



Planetary Health Report Card:

Peninsula Medical School



UNIVERSITY OF
PLYMOUTH
Peninsula Medical School

2021-2022 Contributing Team:

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Summary of Findings

Overall	B
<u>Curriculum</u>	B+
<ul style="list-style-type: none"> Peninsula Medical School covered most curriculum topics in the core or elective curriculum. Many topics were covered by the Year 1 Clinical Leadership and Extension Week workshop on planetary health (PH). Recommendations: PH teaching could be incorporated into more taught sessions, allowing more topics to be covered in depth. Learning objectives with planetary health aims can ensure these needs are met. 	
<u>Interdisciplinary Research</u>	B+
<ul style="list-style-type: none"> The Sustainable Earth Institute's research festival and conferences promote PH and sustainability. The Global Health Collaborative and many medical faculty members work on PH projects such as the KUPUMUA project. Recommendations: Opportunities to engage with interdisciplinary research need better publicisation and easier access. We recommend that the medical school compiles a list of education for sustainable healthcare and PH research opportunities, accessible on the PH webpage on the digital learning environment (DLE). 	
<u>Community Outreach and Advocacy</u>	C-
<ul style="list-style-type: none"> Peninsula Medical School routinely partners with community organisations. Due to COVID-19, there have been no community courses or events over the past year. There is regular coverage of PH topics in university communications. The main affiliated hospital trust does not provide postgraduate PH teaching, and there are no accessible educational materials for patients regarding health impacts of PH topics. Recommendations: To encourage student partnership with affiliated hospital trusts, to produce patient education resources, and to incorporate PH topics into postgraduate education. Community-facing PH courses and events could also be held. 	
<u>Support for Student-Led Initiatives</u>	B-
<ul style="list-style-type: none"> Peninsula Medical School offers support for student-led PH projects and has hosted co-curricular PH programs and initiatives. There is a dedicated PH page on the DLE with relevant initiatives and potential mentors, and a PH student group. There is a student liaison representing sustainability interests within the medical school. Recommendations: To offer faculty support for the PH student organisation. The medical school could also host a variety of co-curricular events including organic agriculture, sustainable food systems, environmental justice, cultural arts and local volunteer opportunities. 	
<u>Campus Sustainability</u>	B-
<ul style="list-style-type: none"> Within the University of Plymouth, Peninsula Medical School looks to sustainably manage its carbon footprint, procurement of goods, supply of food/beverage products and environmentally conscious waste disposal. It is still unclear to what extent these efforts are adopted by the medical school. Recommendations: There are currently no laboratory incentives or programmes facilitating environmentally friendly practice or carbon neutrality. Events held by the medical school are not subject to sustainability requirements. Introducing staff or student roles specific to medical school sustainability would help to introduce these changes. Existing monitoring systems can be used to maximise the use of renewable energy in existing campus buildings. 	

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 analyzing 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, urbanization, 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 medical 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 medical training. It is imperative that we hold our institutions accountable for educating medical 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 color, 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 medical schools, we have created a Planetary Health Report Card that medical students internationally can use to grade and compare their home institutions on an annual basis. This medical-student-driven initiative aims to compare medical 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 centered on environmental health impacts 5) medical school campus sustainability.

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the *Planetary Health Alliance* as “a solutions-oriented, transdisciplinary field and social movement focused on analyzing and addressing the impacts of human disruptions to Earth’s natural systems on human health and all life on Earth.” 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 medical school 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.
- **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 vs. Institution:** When “medical school” is specified in the report card, this only refers to curriculum and resources offered by the School of Medicine and does not include offerings from other parts of the university (for example, undergraduate departments (USA), other related departments eg Public Health, Population Health departments). In contrast, when “institution” is specified in the report card, we are referring to the university more broadly. 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 (Metric 19 in curriculum section):** This is a series of questions

providers 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 mold 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.

- **Elective:** The word “elective” refers to an optional course or lecture series that a medical 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.
- **Clerkship:** 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 or placements.

Other considerations:

- If there are more than one “tracks” at your medical school 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 example).

Added to our resources this year, the Planetary Health Report Card Literature Review by Metric collates the evidence behind each of the metrics in the Planetary Health Report Card. It serves as a collection of references for further learning and a resource for those advocating for increased planetary health engagement at their institutions.

Planetary Health Curriculum

Section Overview: This section evaluates the integration of relevant planetary health topics into the medical school curriculum. Today's medical students will be on the frontlines of tackling the health effects of climate and other environmental changes. Therefore, it is critical that medical 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. Did your medical school offer elective courses (student selected modules) to engage students in Education for Sustainable Healthcare or Planetary Health in the last year?	
3	Yes, the medical school has offered more than one elective whose primary focus is ESH/planetary health in the past year.
2	Yes, the medical school has offered one elective whose primary focus is ESH/planetary health in the past year.
1	The medical 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.
0	No, the medical school has not offered any electives on planetary health or electives that include ESH/planetary health topics in the past year.
<p><i>Student Selected Unit (SSU) option: Green Practice. Creating a more sustainable world in General Practice. Learning outcomes:</i></p> <ul style="list-style-type: none"> • The planet is changing, and this is due to the way we treat it. We all as individuals need to change our lifestyles to reduce the impact we are having on the earth. • We also need to do that, corporately, in our workplaces. This SSU focuses on a rural general practice. • Taking the model from the national “Green Practice” scheme, we will develop aspects of working to reduce carbon footprint, reduce waste, as well as creating more energy via solar paneling / wind turbines in surgery land. <p><i>Year 2 Doctors as Educators: Sustainability in Healthcare:</i></p> <ul style="list-style-type: none"> • As the largest UK employer, the NHS and Health and Social Care sectors have a responsibility to contribute to sustainability and reduce their environmental impact while delivering exceptional care. How can medical students contribute to this? What do they need to know to help them be the champions of the future? 	

Curriculum: Health Effects of Climate Change

2. Does your medical school curriculum address the relationship between extreme heat, health risks, and climate change?

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Year 1 Planetary health Workshop. Learning objectives - The science of the climate emergency:

- *Doctors responding to the climate emergency threat as part of advocacy*
- *Links between responding to the climate emergency and sustainability targets*
- *Win/Win solutions to the climate emergency*
- *Contribution of health care to emissions*

Year 2 Doctors As Educators (DAE) project subject: “Sustainability in Healthcare”

Year 3 Locally Global Plenary:

- *Climate change: new threats and challenges*

Year 5 elective learning outcome:

- *“Demonstrate a current and in-depth understanding of a topic relating to global health or health inequality.”*

3. Does your medical school curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Planetary health workshop in year 1, learning objectives: The science of the climate emergency:

- *Doctors responding to the climate emergency threat as part of advocacy*
- *Links between responding to the climate emergency and sustainability targets*
- *Win/Win solutions to the climate emergency*
- *Contribution of health care to emissions*

Yer 1 and 2 optional SSU: Extreme Environment Physiology and Medicine

- *“This SSU will cover the physiological effects of exposure, the acute and chronic threats to health, and special medical considerations for activity and exploration in different types of extreme environments.*

- *Important factors to be covered include the effects of changes in gravity, pressure, respiratory gas composition, nutrition, hydration and temperature. Also covered are the physiological mechanisms involved and - where appropriate - their implications for optimizing performance and survival.*
- *Pharmacological, psychological, emergency management and planning implications will also be considered where relevant."*

Year 2 Life Sciences Resource Center (LSRC) session: "Extreme Weather Impact on Health"

Year 3 Locally Global Plenary:

- *Climate change: new threats and challenges*

4. Does your medical school curriculum address the impact of climate change on the changing patterns of infectious diseases?

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

- *Briefly described in year 2 plenary 'preparing to travel', learning objectives do not directly describe this:*
- *Begin to conceptualise from Global Health in relation to your own clinical practise*
- *Become aware of the challenges that impact infectious disease prevention (vaccines and prophylaxis)*
- *Become aware of some emerging diseases, tropical diseases, and zoonoses*
- *Know where to find relevant information on vaccine and medical guidance for international travel*

5. Does your medical school curriculum address the respiratory health effects of climate change and air pollution?

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

Planetary health workshop in year 1, learning objectives: The science of the climate emergency

- *Doctors responding to the climate emergency threat as part of advocacy*
- *Links between responding to the climate emergency and sustainability targets*
- *Win/Win solutions to the climate emergency*
- *Contribution of health care to emissions*

Years 1 and 2 optional SSU: “Allergies and the Environment”. Learning outcome:

- *“Asthma and atopic allergies are dramatically increasing. This unit will explore the basic immunological mechanisms involved and look at the environmental reasons that may be responsible for these increases”*

Year 2 Quality Improvement (QI) SSU workshop covering air pollution and asthma.

