Planetary Health Report Card (Medicine):

Peninsula Medical School

2023-2024 Contributing Team:
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Summary of Findings

Overall	B

Curriculum	B

- Peninsula Medical School's curriculum covers many metrics in depth in the core curriculum. However, some topics are covered in one session across the course or not at all e.g. reproductive health effects of environmental toxins and importance of Indigenous knowledge
- **Recommendations:** Peninsula Medical School has a spiral curriculum and therefore we recommend that these topics are incorporated into existing sessions across all year groups

Interdisciplinary Research	B+

- Within Peninsula Medical School, the Sustainable Earth Institute and Global Health Collaborative run many projects relating to planetary health. The medical school is a member of the Global Consortium on Climate and Health Education but not of the Planetary Health Alliance.
- **Recommendations:** Peninsula Medical School could organise a conference directly related to Planetary Health. They could also join the Planetary Health Alliance.

Community Outreach and Advocacy	C+

- University Hospitals Plymouth have accessible educational materials for patients about climate change and environmental health exposures in the form of leaflets and other education resources.
- **Recommendations**: Peninsula Medical School could offer community-facing courses and more community partnerships relating to planetary health in student selected units.The institution could also offer courses for postgraduates to ensure their knowledge and skills in sustainable healthcare stays up-to-date.

Support for Student-Led Initiatives	A

- Peninsula Medical School offers a range of sustainability QI projects, some of which require student initiative to seek out. There is a dedicated webpage for planetary health and sustainable healthcare information. Students for Global Health Plymouth hosts education and charity events, but lacks specific faculty support.
- **Recommendations:** Support for student-led initiatives mostly comes from the wider university rather than the medical school. We recommend the medical school offers increased support to students interested in sustainable initiatives e.g. by creating a website to advertise mentors or opportunities for students relating and prioritising grants for related research.

Campus Sustainability	B+

- Peninsula Medical School recognises sustainability as a key principle in decisions about procurement of supplies and campus food and beverage selections, with investment in making lab spaces more resource-conserving. Steps are being taken to implement a sustainable investment platform for organisation of medical school events.
  The University of Plymouth has successfully attained carbon neutrality verification under PAS 2060 standards. However, this involves the utilisation of carbon offsetting measures.
- **Recommendations:** Improvements can be made by moving completely away from investing in fossil fuel companies and guaranteeing onward investments into renewable energy companies and campus initiatives. Peninsula Medical School could also set guidelines for events hosted by the medical school to adhere to sustainability criteria.

Statement of Purpose

Planetary health is human health.

The Planetary Health Alliance describes planetary health as "a solutions-oriented, transdisciplinary field and social movement focused on analysing and addressing the impacts of human disruptions to Earth's natural systems on human health and all life on Earth." This definition is intentionally broad, intended to encompass the multitude of ways that the environment can affect health, including water scarcity, changing food systems, urbanisation, biodiversity shifts, natural disasters, climate change, changing land use and land cover, global pollution, and changing biogeochemical flows. The health of humanity is dependent on our environment, and our environment is changing rapidly and in disastrous ways. Although the World Health Organization has called climate change "the greatest threat to global health in the 21st century," many 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 colour, older adults sensitive to health threats, and individuals in low-resource settings), these issues are inherently ones of equity and justice.

With the purpose of increasing planetary health awareness and accountability among 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 centred on environmental health impacts 5) medical school campus sustainability.

Definitions & Other Considerations

Definitions:

- **Planetary Health:** is described by the Planetary Health Alliance as "the health of human civilisation and the state of the natural systems on which it depends." For example, topics such as climate change, declining biodiversity, shortages of arable land and freshwater, and pollution would all fall under the realm of planetary health. Both planetary health and traditional 'environmental health' examine the relationship between human health and the external environment, including extreme temperatures, chemicals, vector-borne diseases, etc. Planetary health explicitly concerns itself with the potential health harms associated with human-caused perturbations of natural systems. Therefore, the human health focus of planetary health makes the field well-adapted for the context of 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.

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

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

    1. Describe how the environment and human health interact at different levels.

    2. Demonstrate the knowledge and skills needed to improve the environmental sustainability of health systems.

    3. Discuss how the duty of a doctor to protect and promote health is shaped by the dependence of human health on the local and global environment.

- **Medical School 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 (e.g. undergraduate departments (USA), other related departments (e.g. Public Health, Population Health departments). In contrast, when "institution" is specified in the report card, we are referring to the university more

broadly. 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 mould after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution.

- **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 examples).

Added to our resources in 2022, 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

1.1. 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.

Year 1 Student Selected Unit (SSU) 1 – Biomedical Review Article

- *Students will be offered an option to write a Biomedical Review Article on planetary health.*

Y2 SSU topic: Global Health, Infectious Disease and trauma in resource poor setting

- *Learning outcomes:*
  - *Students will develop a research project on Global Health, Pathogenesis of Infectious Disease, Tropical Medicine (particularly diseases endemic to West Africa) and Trauma in the developing world.*

Y1/2 SSU topic: World health inequalities: a global or local problem

  - *Students will focus on global health topic, such as communicable disease, environmental issues, the pharmaceutical industry*
  - *The sessions will explore the global health inequalities, and gain critical insight into cultural and structural perspectives of health and illness*

Y4 SSU topic: Green Practice. Creating a more sustainable world in General Practice.

- *Students will focus on rural general practice and the national "Green Practice" scheme, to develop innovative ways to reduce waste and environmental impact of patient care*

Y4 SSU topic: SSU topic: Global Health, Infectious Disease and trauma in resource poor setting

- *Students will complete a Global Health Project at Masanga Hospital in rural Sierra Leone*
- *The project will be focusing on the Pathogenesis of infectious Disease, Tropical Medicine (particularly diseases endemic to West Africa) and Trauma in the developing world.*

SSU topic: How to be a "greener" GP Surgery

- *Students will complete a Quality improvement project to improve the environmental impact of a GP surgery and of the NHS.*

SSU topic: Making Sexual Health Green

- *Students will complete a Quality improvement project at the sexual health department to reduce waste to achieve the goals of a 'green department'*

Curriculum: Health Effects of Climate Change

1.2. Does your <u>medical school</u> 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 Jigsaw: Public Health issues and resource allocation

- *Explores environmental factors that influence an individual's health and well-being at different stages of the life cycle*

Year 2 Plenary: The Global Picture:

- *Discuss the concept of global health and how global issues impact all clinicians*

Year 2 Plenary: Public Health: Child Health Across the World (interactive session)

- *Learning Objectives*
  - *Discuss the concept of global health, global health inequalities*

Year 2 Plenary: Public Health Workshop - Global Health (interactive)

