



Planetary Health Report Card:

Peninsula Medical School



UNIVERSITY OF
PLYMOUTH
Peninsula Medical School

2020-2021 Contributing Team:

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Summary of Findings

Curriculum	B
<ul style="list-style-type: none"> • The Peninsula Medical School BMBS curriculum offers opportunities for student engagement with planetary health (PH) and education for sustainable healthcare (ESH) via interactive workshops, small group discussions, lectures, and the elective curriculum (consisting of special study units (SSUs) and the 5th year clinical elective). • The Centre for Sustainable Futures runs training workshops for staff interested in PH and sustainability as an incentive programme. • However, considering the higher emphasis on ESH and PH during pre-clinical years, better longitudinal integration is necessary. Also, more learning outcomes clearly detailing ESH and PH topics would better standardise instruction. 	
Interdisciplinary Research	B
<ul style="list-style-type: none"> • The Sustainable Earth Institute’s research festival and conferences promote PH/sustainability. The Global Health Collaborative (GHC) and many medical faculty members are also working on PH projects (ex: the KUPUMUA project). • Opportunities to engage with interdisciplinary research need to be better publicised and easier to access. We recommend the medical school compile a list of ESH and PH research opportunities onto a document that is accessible from the digital learning environment. 	
Community Outreach and Advocacy	C
<ul style="list-style-type: none"> • The Social Engagement pathway, the BMBS Student Newsletter, and Plymouth Student Bulletins are examples of community outreach and advocacy. The GHC also offers a continuing professional development course for clinicians (REM716). 	
Support for Student-Led Initiatives	C+
<ul style="list-style-type: none"> • The University employs an Environment and Sustainability Officer through the Students’ Union. Student representatives are also a part of the GHC. Staff support for student initiatives is also prevalent throughout campus. • Students for Global Health and the Plymouth University Wilderness and Expedition Medicine Society are two student PH initiatives currently active on campus. We urge medical faculty to provide more funding for similar such student-led initiatives. 	
Sustainability	B-
<ul style="list-style-type: none"> • The University of Plymouth most recently scored 79% in food sustainability due to strategies like recycling systems and sending food waste to local anaerobic digestion. • However, <20% of energy needs are being met by renewable energy generation. We support purchasing the Renewable Energy Guarantees Origin by 2025 and recommend the medical school publishes their own carbon/sustainability goals. Considering the University’s decentralised policies, we also urge medical faculty to apply standardised sustainability criteria to future supply procurement. 	

Statement of Purpose

Planetary health is human health.

The Planetary Health Alliance defines planetary health as “a field focused on characterizing the human health impacts of human-caused disruptions of Earth's natural systems.” 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 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.

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 change. Therefore, it is critical that medical students are trained to understand the health effects of climate change, as well as planetary health 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 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>Score explanation:</i></p> <ul style="list-style-type: none"> ● <i>Year 1 and 2: Green practice Special Study Unit (SSU) option description: “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 panelling / wind turbine in surgery land. This SSU will also be fun and we as a surgery promise to provide you with lots of cake.”</i> ● <i>Year 2 Doctors As Educators (DAE) project subject: “Sustainability in Healthcare”</i> ● <i>Year 5 elective learning outcome: “Demonstrate a current and in-depth understanding of a topic relating to global health or health inequality.”</i> 	

Curriculum: Health Effects of Climate Change

2. Does your medical school curriculum address the relationship between extreme temperature health risks and climate change, as well as the socioeconomic/racial disparities in extreme heat exposure?	
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.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> <i>Covered in depth in one session: Year 1 Doctors and Planetary Health Clinical Leadership and Extension Week (CLEW) session; learning objectives: “the science of the climate emergency” and “doctors responding to the climate emergency threat as part of advocacy”</i> 	

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.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> <i>Year 1 Doctors and Planetary Health CLEW session learning objective: “doctors responding to the climate emergency threat as part of advocacy”</i> <i>Optional SSU year 1 and 2: 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 optimising performance</i> 	

and survival. Pharmacological, psychological, emergency management and planning implications will also be considered where relevant.”

- *Year 2 Life Sciences Resource Centre (LSRC) session: “Extreme Weather Impact on Health”*

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.