Year 4 plenary on environmental lung disease, learning objectives:

- *Environmental lung diseases associated with the environment, smoking and industrial/occupational hazards.*

6. Does your medical school curriculum address the cardiovascular health effects of climate change, including increased heat?

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

- *Year 1 Clinical Leadership and Extension Week (CLEW) - Planetary Health Workshop. Learning objectives - The science of the climate emergency:*
- *Doctors responding to the climate emergency threat as part of advocacy*
- *Links between responding to the climate emergency and sustainability targets*
- *Win/Win solutions to the climate emergency*
- *Contribution of health care to emissions*

7. Does your medical school curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

- *Year 1 Doctors and Planetary Health CLEW session learning objective: “doctors responding to the climate emergency threat as part of advocacy” and “Win/Win solutions to the climate emergency”.*
- *Year 1 plenary: “Influences on Health” learning outcome: “Psychological, social, economic and environmental factors that influence an individual’s health and well-being at different stages in the life cycle”.*

8. Does your medical school curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

- *Year 1 workshop: Planetary Health workshop learning outcome: “contribution of healthcare to emissions”.*
- *Year 1 plenary: “Influences on Health” learning outcome: “Psychological, social, economic and environmental factors that influence an individual’s health and well-being at different stages in the life cycle”.*
- *Maslow’s Hierarchy of Needs is discussed in depth in years 1 and 2 (multiple Dr. Tim Ley lectures).*
- *Year 1 Doctors and Planetary Health CLEW session.*
- *Year 2 social engagement essential reading: social determinants of health.*
- *Year 5 elective learning outcome: “Demonstrate a current and in-depth understanding of topic related to global health or health inequality”.*

9. Does your medical school curriculum address the outsized impact of climate change on marginalized populations such as those with low SES, women, communities of color, Indigenous communities, children, homeless populations, and older adults?

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

- *Year 1 Jigsaw (reflective small group seminars) session “Influences on Health” learning outcome: “psychological, social, economic and environmental factors that influence an individual’s health and well-being at different stages in the life cycle”.*
- *Year 1 Lecture/plenary “Developmental Psychology” considered the role of nature vs nurture or Genetics vs Environment.*

- Year 2 Lecture “Health of the Homeless” included the learning outcomes “understand social determinants of homelessness-risk factors for homelessness/epidemiology” and “understand common health problems of the homeless and their access to health services”.
- Year 3 Tutorial week lecture “Prematurity: Biopsychosocial Cause and Consequences” learning outcome: “understand the psychosocial causes of preterm birth”.
- Year 3 SSU general handbook states that “newly qualified doctors must be able to apply the principles, methods and knowledge of population health and the improvement of health and sustainable healthcare to medical practice, describe the health of a population using basic epidemiological techniques and measurements, and evaluate the environmental, social, behavioral and cultural factors which influence health and disease in different populations.”.
- Year 3 locally global: a population view of medicine learning objectives: “Describe common factors influencing health at home and abroad, Articulate a Population Health approach to local and global problems, Role and principles of healthcare provision, How to find winning solutions to complex problems”.
- Year 4 General Practice (GP) clinical pathway week learning outcome: “understand the patient perspective and how family and environment influences health behaviours and outcomes”.
- Year 4 CC2 tutorial “Environmental Lung Disease” learning outcome “environmental lung diseases associated with the environment, smoking, and industrial/occupational [factors]”.
- Year 4 SSU module handbook/elective handbook learning outcome: “socioeconomic and environmental determinants of health [including] 1) demonstrate awareness of the non-clinical determinants of health, including social, political, economic, environmental, and gender disparities 2) examine how health can be distributed unequally within and between populations in relation to socially defined measures and 3) describe how the environment and health interact at the global level”

10. Does your medical school curriculum address the unequal regional health impacts of climate change globally?

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

- Year 2 LSRC “preparing to travel” learning objectives: “Become aware of the challenges that impact infectious disease prevention (vaccines and prophylaxis)” and “Become aware of some emerging diseases, tropical diseases, and zoonoses”.
- Year 2 LSRC “Disease of the Returning Traveller” learning objective: “Recognise diseases of significant public health importance and know what to do in these situations (VHFs / notifiable diseases)” and “become aware of some additional emerging diseases, tropical diseases and zoonotic diseases”.
- Year 2 learning objective: “Discuss health inequalities from a global perspective”.
- Year 2 social engagement essential reading: social determinants of health.

- *Year 3 locally global: a population view of medicine learning objectives: “Describe common factors influencing health at home and abroad, Articulate a Population Health approach to local and global problems, Role and principles of healthcare provision”.*
- *Year 4:workshop “Global Health: Providing Healthcare for Global Populations (pre-elective session)” learning objectives: “Appreciate the huge differences in health and healthcare around the world” and “Understand the principal institutions having responsibility for health globally”.*
- *Year 5 elective learning outcome: “Demonstrate a current and in-depth understanding of topic related to global health or health inequality”.*

Curriculum: Environmental Health & the Effects of Anthropogenic Toxins on Human Health

11. Does your medical school curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

There are no learning outcomes covering the environmental impact on reproductive health across all the year groups.

12. Does your medical school curriculum address important human-caused environmental threats that are relevant to the university’s surrounding community?

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

- *Year 2 ‘Planetary Health’ workshop with learning objectives including ‘contribution of healthcare to emissions’.*
- *Year 4 ‘Environmental Lung disease’ tutorial with learning objectives covering the industrial and environmental causes of some lung disease. These are relevant to the population of Plymouth as many work in the docks and others have worked on the railways. Similarly, we have talked about the levels of radioactivity within Devon and Cornwall and how this impact the local populations.*

13. To what extent does your medical school emphasize the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?

3	Indigenous knowledge and value systems are integrated throughout the medical school's planetary health education
2	Indigenous knowledge and value systems as essential components of planetary health solutions are included briefly in the core curriculum.
1	Indigenous knowledge and value systems as essential components of planetary health solutions are included in elective coursework.
0	This topic was not covered.

The Peninsula Medical School curriculum doesn't have any learning objectives that cover this across all the year groups.

14. Does your medical school curriculum address the outsized impact of anthropogenic environmental toxins on marginalized populations such as those with low SES, women, communities of color, children, homeless populations, Indigenous populations, and older adults?

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

- *Year 1 'Influences on health' Jigsaw session with learning outcome covering 'Psychological, social, economic and environmental factors that influence an individual's health and well-being at different stages in the life cycle'*
- *Year 2 'Sustainable health and QI' workshop with learning objective 'Consider how the environment affects all the social determinants of health and how the environmental impact of health care'*
- *Year 2 Social Engagement 'Gained an understanding of the health-related needs of a given population group, how some of these needs are currently being met and by whom. Explored how these needs relate to wider population needs - locally, nationally and globally.'*
- *Year 2 'Health of the Homeless' plenary covering 'Understand social determinants of homelessness - risk factors for homelessness, epidemiology'*
- *Year 3 'Creative approaches to advocacy and wellbeing' SSU with learning objective 'evaluate the environmental, social, behavioral and cultural factors which influence health and disease in different populations'.*

Curriculum: Sustainability

15. Does your medical school curriculum address the environmental and health co-benefits of a plant-based diet?

3	This topic was explored in depth by the core curriculum.
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

- *There is no specific discussion on the environmental and health co-benefits of a plant-based diet, however, the health benefits of a balanced diet and recommendations for patients is mentioned.*
- *Year 1 “Balanced Diet Plenary” Learning outcomes covers “3. To understand the principles for the design of a proper diet (the Eatwell Plate and the five food groups which we need for a balanced diet)”.*
- *There is a very brief mention of plant based diets and their positive impact on health and the planet in Year 1 “planetary health” workshop as part of the “win win solutions to the climate emergency” learning objectives. The slide is titled win win solutions: Food. This should be more explicitly explained in the learning objectives.*

16. Does your medical school curriculum address the carbon footprint of healthcare systems?

3	This topic was explored in depth by the core curriculum
2	This topic was briefly covered in the core curriculum.
1	This topic was covered in elective coursework.
0	This topic was not covered.

