Planetary Health Report Card (Medicine) 2026:

McMaster University

2025-2026 Contributing Team:

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We recognize that McMaster University is located on the traditional territory shared between the Haudenosaunee confederacy and the Anishinabe nations, acknowledged in the Dish with One Spoon Wampum belt. We understand that reconciliation is an ongoing process and requires continuous reflection, learning, and action. We are committed to being accountable for our actions and to making meaningful progress toward reconciliation and healing as part of our work.

Summary of Findings

Overall Grade	B

Curriculum	B+

- The medical school curriculum at McMaster University currently successfully covers a broad range of planetary health topics, including extreme heat, extreme weather events, changing patterns of disease transmission, and respiratory health impacts (among other topics) — and also integrates a climate justice lens, exploring how many vulnerable populations in Canada and around the world are disproportionately impacted by climate change. However, the vast majority of this content is covered in just a single lecture, with very little integration into the rest of the curriculum. As a result, there are some other planetary health topics that were not thoroughly covered in the curriculum (perhaps because they did not fit into this single lecture), such as reproductive health impacts and mental health impacts.
- **Recommendations:** The Michael G. DeGroote School of Medicine at McMaster University should consider integrating planetary health education into the curriculum in a more longitudinal format, rather than seeking to cover the vast majority of planetary health-related content in just one or two Professional Competencies sessions.

Interdisciplinary Research	A+

- McMaster University has commendable research involvement in the sphere of planetary health including research, student education, and conferences.
- **Recommendations**: Although the PEACH Health Ontario website fulfills the key objectives of a centralized planetary health website, the McMaster Office of Sustainability website could also be updated with more campus-wide resources, planetary health initiatives, and sustainability reports.

Community Outreach and Advocacy	B

- McMaster University demonstrates strong community outreach and advocacy in planetary and environmental health through multiple sustained partnerships with government bodies, conservation authorities, and regional community organisations. These collaborations are supported by dedicated institutional structures, including the McMaster Centre for Climate Change and the Office of Community Engagement, and are operationalized through programs such as CityLAB, the McMaster Research Shop, MacChangers, and Nature @ McMaster. These initiatives together reflect meaningful, ongoing community engagement that integrates environmental sustainability with broader determinants of health.
- **Recommendations**: Expand patient-facing and community-focused educational resources on planetary health and the health impacts of climate change, particularly through affiliated teaching hospitals, in order to complement existing community partnerships and sustainability initiatives.

Support for Student-Led Initiatives	B

- McMaster University as an institution currently offers some support for student-led planetary health initiatives, particularly through the new Planetary Health Seed Grant program. However, there is room for improvement in areas such as student advocacy opportunities and co-curricular planetary health initiatives.
- **Recommendations**: Especially in light of the potential for improvements to the planetary health curriculum (see “Curriculum” above), it would be prudent to create opportunities for students to advise on planetary health curriculum reform and best practices (as outlined in question 4.5). This could be a new role on the McMaster Medical Student Council (i.e., “Sustainability Director”), or integrated into an existing role such

as Global Health Director.

Campus Sustainability	C+

- McMaster University as an institution has recently taken on new initiatives to improve campus sustainability — the Sustainable Procurement Policy and sustainability criteria for campus food and beverages are particularly noteworthy. However, there are still many areas for improvement, ranging from plans for carbon neutrality, to use of renewable energy, to fossil fuel investments.
- **Recommendations**: McMaster's plan to achieve carbon neutrality does not meet any of the benchmarks outlined in this report (i.e., the most conservative deadline suggested by the PHRC is 2040 — but McMaster has only committed to a 90% reduction in emissions by 2050). Additionally, although the institution has partially divested from fossil fuel companies, they have not yet fully divested and do not have any published deadlines to do so. These two areas represent two of the most pressing areas for improvement on campus sustainability.

Statement of Purpose

Planetary health is human health.

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

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

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

Definitions & Other Considerations

Definitions:

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

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

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

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

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

specifically targeted for medical students, can meet this metric.

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

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

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

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

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

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

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

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

- **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).

Scoring Matrix

- Elective coursework (1 point): This score applies to material that is actively selected by the students such as a module choice, or additional lecture series. By implication, only a given proportion of the cohort will receive this taught material.
- Brief coverage in the core curriculum (2 points): This score applies where a topic is covered only briefly in a core curriculum session. This implies that the entire cohort receives the same material. At minimum brief inclusion would qualify as inclusion in a single lecture slide in a single year.
- In depth coverage in the core curriculum (3 points): This score applies where a topic is taught in significant detail or where a topic is repeatedly brought up in different years. This might look like several dedicated lecture slides, or inclusion of the same topic in different lectures and teaching formats.

Other considerations:

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

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

Planetary Health Curriculum

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

Curriculum: General

1.1. Did your 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 point)	
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:	2
Medical students at McMaster University have the option to complete a two-week reading elective on planetary health in preclerkship or clerkship. The learning objectives of the elective include: (1) Describe the current state of the climate crisis and the contributing factors to ongoing climate change effects; (2) Describe the major adverse health consequences of climate change; (3) Summarize different ways in which physicians and medical students can play a role in preventing and mitigating the negative health effects of the climate emergency; (4) Discuss how health inequities and determinants of health intersect with climate change, both globally and locally.	