Score explanation

- *Year 1 Doctors and Planetary Health CLEW session learning objective: “doctors responding to the climate emergency threat as part of advocacy”*
- *Year 2 plenary: “Preparing to Travel” learning outcomes: “To be aware of some of the global challenges that impact on infectious disease and diseases of poverty” and “be aware of some tropical infectious diseases and a little of their pathophysiology.”*

5. Does your medical school curriculum address the cardiorespiratory health effects of climate change, including 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.

Score explanation:

- *Year 1 Doctors and Planetary Health CLEW session*
- *Optional SSU year 1 and 2: “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 Continuing Care 2 (CC2) tutorial: “Environmental Lung Disease” learning outcome: “lung diseases associated with the environment, smoking, industrial and occupation.”*

6. 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.

Score explanation:

- *Year 1 Doctors and Planetary Health CLEW session learning objective: “doctors responding to the climate emergency threat as part of advocacy”*

7. 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.

Score explanation:

- *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.”*
- *Year 1 Evidence Based Learning (EBL) session 4: “Global Health, the Environment and Access to Clean Water”*
- *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 interactive activity covering access to food for disadvantaged communities.*

- *Year 5 elective learning outcome: “Describe how the environment and health interact at the global level”*

8. 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, 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.

Score explanation:

- *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 2 Clinical Skills student study guide “Nutritional Assessment” learning outcome: “student recognises the factors within different environments that may lead to patient malnutrition.”*
- *Year 2 Sustainability QI workshop*
- *Year 3 placement pathway week “Outreach/Substance Abuse” learning outcome: “to understand knowledge base of social determinants of health. To evaluate the information about family relationships and other relevant social factors (including work, education and finances) and their impact on an individual patient with corroboration whenever needed from other sources.”*
- *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, behavioural and cultural factors which influence health and disease in different populations.”*
- *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.”*

9. Does your medical school curriculum address the unequal 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.

Score explanation:

- *Year 2 LSRC “Disease of the Returning Traveller”*
- *Year 2 Global Health SSU*
- *Year 2 Jigsaw session “The Global Picture”.*

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

10. 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.

Score explanation:

- *Limited mention of reproductive health in Learning Outcomes across all years.*
- *Upon discussion with faculty members, year 3 “Infertility” lecture is being planned to have specific learning outcomes on how and what environmental toxins cause infertility for future sessions.*

11. 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.

Score explanation:

- *Optional SSU year 1 and 2: Green Practice- involves looking at environmental threats in Plymouth: “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 panelling / wind turbine in surgery land. This SSU will also be fun and, we, as a surgery, promise to provide you with lots of cake.”*

12. Does your medical school curriculum address the unique climate and environmental health challenges that have impacted and are impacting Indigenous communities?

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.

Score explanation:

There is no evidence that the medical school curriculum has covered any climate or health challenges facing Indigenous communities.

13. 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, 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.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> • <i>Year 1 Jigsaw “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.”</i> • <i>Year 2 lecture/plenary “Health of the homeless” learning outcome: “Understand social determinants of homelessness - risk factors for homelessness, epidemiology. Understand common health problems of the homeless and their access to health services.”</i> • <i>Year 3 SSU (general handbook): “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. a) describe the health of a population using basic epidemiological techniques and measurements. b) evaluate the environmental, social, behavioural and cultural factors which influence health and disease in different populations”</i> • <i>Year 4 GP pathway week learning outcome: “Understanding of the patient perspective and how family and environment influences health behaviours and outcomes”</i> • <i>Year 4 Environmental Lung Disease (CC2 tutorial) learning outcome: “Environmental lung diseases associated with: The environment, Smoking, Industrial/Occupational”</i> • <i>Year 4 SSU module handbook (elective handbook): “Socioeconomic and environmental determinants of health. 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 3.Describe how the environment and health interact at the global level”</i> 	

Curriculum: Sustainability

14. 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.
<p><i>Score explanation:</i></p> <p><i>There is no evidence to show that the benefits of a plant based diet are covered in learning outcomes for either the core curriculum or in elective coursework.</i></p>	

15. Does your medical school curriculum highlight the waste generated by the healthcare system and identify ways to advocate for and implement sustainable best practices in health care?

