Planetary Health Report Card (Medicine):

Columbia University

2024-2025 Contributing Team:

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Land acknowledgment:

We acknowledge the traditional, ancestral, unceded territory of the Lenape People on which we learn, work, and gather today at Columbia University Vagelos College of Physicians and Surgeons. Lenape means real person, or original person, and it is important to remember that Lenape, collectively, are a living and breathing community. Let us honor their legacy. Let us commit ourselves to the struggle against the forces that have dispossessed the Lenape and other Indigenous people of their lands. We stand strong in our commitment to support and defend all marginalized people of this land who have been stripped of their rights to self-determination. (Adapted from Columbia University School of Nursing)

Summary of Findings

Overall Grade	B-

Curriculum	C

- A new "Climate and Health Equity" curricular thread with a dedicated faculty lead has been approved that has resulted in numerous additions of climate health to the core curriculum including during preclinical lectures and clinical clerkships. There are ongoing collaborations with faculty to add more information across all phases of the curriculum.
- **Recommendations:** The medical school should continue to add climate health as a central topic in the curriculum through team based learning sessions and should integrate material on the impact of the healthcare system on climate change.

Interdisciplinary Research	A

- Through partners at the Mailman School of Public Health and the newly formed Climate School, medical students have access to faculty conducting interdisciplinary research across the university which they can be involved in.
- **Recommendations**: The medical school should create a centralized location where students can find faculty members across different schools of the university doing work in environmental health to make it easier to find research opportunities and mentors. The university should also prioritize community involvement in research projects.

Community Outreach and Advocacy	C

- Columbia University works with some community organizations including WE ACT and offers public facing events and lecture series. Students across multiple schools interact with WE ACT on capstone projects and research/internship opportunities.
- **Recommendations**: The university should prioritize working with more community organizations to promote planetary and environmental health. The affiliated teaching hospitals should focus on creating education materials for both patients and providers that teach the health effects of climate change.

Support for Student-Led Initiatives	A

- The medical school offers a newly funded Climate Health and Justice fellowship that will work with WE ACT as part of a new curricular thread on climate change. There is also funding available for student humanitarian initiatives and research studies for students interested in climate health. There are student council positions and multiple registered student groups across the university dedicated toward climate change.
- **Recommendations**: The medical school should seek to centralize information related to planetary health or sustainable healthcare as well as create funded fellowships/research opportunities that are primarily geared toward climate health work.

Campus Sustainability	C

- The university has specific green transport initiatives including a university shuttle operated by electric buses and incentives for green commuters. A new building is being built on the medical campus that will be the first university-owned research building that does not rely on fossil fuels.
- **Recommendations**: The medical school and university should prioritize sustainability efforts in laboratory spaces and reduce excess supply waste in healthcare settings. The university should also increase the number and use of recycling bins at events to encourage recycling and encourage zero waste events.

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

Instructions for Completing the PHRC

Thank you! We are really pleased to have you and your team on board to complete the PHRC at your institution. Many of you will have already been part of a completed report card or even lead the team at your school but please take a moment to read the instructions below.

For a full comprehensive step-by-step guide to completing your report card please refer to the PHRC User Guide. This page serves as a brief overview of the important methodology.

Completing the report card:

The Planetary Health Report Card is a self assessment tool designed to identify an institution's strengths and areas in need of improvement in regards to its planetary health education. The metric-based report card consists of five sections; 1. Curriculum, 2. Interdisciplinary Research, 3. Community Outreach, 4. Support for Student-Led Initiatives and 5. Campus Sustainability.

- **Metrics.** There are roughly 55 metrics (depending on your discipline). Sections 2-5 are the same across all disciplines. Each metric has different criteria for either scoring 1, 2 or 3 points. Participants should read each metric carefully and answer the question with as much accuracy as possible, drawing upon multiple sources where possible. It is vital sufficient investigation is completed for each metric to give a fair and accurate representation of your institution.

  Most of the Curriculum metrics are graded by inclusion in **elective** coursework, **brief** coverage in the **core curriculum** or **in depth** coverage in the **core curriculum.**

  > **Elective coursework:** This score applies to material that is actively selected by the students such as a module choice, or additional lecture series. By implication, only a given proportion of the cohort will receive this taught material.
  >
  > **Brief** coverage in the **core curriculum**: This score applies where a topic is covered only briefly in a core curriculum session. This implies that the entire cohort receives the same material. Brief inclusion would qualify as inclusion in a single lecture slide in a single year.
  >
  > **In depth** coverage in the **core curriculum:** This score applies where a topic is taught in significant detail or where a topic is repeatedly brought up in different years. This might look like several dedicated lecture slides, or inclusion of the same topic in different lectures and teaching formats. Please consider amongst your team that this is the highest score awarded and a subjective decision must be made as to whether the topic should be awarded this score.
  >
  > (A full list of definitions is provided on the below pages)

- **Types of evidence.** Acceptable forms of evidence include: lecture titles, learning objectives, module descriptions, descriptions of the intended learning, case titles, seminar titles, project titles, webpages, researcher profiles / biographies, news articles, publications, social media output, institutional policy documents. Please be as specific as possible.