- *Year 1 “Planetary Health” workshop mentions “Contribution of health care to emissions” in the learning outcomes.*
- *Year 2 “Public Health Workshop - Global Health.” plenary includes the learning outcomes “Global morbidity and mortality” and “Social determinants of health”, which discusses the link between climate change and the spread of infectious diseases.*

17. Does your medical school curriculum cover these components of sustainable clinical practice in the core curriculum? (1 point each)

1	Waste production within the healthcare system and strategies for reducing waste in clinical activities, such as in the operating room
1	The impact of inhalers on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.

1	The impact of anaesthetic gases on the healthcare carbon footprint and ways to reduce anaesthesia environmental impacts, such as total intravenous anaesthesia or choosing less environmentally anaesthetic gas options with reduced greenhouse gas emissions
1	The environmental impact of pharmaceuticals and over-prescribing as a cause of climate health harm. Alternatively teaching on deprescribing where possible and its environmental and health co-benefits would fulfill this metric.
1	The health and environmental co-benefits of non-pharmaceutical management of conditions where appropriate such as exercise or yoga classes for type 2 diabetes; social group activities such as gardening for mental health conditions; active transport such as bicycle schemes for obesity. This is commonly known as social prescribing in the UK.
1	The health and environmental co-benefits of avoiding over-medicalisation, over-investigation and/or over-treatment
<ul style="list-style-type: none"> • <i>Point 1: Reducing waste is mentioned in Year 4 small group session “Politics, resource management and how the NHS works” Learning outcomes: “Discuss and give examples of the role of the doctor with respect to managing resources, ensuring cost effectiveness and minimising waste.</i> • <i>Point 2: The impact of powdered inhalers on carbon footprint is thoroughly explored in Year 2 “Sustainable Health and QI” which uses asthma as a case study to explore “environmental impacts of healthcare” particularly inhalers.</i> • <i>Point 4: Year 3 Plenary: “Locally Global: a population view of medicine.” This plenary briefly examines the problems of over-prescribing.</i> • <i>Point 5: The health benefits of non-pharmaceutical management is explored in Year 4 Tutorial “Caring for patients' wellbeing” Learning outcomes: “Discuss the role of complementary and creative therapies in maintaining hope and preserving dignity. Holistic care: identifying and addressing physical, psychological, social and spiritual needs of patients and their families.”</i> 	

Curriculum: Clinical Applications

18. In training for patient encounters, does your medical school’s curriculum introduce strategies to have conversations with patients about the health effects of climate change?	
2	Yes, there are strategies introduced for having conversations with patients about climate change in the core curriculum.
1	Yes, there are strategies introduced for having conversations with patients about climate change in elective coursework.
0	No, there are not strategies introduced for having conversations with patients about climate change
<ul style="list-style-type: none"> • <i>The medical school curriculum does not include strategies to have conversations on the health effects of climate change. Lectures and workshops discuss the health effects of climate change, but not at specific patient encounters. They are mainly focused on providing healthcare to</i> 	

global populations, with regards to climate change and health inequalities rather than conversations with individual patients.

- *Year 1 “Planetary Health” Workshop links climate change to healthcare, including advocacy as a way to address this. Learning outcomes: “Doctors responding to the climate emergency threat as part of advocacy” and “Contribution of health care to emissions”*
- *Year 2 Plenary “Public Health Workshop - Global Health”. Learning outcomes include: “Global morbidity and mortality, Social determinants of health, health inequalities”*
- *Year 2 Plenary “Health Inequalities” discusses health inequalities in populations and what can be done about this, the effect of climate change is mentioned briefly. Learning outcomes:*
 - *“What are health inequalities?”*
 - *How do they arise?*
 - *What is the situation globally and in the UK?*
 - *What can be done about it?*
 - *What is the role of health and doctors?”*
- *Year 3 Plenary “Locally Global: a population view of medicine” Learning outcomes:*
 - *“Provide an overview of key health issues locally and globally*
 - *Describe common factors influencing health at home and abroad*
 - *Articulate a Population Health approach to local and global problems*
 - *Role and principles of healthcare provision*
 - *How to find winning solutions to complex problems”*

19. In training for patient encounters, does your medical school’s curriculum introduce strategies for taking an environmental history or exposure history?

2	Yes, the core curriculum includes strategies for taking an environmental history.
1	Only elective coursework includes strategies for taking an environmental history.
0	No, the curriculum does not include strategies for taking an environmental history.

- *Year 1-2 Clinical skills includes teaching on how to take a clinical history with simulated patients, which also involves taking an environmental history. The Calgary-Cambridge Framework was used.*
- *Lectures, workshops and SSUs explore the effects of environment and exposure to risk factors to understand the importance of considering these when taking a history.*
- *Year 2 - Workshop “Sustainable Health and QI” Learning outcomes: “Consider how the environment affects all the social determinants of health and how the environmental impact of health care” and “Start to develop knowledge and skills to improve the quality and environmental sustainability of health care, using asthma as an example” mentions the effect of environmental risk factors, with a focus on asthma.*
- *Year 4 - Tutorial “Environmental lung disease” Learning outcomes: “Environmental lung diseases associated with:*
 - *The environment*
 - *Smoking*
 - *Industrial/Occupational”*
- *Biomedical science SSU - “Allergies and the Environment” Learning outcomes: “Asthma and atopic allergies are dramatically increasing. This unit will explore the basic immunological*

mechanisms involved and look at the environmental reasons that may be responsible for these increases”.

Curriculum: Administrative Support for Planetary Health

20. Is your medical school currently in the process of implementing or improving Education for Sustainable Healthcare (ESH)/planetary health education?

4	Yes, the medical school is currently in the process of making major improvements to ESH/planetary health education.
2	Yes, the medical school is currently in the process of making minor improvements to ESH/planetary health education.
0	No, there are no improvements to planetary health education in progress.

On review of the questions in this report card, we believe that the medical school is taking steps to integrate more Education for Sustainable Healthcare (ESH)/ planetary health education into the curriculum. Compared to last year, we can see active changes have been made in the curriculum. There is, of course, still room for improvement and hope to continue to see changes in the future.

21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the core curriculum?

6	Planetary health/ESH topics are well integrated into the core medical school curriculum.
4	Some planetary health/ESH topics are appropriately integrated into the core medical student curriculum.
2	Planetary health/ESH is not integrated and is primarily addressed in (a) standalone lecture(s).
0	There is minimal/no education for sustainable healthcare.

There are multiple planaries, workshops and small group learning objectives focusing on planetary health, however these tend to only be held in Year 1 and 2, with only optional SSU topics found in the later years.

22. Does your medical school employ 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?

1	Yes, the medical school has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare
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0	No, the medical school does not have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare.
<i>There is no specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare.</i>	

Section Total (53 out of 69)	53
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Interdisciplinary Research

Section Overview: This section evaluates the quality and quantity of interdisciplinary planetary health research at the medical school and 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, medical schools 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 emphasized.

1. Are there researchers engaged in planetary health research and healthcare sustainability research at your medical school?	
3	Yes, there are faculty members at the School of Medicine who have a primary research focus in planetary health or healthcare sustainability.
2	Yes, there are individual faculty members at the School of Medicine who are conducting research related to planetary health or healthcare sustainability, but it is not their primary research focus.
1	There are planetary health and/or healthcare sustainability researchers at the institution, but none associated with the medical school.
0	No, there are no planetary health and/or healthcare sustainability researchers at the institution or medical school at this time.

These researchers are part of Global Health Research team within the Faculty of Health (<https://www.plymouth.ac.uk/research/primarycare/fresh-air>):

- *Honorary Associate Professor Dr Rupert Jones (The KUPUMA project)*
- *Senior Research Fellow PenARC Dr Lynne Callaghan*
- *Research Assistant Mrs Lucy Cartwright*
- *Honorary University Fellow Ms Debra Westlake*

The KUPUMA project is “a partnership project between the University of Plymouth and Makerere University in Uganda”. This project’s aims are:

- *“to bring together medicine, art, music and dance to educate, treat, and develop capacity and capability in Uganda”.*
- *“to prevent and treat chronic lung disease in East Africa in partnership with the Makerere University Lung Institute, Uganda” as “chronic lung diseases particularly affect the poorest people in the poorest countries, contributing to health inequalities and disrupting communities. This research has been taken up widely across the globe to try and tackle that problem”*
(<https://www.plymouth.ac.uk/research/primarycare/fresh-air/kupumua>).