Curriculum: Health Effects of Climate Change

1.2. Does your medical school 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:	3
First-year medical students at McMaster University have a mandatory session on Planetary Health as part of the longitudinal Professional Competencies curriculum. One of the key objectives of this session is: "Describe the major adverse health consequences of climate change and/or environmental change (e.g. heat-related illness and respiratory disease, food and water insecurity, changing infectious disease burdens, impact on mental health/climate anxiety)". Extreme heat and its associated health impacts were specifically discussed across multiple slides in the Planetary Health session.	

1.3. Does your medical school 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:	3
The Professional Competencies session on Planetary Health discusses the impacts of multiple climate-related extreme weather events — particularly tornadoes, flooding, and wildfires.	

1.4. Does your medical school curriculum address the impact of climate change on the changing patterns of infectious diseases?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3
The Professional Competencies session on Planetary Health dedicated several slides to discussing climate change-associated changes in infectious disease transmission, focusing on regionally relevant diseases (i.e., West Nile virus and Lyme Disease).	

1.5. Does your medical school curriculum address the respiratory health effects of climate change and air pollution?
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:	3
The Professional Competencies session on Planetary Health included extensive discussion of the respiratory effects of climate change and air pollution. Following the lecture, students analyzed and discussed the case study of a teenager whose asthma was exacerbated by poor air quality and wildfire smoke during the summer months.	

1.6. Does your medical school curriculum address the cardiovascular health effects of climate change, including increased heat?	
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:	3
The Professional Competencies session on Planetary Health briefly mentions the link between cardiovascular health outcomes and tree loss. The Planetary Health Jeopardy game associated with this session (which students completed in small groups following the presentation) included questions about the cardiovascular benefits of improved shade provision and reductions in urban heat islands (i.e., improved blood pressure control and reduced risk of stroke), as well as the cardiovascular impacts of traffic pollution.	

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. (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
The Professional Competencies session on Planetary Health briefly discussed climate anxiety/grief as a health impact of climate change. *Faculty are currently developing a case-based module on Planetary Health (1.5-2 hours long), which will discuss climate anxiety among other planetary health topics. This module is not yet*	

available (and therefore was not considered in the calculation of the above score), but it is anticipated that the module will be offered to students as of Fall 2026.

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. (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
Food insecurity was briefly mentioned on one slide in the Professional Competencies session on Planetary Health.	

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. (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:	3
The Professional Competencies session on Planetary Health contained a slide listing a variety of vulnerable patient populations. One of the case studies for students to discuss in small groups discussed a patient who is a refugee and of low SES, presenting with heat stroke because he works outdoors as a construction worker. The associated Planetary Health Jeopardy game included a question/answer on the vulnerability of unhoused populations to wildfire smoke and associated health impacts.	

1.10. Does your medical school curriculum address the unequal regional health impacts of climate change globally?
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:	3
The Professional Competencies session on Planetary Health contained multiple slides describing how low-and-middle-income countries are disproportionately impacted by a wide variety of climate change impacts (e.g., desertification, drought, food shortages, vector-borne diseases), even though high-income countries are largely responsible for global greenhouse gas emissions.	

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, microplastics)?	
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:	0
The objectives for the preclerkship subunit on Reproduction do not include any discussion of the reproductive health effects of industry-related environmental toxins.	

1.12. Does your medical school 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. (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:	3
McMaster University is located in Hamilton, Ontario — a city with a long industrial history, and as a result, significant air pollution. The Professional Competencies session on Planetary Health contained several slides discussing the outsized impact of industrial air pollution on lower-income communities in Hamilton, as well as an in-depth case study on the impacts of local air pollution on a pediatric asthma patient living in local social housing. *Additionally, one of the clinical skills sessions on the respiratory exam has a standardized patient who is presenting with an asthma exacerbation due to wildfire smoke exposure — an issue that has impacted Hamilton as well as many other Canadian communities in recent years.*	

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?	
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:	3
Second year medical students at McMaster University have a mandatory session on Indigenous Knowledge of Planetary Health as part of the longitudinal Professional Competencies curriculum. The learning objectives of this session are: (1) Understand Indigenous knowledge of land relationships, resource stewardship, and the determinants of planetary health; (2) Analyze the role of Indigenous knowledge and leadership in informing climate mitigation and adaptation strategies, particularly as it relates to the impact of the climate crisis on human health; (3) Describe the concept of environmental racism as it relates to Indigenous communities across Turtle Island (Canada).	

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?	
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:	3
The Professional Competencies session on Planetary Health contains a slide listing local patient populations that are at an increased risk of climate-related health impacts (with reference to nearby industrial pollution). The presentation also made reference to the disproportionate impacts of anthropogenic toxins on low SES communities and communities of colour in the context of the United States.	