  It is essential that you have clearly justified the score for each metric, outlining in the box provided the specific content delivered in your curriculum and why you have assigned the

score. Each report card is reviewed by a member of the leadership team for accuracy and consistency across report cards. An example of the sufficient level of evidence is provided below each metric.

Please do not include **lecturers' names** without permission. The title of the lecture or module with a brief description of the material will suffice.

Where material is publicly available via an institution's website, please include hyperlinks to the webpages.

- **Evidence deadline.** Any material from the previous academic year and the current academic year up to the draft deadline of the **17th February 2025** may be included in this report card. Any teaching planned after this date should not be scored in this report card but can be included in the 2025/26 report. You may wish to make a note of any such teaching for your colleagues producing next year's report card.

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

specifically targeted for medical students, can meet this metric.

- **Environmental history (Metric #19 in Curriculum Section):** This is a series of questions students are taught to ask during medical encounters that elicits patients' exposures and environmental risk factors. Historically, this has included consideration of exposures like pesticides, asbestos, and lead, though in the modern era shaped by climate change, it can be expanded to include things like wildfire smoke exposure, air pollution and mould after flooding. Key components include place of residence over the lifecourse, occupational history, food and water sources (e.g. meat from industrial feeding operations, regular fishing in contaminated water, access to clean drinking water), and exposure to air pollution. Please be as specific as possible when providing evidence for this metric.

- **Elective:** The word "elective" refers to an optional course or lecture series that a 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.

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

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

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

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

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

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

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

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

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

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

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

- **Anthropogenic:** Created through human activity

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

Other considerations:

- If there are more than one "tracks" at your institution with two different curricula (for example, Harvard Medical School has a Pathways and HST curriculum track), you can choose to fill out a report card for each track, or fill out just one report card and average the scores received by each track in cases where the scores are different (see the 2021 Harvard or Oxford report cards as examples). Where possible please indicate the proportion of students that are on each track.

Completed in 2022 a Literature Review by Metric is available for the 2022 medicine report card metrics. We are in the process of updating this review and making it more applicable to all the disciplines. However the review serves as a rough 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?	
Yes, the medical school has offered **more than one** elective whose primary focus is ESH/planetary health in the past year. (3 points)	
Yes, the medical school has offered **one** elective whose primary focus is ESH/planetary health in the past year. (2 points)	
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. (1 points)	
No, the medical school has **not** offered any electives on planetary health or electives that include ESH/planetary health topics in the past year. (0 points)	
Score Assigned:	3
Score explanation: VP&S offers an elective entitled “Introduction to Global and Population Health," which features 2 modules focusing on climate health: “Climate Change and Human Health” and “Determinants of Disease: Environment, Air Pollution, and Health” The elective is interdisciplinary and offered to medical, dental, nutrition, public health, OT and PT students and consists of weekly evening lectures on determinants of disease and policy making in global health. Each lecture has dedicated slides and discussion regarding the impact of climate change on the given subject, from oral disease to forced migration. There is also an interprofessional elective focused on the effects of climate change in patient care settings titled “Interprofessional Perspectives on the Impact of Climate Change on Health and Health Care Delivery,” taught by Dr. Cecilia Sorensen and Dr. Kristie Hadley. Additionally, an optional Public Health orientation course is offered to incoming medical students through a collaboration between the medical school and school of public health. It is completed within the first month of matriculation, and one of the modules has a section dedicated entirely to climate health.	

1.2. Does your <u>medical school</u> curriculum address the relationship between extreme heat, health risks, and climate change?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	2
Score explanation: In the introductory pharmacology course during the first semester, a lecture on dose adjustments discusses the effects of warmer temperatures on serum lithium concentrations. Specifically, higher temperatures raise levels of lithium, which prescribers must consider in warmer seasons. In addition, the risk of acute kidney injury and dehydration during summer months is discussed, with emphasis on possibly decreasing dosage of diuretics in elderly patients. The neuroscience block of BHD covers the connection between heat exposure and multiple sclerosis and delirium.	