- *Learn about the relationship between climate change and global health*

Year 1 Student Selected Unit (SSU) 1 – Biomedical Review Article

- *Students will be offered an option to write a Biomedical Review Article on the planetary health, which includes the relationship between extreme heat, health risks and climate change*

Y1/2 SSU topic: Extreme Environment Physiology & Medicine

- *Students will learn about acute and chronic risks and outcome to exposure to extreme environments. Including the effects of changes in gravity, pressure, respiratory gas composition, nutrition, hydration and temperature.*

Y4 SSU topic: SSU topic: Global Health, Infectious Disease and trauma in resource poor setting

- *Students will complete a Global Health Project at Masanga Hospital in rural Sierra Leone*
- *The project will be focusing on the Pathogenesis of infectious Disease, Tropical Medicine (particularly diseases endemic to West Africa) and Trauma in the developing world.*

Year 3 Plenary: FW1: Locally Global: a population view of medicine

- *Students will learn about global health issues and factors influencing health, such as climate change.*

Year 3 Workshop: Global Health: Providing Healthcare for Global Populations:

- *Students will discuss about global health*
- *Also focusing on the threats to Global health, such as pandemics and consequences of climate change and environmental degradation*

Y4 SSU topic: SSU topic: Global Health, Infectious Disease and trauma in resource poor setting

- *Students will complete a Global Health Project at Masanga Hospital in rural Sierra Leone*
- *The project will be focusing on the Pathogenesis of infectious Disease, Tropical Medicine (particularly diseases endemic to West Africa) and Trauma in the developing world.*

SSU topic: Making Sexual Health Green

- *Students will complete a Quality improvement project at the sexual health department to reduce waste to achieve the goals of a 'green department'*

Year 5 elective

- *Learning outcome:*
  - *"Demonstrate a current and in-depth understanding of a topic relating to global health or health inequality."*
  - *Specific learning objectives/outcomes regarding Planetary Health are depending on students' proposals submitted in Year 4.*

1.3. Does your <u>medical school</u> 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.

Year 2 Plenary: The Global Picture:

- *Discuss the concept of global health and how global issues impact all clinicians*

Year 2 Plenary: Public Health Workshop - Global Health (interactive)

- *Learn about the relationship between climate change and global health*

Year 3 Workshop: Global Health: Providing Healthcare for Global Populations:

- *Students will discuss about global health*
- *Also focusing on the threats to Global health, such as pandemics and consequences of climate change and environmental degradation*

Year 1 Student Selected Unit (SSU) 1 – Biomedical Review Article

- *Students will be offered an option to write a Biomedical Review Article on the planetary health, which includes the relationship between extreme weather events and population health*

Y1/2 SSU topic: Extreme Environment Physiology & Medicine

- *Students will learn about acute and chronic risks and outcome to exposure to extreme environments. Including the effects of changes in gravity, pressure, respiratory gas composition, nutrition, hydration and temperature.*

Year 5 elective learning outcome:

- *"Demonstrate a current and in-depth understanding of a topic relating to global health or health inequality."*
- *Specific learning objectives/outcomes regarding Planetary Health are depending on students' proposals submitted in Year 4.*

1.4. Does your <u>medical school</u> 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.

Year 1 Student Selected Unit (SSU) 1 – Biomedical Review Article

- *Students will be offered an option to write a Biomedical Review Article on the planetary health, which includes the relationship between climate change and changing health pattern*

Y2 & Y4 SSU topic: Global Health, Infectious Disease and trauma in resource poor setting

- *Students will develop a research project on Global Health, Pathogenesis of Infectious Disease, Tropical Medicine (particularly diseases endemic to West Africa) and Trauma in the developing world.*

Year 2 plenary: Preparing to travel

- *Explored travellers disease relevant to travel destination, and how the prevalence and pattern and disease are changing due to climate change*

Year 2 Plenary: Infectious Intestinal Disease

- *Discussed about travellers disease*
- *Briefly explored how climate change, e.g. extreme heat/storm season, changes the pattern of infectious disease in different times of the year*

Year 3 – Plenary - Locally Global: a population view of medicine

- *Briefly explored global health issues and how climate changes impact on prevalence of infectious disease and therefore the population health*

Year 4 Plenary: Large Outbreaks of Infectious Disease: How to Recognise and Manage Them

- *Examples of endemic/epidemic/pandemic infectious disease is discussed and relationship between climate change and the outbreak or control of infectious diseases is explored*

Year 5 Supporting Academic Programme (SAP): Pathology – 'Sun, Beer, Mopeds & Multi-drug Resistance – Aspects of Antibiotic Treatment & Resistance'

- *Briefly talked about how climate change affected evolution of microbes, extreme climate e.g. melting of iceberg/flooding, post threat to population and global health*

1.5. Does your <u>medical school</u> 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

- *Explored topics of climate emergency and its relationship to respiratory health*

SSU topic: Allergies and the Environment

- *Student will conduct a project related exploring the relationship between allergies and environment, including Asthma and other immunological respiratory disease*

Year 1 Student Selected Unit (SSU) 1 – Biomedical Review Article

- *Students will be offered an option to write a Biomedical Review Article on the planetary health, which includes the relationship between climate change and air pollution*

Y1/2 SSU topic: Extreme Environment Physiology & Medicine

- *Students will learn about acute and chronic risks and outcome to exposure to extreme environments. Including the effects of changes in gravity, pressure, respiratory gas composition, nutrition, hydration and temperature.*

Year 4 Tutorial: Environmental Lung Disease

- *To gain an understanding of environmental lung diseases associated with: the environment, smoking, industrial/Occupational'*

Year 4 Tutorial: Lower Respiratory Tract Infections

- *Briefly explores the relationship between air pollution/climate change and LRTI*

Year 3 Placement: Respiratory

- *Students will meet patients with various lung diseases, including asthma and COPD patients. Through clinical reasoning sessions, they may explore the relationship between air pollution and climate with control of asthma/COPD.*

Year 4 Specialty Week: Allergy/Immunology

- *Discussion on respiratory health effects of climate change and air pollution are explored when talking to patients, and may be discussed during clinical reasoning.*

Year 4 Placement: Airways

- *Discussion on respiratory health effects of climate change and air pollution are explored when talking to patients, and may be discussed during clinical reasoning.*

Year 4 Workshop: Your Elective - Planning a Safe Elective

- *Risks factors to health are explored in the context of foreign travel, e.g. worsening of asthma control if travelling to places with poorer air quality*

1.6. Does your <u>medical school</u> 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.

- *Climate emergency is explored including its relationship to cardiovascular health.*