Curriculum: Sustainability

1.15. Does your medical school curriculum address the environmental and health co-benefits of a plant-based diet?
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 point)	
Score Assigned:	2
In the Professional Competencies session on Planetary Health, the environmental benefits of plant-based diets are discussed in the context of reducing carbon emissions of hospitals (i.e., by moving to plant-rich menus). After the presentation, students participated in a "Planetary Health" Jeopardy game, which included a question describing the health and environmental co-benefits of a plant-based diet.	

1.16. Does your medical school curriculum address the carbon footprint of healthcare systems?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3
The Professional Competencies session on Planetary Health extensively covered the contributions of healthcare to the national carbon footprint in Canada, with detailed discussion of the contributors to the carbon footprint of healthcare systems, and ongoing efforts to reduce healthcare emissions.	

1.17. Does your medical school curriculum cover these components of sustainable clinical practice in the core curriculum? (points for each)	**Score**
The health **and** environmental **co-benefits** of **avoiding** over-medicalisation, over-investigation and/or over-treatment (2 points)	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. (2 points) .	2
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)	1
The impact of **anaesthetic** gases on the healthcare carbon footprint and ways to reduce anaesthesia's environmental impacts, such as total intravenous anaesthesia or choosing less	1

environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	
The impact of **inhalers** on the healthcare carbon footprint and the environmental benefit of dry powdered inhalers over metered dose inhalers. (1 point)	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) (1 point)	0

Throughout the McMaster medical school curriculum, there are frequent references to recommendations from Choosing Wisely Canada, an organization that aims to reduce unnecessary tests and treatments (for several reasons, including but not limited to the climate crisis).

The Professional Competencies session on Planetary Health discussed the environmental impacts of surgical healthcare, as well as the impacts of anesthetic gases and inhalers on the healthcare carbon footprint.

As previously mentioned, a new module on Planetary Health is currently being developed, and will be offered to students as of Fall 2026. It is anticipated that this module will discuss the health and environmental co-benefits of social prescribing/non-pharmaceutical interventions.

Curriculum: Clinical Applications

1.18. In training for patient encounters, does your medical school's curriculum introduce strategies to have conversations with patients about the health effects of climate change?	
Yes, there are strategies introduced for having conversations with patients about climate change in the **core** curriculum. (2 points)	
Yes, there are strategies introduced for having conversations with patients about climate change in **elective** coursework. (1 point)	
No, there are **not** strategies introduced for having conversations with patients about climate change. (0 points)	
Score Assigned:	0

The Clinical Skills curriculum at McMaster does not include education on communicating with patients about the health impacts of climate change.

1.19. In training for patient encounters, does your medical school's 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

Through the Clinical Skills curriculum, medical students at McMaster are trained to take a comprehensive social history, which includes various occupational and environmental exposures, ranging from asbestos to wildfire smoke.

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:	2
Several curriculum changes have taken place in recent years to implement/improve the planetary health education for medical students at McMaster. This includes the introduction of the Professional Competencies session on Planetary Health, the creation of a two-week Planetary Health reading elective, and the integration of some planetary health concepts into a clinical skills case. However, it should be noted that some other curriculum changes did not appear to persist across years. For example, as of 2024, two additional Professional Competencies sessions (on Population Health and Global Health) included material on climate-related health effects — but as of 2025-26, these links to planetary health are no longer present.	

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:	2
The vast majority of planetary health content is delivered in two Professional Competencies lectures: the Planetary Health session in first year, and the Indigenous Knowledge of Planetary Health session in second year. A couple of environmental health-related topics such as air pollution are more integrated into the core curriculum (such as a clinical skills session with a patient suffering from dyspnea and wheezing due to wildfire smoke), but most other planetary health topics (as well as explicit links to climate change as an overarching issue) are primarily discussed in these standalone lectures.	

1.22. Does your medical school employ a member of faculty to specifically oversee and take responsibility for the incorporation of planetary health and sustainable healthcare as a theme throughout the course?	
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
Dr. Myles Sergeant (sergeam@mcmaster.ca) is the current Planetary Health Lead for the Michael G. DeGroote School of Medicine at McMaster University.	

1.23. Does your health professional curriculum include teaching on civic engagement/advocacy to address the environmental and structural determinants of health?	
This topic was explored **in depth** by the **core** curriculum. (3 points)	
This topic was **briefly** covered in the **core** curriculum. (2 points)	
This topic was covered in **elective** coursework. (1 point)	
This topic was **not** covered. (0 points)	
Score Assigned:	3
One of the key objectives of the Professional Competencies program at McMaster is "Describe the role that physicians can play in promoting health and preventing diseases at the individual and population level". Multiple Professional Competencies sessions (most notably, the Introduction to Population Health session) have discussed the need for large-scale advocacy by physicians to address the social determinants of health.	

Section Total (58 out of 75)	**77.33%**

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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
McMaster University recently announced the Planetary Health Seed Grant initiative providing funding to researchers dedicated to studying living labs, energy pathways, nuclear energy and medicine, and energy transition and electrification. Additionally, Partnerships for Environmental Action by Communities within Healthcare systems (PEACH) founded by McMaster University researchers, conducts research and establishes relationships and guides for institutions interested in curating impact in planetary health. The McMaster Postgraduate Medical Education Sustainable Healthcare committee additionally conducts research and supports programs in sustainable healthcare curricula implementation.	