1.3. Does your <u>medical school</u> curriculum address the impacts of extreme weather events on individual health and/or on healthcare systems?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	2
Score explanation: This topic is discussed in the internal medicine clerkship course public health commute with links to the *Harvard Chan This Week in Health* podcast series *Climate Change and Health*. Additional reading integrated into coursework includes the New York Times article *As Climate Changes, Southern States Will Suffer More Than Others*. In BHD, there was mention in the "Diarrhea" lecture that gastrointestinal health worsens in the developing world after extreme weather events.	

1.4. Does your <u>medical school</u> curriculum address the impact of climate change on the changing patterns of infectious diseases?
This topic was explored **in depth** by the **core** curriculum. (3 points)

This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	2
Score explanation: Several slides in the "Introduction to Infectious Diseases" lecture discuss climate change as a catalyst for the alteration in distribution of microbes, vectors, and hosts.	

1.5. Does your <u>medical school</u> curriculum address the respiratory health effects of climate change and air pollution?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	3
Score explanation: This topic was discussed in several lectures, particularly as it relates to the global burden of lung disease, COPD, and asthma. Additionally, there is a Public Health Commute module focused exclusively on climate change and lung health, which focuses on asthma. The lectures included "COPD", "OLD", "Asthma", and a Foundations of Clinical Medicine (FCM) lecture in which environmental contribution to asthma was discussed.	

1.6. Does your <u>medical school</u> curriculum address the cardiovascular health effects of climate change, including increased heat	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2

Score explanation: Mention of cardiovascular-related illnesses associated with climate change was included as part of the Ischemic Heart Disease TBL session in the Cardiology section of The Body: In Health and Disease (BHD) curriculum.

1.7. Does your medical school curriculum address the mental health and neuropsychological effects of environmental degradation and climate change?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: This topic was covered during the Introduction to Global and Population Health elective course. In the psychiatric medicine course, there was discussion of the impact of climate change and extreme weather events on the development of post traumatic stress disorder, with mention of a potential increase in the incidence of trauma related mental illness.	

1.8. Does your medical school curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	1
Score explanation: This topic was covered during the Introduction to Global and Population Health elective course.	

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?
This topic was explored **in depth** by the **core** curriculum.
This topic was **briefly** covered in the **core** curriculum.

This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	1
Score explanation: This topic was covered during the Introduction to Global and Population Health elective course. This topic is also discussed in the "Environmental Health" module of the Public Health Commute.	

1.10. Does your <u>medical school</u> curriculum address the unequal regional health impacts of climate change globally?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	0
Score explanation: There was no mention of this topic in the core curriculum.	

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

1.11. Does your <u>medical school</u> curriculum address the reproductive health effects of industry-related environmental toxins (e.g. air pollution, pesticides)?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: There was brief mention of the reproductive health effects of environmental exposures during the Neurology block, such as in the Neuroembryology lecture.	

1.12. Does your <u>medical school</u> curriculum address important human-caused environmental threats that are relevant to the university's surrounding community?
This topic was explored **in depth** by the **core** curriculum.

This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: A lecture on Social Determinants of Health in the Foundations of Clinical Medicine course described several factors affecting residents of New York City, particularly with the geographical relationship between poverty and illnesses such as asthma and quality of care. This topic was also briefly addressed by the "Environmental Health" module of the Public Health Commute.	

1.13. To what extent does your <u>medical school</u> emphasise the importance of Indigenous knowledge and value systems as essential components of planetary health solutions?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	0
Score explanation: There was no mention of this topic identified in the core curriculum.	

1.14. Does your <u>medical school</u> 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?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	2
Score explanation: There have been several discussions of anthropogenic environmental toxins and their impact on marginalized communities. In the core curriculum, the environmental contribution to asthma is discussed in the Foundations of Clinical Medicine. Additionally, this topic is	

emphasized throughout the Introduction to Global and Population Health elective course, as well as the required “Environmental Health” module of the Public Health Commute.

Curriculum: Sustainability

1.15. Does your <u>medical school</u> curriculum address the environmental and health co-benefits of a plant-based diet?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	0
Score explanation: No mention of the benefits of a plant-based diet in relation to sustainability and health was found. In the “Antihypertensive Therapy” lecture, vegetarian diets were mentioned as a means to improve cardiovascular health in patients with hypertension.	

1.16. Does your <u>medical school</u> curriculum address the carbon footprint of healthcare systems?	
This topic was explored **in depth** by the **core** curriculum.	
This topic was **briefly** covered in the **core** curriculum.	
This topic was covered in **elective** coursework.	
This topic was **not** covered.	
Score Assigned:	0
Score explanation: There was no mention of the waste generated by the healthcare system in the core curriculum that was identified.	

