** from fossil fuel companies **or** has made a **commitment to fully divest**, but **currently** still has fossil fuel investments. (2 points)	
The institution has **not divested** from fossil-fuel companies, but faculty and/or students are **conducting organised advocacy** for divestment. (1 point)	
Yes, the institution has investments with fossil-fuel companies and there have been **no efforts** to change that. (0 points)	
Score Assigned:	4
Score explanation: In 2019, the University of Bristol became the first university in the UK to declare a climate emergency. Following this, the institution completely divested from all investments in fossil fuel companies. *The University of Bristol invests in renewable energy companies, with 32.7% of the portfolio being invested in companies that support a low carbon transition e.g. those that are reducing their own GHG emissions year-on-year, those which have committed to sourcing increasing amounts of renewable energy, or those which provide technology, infrastructure, products or services that facilitate the transition.* *University of Bristol – portfolio climate metrics*	

Section Total (28 out of 32)	**87.5%**

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Grading

Section Overview
This section focuses on the grading of the report card. The institution received a grade for each of the individual sections as well as an overall institutional grade. Section point totals were tallied, divided by the total points available for the section, and converted to a percentage. The overall institutional grade is a weighted average of the section grades, with curriculum receiving a higher weight owing to its larger number of metrics. Letter grades for each section and the institution overall were then assigned according to the table below.

Letter Grade*	Percentage
A	80% - 100%
B	60% - 79%
C	40% - 59%
D	20% - 39%
F	0% - 19%

**Within each grade bracket, a score in the top 5% (_5 to_9%), receives a "+", and a score in the bottom 5% (_0-_4%) receives a "--". For example, a percentage score of 78% would be a B+.*

Planetary Health Grades for the University of Bristol Dental School
The following table presents the individual section grades and overall institutional grade for the University of Bristol Dental School on this Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(42/70) x 100 = 60%	B-
Interdisciplinary Research (17.5%)	(17/17) x 100 = 100%	A+
Community Outreach and Advocacy (17.5%)	(14/14) x 100 = 100%	A+
Support for Student-led Planetary Health Initiatives (17.5%)	(15/15) x 100= 100%	A+
Campus Sustainability (17.5%)	(28/32) x 100 = 87.5%	A
Institutional Grade	**85.8 %**	**A+**

Report Card Trends

Section Overview
It is the first year that the University of Bristol Dental School has completed the Planetary Health Report Card.