The Midwife Project in Uganda is an educational programme which aims to “teach midwives and other community healthcare workers about the dangers of biomass smoke and about reducing the risks to mother, foetus and young children”
(<https://www.plymouth.ac.uk/research/primarycare/fresh-air/the-midwife-project>).

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

3	There is at least one dedicated department or institute for interdisciplinary planetary health research.
2	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.
1	There is an Occupational and Environmental Health department, but no interdisciplinary department or institute for planetary health research.
0	There is no dedicated department or institute.

- *The Global Health Collaborative (GHC) is a forum for global (local and overseas) health education, opportunities, partnerships, research and sustainability. “The GHC was set up in 2016 to bring together individuals and organisations, across Plymouth and the wider South West, who have an interest in or are already working in, global health. They aim to share learning, enable new international health partnerships to be set up, and increase both global health education and work/experience opportunities for health professionals of all levels, both in international and 'locally global' settings.”*
(<https://www.plymouth.ac.uk/research/global-health-collaborative>.)
- *The Sustainable Earth Institute is “about promoting a new way of thinking about the future of our world. We bring researchers together with businesses, community groups and individuals to develop cutting-edge research and innovative approaches that build resilience to global challenges. We link diverse research areas across the University including science, engineering, arts, humanities, health and business.”*
(<https://www.plymouth.ac.uk/research/institutes/sustainable-earth>)

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 medical school?

3	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.
2	Yes, there is a process in which community members impacted by climate and environmental injustice advise the climate + environmental research agenda.
1	No, but there are current efforts to establish a process for community members to advise or make decisions on the research agenda.
0	There is no process, and no efforts to create such a process.

- *The Global Challenges Research Fund (GCRF) is a £1.5 billion fund that supports cutting-edge research to address challenges faced by developing countries. It is part of the UK's official development assistance (ODA). The fund addresses the United Nations*

sustainable development goals. It aims to maximise the impact of research and innovation to improve lives and opportunity in the developing world. Plymouth University (including the medical school) chooses relevant projects from the GCRF's lists and using the funds to conduct research.

- One such project taken up by the medical school in partnership with the Makerere University (Uganda) is the KUPUMUA project. Dr Rupert Jones, who is one of the main people in charge of the project, explains that “when such projects are undertaken, we perform stakeholder engagement in a formal way. This often starts with qualitative research with stakeholders including experts, clinicians and community members (patients where appropriate) using in-depth interviews or focus groups (see <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6087019/>). For one project, around 50 people from community members to the Ministry of Health were interviewed to understand how to tailor our messages to be culturally appropriate and to fit within the existing health systems. Our research basically continues in PDSA (Plan-Do-Study-Act) cycles. You identify a problem, you work on a solution, you test the solution, you adapt it, you apply it, you re-evaluate and amend et cetera” (<https://www.plymouth.ac.uk/research/support/funding/kupumua>).

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

3	There is an easy-to-use, adequately comprehensive website that centralizes 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.
2	There is a website that attempts to centralize various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive.
1	The institution has an Office of Sustainability website that includes some resources related to health and the environment.
0	There is no website.

- *The Sustainable Earth Institute, which can be accessed from the Research and Expertise website (<https://www.plymouth.ac.uk/research>)*
- *The page for sustainability education and related events can be found on the sustainable and global citizen page, which has other relevant links as well. (<https://www.plymouth.ac.uk/about-us/teaching-and-learning/plymouth-compass/the-sustainable-and-global-citizen>)*
- *On the Peninsula Medical School Digital Learning Environment, there is a Planetary Health page linking resources on all aspects of Planetary Health, as well as links to activities and groups (<https://dle.plymouth.ac.uk/mod/book/view.php?id=1212678>).*

5. Has your institution recently hosted a conference or symposium on topics related to planetary health?

4	Yes, the medical school has hosted at least one conference or symposium on topics related to planetary health in the past year.
3	Yes, the institution has hosted at least one conference or symposium on topics related to planetary health in the past year.
2	Yes, the institution has hosted a conference on topics related to planetary health in the past three years.
1	The institution has not hosted any conferences directly, but they have provided financial support for a local planetary health event.
0	No, the institution has not hosted a conference on topics related to planetary health in the past three years.
<ul style="list-style-type: none"> • <i>The Sustainable Earth Institute:</i> <ul style="list-style-type: none"> ◦ Sustainable Earth 2021: <i>Two-day online forum across 24 and 25 June, as we bring together researchers, businesses, NGOs, the public sector, community groups and individuals to tackle global and local challenges around the climate emergency.</i> ◦ https://www.plymouth.ac.uk/research/institutes/sustainable-earth/se21 • <i>Research festival 2020 was a 4 day event with various event listings such as Biodiversity at a crossroads, sustainable agriculture, and natural capital for clean growth</i> (https://www.plymouth.ac.uk/research/plymouth-research-festival/2020). • <i>Future Plymouth 2030 started on November 18, 2020. "It is a series of 12 fortnightly webinars exploring collaborative pathways to achieve low carbon, sustainable development in the city, and providing a platform for knowledge exchange and collaborative action"</i> (https://www.plymouth.ac.uk/whats-on/future-plymouth-2030). 	

6. Is your medical school a member of a national or international planetary health or ESH organization?	
1	Yes, the medical school is a member of a national or international planetary health or ESH organization
0	No, the medical school is not a member of such an organization
<ul style="list-style-type: none"> • <i>University of Plymouth, Faculty of Health & Human Sciences is a member of the Global Consortium on Climate and Health Education</i> • https://www.publichealth.columbia.edu/research/global-consortium-climate-and-health-education/map-gcche-member-institutions • https://www.planetaryhealthalliance.org/pha-members-jr 	

Section Total (13 out of 17)	13
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Community Outreach and Advocacy

Section Overview: *This section evaluates medical school 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 color. 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.*

1. Does your medical school partner with community organizations to promote planetary and environmental health?	
3	Yes, the medical school meaningfully partners with multiple community organizations to promote planetary and environmental health.
2	Yes, the medical school meaningfully partners with one community organization to promote planetary and environmental health.
1	The institution partners with community organizations, but the medical school is not part of that partnership.
0	No, there is no such meaningful community partnership.
<p><i>Livewell Southwest</i></p> <ul style="list-style-type: none"> ● <i>Livewell Southwest is an independent, award winning social enterprise providing integrated health and social care services for people across Plymouth, South Hams and West Devon, as well as some specialist services.</i> ● <i>Students have placements with a range of LiveWell professionals including community nurses, physiotherapists, social workers as well as community mental health services; wellbeing and health improvement services and services for children and young people.</i> <p><i>Social Engagement</i></p> <ul style="list-style-type: none"> ● <i>Led by Well Connected, a local charity experienced in community engagement and health improvement, Year 2 students work as a team, over the year, with disadvantaged groups, such as people who are homeless, have learning disabilities, dementia or difficulties with substance misuse.</i> ● <i>Students work alongside local community organisations and their clients to better understand the needs of their population group and develop a health-related activity.</i> ● <i>In doing so students gain important skills and understanding, learning about local services, how to design and implement projects and how to communicate with different groups and individuals.</i> ● <i>Learning Outcomes (set by the medical school to be met through the Social Engagement project):</i> <ul style="list-style-type: none"> ○ <i>Actively listen to, and communicate with, local people and staff to develop deeper awareness of their needs and views.</i> 	

- *Seek out information and evidence to better understand population needs and possible approaches for addressing these.*
- *Work collaboratively within small and large teams, actively sharing information and pooling skills.*
- *Evaluate current programmes and services on offer and compare to others locally, nationally and globally.*
- *Contribute, as a group, to a health-related activity based on the needs identified and leading to shared learning.*
- *Deliver and evaluate the health-related activity, including identifying appropriate resources and gaining feedback from others.*
- *Communicate the details of your activity and its outcomes, with appropriate justification and rationale, to an appropriate audience in a clear and concise manner.*

<https://www.plymouth.ac.uk/courses/undergraduate/bmbs-bachelor-of-medicine-bachelor-of-surgery/community-care>

2. Does your medical school offer community-facing courses or events regarding planetary health?

3	The medical school offers community-facing courses or events at least once every year.
2	The medical school offers courses or events open to the community at least once per year, but they are not primarily created for a community audience.
1	The institution has offered community-facing courses or events, but the medical school was not involved in planning those courses or events.
0	The medical school has not offered such community-facing courses or events.