Year 1 Student Selected Unit (SSU) 1 – Biomedical Review Article

- *Students will be offered an option to write a Biomedical Review Article on planetary health, which includes the relationship between climate change and cardiovascular health.*

Year 3 Placement: Cardiology

- *Students will talk to different patients at clinics and wards; the relationship between climate change and cardiovascular disease may be explored during then and during clinical reasoning sessions.*

Year 3 Workshop: Global Health: Providing Healthcare for Global Populations:

- *Students will discuss about global health*
- *Also focusing on the threats to Global health, such as pandemics and consequences of climate change and environmental degradation*

Y1/2 SSU topic: Extreme Environment Physiology & Medicine

- *Students will learn about acute and chronic risks and outcome to exposure to extreme environments. Including the effects of changes in gravity, pressure, respiratory gas composition, nutrition, hydration and temperature.*

Year 4 Workshop: Your Elective - Planning a Safe Elective

- *When discussing potential risk in travel and elective destination, the relationship between environmental factors/extreme climate to cardiovascular health are explored*

1.7. Does your <u>medical school</u> 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 SSU1 – Biomedical Review Article

Year 1 Student Selected Unit (SSU) 1 – Biomedical Review Article

- *Students will be offered an option to write a Biomedical Review Article on the planetary health, which includes the relationship between mental health and neuropsychological effects of environmental degradation and climate change*

Year 1 plenary: "Influences on Health"

- *Relationships between environmental factors e.g. climate change and well-being (physical and mental) are explored.*

Year 1 Planetary Health workshop:

- *Discussed doctors responding to the climate emergency threat as part of advocacy and Win/Win solutions to the climate emergency.*

Y1/2 SSU topic: Extreme Environment Physiology & Medicine

- *Explored the impact of extreme weather and climate change, e.g. heat, to mental health and neuropsychological effects*

Year 3 Workshop: Locally Global: a population view of medicine

- *Brief discussion on environmental factors influencing mental health and wellbeing*

Year 3 Workshop: Global Health: Providing Healthcare for Global Populations:

- *The workshop explores the consequences of climate change and environmental degradation and how it threatens the Global health (both physical and mental)*

Year 4 Workshop: Your Elective - Planning a Safe Elective

- *When discussing potential risk in travel and elective destination, the relationship between environmental factors/extreme climate to individuals' psychological well-being are explored*

1.8. Does your <u>medical school</u> 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 Planetary Health CLEW plenary discussed:
- *Contribution of health care to emissions*
- *Links between responding to the climate emergency and sustainability targets.*

Year 1 SSU overarching theme in Planetary health:
- *Example topic SSU 1: effects of air pollution on respiratory and cardiovascular disease.*
- *Example topic SSU 2: Challenges and solutions for achieving sustainable green healthcare infrastructure.*
- *Example topic SSU 3: how do we achieve healthcare equality in a changing climate?*

Year 1 SSU module handbook aims:
- *Demonstrate a current and in-depth understanding of medically relevant specialist areas including but not limited to: biomedical science; psychology; social science; population health and ethics.*

Year 1 interactive session Public health workshop - Global health:
- *Climate change:changing patterns of disease*
- *Sustainable Development Goals: health and healthcare*

Year 1 CLEW

- *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*
- *Mitigation and adaptation to climate change*
- *Health effects of climate change. Extreme weather, infectious disease, flooding, migration, stress and mental health effects*
- *Win/Win solutions to the climate emergency*
- *Contribution of health care to emissions*

1.9. Does your medical school curriculum address the outsized impact of climate change on marginalised populations such as those with low SES, women, communities of colour, 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 3 SSU module handbook learning outcomes:

- *25 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*
    - *evaluate the environmental, social, behavioural, and cultural factors which influence health and disease in different populations everywhere.*

Year 2 Plenary Health Inequalities learning objectives:

- *Marmot Review: what can be done for populations.*
    - *Create and develop healthy and sustainable places and communities. Climate change, air pollution, social isolation*

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".

1.10. 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 lecture Preparing to travel learning objective:

- *Recognises some emerging diseases, tropical diseases, and zoonoses, and how climate change is affecting their spread.*

Year 2 LSRC lecture Disease of the Returning traveller objective:

- *Understand the importance of history taking, especially in patients that have travelled abroad*
- *Recognise diseases of significant public health importance and know what to do in these situations (VHFs / notifiable diseases).*

Year 2 learning objective: "Discuss health inequalities from a global perspective".

Year 2 social engagement essential reading:
- *social determinants of health.*

Year 3 plenary 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.*
- *Climate change: new threats and challenges.*

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*
- *Understand the principal institutions having responsibility for health globally.*

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

1.11. 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.
No learning outcomes cover this topic	

1.12. 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 learning objective:
- *contribution of healthcare to emissions'*

Year 4 'Environmental Lung disease' tutorial learning objective:
- *covers the industrial, and environmental causes of some lung diseases.*

Year 2 Plenary "Health Inequalities" mentioned local interventions:

- *The NHS long term health plan, one of the points discussing air pollution*
- *Thrive plymouth, public health programme discussing the focus issues in Plymouth.*

Year 2 Jigsaw session topic discussion point:

- *Describe psychological, social, economic & environmental factors that influence an individual's health and well-being at different stages of the life cycle and consider how the NHS and other organisations can improve health at different stages in the life cycle.*

Year 2 Doctors as Educators SSU project examples:

- *Sustainability in healthcare - thinking about the environmental impact (e.g waste) of NHS*
- *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?*

1.13. To what extent does your medical school emphasise 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.
No learning outcomes cover this topic.	

1.14. Does your medical school curriculum address the outsized impact of anthropogenic environmental toxins on marginalised populations such as those with low SES, women, communities of colour, 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 2 Plenary: Public Health: Child health across the world: - *Discusses fundamental drivers in improving life expectancy: rising living standards, environmental improvements, lifestyle changes and education.* - *Discusses the impact of unclean water and the Prevalence of diarrheal diseases contributing to the cases of child mortality.*	

Year 2 workshop Sustainable health and Quality Improvement: asthma case study

- *Consider how the environment affects all the social determinants of health and how the environmental impact of health care.*
- *Discuss what is meant by quality improvement in healthcare*
- *Start to develop knowledge and skills to improve the quality and environmental sustainability of health care, using asthma as an example*
- *Consider whether and how your responsibility as medical students and future doctors to protect and promote health, includes taking responsibility for environmental factors.*

Year 2 'Health of the Homeless' plenary covering:

- *'Understand social determinants of homelessness -risk factors for homelessness, epidemiology'*
- *Understand common health problems of the homeless and their access to health services.*

Year 3 'Creative approaches to advocacy and wellbeing' SSU with learning objective 'evaluate the environmental, social, behavioural and cultural factors which influence health and disease in different populations'

Curriculum: Sustainability

1.15. 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.