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)	**Score**
The health **and** environmental **co-benefits** of **avoiding** over-medicalisation, over-investigation and/or over-treatment (2 points)	0
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. (2 points) .	0

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 point)	0
Environmental impact of **surgical** healthcare on planetary health and the climate crisis, and how can it be mitigated. (1 point)	0
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 point)	0
The impact of **inhalers** on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	0
Waste production within healthcare **clinics** and strategies for reducing waste in clinical activities (e.g. single use items in the inpatient or outpatient setting) (1 point)	0
Score explanation: There is no mention of any component of sustainable clinical practice in the core curriculum.	

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?	
Yes, there are strategies introduced for having conversations with patients about climate change in the **core** curriculum. (2 points)	
Yes, there are strategies introduced for having conversations with patients about climate change in **elective** coursework. (1 points)	
No, there are **not** strategies introduced for having conversations with patients about climate change. (0 points)	
Score Assigned:	0
Score explanation: There are no strategies introduced for having conversations with patients about climate change. There are several sessions dedicated to effective communication with patients but none of them focus on environmental health or climate change	

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?
Yes, the **core** curriculum includes strategies for taking an environmental history. (2 points)
Only **elective** coursework includes strategies for taking an environmental history. (1 point)
No, the curriculum does **not** include strategies for taking an environmental history. (0 points)

Score Assigned:	2
Score explanation: In the Pulmonology block of the preclinical curriculum, students are taught to ask about occupational exposures such as asbestos, silicone, and beryllium. In the Pediatrics clerkship in clinical year, students are taught to ask about lead exposure in the outpatient well child visits. Students are not taught to ask about environmental risk factors specific to certain zip codes (for example, patients affected by Hurricane Sandy may be impacted by mold after flooding, pediatric patients from the Bronx are more likely to have asthma from the levels of air pollution, etc). Students are taught to ask about travel history to assess for vector-borne diseases in Foundations of Clinical Medicine and Tutorials.	

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?	
Yes, the medical school is currently in the process of making **major** improvements to ESH/planetary health education. (4 points)	
Yes, the medical school is currently in the process of making **minor** improvements to ESH/planetary health education. (2 points)	
No, there are **no** improvements to planetary health education in progress. (0 points)	
Score Assigned:	4
Score explanation: There is significant support from the Senior Associate Dean for Student Affairs, Vice Dean for Education, and Associate Dean for Curricular Affairs that allows for student input to expand planetary health education into the core curriculum. A new Climate Health and Justice curricular thread has been approved and added to the curriculum. Case based learning slide decks and Public Health Commute modules that incorporate climate health have been created to be implemented in the forthcoming curriculum redesign.	

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

Score explanation: Planetary health topics are being continuously integrated throughout the first three years of medical school at Columbia VP&S through mention in Body in Health and Disease (BHD) lectures, elective coursework, and through the Public Health Commute modules in BHD as part of the new Climate Health and Justice curricular thread. There are still opportunities to continue integration to the core medical school curriculum.

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?	
Yes, the **medical school** has a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (1 point)	
No, the **medical school** does **not** have a specific faculty/staff member responsible for overseeing curricular integration of planetary health and sustainable healthcare. (0 points)	
Score Assigned:	1
Score explanation: Dr. Cecilia Sorensen has recently been appointed as the faculty lead overseeing the integration of the Climate Health and Justice curricular thread.	

Section Total (35 out of 72)	**49%**

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Interdisciplinary Research

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

2.1. Are there researchers engaged in planetary health research and healthcare sustainability research at your institution?	
Yes, there are faculty members at the **institution** who have a **primary** research focus in planetary health **or** sustainable healthcare/vetcare. (3 points)	
Yes, there are individual faculty members at the **institution** who are conducting research **related** to planetary health or healthcare sustainability, OR are part of a national/international sustainability working group, but it is not their primary research focus. (2 points)	
There are sustainability researchers at the **institution**, but not specifically associated with healthcare/vetcare. (1 point)	
No, there are **no** planetary health and/or sustainability researchers at the **institution** at this time. (0 points)	
Score Assigned:	3
Score explanation: There are many faculty members at the medical school and larger institution that focus on topics of environmental health, such as exposure to neurotoxicants, environmental epigenetics, and health disparities. There is a guide of planetary health researchers at the school of public health that has been disseminated to students.	

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

Score Assigned:	3
Score explanation: There are several centers and departments which feature multidisciplinary research relating to the environment at Columbia University, including the Earth Institute, the department of Environmental Health Sciences at the Mailman School of Health, and the Columbia Climate School.	

2.3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your institution?	
Yes, there is a process in which community members impacted by climate and environmental injustice have **decision-making power** in the climate + environmental research agenda. (3 points)	
Yes, there is a process in which community members impacted by climate and environmental injustice **advise** the climate + environmental research agenda. (2 points)	
No, but there are **current efforts** to establish a process for community members to advise or make decisions on the research agenda. (1 points)	
There is **no** process, and **no** efforts to create such a process. (0 points)	
Score Assigned:	1
Score explanation: There is no identified process or efforts known to create a pipeline where communities can give input or make decisions about research agendas at the medical school specifically, but there are research projects involving community members at the School of Public Health.	