There are no such community-facing courses or events offered by the medical school. Please note that this has been restricted by COVID-19 over the past year.

Previous courses include:

- *Global Health Collaborative events 2019-2020: Global Health Cafes, Seminars and Events (<https://www.plymouth.ac.uk/research/global-health-collaborative>), Dec 20 'Solving the Global Health workforce crisis:'*
 - *Implementation Science and Improvement Science in Global Health March 2020*
 - *Appreciative inquiry, Public Health department February 2020*
 - *Workforce development = Effective ways to support development of the health workforce globally, without whom there is no healthcare' with Health Education England, Fleur Kitsell, January 2020*
- *Global Health Collaborative continuing professional development (CPD) and MSc Global Health short course: REM716 Remote and rural practitioner module (<https://www.plymouth.ac.uk/courses/postgraduate/msc-global-health/remote-and-rural-practitioner-module>):*
 - *"The remote practitioner module provides students with an insight to the realities of working in remote and austere environments. We explore the opportunities of wilderness medicine as well as the environmental, physical and psychological*

challenges associated with working as a remote practitioner. Much of the taught component is spent outdoors to give you a realistic understanding of managing patients in the field. This module is suitable for any clinician who will be using their skills in a remote, wilderness, expedition or rural setting....It is run as two three day blocks in the spring/ early summer.

- *Key topics covered include:*
 - *“Preparation: medico-legal considerations, medical kits, mental health, evacuation (including aeromedical).*
 - *Austere environments: heat illness, hypothermia, tropical medicine.*
 - *Practical skills: navigation, ropes and slings, packaging and moving casualties, primary and secondary survey in the field.*
 - *Search and rescue simulation.*
 - *Expedition specifics: dive medicine, expedition dentistry.*
 - *Global Health Delivery: Primary health care”*

3. Does your medical school have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?

2	Yes, all students regularly receive communication updates dedicated to planetary health and/or sustainable healthcare.
1	Yes, planetary health and/or sustainable healthcare topics are sometimes included in communication updates.
0	Students do not regularly receive communications about planetary health or sustainable healthcare.

The monthly BMBS Student Newsletter sometimes includes planetary and/or sustainable healthcare topics.

For example, in October 2021:

- *Global Health database: Dr Mike Dillon:*
 - *The Faculty of Health has recently subscribed to the EBSCO Global Health database. It can be accessed from Primo A-Z databases. It is the only specialised database dedicated to international public health and covers all aspects of public health at community and international levels. It also includes material from biomedical, life science, and pedagogy, completing the picture of international research. According to the All-Party Parliamentary Group on Global Health: “Health is interdependent and interconnected – it is no longer possible to separate health issues in the UK from health issues abroad.” This resource makes it easier than ever to include a truly global perspective in your research.*

The bi-monthly University of Plymouth Internal Communications updates often include planetary and/or sustainable healthcare topics.

Recent examples include:

- 27th January 2022: Recycling target - Did you know that we have a recycling target of 70% on campus? Find out what can be recycled on campus and where you live, and take our recycling quiz on our waste sustainability SharePoint pages.
- 11th January 2022: University powered by 100% renewable electricity - From August 2021, our University campuses have been entirely supplied by renewable electricity, as certified by the Renewable Energy Guarantees of Origin (REGO). This means that in 2022 we will be using 100% renewable electricity – saving approximately 3,474 tonnes of CO2e every year. See more about our sustainability initiatives on the SharePoint site.
- 22nd November: Discover careers in sustainability (Wednesday 24 November, 1.30–3.30pm, online): The next employer insights panel, run by the Careers Service, highlights new and emerging career opportunities linked to sustainability in a wide variety of sectors including renewable energy, transportation, marine and manufacturing. Find out more and book your space on myCareer.

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?

2	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.
1	Yes, the institution or main affiliated hospital trust offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers
0	There are no such accessible courses for post-graduate providers

*No, there are no such accessible courses for post-graduate providers provided by Derriford Hospital.
<https://www.pgmeplymouth.com/teaching>*

5. Does your medical school or its primary affiliated hospital have accessible educational materials for patients about environmental health exposures?

2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated medical centers have accessible educational materials for patients.

There is no evidence that any such patient literature is provided by University Hospitals Plymouth (UHP), Torbay Hospital or Musgrove Park Hospital.

6. Does your medical school or its primary affiliated hospital have accessible educational materials for patients about climate change and health impacts?

2	Yes, all affiliated hospitals have accessible educational materials for patients.
1	Some affiliated hospitals have accessible educational materials for patients.
0	No affiliated hospitals have accessible educational materials for patients.
<p><i>There is no evidence that any such patient literature is provided by UHP, Torbay Hospital or Musgrove Park Hospital.</i></p> <ul style="list-style-type: none"> • <i>UHP declared a climate emergency in 2020 and developed a five-year sustainable development plan “For a Greener Future.” The plan and other information is available on the UHP website: https://www.plymouthhospitals.nhs.uk/environment-group</i> • <i>Torbay Hospital is working to develop their five-year plan: https://www.torbayandsouthdevon.nhs.uk/about-us/sustainability-and-transformation-plan/</i> • <i>There is no evidence that Musgrove Park Hospital has produced any similar plans.</i> 	

Section Total (6 out of 14)	6
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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.*

1. Does your institution offer support for medical students interested in enacting a sustainability initiative/QI project?	
2	Yes, the institution <i>either</i> offers grants for students to enact sustainability initiatives/QI projects <i>or</i> sustainability QI projects are part of the core curriculum.
1	The medical school encourages sustainability QI projects (to fulfill 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.
0	No, the institution does not offer opportunities or support for sustainability initiatives or QI projects.
<p><i>In Year 3 students undertake a Quality Improvement (QI) Student Selected Unit (SSU).</i></p> <ul style="list-style-type: none"> • <i>This is a compulsory part of the curriculum and involves students in groups, with the support of an external provider, to engage in some part of QI planning and research.</i> • <i>Students can then focus their research into planetary health or sustainable healthcare.</i> • <i>Students are not paid to do this work.</i> 	

2. Does your institution offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
2	The institution has a specific research program or fellowship for students interested in doing planetary health/sustainable healthcare research.
1	There are research opportunities for students to perform research related to planetary health/sustainable healthcare but these require student initiative to seek these out and carry them out in their spare time.
0	There are no opportunities for students to engage in planetary health/sustainable healthcare research.
<ul style="list-style-type: none"> • <i>In first and second year students must choose an SSU project and select their research from a list of offered titles. Some titles either focus on, or include an element of planetary health and/or sustainable healthcare, such as 'Allergies and the Environment' and 'World health inequalities: a global or local problem?'</i> 	

- *In third year it is compulsory for students to engage in a QI project, which can be focused towards planetary health and/or sustainable healthcare*

3. Does the medical school have a webpage where medical students can find specific information related to planetary health and/or sustainable healthcare activities and mentors within the medical school? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.

2	The medical school has a webpage with specific information related to planetary health or sustainable healthcare that includes up-to-date information on relevant initiatives and contact information of potential mentors.
1	There is a medical school webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information.
0	There is no medical-school specific webpage for locating planetary health and/or sustainable healthcare projects or mentors.

Last year:

- *Inspire Scheme: Alongside Cardiff, Bristol, and Exeter Medical Schools, the Peninsula Medical School at Plymouth University offers students with grants for studentships in different research areas of their choice, including environmental health and sustainable healthcare. (<https://acmedsci.ac.uk/grants-and-schemes/mentoring-and-other-schemes/INSPIRE>)*
- *The Inspire Scheme has a dedicated webpage on the university site. This shares key information but doesn't immediately highlight the opportunity for planetary health research.*
- *The Global Health Collaborative has a webpage in the wider University of Plymouth "Research and expertise" area of the website which gives information about who they are, what they do and recent projects carried out by students. (<https://www.plymouth.ac.uk/research/global-health-collaborative>)*

This year:

- *The Peninsula Medical School Digital Learning Environment has a workbook dedicated to planetary health and how it relates to medicine. This workbook includes links to key articles related to the field, as well as other links on how medicine and climate change interact (e.g. the impact of inhalers). Dr Richard Ayres, Lead for Population Health, is a named contact, and is able to signpost to further potential mentors. We are continuously adding more initiatives to this page (<https://dle.plymouth.ac.uk/mod/book/view.php?id=1212678>).*