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

There is **no** dedicated department or institute. (0 points)	
Score Assigned:	3
The Postgraduate Medical Education program at McMaster has a Sustainable Healthcare subcommittee that supports a variety of planetary health projects, including research. Note that this initiative currently only engages postgraduates (i.e., medical residents), not undergraduate medical students.	

2.3. Is there a process by which communities disproportionately impacted by climate change and environmental injustice give input or make decisions about the research agenda at your institution?	
Yes, there is a process in which community members impacted by climate and environmental injustice have **decision-making power** in the climate + environmental research agenda. (3 points)	
Yes, there is a process in which community members impacted by climate and environmental injustice **advise** the climate + environmental research agenda. (2 points)	
No, but there are **current efforts** to establish a process for community members to advise or make decisions on the research agenda. (1 point)	
There is **no** process, and **no** efforts to create such a process. (0 points)	
Score Assigned:	3
Through the Planetary Health Seed Grant initiative, a project entitled the "An interdisciplinary living lab at McMaster Forest" was awarded up to $80,000. Its focus is ecological restoration with an element including a Indigenous teaching garden with native plant species. Secondly, all second-year medical students participate in the Indigenous Knowledge of Planetary Health professional competencies session. Through teaching and resources from Indigenous physician faculty, students discuss topics related to land stewardship, climate advocacy, and the disproportionate effects climate change has on marginalized peoples. Additionally, the Indigenous Health Learning Lodge and Associate Dean of Indigenous Health play key roles in advancing Indigenous health education and research.	

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
PEACH Health Ontario, a planetary health initiative founded at McMaster University, has a website (https://peach.healthsci.mcmaster.ca/) with up-to-date information about past and ongoing research projects, upcoming webinars and events, and planetary health researchers at McMaster. *McMaster University also has a website for the Office of Sustainability (https://facilities.mcmaster.ca/sustainability/), which lists Health and Wellbeing as a focus, but has little-to-no information about ongoing research or events related to health and the environment. The Sustainability Report section of the website lists some additional sustainability initiatives, but the events section is several months out of date (as of February 2026).*	

2.5. Has your institution recently hosted a conference or symposium on topics related to planetary health?	
Yes, the **institution** has hosted at least one conference or symposium on topics related to planetary health in the past year. (4 points)	
Yes, the **institution** has hosted at least one conference or symposium on topics related to sustainable healthcare/vetcare in the past year. (3 points)	
Yes, the **institution** has hosted a conference on topics related to planetary health / sustainable healthcare/vetcare in the past three years. (2 points)	
The **institution** has not hosted any conferences directly, but they have provided financial support for a local planetary health event. (1 point)	
No, the **institution** has not hosted a conference on topics related to planetary health in the past three years. (0 points)	
Score Assigned:	4
PEACH Health Ontario, founded at McMaster University, hosted their inaugural conference in 2025 on the topic of Environmental Sustainability in Primary Healthcare. It included experts in sustainability, planetary health, and family medicine to share strategies for integrating sustainability in primary care. *The second annual conference entitled Stories for Health Systems Change: Mobilizing Climate Justice Narratives, will bring together experts in sustainability, planetary health, ethics, Indigenous studies, climate justice, and knowledge translation to explore how climate change is transforming healthcare delivery, and how human stories can drive change.*	

2.6. Is your institution a member of a national or international planetary health or ESH/ESV organisation?

Yes, the institution is a member of a national or international planetary health **or** ESH/ESV organisation. (1 point)	
No, the institution is **not** a member of such an organisation. (0 points)	
Score Assigned:	1
The Michael G. DeGroote School of Medicine has signed The Academic Health Institutions' Declaration on Planetary Health which calls on institutions to institute sustainable practices and halt activities harming the planet.	

Section Total (17 out of 17)	**100.00%**

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Community Outreach and Advocacy

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

3.1. Does your institution partner with community organisations to promote planetary and health?	
Yes, the **institution** meaningfully partners with **multiple** community organisations to promote planetary and environmental health. (3 points)	
Yes, the **institution** meaningfully partners with **one** community organisation to promote planetary and environmental health. (2 points)	
The **institution** does not partner with community organisations, but participates in community focused events relating to planetary health. (1 point)	
No, there is **no** such meaningful community partnership. (0 points)	
Score Assigned:	3

McMaster University meaningfully partners with multiple community organisations to advance planetary and environmental health through formal, sustained collaborations and community-engaged initiatives. The McMaster University Centre for Climate Change maintains formal partnerships with government bodies, conservation authorities, and regional environmental organisations, including Ontario environmental ministries, the Hamilton Conservation Authority, the Royal Botanical Gardens, and the City of Hamilton, all of which are external stakeholders focused on ecosystem health and climate action. In parallel, McMaster's Office of Community Engagement exists specifically to build and support partnerships with local community organisations to address sustainability and health-related priorities through collaborative research, education, and service. Programs such as CityLAB, the McMaster Research Shop, and MacChangers connect students and faculty with community partners to co-develop solutions to sustainability and environmental health challenges, reflecting ongoing collaboration rather than one-off events. Additionally, the Centre for Climate Change conducts outreach with schools and community groups to promote climate literacy, while Nature @ McMaster works with community partners on environmental stewardship initiatives such as habitat management, tree planting, and conservation education. Collectively, these efforts integrate environmental sustainability with broader determinants of community health, demonstrating multiple meaningful community partnerships that support planetary and environmental health.