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.

Score explanation:

- *Year 2 Sustainability QI Workshop*
- *All BMBS students are taught the safety importance and economic value of correctly disposing sharps and clinical waste appropriately, but this is not explicitly identified in any learning outcomes or designated sessions of the core curriculum.*

Curriculum: Clinical Applications

16. 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

Score explanation:

- *There are no specific strategies in place for having conversations with patients on climate change currently. There are lectures which teach medical students about climate change and health but not conversational techniques.*
- *There are workshops focussed on providing healthcare to global populations broadly but not at specific patient encounters. For example, the “Global Health: providing healthcare for Global populations” workshop aims to teach about how healthcare can be provided in different environments, such as lacking certain resources in different parts of the world.*
- *Also there are workshops on infectious disease outbreak management but do not link climate change in the learning objectives (ex: “Epidemiology: investigating disease clusters;” “Notifiable disease, surveillance and monitoring;” and “No man is an island: The challenge of*

infectious disease”). These workshops teach the principles of how and why diseases spread but don’t link how professionals should discuss with patients on how climate change can increase the spread of certain diseases.

- *Year 1 workshop “Planetary Health” learning outcomes:*
 - *“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 LSRC session “Preparing to travel” learning outcomes:*
 - *“To revisit the importance of global health within clinical practice*
 - *To be aware of some of the global challenges that impact on infectious disease and diseases of poverty”*
- *Year 2 DAE project (see below) suggestion could be interpreted as facilitating students to consider how to have conversations with patients about climate change:*
 - *“As the largest UK employer, the National Health Service (NHS) and Health and Social Care sectors have a responsibility to contribute to sustainability and reducing 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?”*

17. 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.

Score explanation:

- *Years 1 - 2 Clinical Skills teaching: simulated sessions with actors on generic systems framework and the Calgary Cambridge process which include teaching on how to take an environmental history and what relevant aspects there are to look out for. For example: exposure to dyes and bladder cancer risk. This teaching was confirmed by two senior clinical skills instructors.*
- *Lecture based and EBL cases looking at how exposure risk factors influence likelihood of disease occurrence. It is good to have a scientific understanding of these associations so that when talking to patients, explanations are clear.*
- *Year 4 plenary “Risk factors for different cancers - genetic, lifestyle, environmental”*
- *Year 4 tutorial “Environmental Lung Disease” learning outcomes:*
 - *Common respiratory presentations*
 - *Environmental lung diseases associated with:*
 - *The environment*
 - *Smoking*
 - *Industrial/Occupational*

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Curriculum: Administrative Support for Planetary Health

18. Is your medical school currently in the process of 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.
<p><i>Score explanation:</i></p> <p><i>After having collectively reviewed the questions of this report card, it is our shared opinion that the medical school is currently taking noteworthy steps towards integrating more ESH/planetary health education into the curriculum. However, as there is still room and current plans being put into improving this focus, we believe “major improvements” may be a criteria more fitting for future report card analyses.</i></p>	

19. 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.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> • <i>13 of the preliminary questions and therefore the majority of questions scored either maximum points or partial points.</i> • <i>Therefore, this question deserves to be awarded either 6 or 4 points. However, as only 7 of the 13 questions scored an average of 3 full points compared to the other 6 (average of 2 points), we believe awarding this question with 4 points is more fair, as there is still room for better</i> 	

integration of planetary health/ESH topics into the curriculum, especially into the core standards.

20. Bonus: Does your medical school have a program that offers incentives for faculty/departments to develop new planetary health/ESH courses and/or incorporate planetary health/ESH into existing courses?

1* Yes, the medical school has an incentive program.