4. Does your medical school have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?

2	Yes, there is a student organization with faculty support at my medical school dedicated to planetary health or sustainability in healthcare.
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1	Yes, there is a student organization at my medical school dedicated to planetary health or sustainability in healthcare but it lacks faculty support.
0	No, there is not a student organization at my institution dedicated to planetary health or sustainability in healthcare.
<p><i>Last year:</i></p> <ul style="list-style-type: none"> • <i>Students for Global Health Plymouth is a student-run society hosting a number of educational and charity events. Their aims are education, advocacy and community social action in a number of areas including climate change, women's rights, infectious diseases and access to medicine (https://studentsforglobalhealth.org/plymouth/).</i> • <i>In 2019/20 events organised within the Sustainability Hub of the Students Union attracted over 40 participants, partnering staff and students with community organisations, supported by University staff.</i> • <i>Medical school societies registered with the University of Plymouth Students' Union (UPSU) may be eligible for funding from the Students' Union (SU) (dependent on fulfilling criteria e.g. membership numbers). Oh</i> • <i>Envirosoc is a SU society focusing on general environmental issues, but does not seem to be hosting many active events currently.</i> • <i>External funding can be applied for by individuals and societies for specific initiatives (ex: the Inspire Scheme; Wellcome Trust).</i> <p><i>This year:</i></p> <ul style="list-style-type: none"> • <i>In December 2019, the SU joined universities across the UK in declaring a climate emergency. The local city council have joined them in this in an attempt to raise awareness on the seriousness of climate change. The SU hosted large scale protests on campus and throughout the city in December 2019 to raise awareness of this issue.</i> • <i>The UPSU website has a page dedicated to sustainability. They also have an environment and sustainability officer. Within the medical school specifically, there does not seem to be a faculty supported group.</i> 	

5. Is there a student liaison representing sustainability interests who serves on a medical school or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?	
1	Yes, there is a student representative that serves on a medical school or institutional decision-making council/committee.
0	No, there is no such student representative.
<p><i>Last year:</i></p> <ul style="list-style-type: none"> • <i>Student Union Environment and Sustainability Officer (https://www.upsu.com/representation/representatives/environmentofficer/)</i> • <i>The Global Health Collaborative currently includes two student representatives on their committee.</i> • <i>General University of Plymouth student leadership and involvement opportunities (https://www.plymouth.ac.uk/students-and-family/sustainability/get-involved):</i> <ul style="list-style-type: none"> ○ <i>The Future Leaders Programme</i> 	

- *Student sustainability ambassadors*
- *UPSU environment and sustainability forum*

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)

1	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 organize hiking, backpacking, kayaking, or other outings for students)
<ul style="list-style-type: none"> ● <i>Students For Global Health's annual theme this year is climate change. Events such as a harbour clean, lecture on conservation medicine (Dr Vik Mohan), the big green youth survey, climate clinic etc.</i> ● <i>University of Plymouth beekeeping group: Two hives managed by dedicated volunteers and is the native Black Honey Bee which is more suited to the colder climate than the European Honey Bee.</i> ● <i>Nutritank recently ran an online workshop on nutrition, farming and sustainability.</i> ● <i>UPSU Allotment society is no longer running.</i> ● <i>Plymouth University Wilderness and Expedition Medicine Society, and other outdoor Societies (e.g. Adventure and Expo), encourage "leave no trace" principles. These principles encourage members to take all belongings and litter home with them and to generally have minimal impact on the environment that they use.</i> 	

Section Total (9 out of 15)

9

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Campus Sustainability

Section Overview: *This section evaluates the support and engagement in sustainability initiatives by the medical school and/or 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 endeavor, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinizing 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 medical schools, clinics, and hospitals must set the standard for sustainable practices, and show other sectors what is possible when it comes to minimizing environmental impact.*

1. Does your medical school and/or institution have an Office of Sustainability?	
3	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 and/or medical school.
2	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 medical school and/or hospital sustainability.
1	There are no salaried sustainability staff, but there is a sustainability task force or committee
0	There are no staff members or task force responsible for overseeing campus sustainability
<p><i>In 2019, the university's 'Sustainability Hub' was opened on campus which houses the 'Sustainable Earth Institute' and 'Centre for Sustainable Futures' (CSF).</i></p> <ul style="list-style-type: none"> <i>It is a space that allows for improving knowledge on sustainability issues as well as working together in research and education.</i> <i>Different groups and individuals including students, researchers, businesses, and communities can collaborate and innovate together towards reaching sustainability goals.</i> <p><i>The staff dedicated to the university's sustainability efforts are based in 'Estates and Facilities'.</i></p> <ul style="list-style-type: none"> <i>Here, two sustainability areas of focus are 'waste and recycling' and 'energy, environment and sustainability'.</i> <p><i>There is no designated staff member for sustainability at the medical school, although the CSF Sustainable Education Leaders Forum has two staff members from the medical school (Professor Sheena Asthana and Dr Richard Ayres).</i></p> <p>https://www.plymouth.ac.uk/students-and-family/sustainability/sustainability-hub https://www.plymouth.ac.uk/about-us/university-structure/service-areas/estates-facilities https://www.plymouth.ac.uk/students-and-family/sustainability/sustainability-education/meet-the-team https://www.plymouth.ac.uk/students-and-family/sustainability/our-sustainability-plan</p>	

2. How ambitious is your medical school/institution’s plan to reduce its own carbon footprint?	
4	The institution has a stated goal of carbon neutrality by 2030 or earlier and the medical school / institution has a well-defined and adequate plan in place to achieve this goal.
3	Yes, there is a stated carbon neutrality goal by at least 2040 and the medical school/institution has a well-defined and adequate plan in place to achieve this goal.
2	Yes, there is a stated carbon neutrality goal by at least 2040, but the medical school/institution has not created a plan to reach that goal or the plan is inadequate.
1	There is a CO2 emission reduction goal, but it is not one of carbon neutrality.
0	There is no stated goal for reduction of CO2 emissions.
<p><i>In 2019, the university signed onto the ‘Climate Emergency’ declaration, creating a ‘Carbon Strategy and Management Plan’.</i></p> <ul style="list-style-type: none"> <i>• This included six goals, two of which was reaching carbon neutrality from direct emissions (scope 1 & 2) by 2025, and reaching carbon neutrality from indirect emissions (scope 3, e.g. staff/student commuting, goods procurement, off-site waste disposal, etc.) by 2030-2050.</i> <i>• They are working in partnership with ‘Low Carbon Devon’ to achieve their goals and have outlined steps that they are or will be taking to do so.</i> <i>• They have also incorporated annual reviews to assess progress and make improvements to action plans.</i> <i>• While the first goal for 2025 is well defined due to greater control the university has on these emissions, the scope 3 emissions target is vague with uncertainties surrounding current emission levels within this scope, feasibility of projects with external partners, as well as cost of implementing changes.</i> <i>• Therefore, the university is still in the process of cultivating plans for scope 3 emissions.</i> <p><i>https://www.plymouth.ac.uk/students-and-family/sustainability/carbon-and-energy-reduction</i> <i>https://www.plymouth.ac.uk/uploads/production/document/path/18/18648/Carbon Strategy issue 1.pdf</i> <i>https://www.plymouth.ac.uk/research/sustainability-hub-low-carbon-devon</i> <i>https://www.plymouth.ac.uk/uploads/production/document/path/18/18650/Carbon Management Plan issue 4.pdf</i></p>	

3. Do buildings/infrastructure used by the medical school for teaching (not including the hospital) utilize renewable energy?	
3	Yes medical school buildings are 100% powered by renewable energy
2	Medical school buildings source >80% of energy needs from off-site and/or on-site renewable energy.
1	Medical school buildings source >20% of energy needs from off-site and/or on-site renewable energy.