https://climate.mcmaster.ca/community-outreach-2/community-outreach/partnerships/
https://community.mcmaster.ca/work-with-us/students
https://climate.mcmaster.ca/community-outreach-2/community-outreach
https://nature.mcmaster.ca/about-us/about-us-2/

3.2. Does your institution offer community-facing courses or events regarding planetary health?	
The **institution** offers community-facing courses or events at least once every year. (3 points)	
The **institution** offers courses or events open to the community at least once per year, but they are not primarily created for a community audience. (2 points)	
The **institution** has promoted community-facing courses or events, but was not involved in planning those courses or events. (1 point)	
The **institution** has not offered such community-facing courses or events. (0 points)	
Score Assigned:	3
McMaster University regularly offers community-facing events and educational programming related to environmental sustainability and planetary health that are open to the public at least once every year. For example, the McMaster Centre for Climate Change hosts a free public speaker series twice a year geared toward engaging community members on climate issues and sustainability topics, alongside academic seminars and roundtables that are open to lifelong learners and local residents. In addition, the University celebrates Earth Day with multiple events such as guided ecological hikes, tree planting, sustainability fairs, workshops, and talks that invite community participation and environmental learning each year. McMaster University Libraries is also presenting a Year of Environmental Action series of events and exhibits focused on environmental action and sustainability for the wider community from fall 2025 through spring 2026. These regular public events demonstrate ongoing community-facing engagement in planetary and environmental health beyond the student body. *https://climate.mcmaster.ca/community-outreach-2/community-outreach* *https://news.mcmaster.ca/celebrating-earth-day-at-mcmaster/* *https://library.mcmaster.ca/year-environmental-action*	

3.3. Does your institution have regular coverage of issues related to planetary health and/or sustainable healthcare in university update communications?	
Yes, all students **regularly** receive communication updates dedicated to planetary health and/or sustainable healthcare. (2 points)	
Yes, planetary health and/or sustainable healthcare topics are regularly included in communication updates to **some courses**. (1 point)	
Students **do not** receive communications about planetary health or sustainable healthcare. (0 points)	
Score Assigned:	2
McMaster University regularly includes topics related to planetary health and sustainability in its communications to students and the broader campus community, though not always in dedicated newsletters solely focused on planetary health. The McMaster News platform frequently publishes	

articles highlighting sustainability and environmental action, including features on campus sustainability initiatives, Earth Day activities, and sustainability dialogues that discuss climate change and planetary health issues as central themes, which are accessible to the university community at large. Additionally, McMaster University Libraries is promoting a "Year of Environmental Action"series of events and resources focused on environmental action and sustainability that is communicated to students and staff as part of regular updates. The university also shares sustainability content through social media and daily highlights during sustainability month, reaching students through channels such as the @sustainableMac Instagram account. These regular inclusions of planetary health, sustainability, and environmental topics in university communications indicate that students receive ongoing information about these issues, though not always as a dedicated communication stream.

https://news.mcmaster.ca/sustainability-at-mcmaster-university/
https://library.mcmaster.ca/year-environmental-action
https://dev-news.mcmaster.ca/learn-about-campus-sustainability-with-daily-instagram-posts/

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

Yes, the **institution** or **main affiliated hospital trust** offers multiple in-person or online courses relating to planetary health and/or sustainable healthcare for post-graduate providers, including at least one with a primary focus of planetary health. (2 points)

Yes, the **institution** or **main affiliated hospital trust** offers one course relating to planetary health and/or sustainable healthcare for post-graduate providers. (1 point)

There are **no** such accessible courses for post-graduate providers. (0 points)

Score Assigned:	1

McMaster University does offer continuing education and professional development programs that can help post-graduate professionals advance their understanding of sustainability and related topics, although none are currently tailored exclusively to planetary health or sustainable healthcare for health professionals. Through McMaster Continuing Education, the University provides a Sustainability Program comprising online courses on sustainability principles and practices that are aimed at working professionals seeking to build knowledge in environmental and sustainable practices, which can be relevant to broader planetary health contexts. Additionally, McMaster Continuing Education routinely offers various professional courses and workshops in leadership, health analytics, and caregiving-relevant topics that support professional skill development, though these are general professional development offerings rather than specific to sustainable healthcare. There is no clear evidence of a dedicated professional course specifically for post-graduate health providers with a primary focus on planetary health or sustainable healthcare offered by McMaster University or its main affiliated hospital partners at present. As a result, McMaster does support continuing education that can indirectly build relevant competencies, but does not currently provide a dedicated planetary health/sustainable healthcare course for post-graduate professionals.

https://continuing.mcmaster.ca/programs/business/sustainability/
https://continuing.mcmaster.ca/professional-development/