Year 1: Clinical Leadership and Extension Week 1.1: Planetary Health workshop.

- *Compares the environmental impact of different plant-based proteins and meat sources via greenhouse gases emissions*
- *Discussed how greenhouse gases emissions could be reduced with changes in the consumption of fish, meat, eggs*

Year 2 Plenary: Fever and Infection Unit: The Human Microbiome

- *Explored how a plant-based diet with different plant fibres can improve gut health by increasing microbial diversity*

- *Briefly explored the dangers of a highly processed diet on health*

1.16. Does your <u>medical school</u> 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: Clew 1.1: Planetary Health workshop presentation.

Presentation explores the percentage of global health care footprint around the world. Explores direct and indirect contributors to greenhouse gas emissions. Includes breakdown of carbon footprint of NHS and Public Health and Social care from 1990 to 2025 - specifically about the carbon footprint of asthma inhalers specifically metered dose inhalers.

Clew 2.2: Workshop: Sustainable Health & QI; Sustainability in Quality Improvement: an asthma case study

Description: the importance of quality improvement for sustainable healthcare including current carbon emissions and cost to life, particularly focussing on Asthma.

Year 4: SSU Quality Improvement

Topic: Green Practice. Creating a more sustainable world in General Practice

Description: Develop aspects of working to reduce carbon footprint; reduce waste, as well as creating more energy via solar panelling / wind turbines in surgery land.

Topic 2: Working with patients to promote a greener NHS by switching from a metered-dose inhaler (MDI) to a Dry powder inhaler (DPI)

This SSU explores metered-dose inhalers, the impact on the environment and considers how to encourage patients to switch to more environmentally friendly methods.

1.17. Does your <u>medical school</u> curriculum cover these components of sustainable clinical practice in the <u>core</u> curriculum? (points for each)	
2	The health **and** environmental **co-benefits** of **avoiding** over-medicalisation, over-investigation and/or over-treatment

2	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 fulfil 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. This is commonly known as social prescribing in the UK.
1	Environmental impact of **surgical** healthcare on planetary health and the climate crisis, and how can it be mitigated
1	The impact of **anaesthetic** gases on the healthcare carbon footprint and ways to reduce anaestheisa's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions
1	The impact of **inhalers** on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers.
1	**Waste production** within healthcare **clinics** and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting)

2: The environmental impact of **pharmaceuticals and overprescribing:**

- *Year 3: Foundation Week 1: Locally Global: a population view of medicine: Presentation explores problems of overprescribing and polypharmacy*

3: The health **and** environmental **co-benefits** of **non-pharmaceutical management**

- *Year 1: Biomedical SSU: The role of diet and nutrition in the treatment of chronic disease: Explores nutrition based management for Type 2 diabetes, obesity and other chronic diseases*
- *Year 3: Creative Approach to Wellbeing SSU: Homelessness, Health and Art: Explores how the arts and creative expression can be used as a form of healing and a channel for the exploration of personal narratives to allow us to develop appropriate and inclusive advocacy.*
- *Year 3: Creative Approach to wellbeing SSU: How can art be used to improve student wellbeing?: Explores physical and mental health challenges with focus on art to manage mental health issues*

6. The impact of **inhalers** on the healthcare carbon footprint

- *Clew 2.2: Workshop: Sustainable Health & QI; Sustainability in Quality Improvement: an asthma case study: Presentation explains the importance of quality improvement for sustainable healthcare including current carbon emissions and cost to life. Gives specific cases of asthma involving carbon footprint as well as non-carbon environmental impact.*
- *Topic 2: Working with patients to promote a greener NHS by switching from a metered-dose inhaler (MDI) to a Dry powder inhaler (DPI): This SSU explores metered-dose inhalers, the impact on the environment and considers how to encourage patients to switch to more environmentally friendly methods.*

7. **Waste production**

- *Waste is mentioned in Year 4 small group session: Politics, resource management and how the NHS works". Discusses management of resources, ensuring cost effectiveness and minimising waste*

- *Year 4: Quality Improvement SSU: Drug waste in the community setting. Understanding patient choices to improve the quality and outcome of care. SSU explores the impact of wasted medication in the community and discusses how to mitigate this.*
- *Year 4: QI SSU: Increase sustainability and reducing plastic waste in the clinical areas. SSU focuses of ways to reduce plastic waste in clinical areas without compromising patient safety as well as reviewing proper disposal of waste.*

Curriculum: Clinical Applications

1.18. In training for patient encounters, does your <u>medical school's</u> 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
No strategies have been identified.	

1.19. In training for patient encounters, does your <u>medical school's</u> 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: Biomedical SSU: Allergies and the Environment
Description: 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

Learning Outcomes:
- *To familiarise students with the nature of atopic allergies and their apparent dramatic increases in certain populations and in certain geographical areas.*
- *To develop students' awareness of the spectrum of environmental features (stress, pollutants, hygiene,use of antibiotics etc.) which may contribute to this increase and how their effect(s) might be evaluated.*
- *To develop their analytical and critical skills and to produce a clear concise scientific style.*

Year 2 - Workshop: Sustainable Health and QI; Sustainability in Quality Improvement: an asthma case study

Learning outcomes:

- *Consider how the environment affects all the social determinants of health and how the environmental impact of health care*
- *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*

Presentation highlights the need for exposure history.

Years 1 and 2 communication skills during clinical teaching sessions includes Calgary-Cambridge framework to take environmental and exposure history from simulated patients.

Curriculum: Administrative Support for Planetary Health

1.20. Is your <u>medical school</u> 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.
There have been some changes in the Population Health Curriculum in this area, including am updated 2 hour workshop in Year 1 which gives new teaching about non-pharmacological management of chronic non-communicable diseases as well as more teaching about environmental impact of Metered Dose Inhalers asthma inhalers.	

1.21. How well are the aforementioned planetary health/Education for Sustainable Healthcare topics integrated longitudinally into the <u>core</u> 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 is teaching about planetary health and sustainable healthcare throughout 5 years of the course however could be improved with more focused cohort teaching in year 4 and 5 as planetary health teaching then become student based opportunities.

1.22. Does your <u>medical school</u> 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
0	**No**, the **medical school** does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare.
There is a faculty member responsible for overseeing curricular integration of planetary health and sustainable healthcare. They lead the integration of population health knowledge into the curriculum for medical students.	