0	Medical school buildings source <20% of energy needs from off-site and/or on-site renewable energy.
	<ul style="list-style-type: none"> • <i>The medical school uses buildings across campus, but particularly Portland Square.</i> • <i>The 2020 sustainability report highlights this building's use of solar thermal hot water, thermal decks, passive ventilation, night-time cooling, high-efficiency LED lighting, and lighting sensors in order to reduce energy consumption.</i> • <i>It also shows that in 2019-20 the ratio of total renewable fuel consumption to total energy consumption (electricity and gas) was 831GJ to 97,190GJ which is markedly under 20% (<1%).</i> • <i>This has nearly doubled from 2016-17, which shows some progress in the aim to move from fossil fuels to renewable sources.</i> • <i>The 'Energy Infrastructure Project' started in 2019-20 by the university focuses heavily on this. (1)</i> • <i>Other avenues of monitoring and controlling energy use are the computer-based 'Building Management System' which is responsible for 95% of campus buildings, and the 'Environmental Management System' which is utilised in the medical school's John Bull Building. (2)(3)</i> <p>(1)https://www.plymouth.ac.uk/uploads/production/document/path/20/20294/Sustainability_Report_2020.pdf (2)https://www.plymouth.ac.uk/students-and-family/sustainability/our-sustainable-campus (3) https://www.plymouth.ac.uk/students-and-family/sustainability/carbon-and-energy-reduction</p>

4. Are sustainable building practices utilized for new and old buildings on the medical school campus, with design and construction of new buildings and remodeling of old buildings conforming to a published sustainability rating system or building code/guideline?	
3	Yes, sustainable building practices are utilized for new buildings on the medical school campus and the majority of old buildings have been retrofitted to be more sustainable.
2	Sustainable building practices are utilized for new buildings on the medical school campus, but most old buildings have not been retrofitted.
1	Sustainable building practices are inadequately or incompletely implemented for new buildings.
0	Sustainability is not considered in the construction of new buildings.
	<ul style="list-style-type: none"> • <i>As well as having sustainable standards for new constructions across the university, refurbishment projects are also being established to achieve SKA* Gold standards.</i> • <i>These sustainability efforts include the Sustainability Hub (refurbished 2019) and the 'Derriford Research Facility' (BREEAM** Excellent, 2018).</i> • <i>The university's 'Sustainable Construction & Refurbishment Policy Statement' (v2, pub Oct 2020) overviews the sustainability objectives to which all construction projects must adhere, to ensure that the standards are met.</i> <p>*SKA – environmental assessment method, measured in Bronze, Silver, and Gold ratings</p>

****BREEAM: Building Research Establishment's Environmental Assessment Method – independent sustainability rating scheme, 6 ratings (Unclassified, Pass, Good, Very Good, Excellent, Outstanding) with Excellent equivalent to best practice, awarded to top 10% of buildings with percentage rating of $70\% \leq$ and $< 85\%$.**

<https://www.plymouth.ac.uk/students-and-family/sustainability/sustainable-campus-and-construction>
https://www.plymouth.ac.uk/uploads/production/document/path/18/18664/Sustainable_Construction_Refurbishment_Strategy_issue_2.pdf
https://www.breeam.com/BREEAMIntNDR2016SchemeDocument/content/03_scoringrating_all/rat_be_nmks_all.htm

5. Has the medical school implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental impact of commuting?

2	Yes, the medical school 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-utilized by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.
1	The medical school has implemented some strategies to provide environmentally-friendly transportation options, but the options are unsatisfactorily accessible or advertised.
0	The medical school has not implemented strategies to encourage and provide environmentally-friendly transportation options.

- *The medical school offers free bus travel for students from the Plymouth city centre (main) campus to the main hospital and north campus, minimising the need for cars.*
- *There is also an allowance that contributes towards overnight accommodation for placements which are further afield, minimising the environmental impact of travel.*

https://www.plymouth.ac.uk/uploads/production/document/path/4/4837/PAHC_Directions_and_Map.pdf

6. Does your medical school have an organics recycling program (compost) and a conventional recycling program (aluminum/paper/plastic/glass)?

2	Yes, the medical school has both compost and recycling programs accessible to students and faculty.
1	The medical school has either recycling or compost programs accessible to students and faculty, but not both.
0	There is no compost or recycling program at the medical school.

The University of Plymouth Sustainability Plan for 2020 outlines two main goals with regards to waste: to increase the proportion of waste recycled, and to reduce the amount of waste generated.

- *Recycling and non-recyclable bins are available across all campus sites.*
- *Signage and visual aids are visible on the top of each bin to assist in correct waste disposal.*
- *These efforts are not seen within clinical areas, such as the University Hospital Trust Plymouth sites and Derriford Hospital.*
- *The introduction of a mixed recycling collection scheme, meaning that all recyclable materials (except glass) can be mixed together in the same recycling bin across main campus will hopefully increase the amount of recyclables diverted from the waste stream and reduce confusion.*
- *A dedicated team exists to collect the waste from the bins around campus.*
- *Active reuse of broken chairs, desks and bits of furniture to separate wood, plastic and metal, as well as electrical waste – officially known as Waste Electrical & Electronic Equipment (WEEE), is carried out to maximise recycling*
- *The University waste contractor manages the recycling and disposal of waste, with a focus on waste reuse and recycling; of which there are monthly reports.*
 - *In 2019-2020, the University recycled 56% of their waste, which is still far from their goal of 70%.*
- *A general reduction across the different waste streams and uses such as printing was seen during the COVID-19 pandemic, however this has now since increased through 2021.*
- *Medical waste:*
 - *A key area of waste generation the plan considers is the clinical and hazardous waste generated through healthcare related research and teaching as well as laboratory-based research.*
 - *There is little detail available on how this is achieved.*
- *Food waste:*
 - *All cafés and kitchens operate a system of usable and unusable food waste, where unusable food waste is collected separately and sent for anaerobic digestion, which includes used coffee grounds.*
 - *Food waste is then converted to biomethane to produce heat and electricity.*
 - *Any consumable food waste that is left is donated to local charities.*
 - *We are aiming to add an app offer for students to access reduced price, near-date food.*

https://www.plymouth.ac.uk/uploads/production/document/path/20/20294/Sustainability_Report_2020.pdf
<https://www.plymouth.ac.uk/students-and-family/sustainability/waste-and-recycling>

7. Does the medical school apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?

3	Yes, the medical school has adequate sustainability requirements for food and beverages, including meat-free days or no red-meat, and is engaged in efforts to increase food and beverage sustainability.
2	There are sustainability guidelines for food and beverages, but they are insufficient or optional. The medical school is engaged in efforts to increase food and beverage sustainability.
1	There are sustainability guidelines for food and beverages, but they are insufficient or optional. The medical school is not engaged in efforts to increase food and beverage sustainability.

The University of Plymouth and subsidiary catering provider, University Commercial Service Plymouth Limited (UCSP Ltd), is responsible for selecting, sourcing and delivering all food and beverages accessible in all campus venues and off-site venues, including the medical school buildings and cafes, as well as event catering, hospitality and the on-site nursery. Their sustainability plan for 2020-2025 emphasises their goal to liaise with the University Medical Faculty to develop sustainability awareness and create a “sustainable food culture”. It states:

“This Sustainable Food Plan aligns with government guidelines for healthy and sustainable eating as detailed by the Good Food Guide”.

The UCSP Ltd Sustainable Food Plan holds detailed guidance and objectives on the sourcing and shipping of food.

- *They outline detailed and arguably realistic objectives of increasing vegetable intake, higher welfare meats, and high-quality farming for environmental purposes.*
 - *This is in accordance with Part One of the National Food Strategy, The Good Food Guide, United Nations Sustainable Development Goals, specifically ‘Responsible Consumption and Production’ and ‘Climate Action’ goals with current targets considering ‘Life Below Water’ and ‘Life on Land’.*
- *It aims to source ethical, local and seasonal produce where possible.*
- *The Sustainable Restaurant Association Standard gave them a 3-star rating in 2019. More up to date figures are not available for 2012-2022.*
- *They aim to “Reduce food waste and packaging waste associated with catering and increase composting and recycling”, by accessing disposal routes in all cafes, maintaining discount on reusable cups, reduce the use of disposable glass bottling and audit the use of plastics with aim for reduced consumption to name a few.*
- *Relevant achievements over the last two years and future goals to:*
 - *Reduce food waste to below the 2016–17 benchmark of 18 tonnes per annum and reduce the use of disposal packaging (target to be set).”*
 - *Increasing the purchase of organic food for resale.*
 - *All fresh milk sourced from a local farm in Redruth, Cornwall*
 - *Use of environmentally-friendly cleaning chemicals from Delphis Eco in all catering outlets*
 - *Always serving lesser known fish varieties to reduce overfishing of any one species and never serving fish identified as ‘threatened’ by the Marine Conservation Society (MSC)*
 - *Use of 100% local, organic vegetables from Riverford Organic Farmers in our Reservoir Vegetarian Bistro*
 - *Reduce meat consumption: “Review the amount of meat per portion and continue to reduce (to less than 150g per serving)”*
 - *All cling film removed from hospitality services, with the implementation of washable and reusable trays and food coverings*
 - *No plastic cutlery on site, only wooden or cutlery made from plants are used, and a reduction in use of over 10,000 disposable cups*
 - *Champion local food sourcing: “Maintain local sourcing in excess of 48% from Devon and Cornwall, and 60% from the South West including Bristol.”*
 - *And review the ethical international sourcing of food: Active and on-going review on the sustainability of palm oil providers and the donation of food to local charities to reduce waste.*

Information was sourced via:

https://www.plymouth.ac.uk/uploads/production/document/path/10/10122/Sustainable_Food_Plan_2020-2025_issue_5.pdf

https://www.plymouth.ac.uk/uploads/production/document/path/20/20294/Sustainability_Report_2020.pdf

There are sustainability guidelines for food and beverages, but they are insufficient or optional. The medical school is engaged in efforts to increase food and beverage sustainability.