3.5. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about environmental health exposures?	
Yes, the **institution** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated medical centres have accessible educational materials for patients. (0 points)	
Score Assigned:	1
McMaster University's affiliated teaching hospitals (primarily Hamilton Health Sciences and St. Joseph's Healthcare Hamilton) do provide patient education resources through accessible channels, though materials specifically focused on environmental health exposures are not clearly documented as standard patient-facing content. Hamilton Health Sciences offers a Patient Education Library with expert-created materials covering a range of health topics for patients across its network of hospitals and care areas, which patients and families can access during their care journey, and can include guidance related to general safety, infection control, and navigating their care, but this resource is not explicitly focused on environmental health exposures specifically. St. Joseph's Healthcare Hamilton also provides infection prevention and control guidance for patients and visitors to help reduce the risk of infections and improve patient safety, which is a form of environmental health education about exposures within the healthcare setting, though again it doesn't appear as a comprehensive environmental health resource for patients. While these educational resources are accessible to patients within affiliated hospitals, there is no clear evidence that all affiliated medical centres systematically provide environmental health exposure materials for patients as a core part of patient education. *https://www.hamiltonhealthsciences.ca/patient-education-library/* *https://www.stjoes.ca/patients-visitors/support-services/infection-prevention-control*	

3.6. Does your institution or its affiliated teaching hospitals have accessible educational materials for patients about the health impacts of climate change?	
Yes, the **institution** or **all affiliated hospitals** have accessible educational materials for patients. (2 points)	
Some affiliated hospitals have accessible educational materials for patients. (1 point)	
No affiliated hospitals have accessible educational materials for patients. (0 points)	
Score Assigned:	0
While McMaster University and its affiliated teaching hospitals demonstrate institutional commitments to sustainability through published action plans and emissions-reduction initiatives, there is no clear publicly available evidence that they provide patient-facing educational materials specifically addressing the health impacts of climate change. Sustainability strategies reference internal environmental goals and awareness efforts, and while the McMaster Centre for Climate	

Change offers climate-related outreach, these resources are not specifically designed for patients within clinical care settings. https://www.stjoes.ca/quality-and-performance/external-review-corporate-information/environmental-sustainability/sustainability-action-plan-2024-26.pdf https://www.oha.com/news/a-fresh-approach-to-food-waste-and-emissions https://climate.mcmaster.ca/community-outreach-2/community-outreach/

Section Total (10 out of 14)	**71.43%**

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Support for Student-Led Planetary Health Initiatives

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

4.1. Does your institution offer support for students interested in enacting a sustainability initiative/QI project?	
Yes, the **institution** *either* offers grants for students to enact sustainability initiatives/QI projects *or* sustainability QI projects are part of the core curriculum. (2 points)	
The **institution** encourages sustainability QI projects (to fulfil clerkship or longitudinal requirements) and offers resources to help students succeed in these projects, **but** there is no student funding available and there is no requirement to participate. (1 point)	
No, the institution does not offer opportunities or support for sustainability initiatives or QI projects. (0 points)	
Score Assigned:	1
McMaster University Facility Services announced in their 2023-24 Sustainability Report that they would be launching a $10,000 Sustainability Fund to support students taking on campus sustainability projects. However, the 2024-25 Sustainability Report made no mention of this sustainability fund. It is unclear whether this proposed project transitioned into the McMaster Planetary Health Seed Grant program instead (see description of this program below).	

4.2. Does your institution offer opportunities for students to do research related to planetary health and/or sustainable healthcare/vetcare?	
The **institution** has a **specific** research program or fellowship for students interested in doing planetary health/sustainable healthcare/vetcare research. (2 points)	
There are research opportunities for students to perform research related to planetary health/sustainable healthcare, but these **require student initiative** to seek them out and carry them out in their spare time. (1 point)	
There are **no opportunities** for students to engage in planetary health/sustainable healthcare research. (0 points)	
Score Assigned:	2
McMaster has a new Planetary Health Seed Grant program that provides up to $40,000 over two years to undergraduate and graduate students in the Faculty of Engineering, Faculty of Science, or Faculty of Health Sciences. Projects must align with the university's planetary health priorities: "Living labs, energy pathways, nuclear energy and medicine, and energy transition and	

electrification". Information about 2025 recipients of the Planetary Health Seed Grant can be found here.

4.3. Does the institution have a webpage where students can find specific information related to planetary health and/or sustainable healthcare/vetcare activities and mentors within the institution? For example, projects achieved, current initiatives underway at the medical school and/or contact of information of potential mentors.	
The institution has a webpage with specific information related to planetary health or sustainable healthcare/vetcare that includes up-to-date information on relevant initiatives and contact information of potential mentors. (2 points)	
There is an institution webpage that features some information on projects and mentors within planetary health and sustainable healthcare within the institution, but it lacks key information. (1 point)	
There is **no institution** specific webpage for locating planetary health and/or sustainable healthcare projects or mentors. (0 points)	
Score Assigned:	2
McMaster University is the home of PEACH Health Ontario, an initiative that aims to cultivate and sustain partnerships across healthcare facilities in Ontario to support climate action. The PEACH website contains information about sustainability projects and conferences. Additionally, the postgraduate (i.e., medical residents) medical education program at McMaster has a website on sustainable healthcare, which contains information about events, sustainability toolkits, and other resources. This website also contains a list of members of the postgraduate medicine Sustainable Healthcare sub-committee.	