0 No, the medical school does not have an incentive program.

Score explanation:

- *The University's Centre for Sustainable Futures (CSF) runs workshops for staff who are seeking to integrate sustainability (especially the UN Sustainable Development Goals) and planetary health into the curriculum. The workshops use a "community of practice" approach to encourage sharing of good practice and knowledge amongst staff.*
- *University of Plymouth has a Sustainability Health and Wellbeing Interest Group consisting of students and staff but this group engages with multiple university courses, including BMBS.*
- *CSF also has contributed to a guidance document being produced by the Quality Assurance Agency and AdvanceHE for all higher educational institutions on education for sustainable development that aims to help staff at medical schools with integrating ESH into their teaching.*

Section Total (38 out of 58)

38

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?	
4	Yes, there are faculty members at the School of Medicine who have a primary research focus in planetary health and healthcare sustainability.
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.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> ● <i>The researchers listed below are part of the Global Health Research team and are part of the medical school faculty involved in planetary health research (https://www.plymouth.ac.uk/research/primarycare/fresh-air).</i> <ul style="list-style-type: none"> ○ <i>Honorary Associate Professor Rupert Jones (The KUPUMUA project)</i> ○ <i>Honorary Associate Professor Dr Lynne Callaghan</i> ○ <i>Honorary Associate Professor Lucy Cartwright</i> ○ <i>Honorary Associate Professor Debra Westlake</i> ● <i>The KUPUMUA project is an ongoing project that aims “to prevent and treat chronic lung disease in East Africa in partnership with the Makerere University Lung Institute, Uganda.” They have also stated that “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)</i> 	

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.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> <i>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.”</i> (https://www.plymouth.ac.uk/research/global-health-collaborative.) <i>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.”</i> (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.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> <i>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.</i> <i>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).</i> 	

4. Does your institution have a planetary health website, or a website centralizing various campus resources 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.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> <i>The Sustainable Earth Institute, which can be accessed from the Research and Expertise website (https://www.plymouth.ac.uk/research)</i> 	

- *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>)*

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

4	Yes, the institution has hosted more than one conference or symposium on topics related to planetary health in the past year, including at least one on climate change.
3	Yes, the institution has hosted 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.

Score explanation:

- *The Sustainable Earth Institute:*
 - *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 (<https://www.plymouth.ac.uk/research/plymouth-research-festival/2020>).*
 - *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” (<https://www.plymouth.ac.uk/whats-on/future-plymouth-2030>).*

6. Has your institution or medical school joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education?

2	Yes, the medical school has joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education.
1	Yes, the institution has joined the Planetary Health Alliance and/or the Global Consortium on Climate and Health Education, but the medical school specifically has not.

0	No, the institution has not joined the Planetary Health Alliance or the Global Consortium on Climate and Health Education.
<p><i>Score explanation:</i></p> <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> • <i>https://www.publichealth.columbia.edu/research/global-consortium-climate-and-health-education/map-gcche-member-institutions</i> • <i>https://www.planetaryhealthalliance.org/pha-members-jr</i> 	

Section Total (14 out of 19)	14
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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>Score explanation:</i></p> <ul style="list-style-type: none"> • <i>Year 2 Social Engagement pathway learning outcomes:</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> ○ <i>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.</i> ○ <i>Explored how these needs relate to wider population needs - locally, nationally and globally.</i> ○ <i>Reflected on what social engagement means and on the relationship between their medical education and the community. (Example- Tamar View Community Complex)”</i> 	

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.

Score explanation:

- *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.

Score explanation:

- *BMBS Student Newsletter Ed 1. January 2021: “The Deep End project is... a group of General Practices which serve the most socio-economically deprived populations. These practices serve high percentages of patients living in data zones defined as being within the 15% most deprived areas in the country. This is a project which was pioneered in Scotland by the University of Glasgow and has since been taken up by General Practices across the UK. We are a group of third year medical students. Our goal is to raise awareness of The Deep End Project amongst other medical students as a drive for further funding and recruitment. eep your eyes peeled for this if you’re interested!”*
- *Upon request from organisations or individuals, the medical school faculty do circulate information about various opportunities and current events amongst staff and students, including material relating to planetary health/ESH.*
- *University of Plymouth Student Bulletin January 6 2020:*
 - *Launch of Sustainability Hub: Low Carbon Devon: “This £2.6 million initiative, supported by the European Regional Development Fund, will harness the University’s expertise and experience in sustainability to benefit local employers. Led by the Sustainable Earth Institute, a launch event for the project was held before Christmas with the guest of honour, E.ON UK’s Chief Executive Officer Michael Lewis, delivering a talk about the energy sector’s responsibilities for responding to the climate emergency.”*
- *University of Plymouth Student Bulletin March 16 2020:*
 - *Chair of the Office for Students visits University: “The Chair of the Office for Students (OfS) - the independent regulator of Higher Education in England - visited the University last week to learn first-hand about its work to champion positive social mobility. Sir Michael Barber met with representatives and students from all levels of the institution to discuss how the University is supporting social mobility in the South West and raising the aspirations of schoolchildren, young people and other prospective students around the world.”*
 - *Soil erosion project in Tanzania shortlisted for Guardian University Award: “Academics from the School of Geography, Earth and Environmental Sciences, with colleagues at the Nelson Mandela African institution of Science and Technology in Tanzania, have been shortlisted for a national award in recognition of a long-running project tackling the issue of soil erosion in East Africa. Jali Ardhi – Swahili for ‘care for the land’ – is one of two finalists at the Guardian University Awards in the Internationalisation category. The project, overseen by Professor Will Blake, Dr Claire Kelly, Maarten Wynants and Professor David Gilvear, has brought together scientists and community groups to collaborate on creating sustainable solutions to soil erosion.”*
- *University of Plymouth Student Bulletin June 22 2020:*
 - *Sustainable Food Awards: “The University has achieved the highest 3-star standard with a score of 79% from the Sustainable Restaurant Association in 2019. We aim to maintain this high level of standard for the next assessment. The Sustainability Restaurant Association work towards an ‘environmentally restorative and socially progressive’ UK hospitality sector by focusing on three main areas; Sourcing, Society and Environment.”*

- *Lecturer receives ‘rising star’ award: “Dr Zoë Mildon, Lecturer in Earth Sciences, has been awarded a prestigious accolade by the Geologists’ Association. She has received the Halstead Award, which recognises an individual who has made a substantial contribution in any area of geology at an early stage in their career. Zoë joined the University in 2018 immediately after completing her PhD, which focused on the link between earthquakes and structural geology in central Italy.”*
- *University of Plymouth Student Bulletin November 24 2020:*
 - *“Article reveals ‘A threat greater than Covid:’ Biomedical Sciences student Matthew McCracken has co-written an article on drug-resistant infections and how, long-term, they could have a bigger impact than COVID-19. The piece coincides with World Antimicrobial Awareness Week.”*
 - *“‘Microplastics discovered on Everest’”: Scientists from the University have identified the highest recorded microplastics ever found on Earth – at an altitude of more than 8,000 metres, close to the summit of Mount Everest.’*
- *University of Plymouth Student Bulletin December 7 2020:*
 - *Helping to preserve the planet: “A group of students has begun the search for 100 young people who share their passion for preserving the planet. The Ambassadors of Earth initiative is looking to create a network of school-age pupils willing to take a proactive role in climate-related projects in their local community.”*

4. Do hospitals affiliated with your medical school 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.
<p><i>Score explanation:</i></p> <p><i>There is no evidence that any such patient literature is provided by University Hospitals Plymouth (UHP), Torbay Hospital or Musgrove Park Hospital. See https://www.plymouthhospitals.nhs.uk/environment-group for further information.</i></p>	

5. Do hospitals affiliated with your medical school 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.

Score explanation:

- *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>*
- *Torbay Hospital is working to develop their five-year plan: <https://www.torbayandsouthdevon.nhs.uk/about-us/sustainability-and-transformation-plan/>*
- *There is no evidence that Musgrove Park Hospital has produced any similar plans.*

Section Total (6 out of 12)

6

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?	
2	Yes, the institution offers grants available to medical students for students to enact sustainability initiatives.
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.
0	No, the institution does not offer opportunities or support for sustainability initiatives.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> • Year 2 Sustainability Quality Improvement (QI) workshop • Years 1 and 2 'Green Practice. Creating a more sustainable world in General Practice' Special Study Unit (SSU) includes support from members of core faculty or external providers. • Years 3 QI SSU • The Future Leaders student-led sustainability programme is accessible to the wider university, including medical students, but these are not funded opportunities (https://www.plymouth.ac.uk/students-and-family/sustainability/sustainability-education/students-as-partners). 	