Section Total (51 out of 72)	**70.83%**

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Are there additional curriculum resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

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 emphasised.*

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your medical school?	
3	Yes, there are faculty members at the **medical school** who have a **primary r**esearch focus in planetary health **or** healthcare sustainability.
2	Yes, there are individual faculty members at the **medical school** 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 and conduct some research related to planetary health:

- *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. Acknowledging that one of the main causes of Chronic Lung Disease (CLD) is air pollution, this project's aims included combating chronic lung disease in East Africa through spreading awareness about smoke exposure and the use of cleaner fuels.

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.

2.2. 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.

● *There is the 'Global Health Collaborative', which is a forum for 'overseas health education, research and sustainability'. It was set up in 2016 to bring together individuals and organisations who are working in or have interest in global health. The scheme brings together researchers, healthcare professionals and other members in academia at the university and the NHS to build knowledge to achieve the aim of sustainable global health.*
● *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."*

2.3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your 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 uses 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".

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

- *There is a central page that serves as an institutional platform to show what the University is doing to achieve its goal in sustainability and promote its research.*
- *There is a page on the University of Plymouth website that details the institution's aim to take climate action and 'meet net zero carbon'. It is part of its sustainable earth initiative.*
- *On the Peninsula Medical School Digital Learning Environment (DLE), there is a Planetary Health page linking resources on all aspects of Planetary Health, as well as links to activities and groups. Some examples of resources included on the DLE:*
    - *Global Health Content Page: Introduces students to the idea of 'Global Health', where the patient can come from anywhere in the world. The site continues on to direct the reader to resources, such as textbooks and the 'Global Burden of Disease' project for those interested in epidemiology.*

2.5. 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.

The Sustainable Earth Institute:
● *Sustainable Earth 2021: 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.*
● *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". It hosted a debate to discuss the 'variety of improved building standards that are available for us to promote, use and choose from with inspired clients and developers to help try to 'raise the bar' (and reduce the carbon) of construction'.

2.6. Is your medical school a member of a national or international planetary health or ESH organisation?	
1	Yes, the medical school is a member of a national or international planetary health **or** ESH organisation
0	No, the medical school is **not** a member of such an organisation

University of Plymouth, Faculty of Health & Human Sciences is a member of the Global Consortium on Climate and Health Education, but is not a member of the Planetary Health Alliance.

- *The Global Consortium on Climate and Health Education is a project aimed at studying how climate and health concepts are being incorporated into public health training globally. Their mission is 'Advancing global health security and educating professionals on the effects of climate change'. This is being undertaken through a survey and is joined by 298 members, globally.*

Section Total (13 out of 17)	**76.47%**

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Are there additional research resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

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 colour. Institutions should partner with local communities affected by climate change and pollution to share information about environmental health threats, advocate together for change, and provide opportunities for students to be a part of this work.*

3.1. Does your medical school partner with community organisations to promote planetary and environmental health?

3	Yes, the **medical school** meaningfully partners with **multiple** community organisations to promote planetary and environmental health.
2	Yes, the **medical school** meaningfully partners with **one** community organisation to promote planetary and environmental health.
1	The **institution** partners with community organisations, but the medical school is not part of that partnership.
0	No, there is **no** such meaningful community partnership.

Livewell Southwest

Livewell Southwest is an independent, social enterprise providing integrated health and social care services. An example of a collaboration is a project conducted with this organisation aimed to promote sustainable food production methods that reduce environmental impact, such as reducing food waste.

Forgotten voices at the heart of new UK food research project - University of Plymouth

Learning in the community - University of Plymouth

Social engagement

Community engagement and health improvement project where students work with local organisations to develop a health-related activity. One example of an organisation that the medical school has partnered with is Keyham Green Places, a community centre that places a strong emphasis on promoting the natural environment with its gardens and horticultural growing area.
https://cropskgp.org.uk/

3.2. 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 **institution/medical school** have not offered such community-facing courses or events.
There are no such community-facing courses or events offered by the medical school.	

3.3. Does your <u>medical school</u> 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** receive communications about planetary health or sustainable healthcare.

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

Recent examples include:

- *23rd May 2023: Climate change – is your bank account a force for good or bad? This Climate Action Plymouth organised event will discuss the financing of energy*
- *28th November 2023: Hear from employers about Careers in a Sustainable Future*
- *Ocean Hackathon: Could you tackle some ocean-based problems and play a part in creating the solutions? Find out more about Plymouth's first Ocean Hackathon taking place Friday 17 to Sunday 19 November.*

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

3.4. Does the <u>institution</u> or <u>main affiliated hospital trust</u> 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 postgraduate trainees provided by Derriford Hospital.
Home | Postgraduate Medical Centre Plymouth (pgmeplymouth.com)

3.5. Does your medical school or its affiliated teaching hospitals have accessible educational materials for patients about environmental health exposures?

2	Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients.
1	**Some** affiliated hospitals have accessible educational materials for patients.
0	**No** affiliated medical centres have accessible educational materials for patients.

There is evidence of patient information leaflets provided by University Hospitals Plymouth (UHP), Torbay Hospital and Musgrove Park Hospital.

Plymouth:

- *Asthma: https://www.plymouthhospitals.nhs.uk/display-pil/pil-asthma-what-you-need-to-know-5932*
- *Antibiotic resistance: Antibiotics the facts | Display Patient Information Leaflets | University Hospitals Plymouth NHS Trust (plymouthhospitals.nhs.uk)*
- *Colon cancer: Family history of bowel (colon) cancer | Display Patient Information Leaflets | University Hospitals Plymouth NHS Trust (plymouthhospitals.nhs.uk)*
- *Malignant melanoma: Malignant Melanoma | Display Patient Information Leaflets | University Hospitals Plymouth NHS Trust (plymouthhospitals.nhs.uk)*
- *Quit smoking in Maternity: Quit smoking help | Display Patient Information Leaflets | University Hospitals Plymouth NHS Trust (plymouthhospitals.nhs.uk)*

Torbay:

- *Smoking in Pregnancy: Supporting Smoke-free Pregnancies (torbayandsouthdevon.nhs.uk)*

Taunton:

- *SmokeFree: Inform me – Smokefreelife Somerset (healthysomerset.org.uk)*

The university website has education materials on reducing exposure to biomass smoke during pregnancy, after delivery and among young children.
https://www.plymouth.ac.uk/research/primarycare/global-health-research/the-midwife-project

3.6. Does your medical school or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?

2	Yes, the **medical school** or **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.

There is no evidence that any such patient literature is provided by Torbay Hospital or Musgrove Park Hospital. However, University Hospitals Plymouth (UHP) collaborates with several organisations for leaflets regarding climate change and its health impacts. An example is a leaflet used by UHP is provided by Asthma + Lung UK which mentions air pollution as a cause of Chronic Obstructive Pulmonary Disease.