4.4. Does your institution have registered student groups dedicated towards fostering a culture of planetary health engagement, scholarship, and advocacy on campus, supported by faculty advisors?	
Yes, there is a student organisation **with faculty support** at my institution dedicated to planetary health or sustainability in healthcare. (2 points)	
Yes, there is a student organisation at my institution dedicated to planetary health or sustainability in healthcare but it **lacks faculty support.** (1 point)	
No, there is **not** a student organisation at my institution dedicated to planetary health or sustainability in healthcare. (0 points)	
Score Assigned:	2
Michael G. DeGroote School of Medicine at McMaster University has a student interest group (IG) focused on Environmental Health. Past projects of the Environmental Health IG include curriculum advocacy and a planetary health speaker series. As with all IGs at the medical school, the Environmental Health IG receives annual funding from the McMaster Medical Student Council.	

4.5. Is there a student liaison representing sustainability interests who serves on a department or institutional decision-making council to advocate for curriculum reform and/or sustainability best practices?	
Yes, there is a student representative who serves on a department or institutional decision-making council/committee. (1 point)	
No, there is no such student representative. (0 points)	
Score Assigned:	0
There is currently no sustainability representative on the McMaster Medical Student Council, nor are there any students formally appointed to advocate for sustainability on any broader departmental council.	

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.	0
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.	0
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
In past years, the McMaster Medicine Environmental Health interest group has hosted a planetary health speaker series aimed at medical students. *Medical students are invited to volunteer with Trees for Hamilton in which participants help plant trees across the city.* *Additionally, the McMaster Wilderness Medicine interest group hosted a variety of events over the past year including a camping trip and outdoor medical adventure.*	

Section Total (10 out of 15)	66.67%

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Campus Sustainability

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

5.1. Does your institution have an Office of Sustainability?	
Yes, there is an Office of Sustainability with multiple full-time staff dedicated to campus sustainability. If the Office of Sustainability serves the entire campus, there is **at least one designated staff member** for sustainability at the hospital. (3 points)	
There is an Office of Sustainability with one or more full-time staff dedicated to campus sustainability, but **no specific staff member** in charge of hospital sustainability. (2 points)	
There are **no salaried sustainability staff,** but there is a sustainability task force or committee. (1 point)	
There are **no** staff members **or** task force responsible for overseeing campus sustainability. (0 points)	
Score Assigned:	2
McMaster University has an Office of Sustainability. A new director for the Office of Sustainability (Dave Cano) was appointed in 2023 to oversee the office and the McMaster Sustainability Advisory Council. There is no indication that there are any staff members specifically in charge of hospital sustainability. However, it should be noted that the affiliated hospital networks (Hamilton Health Sciences and St. Joseph's Healthcare Hamilton) each have coordinators/directors in charge of hospital sustainability and/or waste management.	

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

In 2020, McMaster University announced a plan to achieve a 75% reduction in carbon emissions by 2030 and a 90% reduction in emissions by 2050, with the remaining 10% of emissions potentially mitigated through the purchase of carbon offset credits. The McMaster Net Zero Roadmap can be found here.

5.3. Do buildings/infrastructure used by the institution for teaching (not including the hospital) utilize renewable energy?	
Yes, institution buildings are **100%** powered by renewable energy. (3 points)	
Institution buildings source **>80%** of energy needs from off-site and/or on-site renewable energy. (2 points)	
Institution buildings source **>20%** of energy needs from off-site and/or on-site renewable energy. (1 point)	
Institution buildings source **<20%** of energy needs from off-site and/or on-site renewable energy. (0 points)	
Score Assigned:	1
According to McMaster's Facility Services website (found here), 21% of the university's total energy use came from renewable sources as of 2022.	

5.4. Are sustainable building practices utilised for new and old buildings on the institution's campus, with design and construction of new buildings and remodelling of old buildings conforming to a published sustainability rating system or building code/guideline?	
Yes, sustainable building practices are utilised for new buildings on the institution's campus and the **majority** of old buildings **have been retrofitted** to be more sustainable. (3 points)	
Sustainable building practices are utilised for new buildings on the institution's campus, but most old buildings have **not been retrofitted.** (2 points)	
Sustainable building practices are **inadequately or incompletely** implemented for new buildings. (1 point)	
Sustainability is **not considered** in the construction of new buildings. (0 points)	
Score Assigned:	2
McMaster's sustainable building policy, developed in 2005, states that every new building on campus must have a Leadership in Energy and Environmental Design (LEED) Silver Certification at minimum (source). The importance of retrofitting is described in the institutions' Net Zero Carbon Roadmap.	