2. Does your institution offer opportunities for medical students to do research related to planetary health and/or sustainable healthcare?	
3*	The institution offers an explicit paid fellowship for medical students to do research related to planetary health and/or sustainable healthcare.
2	The institution offers paid research opportunities for students and planetary health/sustainable healthcare projects would be considered eligible.
1	There are unfunded research opportunities for students to perform research related to planetary health/sustainable healthcare.

0	There are no opportunities for students to receive funding for planetary health/sustainable healthcare research.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> • <i>Recent changes in elective medical school units include QI SSUs. This provides students with support from a member of core faculty or an external provider, and students can choose to engage with planetary health/Education for Sustainable Healthcare (ESH) research if they wish to.</i> • <i>However, these projects are not funded / students are not paid to undertake them.</i> 	

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.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> • <i>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</i> • <i>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.</i> • <i>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.</i> 	

4. Does your medical school have funded, registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?	
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2	Yes, there is a funded student organization with faculty support at my medical school dedicated to planetary health or sustainability in healthcare.
1	Yes, there is a student organization at my medical school dedicated to planetary health or sustainability in healthcare but it lacks faculty support and/or funding.
0	No, there is not a student organization at my institution dedicated to planetary health or sustainability in healthcare.
<p><i>Score explanation:</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).</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> 	

5. Is there a student liaison representing sustainability interests who serves on a medical school or institutional decision-making council to advocate for sustainability best practices?	
1	Yes, there is a student representative that serves on a medical school or institutional decision-making council.
0	No, there is no such student representative.
<p><i>Score explanation:</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> ○ <i>Student sustainability ambassadors</i> ○ <i>UPSU environment and sustainability forum</i> 	

- *There is a Sustainability Advisory Group and this group reports directly to the University Executive Group. The President of the SU and the part time sustainability officer from the student union both sit on this committee.*

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) that follow Leave No Trace principles.

Score explanation:

- *University allotment- students can volunteer to participate in maintaining a communal allotment space.*
- *University of Plymouth Beekeeping Group
<https://www.plymouth.ac.uk/students-and-family/sustainability/pubkg#:~:text=The%20universi ty%20has%20its%20own,species%20used%20by%20many%20beekeepers>*
- *Nutritank society's trip to sustainable food farm*
- *SFGH (Students for global health) series of evening teaches with external speakers and conferences. Furthermore, conferences looking at the topic of Displacement. Also, organising groups to attend National climate strikes.*
- *The Plymouth University Wilderness and Expedition Medicine Society, and other outdoor societies, 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.*

****Some events are not currently running due to Covid, but have existed and should continue in future.*

Section Total (8 out of 14)

8

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.

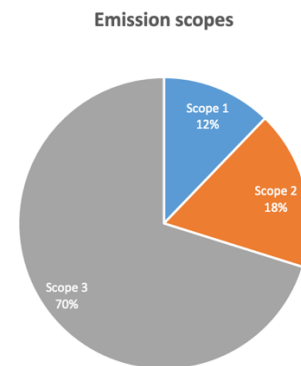
1. Does your medical school and/or institution have an Office of Sustainability?	
3	Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is at least one designated staff member for sustainability 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>Score explanation:</i></p> <ul style="list-style-type: none"> • <i>There is a ‘Sustainability Hub’ on campus, which is a space for people to come together to research, teach, and collaborate on sustainability topics. It is home to the Sustainable Earth Institute, and Centre for Sustainable Futures. Both staff and students, and other partnered groups are able to use this space for workshops and events. For example, the Students for Global Health society have carried out some of their Sustainable Development Goals workshop series in this Hub.</i> • <i>The Estates and Facilities department at the university has sections dedicated to ‘energy, environment and sustainability’ and ‘waste and recycling’.</i> • <i>There is no specific named member of staff from the medical school who is in charge of sustainability.</i> 	

2. Does your medical school and/or institution have a stated goal of carbon neutrality by 2050?	
4*	The medical school is already carbon neutral.

3	Yes, there is a stated carbon neutrality goal and the medical school has a well-defined and adequate plan in place to achieve this goal.
2	Yes, there is a stated carbon neutrality goal, but the medical school 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.