Section Total (8 out of 14)	**57.14%**

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Are there additional community engagement and advocacy resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

Support for Student-Led Planetary Health Initiatives

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

4.1. Does your medical school or your institution offer support for medical students interested in enacting a sustainability initiative/QI project?	
2	Yes, the **medical school** or **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum.
1	The **medical school** or **institution** encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, **but** there is no student funding available and there is no requirement to participate.
0	No, **neither** the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects.

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?'

In fourth year, students are required to undertake a QI project, possible topics for students to choose from a catalogue include:

- *"How should general practice respond to the climate emergency?"*
- *"Green Practice. Creating a more sustainable world in General Practice"*
- *Tackling Antimicrobial resistance*

It is not mandatory for students to undertake QI projects related to sustainability. Students are not paid to do this research.

The University hosts the "Get Involved Awards" annually to encourage collaborative research for sustainable solutions, with grants of £6000 to £8000 available for up to five projects. Although not necessarily aimed at students, this is a source of funding through the wider institution which could be used for a sustainability project.

4.2. 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.

Medical students have opportunities to intercalate between years three and five of their training. This year includes a research project. The options of degrees that include environmental research are BSc International Relations and MSc Global Health. The international relations degree contains the mandatory module 'One Planet? Society and Sustainability' and the optional module 'Global Environmental Politics'. The masters course benefits from Plymouth University's links to the British Antarctic Survey Medical Unit (BASMU) based at University Hospitals Plymouth NHS Trust and the Diving Diseases Research Centre (DDRC). It also contains the options to undertake environmental modules such as; 'Primary and Public Healthcare', 'Remote and Rural Medicine', 'Health in Humanitarian emergencies'. The 'Design and Development of HealthCare Education' module also allows students to research and design a scheme of work, whereby they are given the chance to endorse the new curriculum for sustainable healthcare, which has been added to the GMC list of supplementary guidance for UK medical schools.

For their degree projects, Plymouth University also gives the opportunity to collaborate with Plymouth's Institute of Health and Care Research. Their research theme for 2022 included the full spectrum of public health through primary care to clinical medicine with expertise including sustainability.

Student Selected Components allow students to undertake environmental research during years two and four of study. One of the topics for the 'Doctors as Educators' SSU in year two is sustainability in healthcare, where students create a learning resource for their peers. The 'Quality Improvement' SSU in year four gives project examples of single use plastics, drug waste, travel to surgery, and utilisation of green spaces.

The year one students also receive a planetary health lecture which highlights the areas students can get involved in, giving examples of creating BMJ infographics to display and share their research. One of their learning points in their reflective small group 'Jigsaw' sessions also requires them research to allow them to describe environmental factors that influence an individual's health and consider how the NHS and other organisations can improve health.

4.3. 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.

The Peninsula Medical School Digital Learning Environment has a workbook dedicated to planetary health and how it relates to medicine. It is accessible to students of all years via the Population Health page within the BMBS curriculum folder. It contains updated news and relevant reading, such as the EU emissions gap report.

Within this, there is a growing list of resources on all aspects of Planetary Health, including links to acitivities and group.

For example, escosia which can be added to students' chrome browser and supports planting trees. As well as links to webinars that RCGP have run.

4.4. 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 organisation **with faculty support** at my medical school dedicated to planetary health or sustainability in healthcare.
1	Yes, there is a student organisation at my medical school dedicated to planetary health or sustainability in healthcare but it **lacks faculty support.**
0	No, there is **not** a student organisation at my institution dedicated to planetary health or sustainability in healthcare.

- *Medical Students can register to societies within the student union. There are numerous options that support planetary health. Society examples include; environmental and sustainability society, gardening society and Wildlife and Ecological society.*
- *They recently collaborated on planting projects and have plans in growing productive food and flowering plants at three separate locations of campus.*
- *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/).*
- *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).*

There does not seem to be any direct faculty support.

4.5. 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.

Medical students have the opportunity to become the Student Union's president and Environmental and Sustainability Officer. This would allow them to attend the institution's sustainability advisory to advocate planetary health.
Student involvement that is also open to the General Plymouth University students include; Student sustainability ambassadors, UPSU environment and sustainability forum.

Opportunities for students at Peninsula are also currently secretary, awareness ambassador and chair at climate action Plymouth.

4.6. In the past year, has the institution had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)	
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 organise hiking, backpacking, kayaking, or other outings for students)

Volunteering opportunities in the past year include:

Projects involving organic agriculture and sustainable food systems

- *Garden volunteering at Derriford hospital*

This continues to give students an opportunity to contribute to the upkeep of gardens within the hospital grounds which are "highly valued" and offer "peace and tranquillity during what can be very difficult times." Proving a local opportunity to volunteer and make environmental impacts.

- *Polzeath marine conservation group (PMCG)*

Another volunteering opportunity advertised by Plymouth University on the dedicated volunteering page of the Student Union website is volunteering with PMCG to protect the marine and coastal environment. Their mission is to educate and inform the wider public by putting on activities, such as beach cleaning and beach combing, for schools, visitors and local residents. Students are able to gain experience and knowledge in sustainable food sources by being trained by PMCG to undertake quadrat biodiversity surveys along the shore. This allows volunteers of PMCG to monitor and assess the health of the marine environment monthly.

Panels, Speaker series, or similar events related to planetary health

- *Plymouth University's Environmental society*

The society not only runs volunteering events that are open to all students, but also holds regular talks from external organisations. For example, at the beginning of this academic year, South West Water's Charlotte Bacon. The company is responsible for providing clean drinking water and waste water services throughout Devon and Cornwall.

Events in which students learn directly from members of a local environmental justice community

- *Coastal path connector project*

The South West Coast Path Association has launched a Coast Path Connectors project which aims to broaden the accessibility to coastal walking. One of their five hubs along the coast is situated in Plymouth, thus Plymouth University advertise and encourage this opportunity to their students. Volunteering includes the roles of walk leaders and advocates for the Coast Path with the aim of encouraging confidence of walkers to return and connect with nature. They are also looking to partner with organisations that are health-based which volunteers, like Peninsula's medical students, can connect this charity to in order to recruit walkers who would benefit from coastal walks to promote their health and wellbeing.