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:	1
Undergraduate and graduate students at McMaster receive an unlimited 12-month bus pass with the local public transit system in Hamilton (Hamilton Street Railway), and also have access to a discounted annual bike pass through Hamilton Bike Share. However, these passes and discounts are not available to medical students. Many medical students use their own cars, and the importance of having a car for clinical placements during clerkship is frequently emphasized. *There is also a shuttle service between McMaster's main campus and the 10 Bay residence building in Downtown Hamilton (specifically of relevance to students who live in that residence).*	

5.6. Does your institution have an organics recycling program (compost) and a conventional recycling program (aluminium/paper/plastic/glass)?	
Yes, the institution has **both** compost **and** recycling programs accessible to students and faculty. (2 points)	
The institution has **either** recycling **or** compost programs accessible to students and faculty, but not both. (1 point)	
There is **no** compost or recycling program at the institution. (0 points)	
Score Assigned:	2
Recycling bins can be found in many buildings across campus. The Composting Champions program aims to increase composting at McMaster, and maintains a map of compost bins in operation around campus (found here).	

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

Yes, the institution has a**dequate s**ustainability requirements for food and beverages, including meat-free days or no red-meat, and **is engaged** in efforts to increase food and beverage sustainability. (3 points)
There are sustainability guidelines for food and beverages, but they are **insufficient or optional**. The institution **is engaged** in efforts to increase food and beverage sustainability. (2 points)
There are sustainability guidelines for food and beverages, but they are **insufficient or optional.** The institution is **not** engaged in efforts to increase food and beverage sustainability. (1 point)
There are **no** sustainability guidelines for food and beverages. (0 points)

Score Assigned:	3

McMaster University is committed to the Okanagan Charter, which is an international charter promoting health and sustainability on campus. Campus hospitality services have developed an approach to food sustainability in alignment with the objectives of the Okanagan Charter. Specifically, the Hospitality Services Sustainable Procurement Policy (as of 2022, found here) has guidelines regarding sustainable fish (i.e., avoiding red list fish), fair/ethical trade and water wise coffee and tea, local procurement (35% of produce, and 30% of all other food purchases must be grown or purchased within Ontario), free-run eggs, energy efficient equipment, proportion of plant-based to animal-based procurement (60% plant-based compared to 40% animal-based), and compostable cutlery /containers/coffee cups etc. Data for each of these metrics is reported annually by Hospitality Services.

5.8. Does the institution apply sustainability criteria when making decisions about supply procurement?
Yes, the institution has **adequate** sustainability requirements for supply procurement **and** is **engaged** in efforts to increase sustainability of procurement. (3 points)
There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The institution is **engaged** in efforts to increase sustainability of procurement. (2 points)
There are sustainability guidelines for supply procurement, but they are **insufficient or optional.** The institution is **not engaged** in efforts to increase sustainability of procurement. (1 point)
There are **no** sustainability guidelines for supply procurement. (0 points)

Score Assigned:	3

In 2022-23, McMaster's first Sustainable Procurement Policy was drafted in collaboration with student partners.

McMaster currently requires a Request for Proposal (RFP) for purchases over $100,000. Section 9 of the RFP template includes the following sustainability questions:

1. *List your company carbon footprint and goals to reduce it*
2. *List your CDP (carbon, forests, water, and supply chain) and EcoVadis scores*
3. *Provide the total cost of ownership (TCO) for the services/products*
4. *List all Ecolabels applicable to this product*

5. *Identify how this service or product assists you in meeting your sustainability goals*
6. *Identify % of post-consumer, ocean-bound and/or closed loop plastics in the products and your publicly stated recycled content goal*
7. *Describe any paid time you provide your employees to volunteer*

McMaster also provides a list of optional questions to ask suppliers about sustainability (found here).

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
McMaster Health Sciences, in collaboration with various Canadian environmental and planetary health organizations, has created an implementation guide entitled "Organizing Sustainable Events and Conferences for Health Care" (found here). Adherence to these guidelines is not currently required for campus events.	

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
McMaster's Net Zero Carbon Roadmap contains information about retrofitting laboratory spaces to improve sustainability, such as introducing demand control ventilation (DCV) systems to reduce energy consumption.	

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

As of 2023, fossil fuel companies made up 2.7% of McMaster University's overall investment portfolio, down from 4.5% in 2018. McMaster has stated that they are committed to divesting from fossil fuels, with specific targets to reduce carbon exposure of investments by 65% by 2025, 75% by 2030, and "the rest as soon as possible after that" (source).

Section Total (18 out of 32)	**56.25%**

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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 Michael G. DeGroote School of Medicine (McMaster University).
The following table presents the individual section grades and overall institutional grade for the Michael G. DeGroote School of Medicine (McMaster University) on this Planetary Health Report Card.

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(58/75) x 100 = 77.33%	B+
Interdisciplinary Research (17.5%)	(17/17) x 100 = 100.00%	A+
Community Outreach and Advocacy (17.5%)	(10/14) x 100 = 71.43%	B
Support for Student-led Planetary Health Initiatives (17.5%)	(10/15) x 100= 66.67%	B
Campus Sustainability (17.5%)	(18/32) x 100 = 56.25%	C+
Institutional Grade	**(Ax0.3 + Bx0.175 + Cx0.175 + Dx0.175 + Ex0.175) = 74.71%**	**B**