Score explanation:

- *The medical school is included in the university's commitment for 2025/2050 targets, but there do not seem to be medical school-specific comprehensive plans to reach these targets.*
 - *“GOAL 1: To deliver net zero carbon from scope 1 & 2 emissions by 2025.”*
 - *“GOAL 2: Net zero including scope 3 by 2030-2050.”*
- *Scope 1 and 2 are defined as areas within the university's control, and scope 3 includes the wider infrastructure and industry.*
 - *Emissions from scope 1 & 2 have reduced by 48% since the base year of 1990 and by 39% since 2005.*
 - *Scope 1 & 2 constitute 30% of the university's total emissions (see pie chart above), so although 39/48% reduction seems impressive, it is still a long way off net zero for **all** scopes. See https://www.plymouth.ac.uk/uploads/production/document/path/18/18650/Carbon_Strategy_issue_1_.pdf for more information.*
- *The main hospital affiliated with the medical school recently announced their 'Green Plan'.*
 - *“University Hospitals Plymouth NHS Trust has today (20.12.20) launched its 'green plan', the strategy that determines its sustainability principles for the next five years as it works, alongside partner organisations such as Plymouth City Council to be net zero carbon by 2030.”*
 - *The Trust objectives are: 1. Reduce the Trust's carbon footprint by 20% by 2025 (and work towards net carbon zero by 2030), 2. 10% net biodiversity gain by 2025, 3. 85% avoidance of waste going to landfill by 2025, 4. 70% score in NHS Sustainable Development Assessment Tool (SDAT) by 2025, and 5. Embed sustainability into every Trust service and activity by 2025. Reference: Annual Report and Accounts for Plymouth Hospitals NHS Trust at <https://www.plymouthhospitals.nhs.uk/our-publications>*



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.

Score explanation:

- *As stated by Plymouth University's energy manager, 20% or less of energy needs are fulfilled from on or off site renewable generation. However, there is commitment to purchase Renewable Energy Guarantees Origin (REGO) by 2025, which aims to transform the energy supply for university buildings.*
- *The following map highlights the various different forms of renewable energy and energy-saving technology that different buildings in the university use. The medical school uses a range of buildings, especially Portland Square (PSQ). PSQ uses; solar thermal hot water, thermal decks, passive ventilation, night-time cooling, high-efficiency LED lighting, and lighting sensors.*
 - *Reference: https://www.plymouth.ac.uk/uploads/production/document/path/18/18693/Campus_map-23.pdf*
- *Derriford Research Facility and John Bull building are externally accredited to SO 14001 for the Environmental Management System. "The intended outcomes of an environmental management system include: enhancement of environmental performance... fulfilment of compliance obligations... [and] achievement of environmental objectives."*
 - *Reference: <https://www.iso.org/standard/60857.html> , <https://www.plymouth.ac.uk/students-and-family/sustainability/our-sustainable-campus>*
- *The university has other projects with the intention of moving to low-carbon fuels whilst utilising and improving the efficiency of existing combined heat and power units.*
 - *Reference: https://www.plymouth.ac.uk/uploads/production/document/path/18/18650/Carbon_Strategy_issue_1_.pdf*

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 rating system or sustainable 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.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> <i>The buildings in the Plymouth Science Park are up to Building Research Establishment Environmental Assessment Method (BREEAM) Excellent standards (70-85% score on the BREEAM standard in the UK). Sustainable practices are upheld for ALL new construction projects (see top of page 3 to page 4 at https://www.plymouth.ac.uk/uploads/production/document/path/18/18664/Sustainable_Construction_Refurbishment_Strategy_issue_2.pdf for the specific criteria.</i> <i>The medical school also uses buildings on the main campus as well; a refurbishment project is currently in the design stage for a building that the medical school will utilise. This is currently being designed to 'SKA Gold', an environmental standard for refurbishment projects (the highest rating). Supporting information can be found at: https://www.plymouth.ac.uk/students-and-family/sustainability/sustainable-campus-and-construction</i> 	

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.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> <i>There is subsidised bus transport for certain medical courses. Generally if the courses are split between sites, students are eligible for the free inter-site bus transport. There is a university liftshare account for all staff and students to use as well. Link to the travel plan: https://www.plymouth.ac.uk/uploads/production/document/path/17/17036/Travel_Plan_Issue_6_Full_Plan_with_appendix.pdf</i> <i>For information that applies to all schools: https://www.plymouth.ac.uk/students-and-family/sustainability/green-travel</i> 	