- *Polzeath marine conservation group (PMCG)*

Local volunteer opportunities

- *Coastal path connector project*
- *Polzeath marine conservation group (PMCG)*

Wilderness or outdoors programmes

- *Coastal path connector project*
- *Polzeath marine conservation group (PMCG)*

Additional volunteering opportunities offered through the Student Union:

- *Butterfly conservation*
- *Dartmoor volunteering group with woodland trust*
- *Moor trees conservation volunteering*
- *Plymouth environmental Action {PEA} conservation volunteering*

Section Total (13 out of 15)	**86.67%**

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Are there additional student-led initiative resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

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 endeavour, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinising every aspect of how our systems operate, from where we source our energy, to how we build our infrastructure, to what companies we invest in. Our medical schools, clinics, and hospitals must set the standard for sustainable practices, and show other sectors what is possible when it comes to minimising environmental impact.*

5.1. Does your 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
Plymouth University's 'Sustainability Hub' was opened in 2019 which serves the entire campus as an Office of Sustainability. It is on the main campus in Kirkby Lodge and is where the Sustainable Earth Institute and Centre for Sustainable Futures (CSF) is located. Kirsty Wavish is responsible for sustainability at Derriford (PHNT). *The Sustainability Hub provides a dedicated space for staff and students to host external partners, engage with the community and support local action groups. The Urban Dialogue hosts monthly 'Playground' sessions which have helped to facilitate over 40 environmentally focussed projects across Plymouth.*	

5.2. How ambitious is your institution/medical school plan to reduce its own carbon footprint?	
5	The institution/medical school has a **written and approved plan** to achieve carbon neutrality by **2030**
3	The institution/medical school has a **written and approved plan** to achieve carbon neutrality by **2040**
1	The institution/medical school has a stated goal of carbon neutrality by **2040** but has **not created a plan** to reach that goal or the **plan is inadequate**
0	The institution/medical school does **not** meet any of the requirements listed above

The sustainability hub was part funded by the European Regional Development Fund as part of the Low Carbon Devon project which was held at Plymouth University for five years and closed mid 2023. At the University it was able to access research, business support, events and workshops to work towards shifting for a low carbon economy.

The four areas of complementary activity included:

1. *Refurbished Sustainability Hub*
2. *4 buildings refurbished with state of the art LED lighting, leading to a reduction in the usage of 459,625 kWh/annum, saving five times as much energy*
3. *A reduction of 148.7 tCO2e in greenhouse gas emissions*
4. *Photovoltaic solar cells fitted in two buildings, leading to 25,027 kWh/annum energy production from PVs*

This has contributed to the University achieving carbon neutral PAS 2060 verification, whereby Plymouth University was only the second University to achieve this status.

A Net Zero Vision mural was created as part of the AHRC-funded Net Zero Visions project and Low Carbon Devon.

Carbon neutrality for all Scope 1, 2 and selected Scope 3 (Water, Waste, Business Travel) will be achieved by University of Plymouth in accordance with PAS 2060 on 24th February 2023, with commitment to maintain to 31st July 2025 for the period commencing 1st August 2021, NQA verified. Below is a link to our Qualifying Explanatory Statement explaining how.

PAS 2060 Qualifying Explanatory Statement 21-22

More information regarding the university's various sustainability goals where the plans and policies regarding the carbon neutral footprint can be found at the below web page.

Policies and strategies relating to sustainability - University of Plymouth

The University of Plymouth Sustainability Hub is also working with "Low Carbon Devon" which is a project to support Devon enterprises to move to a low carbon economy to help Devon reach a net zero carbon target.This is funded by the European Regional Development Fund and is an ongoing 3 year project.

All these targets and aims are from the University of Plymouth which are responsible for the sustainability policies set by the Medical School but not Derriford Hospital.

5.3. 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.

Although the medical school buildings are 100% powered by renewable energy, it is only electricity that is 100% renewable. In 2021/22, using third party verification with PAS 2060 Carbon Neutrality standard, the university offsets gas and has a carbon neutral status for all energy. There will be offset against 2022/23 gas usage too using PAS 2060.. The University of Plymouth Sustainability Team holds Renewable Energy Guarantees of Origin (REGOs) for the 2022/23 academic year. This information will be publicly available in the University of Plymouth Sustainability Report once released here: Policies and strategies relating to sustainability - University of Plymouth

Source: University of Plymouth Sustainability Team (sustainability@plymouth.ac.uk).

5.4. Are sustainable building practices utilised for new and old buildings on the medical school campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?

3	Yes, sustainable building practices are utilised 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 utilised 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.

The Derriford research Facility opened in 2018 was designed to BREEAM Excellent Standard. The Derriford Research Facility buildings located in the Plymouth Science park are built according to the Building Research Establishment Environmental Assessment Method (BREEAM) "Excellent" standard in 2018. Sustainable practices are also used for all new construction projects, both on the main campus and at Derriford campus. BREEAM is the world's leading science based method of validation and certification system for a sustainably built environment, aiming to improve performance and sustainability in construction and refurbishment.

Any refurbishment of old buildings are designed to target SKA Gold Standard and existing buildings are upgraded to achieve higher levels of energy efficiency and reduced carbon emissions. SKA is an environmental assessment method which is assessed as either Bronze, Silver or Gold ratings.

New construction projects follow similar sustainability principles. New buildings are designed to be as "low carbon" in use, contractors with ISO 14001 accreditation and environmental management systems are used where possible, solar hot water/heating and photovoltaics are used where possible and pollution from construction is minimised as much as possible. Furthermore, local biodiversity is either enhanced or if not possible protected as much as possible during the development of the project.

These principles are upheld on projects carried out at the University of Plymouth Main Campus and throughout its other sites including those used by the medical school.

University of Plymouth Sustainability Map

Sustainable Construction & Refurbishment Policy Statement Issue 2

BREEAM | BRE Group

Sustainability Policies - University of Plymouth

Sustainable Campus and Construction - University of Plymouth

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

2	Yes, the medical school or institution has implemented strategies to encourage and provide **environmentally-friendly transportation options** such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default.
1	The medical school or institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised.
0	The medical school or institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options.

University of Plymouth provides free bus transport between the main campus in Plymouth City Centre and the Derriford Medical School campus through the use of University Cards with bus logos for eligible students on agreed bus routes due to the split between different campus sites.

The University encourages staff and students to commute by walking, cycling, public transport and car sharing, with 60% of staff and 81% of students travelling sustainably to their campus by sustainable methods (taken from 2019 survey). There is a Plymouth University Car Share group for students and staff, developed in 2013 to increase car sharing throughout the University.

Due to the University's commitment to environmental transport and their easily accessible main campus which is located in the centre of Plymouth with readily accessible public transport routes, the use of cars by students apart from those with disabilities is actively discouraged. There are a number of disabled parking spaces throughout the University campus but there is limited on site car parking otherwise to encourage use of green travel.

There are nearly 300 cycle racks with D locks, adequate lighting and extensive CCTV coverage to encourage cycling as a method of commuting to the main campus. The university works with Plymouth City Council and the Bicycle user group to make cycling to campus safe and to promote cycling as a means of daily transport.