2.4. Does your institution have a planetary health website that centralises ongoing and past research related to health and the environment?	
There is an **easy-to-use, adequately comprehensive** website that **centralises** various campus resources related to health and the environment including all of the following: upcoming events, leaders in planetary health at your institution, and relevant funding opportunities. (3 points)	
There is a website that **attempts to centralise** various campus resources related to health and the environment, but it is hard-to-use, not updated, or not adequately comprehensive. (2 points)	
The **institution** has an **Office of Sustainability website** that includes **some** resources related to health and the environment. (1 point)	
There is **no** website. (0 points)	
Score Assigned:	3
Score explanation: There are several websites that centralize resources related to the environment. For example, https://climate.columbia.edu/ is a website centralizing the various	

environment-related schools and programs at Columbia University. https://sustainable.columbia.edu/ collects resources for students such as environment-related clubs as well as the school's sustainability plan. However, neither of these resources focus explicitly on planetary health. The GCCHE website, hosted by the Columbia University Mailman School of Public Health, contains various resources that focus on the impact of the environment on health: https://www.publichealth.columbia.edu/research/global-consortium-climate-and-health-education/resources

2.5. Has your institution recently hosted a conference or symposium on topics related to planetary health?	
Yes, the **institution** has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)	
Yes, the **institution** has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)	
Yes, the **institution** has hosted a conference on topics related to planetary health / sustianable healthcare/vetcare in the past three years. (2 points)	
The **institution** has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)	
No, the **institution** has not hosted a conference on topics related to planetary health in the past three years. (0 points)	
Score Assigned:	4
Score explanation: Columbia University hosts numerous events related to the environment, sustainability, or climate change. The Mailman School of Public Health hosts a Granville H. Sewell Distinguished Lecture, which features individuals who have made contributions to environmental health sciences. The NIEHS Center for Environmental Health in Northern Manhattan, also part of the School of Public Health, hosts a series of seminars and meetings. Within the new Columbia Climate School, a Student Climate Symposium was held in 2022 as well as a Sustainability Symposium in 2023. Also, the Global Consortium on Climate and Health Education hosts various virtual webinar series, collaborating with global institutions to tie climate to mental and physical health.	

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

Score explanation: The medical school is a member of the Global Consortium on Climate and Health Education and has a chapter of Health Students for a Sustainable Future, previously known as Medical Students for a Sustainable Future.

Section Total (15 out of 17)	**88%**

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Community Outreach and Advocacy

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

3.1. Does your institution partner with community organisations to promote planetary and health?	
Yes, the **institution** meaningfully partners with **multiple** community organisations to promote planetary and environmental health. (3 points)	
Yes, the **institution** meaningfully partners with **one** community organisation to promote planetary and environmental health. (2 points)	
The **institution** does not partner with community organisations, but has participating in community focused events relating to planetary health. (1 point)	
No, there is **no** such meaningful community partnership. (0 points)	
Score Assigned:	2
*Score explanation:*The university interfaces with WE ACT for Environmental Justice, Inc. through the Community Engagement Core at the School of Public Health's NIEHS center.	

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

Score explanation: There are several public-facing events hosted by Columbia that focus on the environment that may occasionally feature lectures or talks on environmental health. These include Lamont-Doherty Earth Observatory public lecture series and open house, and the Lamont open house. While the institution does a good job offering community-facing events, there have been few such events hosted through the medical school.

3.3. Does your institution have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?	
Yes, all students **regularly** receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)	
Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to **some courses**. (1 point)	
Students **do not** receive communications about planetary health or sustainable healthcare. (0 points)	
Score Assigned:	1
Score explanation: Communications about planetary health are received by medical students through school wide newsletters, commonly updated on recycling programs, which are not regularly scheduled. Through sign-up, students are able to receive communication from the Global Consortium on Climate Health and Education, which are regularly scheduled.	

3.4. Does the institution or main affiliated hospital trust engage in professional education activities targeting individuals post graduation with the aim of ensuring their knowledge and skills in planetary health and sustainable healthcare remain up to date during their professional career?	
Yes, the **institution** or **main affiliated hospital trust** offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health. (2 points)	
Yes, the **institution** or **main affiliated hospital trust** offers one course relating to planetary health and/or sustainable healthcare for post-graduate provider. (1 point)	
There are **no** such accessible courses for post-graduate providers. (0 points)	
Score Assigned:	0
Score explanation: No Columbia University-hosted CME courses on planetary health were identified when searched for using the following interface.	