The faculty does not participate actively and purposefully in meat-free days or no meat.

8. Does the medical school or associated institution apply sustainability criteria when making decisions about supply procurement?

3	Yes, the medical school has adequate sustainability requirements for supply procurement and is engaged in efforts to increase sustainability of procurement.
2	There are sustainability guidelines for supply procurement, but they are insufficient or optional. The medical school is engaged in efforts to increase sustainability of procurement.
1	There are sustainability guidelines for supply procurement, but they are insufficient or optional. The medical school is not engaged in efforts to increase sustainability of procurement.
0	There are no sustainability guidelines for supply procurement.

Specific and detailed guidance is available on The University Of Plymouth's procurement of commodities, of which sustainability is a transparent and planned objective. This occurs for both internal and external supply chains.

- *£64m per annum is dedicated to sustainable expenditure and procurement of supplies.*
 - *Most commodity contracts are organized via the Southern Universities Purchasing Consortia (SUPC).*
 - *SUPC is responsible for the selecting and evaluating of supply sourcing.*
- *All suppliers are required to complete Section 3 Grounds for Discretionary Exclusion of the government's Standard Supplier Questionnaire (SQ) as part of the tendering process.*
 - *It is at this stage that trained University of Plymouth staff will assess the suitability of a company with regards to factors including sustainability such as Human Trafficking.*
 - *Lesser detail is available on the use of networking with suppliers to reduce carbon footprint, reduce single use plastics and increase the use of sustainable energy.*
- *The University has recently adopted a supplier engagement tool, Net Positive Futures, which supports building sustainability into the procurement process and maximising sustainable social value in the supply chain.*
 - *Recent data for the use of this tool is not yet available.*
 - *It aims to empower suppliers to have constructive dialogue on sustainability and encourage drive for continuous improvement.*
- *Under the Green Travel Plan, which aims to minimise the impact of car travel on the campus and local environment and encourages maximum use of public and sustainable transport, medical students are able to access free, but limited, bus transport to and from the main University Hospital.*
 - *This is in association with external travel suppliers.*

- *Specifics of medical school sourcing and procurement, the sustainability of production and the supply chain is limited.*
 - *Further clarity about the sourcing of medical equipment, PPE, and medical education tools could be given.*
 - *We would urge this to be more publicly accessible and visible for students.*

Information was sourced via:

https://www.plymouth.ac.uk/uploads/production/document/path/13/13817/Sustainability_Report_2018.pdf

<https://www.plymouth.ac.uk/about-us/university-structure/service-areas/procurement>

9. Are there sustainability requirements or guidelines for events hosted at the medical school?

2	Every event hosted at the medical school must abide by sustainability criteria.
1	The medical school strongly recommends or incentivizes sustainability measures, but they are not required.
0	There are no sustainability guidelines for medical school events.

There are currently no sustainability guidelines for events hosted at the Medical School.

- *The Medical School has no official requirement to adhere to and actively endorse specific sustainability policies.*
- *However, there are guidelines in place for the university campus as a whole, as detailed in the University's Carbon Management Plan;*
 - *This includes goals to achieve 0 net carbon output for event based resources such as grid electricity, refrigerant gases and solid, liquid and gaseous fuels.*
 - *Campus protocol, including for the hosting of events, considers and is taking steps to improve the sustainability of water usage and sewage, recycling and waste management, procurement (as detailed above), energy intake and carbon emissions.*
- *There are also steps being taken to set up a staff and student-run Green Champion Network, of which the involvement of medical and healthcare students may encourage the Medical School to formalise specific sustainable event protocols.*

Information sourced via:

- *Email: sustainability@plymouth.ac.uk*
 - *"We are currently unaware of anything happening directly with the medical school, however there are general initiatives across campus that can be found within our carbon management plan on our policies page... In addition to this, my colleague [...] is working to set up a student and staff Green Champions Network. This could help with this first point going forward [...]. There are currently no 'sustainability guidelines' for events hosted at the medical school but I am currently working directly with our procurement department to improve sustainability in their area".*
- *Carbon management plan issue 4:*
 - https://www.plymouth.ac.uk/uploads/production/document/path/18/18650/Carbon_Management_Plan_issue_4.pdf

The medical school strongly recommends or incentivizes sustainability measures, but they are not required.
Guidelines for the campus as a whole exist but are non-specific to the medical school and it is unclear whether the medical school are strong advocates of these values.

10. Does your medical school have programs and initiatives to assist with making lab spaces more environmentally sustainable?

2	Yes, the medical school has programs and initiatives to assist with making lab spaces more environmentally sustainable.
1	There are guidelines on how to make lab spaces more environmentally sustainable, but not programs or initiatives.
0	There are no efforts at the medical school to make lab spaces more sustainable.

There are no protocols to protect sustainability within the Medical School laboratories. These are primarily based at the John Bull Building, an off-campus site.

The sustainability plans outlined above are inclusive of all on campus and off campus sites, including laboratory spaces. However, no specific attention to detail is paid specifically to lab spaces and research.

Information sourced via:

- Email: sustainability@plymouth.ac.uk
 - *“For the moment this is unlikely to impact the ‘day to day’ spends as we are focused on the ‘higher risk’ elements, but my hope is in the future this work will continue onto the ‘lower risk’, ‘day to day’ spends too”.*
- Carbon management plan issue 4:
 - https://www.plymouth.ac.uk/uploads/production/document/path/18/18650/Carbon_Management_Plan_issue_4.pdf

There are guidelines on how to make lab spaces more environmentally sustainable, but not programs or initiatives.

11. Does your institution’s endowment portfolio investments include fossil-fuel companies?

4	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.
3	No, the institution is entirely divested from fossil fuels.
2	The institution has partially divested from fossil fuel companies or has made a commitment to fully divest, but currently still has fossil fuel investments.
1	The institution has not divested from fossil-fuel companies, but faculty and/or students are conducting organized advocacy for divestment.

0	Yes, the institution has investments with fossil-fuel companies and there have been no efforts to change that.
<p><i>The University has no direct investment in fossil fuel companies. However, 10.1.4 of the “Ethical Investment Policy schedule 10 2021” states that “onward investments” cannot be guaranteed and it “is not reasonable for the University to have control over onward investment”.</i></p> <p><i>See points: 10.1.1 iii, 10.1.2 and 10.1.4 on the following for information on direct investments:</i></p> <ul style="list-style-type: none"> • https://www.plymouth.ac.uk/uploads/production/document/path/7/7061/Pages_from_Treasury_Management_policy_v12_June_2021_ethical_investment_.pdf 	

Section Total (20 out of 31)	20
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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%

Planetary Health Grades for the Peninsula School of Medicine

The following table presents the individual section grades and overall institutional grade for the Peninsula School of Medicine on this medical-school-specific Planetary Health Report Card.

Section	Raw Score	Letter Grade
Planetary Health Curriculum (30%)	$(53 / 69) \times 100 = 76.81\%$	B+
Interdisciplinary Research (17.5%)	$(13 / 17) \times 100 = 76.47\%$	B+
Community Outreach and Advocacy (17.5%)	$(6 / 14) \times 100 = 42.86\%$	C-
Support for Student-led Planetary Health Initiatives (17.5%)	$(9 / 15) \times 100 = 60.00\%$	B-
Campus Sustainability (17.5%)	$(20 / 31) \times 100 = 64.52\%$	B-
Institutional Grade	65.72%	B

Report Card Trends

Section Overview

This graph demonstrates trends in overall and section grades for the years in which Peninsula Medical School has participated in the Planetary Health Report Card initiative.