Walking is actively encouraged and the University main campus has a "pedestrian first" policy where pedestrians have right of way when moving around the campus. Additional measures have been put in

place for the mobility impaired, including slopes and dropped kerb crossings to make walking around campus more accessible to all.

Plymouth Railway Station is only around 400m from the main campus and only a 3 minute walk from Plymouth's coach station. There are multiple bus stops within 200m of the main campus which is along the major bus routes in and out of the city centre. This includes routes to and from Mutley, Southway, Tavistock, Crownhill, St Budeaux and Derriford hospital. There are also 3 Park and Ride sites which provide direct services to the city centre with stops within 200m of the main campus, providing another method of public transport easily accessible to students and staff.

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.

Green travel - University of Plymouth

SUSTAINABLE TRAVEL POLICY AND ACTION PLAN

Green Travel Policy

Sustainability Policies - University of Plymouth

5.6. Does your medical school have an organics recycling program (compost) and a conventional recycling program (aluminium/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 has a mixed recycling collection scheme which includes recycling of paper and cardboard items, plastics and metal but this does not include glass or food waste. In 2017, the University simplified recycling on campus by changing to Dry Mixed Recycling bins to make recycling more accessible for students and members of staff.

There is a team who collect the mixed recycling waste from bins around campus and are responsible for the safe disposal of this. There are mixed recycling bins around the Medical School's John Bull Building and the Plymouth Science Park.

The University aims to reduce the amount of waste generated to 20kg per student or less by 2027 and increase the amount of recycling and reducing waste so that there is less than 6kg of non-recyclable waste per student by 2027.

In 2013, the University introduced food composting in their food catering outlets which is then taken to the anaerobic digester at Langage Farm in Lee Mill. This includes the catering team based out of John Bull Building at the Derriford Medical School campus. However, there aren't composting bins available for use by students and staff at the main University campus or at the John Bull Building.

Medical school waste removal is run centrally by The University of Plymouth.

SharePoint site waste pages

WASTE MANAGEMENT POLICY AND ACTION PLAN

Waste and Recycling - University of Plymouth

Interactive Sustainability Map - University of Plymouth

5.7. 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 s**ustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability.
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.

The medical school's food and beverage selection is run centrally by the University of Plymouth.

The University of Plymouth received a Three Star rating from the Sustainable Restaurant Association in their 2022 Food Made Good report. They were also ranked joint first in the UK for sustainable food in the People & Planet University League 2021 Sustainable Food category. In the 2021 Impact Rankings, the University of Plymouth was ranked 19th out of 422 institutions in the SSDG2 Zero Hunger category.

Almost 56% of food suppliers are based in Devon and Cornwall, and 60% from the South West of England. Over 50% of dishes across all cafes are vegetarian or vegan, and dairy-free alternative milks are available.

There is a 20p discount if reusable cups are used, which translates to an almost 105000 reduction in the use of disposable cups since 2018. As of June 2022, approximately 1600 'non recyclable' coffee cups have been recycled using the Simply Cups recycling scheme. The takeaway disposables used in cafes are biodegradable.

Leftover food and soups is used for soups and stocks, and unusable food is taken to the anaerobic digester at Langage Farm. Waste cooking oil is collected and repurposed.

Sustainable food - University of Plymouth

5.8. Does the medical school or 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.

The medical school's supply procurement is run centrally by the University of Plymouth.

The University of Plymouth recognises sustainability as an embedded principle across everything they do. The procurement team extends this further to include social, ethical, economic and environmental factors, which they refer to as Responsible Procurement. They ensure that procurement decisions contribute positively to the University's Sustainable Policies and Action Plans. This supports the University's Civic University and Social Value agenda, as well as its sustainability commitments which support the United Nations Sustainable Development Goals.

The University of Plymouth's Procurement and Sustainability teams are currently working to ensure they meet all the criteria of ISO 20400 standards for Sustainable Procurement.

Procurement - University of Plymouth

Sustainable Procurement - University of Plymouth

5.9. 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.

Events hosted by the medical school are required to follow the University of Plymouth's policies and guidance:

- *Working alongside the university's current policies and guidelines, particularly in regard to Green Travel, Catering Services, Waste Recycling and Finance and Procurement.*
- *Where possible we eliminate paper programmes and handbooks by putting event materials online*

- *We recycle and reuse name badges and any other event materials that we can*
- *We've developed online and hybrid event models to reduce travel, waste and recycling*
- *Any external event contractors are also procured through a robust tendering process so that they too meet environmental impact and sustainability measures*

The University's Carbon Management Plan also details some further guidance:

- *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 implement a sustainable investment platform, of which the involvement of medical and healthcare students may encourage the Medical School to formalise specific sustainable event protocols.*

CARBON MANAGEMENT PLAN

Source: University of Plymouth Events Team

5.10. 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.

LEAF (Laboratory Efficiency Assessment Framework) Labs was introduced last year. This is a tool containing actions lab users can take to save plastics, water, energy and other resources.There have been LEAF technician workshops regarding how to proceed with this and to discuss which labs will be involved. The medical school has not yet self assessed and submitted for review, however, the aim is to achieve a Bronze this year.

Source: University of Plymouth Sustainability Team (sustainability@plymouth.ac.uk).

5.11. 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	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 organised advocacy** for divestment.
0	Yes, the institution has investments with fossil-fuel companies and there have been **no efforts** to change that.

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".

See below, points: 10.1.1 iii, 10.1.2 and 10.1.4 on the following for information on direct investments:

Ethical_Investment_13_June_2022.pdf (plymouth.ac.uk)

The below link has information on the various policies and guidelines the university follows regarding procurement keeping in mind the sustainability practices followed by the university.

Procurement - University of Plymouth

Linked below is the RESPONSIBLE PROCUREMENT POLICY AND ACTION PLAN 2023-2025 which mentions all the strategies and governance that takes place.

Responsible_Procurement_Policy_and_Action_Plan_v2.pdf (plymouth.ac.uk)

Sustainability Policies - University of Plymouth

Section Total (25 out of 32)	**78.13%**

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Are there additional sustainability resources offered at your medical school or institution not yet asked about that you would like to describe? If so, please do so below.

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%)	(51/72) x 100 = 70.83%	B
Interdisciplinary Research (17.5%)	(13/17) x 100 = 76.47%	B+
Community Outreach and Advocacy (17.5%)	(8/14) x 100 = 57.14%	C+
Support for Student-led Planetary Health Initiatives (17.5%)	(13/15) x 100= 86.67%	A
Campus Sustainability (17.5%)	(25/32) x 100 = 78.13%	B+
Institutional Grade	**73.47%**	**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.