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.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> • <i>The medical school uses multiple buildings within the university campuses.</i> • <i>The university sends food waste from the cafes for local anaerobic digestion, including the John Bull Cafe at the hospital campus site. There is also a recycling system in place.</i> • <i>For information that applies to all schools:</i> 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?	
3	Yes, the medical school has adequate sustainability requirements for food and beverages 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.
0	There are no sustainability guidelines for food and beverages.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> • <i>The medical school uses multiple buildings within the university campuses.</i> • <i>The university's food sustainability rating overall scores at 79% (3 stars) (+3% from the last report) (77% in sourcing, 76% in society and 85% in environment).</i> • <i>For a more detailed breakdown of information, see:</i> https://www.plymouth.ac.uk/uploads/production/document/path/17/17038/Final_2019_Rating_Report_for_University_of_Plymouth.pdf • <i>For the university's plan for improvement, see:</i> https://www.plymouth.ac.uk/uploads/production/document/path/10/10122/Sustainable_Food_Plan_2020-2025_Issue_5.pdf 	

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.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> <i>The university operates a decentralised approach to procurement for the vast majority of lower value, ad-hoc purchases, meaning that faculties are empowered to acquire such goods themselves, provided this happens in accordance with the University's Tendering Policy (https://www.plymouth.ac.uk/uploads/production/document/path/7/7832/University_of_Plymouth_Tendering_Policy_2020.pdf).</i> <i>The aforementioned 'Responsible Procurement Statement' sign posts staff to the university's sustainability pages and policies, which, in addition to the tendering policy, help ensure the university considers the sustainability agenda when making decisions. (https://www.plymouth.ac.uk/students-and-family/sustainability/policies).</i> <i>The Faculty of Health engages with the bi-monthly Procurement User Group internal committee, which was established to bring responsibility to staff in buying goods/services from the across the University together with the objective: "To provide a positive and proactive forum for feedback on purchasing systems and processes and to identify areas for improvement and development." The topic of sustainability features regularly in this group.</i> 	

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.
<p><i>Score explanation:</i></p> <ul style="list-style-type: none"> <i>After having discussed with the university's events team and the university's sustainability manager, there is evidence of sustainability requirements specifically for catering for events with regards to on-campus food, but there is not any evidence of official sustainability requirements or guidelines for events per se (only 'some general comments' directly from the events team such as "decide whether the event needs to be in person or if could be online," "if in-person, encourage the use environmentally friendly transport," and "limit the use of paper by using electronic communication").</i> 	

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.

Score explanation:

- *There was no evidence of any programs or initiatives to assist with making lab spaces more environmentally sustainable within the medical school. However, as doing lab work is not a requirement of the medical school's core curriculum, this question is less relevant to the Peninsula Medical School. Nonetheless, the lab buildings themselves are up to sustainability building codes according to the Associate Dean of Research at the Faculty of Health as well as the general university building code guidelines at <https://www.plymouth.ac.uk/students-and-family/sustainability/sustainable-campus-and-construction>.*

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.
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.

Score explanation:

- *The university does not have any endowment investments so there is no direct investment in fossil fuel companies. However, the university does have pension funds that indirectly invest university (and other businesses) pension funds. The language of the answers does not exactly fit the situation, but technically, the university is not entirely divested from fossil fuels due to these indirect investments.*

- *See points 10.1.1 iii and 10.1.2 on the following for information on direct investments:
https://www.plymouth.ac.uk/uploads/production/document/path/7/7061/Ethical_Investment_Policy_schedule_S10_from_treasury_management_policy_2018.pdf*

Section Total (18 out of 29)

18

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 Medical School:

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

Section	Raw Score	Grade
Planetary Health Curriculum (30%)	38 / 58 = 66%	B
Interdisciplinary Research (17.5%)	14 / 19 = 74%	B
Community Outreach and Advocacy (17.5%)	6 / 12 = 50%	C
Support for Student-led Planetary Health Initiatives (17.5%)	8 / 14 = 57%	C+
Campus Sustainability (17.5%)	18 / 29 = 62%	B-
Institutional Grade	62%	B-