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

Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated medical centres have accessible educational materials for patients. (0 points)	
Score Assigned:	1
Score explanation: Some affiliated medical centers have accessible online educational materials for patients about environmental health exposures (the health library linked through New York Presbyterian), but not about climate change.	

3.6. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?	
Yes, the **medical school** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated hospitals have accessible educational materials for patients. (0 points)	
Score Assigned:	0
Score explanation: No affiliated hospitals were found to have accessible online resources about climate change.	

Section Total (7 out of 14)	**50%**

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Support for Student-Led Planetary Health Initiatives

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

4.1. Does your institution offer support for students interested in enacting a sustainability initiative/QI project?	
Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum. (2 points)	
The **institution** encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, **but** there is no student funding available and there is no requirement to participate. (1 point)	
No, **neither** the medical school or the institution offer opportunities or support for sustainability initiatives or QI projects. (0 points)	
Score Assigned:	2
Score explanation: There is a new funded Climate Health and Justice fellowship that will work with WE ACT, a community organization as part of the new curricular thread. Furthermore, there is general funding available for humanitarian initiatives, like the Steven Miller Prize, that allows for sustainability/QI work.	

4.2. Does your institution offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?	
The **institution** has a **specific** research program or fellowship for students interested in doing planetary health/sustainable healthcare/vetcare research. (2 points)	
There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these **require student initiative** to seek these out and carry them out in their spare time. (1 point)	
There are **no opportunities** for students to engage in planetary health/sustainable healthcare research. (0 points)	
Score Assigned:	2
Score explanation: There are many opportunities for students to perform planetary health research through the Consortium on Climate and Health Education and the Mailman School of Public Health. Furthermore, a list of research labs involved in climate research was sent to the medical students seeking summer internship.	

4.3. Does the institution have a webpage where students can find specific information related to planetary health and/or sustainable healthcare/vetcare activities and mentors within the institution? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.	
The institution has a webpage with specific information related to planetary health or sustainable healthcare/vetcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. (2 points)	
There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the medical school, but it lacks key information. (1 point)	
There is **no institution** specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. (0 points)	
Score Assigned:	1
Score explanation: The School of Public Health hosts resources and getting connected with faculty mentors and medical school student organizations like the Health Students for a Sustainable Future disseminate a sheet of research mentors engaging in planetary health research at the medical campus.	

4.4. Does your institution have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?	
Yes, there is a student organisation **with faculty support** at my medical school dedicated to planetary health or sustainability in healthcare. (2 points)	
Yes, there is a student organisation at my medical school dedicated to planetary health or sustainability in healthcare but it **lacks faculty support.** (1 point)	
No, there is **not** a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)	
Score Assigned:	2
Score explanation: There are many registered student groups at the university. Specifically at the medical school, Food for Thought seeks to educate students about sustainable and healthy diets to integrate healthy eating habits into the practice of medicine. The Health Students for a Sustainable Future seeks to develop planetary health slides for the curriculum and collaborate with faculty members to facilitate an interprofessional workshop in climate health, which is led by faculty mentor and professor Dr. Cecilia Sorensen. There is also an organization, Students for Environmental Action, that is part of the department of Environmental Health Sciences at the School of Public Health.	

4.5. Is there a student liaison representing sustainability interests who serves on a department or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?	
Yes, there is a student representative that serves on a department or institutional decision-making council/committee. (1 points)	
No, there is no such student representative. (0 points)	
Score Assigned:	1
Score explanation: There is an Eco Representative on the student council who advocates for curricular implementation of planetary health topics into the curriculum, participates in the development of the Planetary Health Report Card, and collaborates with the student body for campus sustainability initiatives.	

4.6. In the past year, has the institution had one or more co-curricular planetary health programs or initiatives in the following categories? (1 point each)	**Score**
Projects where students are able to gain experience in organic agriculture and sustainable food systems, such as gardens, farms, community supported agriculture (CSA), fishery programs, or urban agriculture projects.	1
Panels, speaker series, or similar events related to planetary health that have students as an intended audience.	1
Events in which students learn directly from members of a local environmental justice community about the climate and environmental challenges they face, and how health professionals can partner with their community to address these exposures and impacts.	1
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	0
Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	1
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1
Score explanation: There is an annual Interprofessional Education (IPE) day across Columbia health schools that includes a panel by climate doctors and environmental activists, targeted specifically towards medicine, nursing, dental, nutrition, physical therapy, and genetic counseling students. 1. VP&S students advertise and promote community-building events with WeAct, an environmental justice group located in northern Manhattan. 2. VP&S holds a variety of pre-orientation hiking and wilderness trips for first-year medical students under the student-led organization PSOOP. 3. There is a project led by students in the department of Environmental Health Sciences that works with a community garden in the Bronx. 4. There are multiple university hosted events with speakers on climate change and environmental health	

Section Total (13 out of 15)	**87%**

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Campus Sustainability

Section Overview: ***This section evaluates the support and engagement in sustainability initiatives by the institution.*** *The healthcare industry is a major contributor to greenhouse gas emissions as well as pollution that harms local, regional, and global ecosystems. While healthcare is, by nature, a resource-intensive endeavour, the healthcare sector is well poised to lead the world to a more sustainable future. This will involve scrutinising every aspect of how our systems operate, from where we source our energy, to how we build our infrastructure, to what companies we invest in. Our 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 institution have an Office of Sustainability?	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is **at least one designated staff member** for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but **no specific staff member** in charge of hospital sustainability. (2 points)	
There are **no salaried sustainability staff,** but there is a sustainability task force or committee. (1 point)	
There are **no** staff members **or** task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	2
Score explanation: There is an Environmental Stewardship team at the university, and a network of volunteers called the Sustainable Leaders Network that aid in the sustainability effort, including members at the medical school.	

5.2. How ambitious is your institution's plan to reduce its own carbon footprint?	
The institution has a **written and approved plan** to achieve carbon neutrality by **2030** (5 points)	
The institution has a **written and approved plan** to achieve carbon neutrality by **2040** (3 points)	
The institution has a stated goal of carbon neutrality by **2040** but has **not created a plan** to reach that goal or the **plan is inadequate** (1 point)	
The institution/medical school does **not** meet any of the requirements listed above (0 points)	
Score Assigned:	0
Score explanation: There is a commitment in place to become carbon neutral by 2050. The university formalized non-investment in gas, oil, and coal companies. The new Plan 2030 uses “science-based interim emissions reduction targets” to reach carbon neutrality by 2050.	

5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy?	
Yes institution buildings are **100%** powered by renewable energy. (3 points)	
Institution buildings source **>80%** of energy needs from off-site and/or on-site renewable energy. (2 points)	
Institution buildings source **>20%** of energy needs from off-site and/or on-site renewable energy. (1 point)	
Institution buildings source **<20%** of energy needs from off-site and/or on-site renewable energy. (0 points)	
Score Assigned:	3
Score explanation: Columbia University campuses including the medical school campus claim to rely on 100% renewable energy (source) through a combination of retro-commissioning and the purchase of Renewable Energy Certificates (RECs).	

5.4. Are sustainable building practices utilised for new and old buildings on the institution's campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?	
Yes, sustainable building practices are utilised for new buildings on the intitution's campus and the **majority** of old buildings **have been retrofitted** to be more sustainable. (3 points)	
Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have **not been retrofitted.** (2 points)	
Sustainable building practices are **inadequately or incompletely** implemented for new buildings. (1 point)	
Sustainability is **not considered** in the construction of new buildings. (0 points)	
Score Assigned:	2
Score explanation: The VEC is LEED gold certified as of 2018; and, as of 2007, Columbia University has committed to a minimum of LEED Silver certification for all new buildings and reconstruction projects. A new building is being built on the medical campus that will be the first university-owned research building that does not rely on fossil fuels.	

5.5. Has the institution implemented strategies to encourage and provide environmentally-friendly transportation options for students and reduce the environmental

impact of commuting?	
Yes, the institution has implemented strategies to encourage and provide **environmentally-friendly transportation options** such as safe active transport, public transport, or carpooling and these options are well-utilised by students. Alternatively, the campus location is not amenable to unsustainable forms of transportation by default. (2 points)	
The institution has implemented **some** strategies to provide environmentally-friendly transportation options, but the options are **unsatisfactorily** accessible or advertised. (1 point)	
The institution has **not** implemented strategies to encourage and provide environmentally-friendly transportation options. (0 points)	
Score Assigned:	2
Score explanation: The school offers a shuttle between campuses, and public transit is readily available.	

5.6. Does your <u>institution</u> have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?	
Yes, the institution has **both** compost **and** recycling programs accessible to students and faculty. (2 points)	
The institution has **either** recycling **or** compost programs accessible to students and faculty, but not both. (1 point)	
There is **no** compost or recycling program at the medical school. (0 points)	
Score Assigned:	0
Score explanation: There is a recycling program organized by the university available to students. No compost services are readily available on the medical school campus, however, there are public composting bins operated by New York City available to students.	

5.7. Does the <u>institution</u> apply sustainability criteria when making decisions about the campus food and beverage selections (e.g. local sourcing, reduced meat, decreased plastic packaging)?
Yes, the institution has a**dequate s**ustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points)
There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)
There are sustainability guidelines for food and beverages, but they are **insufficient or optional.** The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point)

There are **no** sustainability guidelines for food and beverages. (0 points)	
Score Assigned:	2
Score explanation: The Faculty Club offers a student meal plan for medical students and other students on the medical campus. It has some commitments to sustainability listed on its website, including produce from local farms and coffee certified by the Rainforest Alliance, recycling cooking oil, eco-friendly disposable wares, and some efforts for catered events. 56% of food items served on the Morningside Campus are from local sources. Food scraps are transported to compost sites for use on local urban farming and gardening projects. The medical student spending guidelines do not prioritize sustainability for food and beverage.	

5.8. Does the institution apply sustainability criteria when making decisions about supply procurement?	
Yes, the institution has **adequate** sustainability requirements for supply procurement **and** is **engaged** in efforts to increase sustainability of procurement. (3 points)	
There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The institution is **engaged** in efforts to increase sustainability of procurement. (2 points)	
There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The institution is **not engaged** in efforts to increase sustainability of procurement. (1 point)	
There are **no** sustainability guidelines for supply procurement. (0 points)	
Score Assigned:	1
Score explanation: No sustainable procurement guidelines were identified among the procurement policies on the Columbia University website. However, the 2017 sustainability plan appears to suggest that the Morningside campus (which does not include the medical school) has worked to optimize procurement sustainability (e.g. by reducing waste generation, for example by setting minimum order values with vendors, and partnering with specific vendors) and has made goals to reduce waste. From this source, it appears that guidelines for "socially responsible purchasing" at the medical center are still being developed.	

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

Score explanation: There is a sustainable menu available for events at Columbia. The event planning/catering website at the medical center suggests that events catered by the Faculty Club do take sustainability measures into consideration. However, there is no mention that every event must meet sustainability criteria or that student club spending for events must meet sustainability criteria, and no mention of sustainability in the University's broader events policies.

5.10. Does your institution have programs and initiatives to assist with making lab spaces more environmentally sustainable?	
Yes, the institution has **programs** and **initiatives** to assist with making lab spaces more environmentally sustainable. (2 points)	
There are **guidelines** on how to make lab spaces more environmentally sustainable, but not programs or initiatives. (1 point)	
There are **no** efforts at the institution to make lab spaces more sustainable. (0 points)	
Score Assigned:	1
Score explanation: There are instructions for making a workspace more green as part of the Sustainable Leaders Network, but these are not specific to labs. Columbia partnered with Labs21 for one specific building that is not located at the medical school. There are resources for fume hood upgrades and medical waste recycling.	

5.11. Does your institution's endowment portfolio investments include fossil-fuel companies?	
The institution is **entirely divested** from fossil fuels **and** has made a **commitment to reinvest divested funds** into renewable energy companies or renewable energy campus initiatives. (4 points)	
The institution is **entirely divested** from fossil fuels. (3 points)	
The institution has **partially divested** from fossil fuel companies **or** has made a **commitment to fully divest**, but **currently** still has fossil fuel investments. (2 points)	
The institution has **not divested** from fossil-fuel companies, but faculty and/or students are **conducting organised advocacy** for divestment. (1 point)	
Yes, the institution has investments with fossil-fuel companies and there have been **no efforts** to change that. (0 points)	
Score Assigned:	2
Score explanation: In 2017, Columbia University divested from coal but not oil and gas companies; in January 2021, Columbia announced that it will no longer invest in publicly-traded oil and gas companies. However, the University did not commit to divesting from indirect holdings. Furthermore, the University may make exceptions for companies with credible plans for net-zero emissions by 2050.	

Section Total (17 out of 32)	**53%**

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Grading

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

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

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

Planetary Health Grades for the Columbia University Vagelos College of Physicians & Surgeons
The following table presents the individual section grades and overall institutional grade for the Columbia University Vagelos College of Physicians & Surgeons on this medical-school-specific Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(35/72) x 100 = 49%	C
Interdisciplinary Research (17.5%)	(15/17) x 100 = 88%	A
Community Outreach and Advocacy (17.5%)	(7/14) x 100 = 50%	C
Support for Student-led Planetary Health Initiatives (17.5%)	(13/15) x 100= 87%	A
Campus Sustainability (17.5%)	(17/32) x 100 = 50%	C
Institutional Grade	**(49x0.3 + 88x0.175 + 50x0.175 + 87x0.175 + 53x0.175) = 63%**	**B-**

Report Card Trends

Section Overview
This graph demonstrates trends in overall and section grades for the years in which Columbia University Vagelos College of Physicians and Surgeons has participated in the Planetary Health Report Card initiative.