Planetary Health Report Card (Medicine):

University of California, San Francisco

2024-2025 Contributing Team:

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We would like to acknowledge the Ramaytush Ohlone people, who are the traditional custodians of this land. We pay our respects to the Ramaytush Ohlone people who call the land that UCSF sits upon their home. We thank them for their stewardship and look forward to strengthening our relationship of mutual respect and understanding.

Summary of Findings

Overall Grade	A-

Curriculum	A-

The UCSF School of Medicine effectively incorporates planetary and environmental health topics into its core curriculum, with particularly impactful content in the Justice and Advocacy in Medicine (JAM) block and Core Inquiry Curriculum.
Recommendations: While UCSF addresses many of the curriculum metrics, coverage is concentrated in a few key lectures. Expanding planetary health discussions across multiple blocks into various disease processes would enhance student understanding. Additionally, incorporating education on the environmental impact of medical practices—such as healthcare-related waste and toxins—would provide students with actionable knowledge to reduce environmental harm in their future careers.

Interdisciplinary Research	A+

UCSF continues to uphold a high standard for commitment to research and interdisciplinary collaboration in climate health topics. Robust support for projects via funding and fellowship opportunities, as well as annual symposiums to highlight continued progress demonstrate this commitment.
Recommendations: The School of Medicine could promote medical student engagement with the UC Center for Climate, Health and Equity and the UCSF EaRTH Center by publicizing opportunities to join research projects and encouraging submission to yearly symposiums.

Community Outreach and Advocacy	A

The School of Medicine and UCSF have continued to expand and deepen partnerships with Bay Area communities affected by climate change and environmental injustice. While UCSF has the necessary infrastructure to advocate for the communities affected by climate change, neither the University nor the School of Medicine have utilized their platforms to the fullest extent.
Recommendations: With the support from the School of Medicine, we recommend developing patient education materials to be featured on the UCSF Health website regarding health salient to climate change, such as heat-related illness.

Support for Student-Led Initiatives	A

UCSF continues to recognize student-led initiatives, offering time, scholarly funding, and enthusiasm for student work. This year, the medical school has supported admirable efforts by students to create a new student group, titled Environmental Justice Coalition, as well as numerous lunchtime electives dedicated to planetary health or climate change initiatives. Through the Environmental Scholars Program and Carbon Neutrality Initiative fellowship, the wider university continues to support ongoing funded opportunities for students to engage in planetary health at UCSF.
Recommendations: We recommend updating information on the Center for Climate, Health, and Equity website and consolidating funded opportunities on a single, accessible web page. While there is a diverse breadth of opportunities for student involvement in planetary health initiatives, ideas for improvement include opportunities to learn about sustainable food systems and agriculture, as well as community volunteering to foster resilience against anthropogenic environmental impacts.

Campus Sustainability	B

UCSF has a strong campus sustainability team that is committed to advancing energy efficiency, waste reduction, and emission reduction, and has made strides towards reaching these goals. However, the campus is tied to the UC Health System, which comes with unique challenges related to sustainability.

Recommendations: With a new goal of 90% reduction in total emissions by 2045, we recommend strong and continued investment in all measures, big or small, that will enable UCSF to reach this goal successfully. By transitioning from natural gas generation to clean energy at Parnassus campus, increasing communication around sustainability expectations with vendors, exploring options for retrofitting of older buildings, and continuing to advocate for fossil fuel divestment, UCSF can ensure sustainability metrics are being met across all domains of campus.

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.

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 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.

- **Extractivism:** 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: The school offered a "Climate Justice, Environmental Health, and Professional Activism" Winter elective, organized by Environmental Research and Translation for Health (EaRTH) Center in collaboration with leadership from the Division of Occupational, Environmental, and Climate Medicine. Additionally, as part of the required Inquiry Immersion block, students could also choose from two two-week mini-courses: "Climate Change and Health" and "Environmental Health and Advocacy."	

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
Score explanation: A testable learning objective in the Obstructive and Restrictive Lung Disease lecture of the Airways, Blood & Circulation (ABC) block requires students to "understand the impact of climate change on the burden of respiratory disease," with an in-class focus on how social inequalities and differential exposures to air pollution and climate change contribute to health disparities in asthma and COPD morbidity and mortality. Additionally, climate change and extreme heat were addressed in the Life Stages block during both a lecture and small group on aging, which included a testable learning objective to "explain how aging physiology leads older adults to be more susceptible to the health effects of climate change-induced extreme heat," fostering discussion on how extreme heat affects physiological processes.	

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: Extreme weather events were briefly addressed in the Obstructive and Restrictive Diseases lecture, which included one slide on how wildfires contribute to COPD exacerbations and increased hospital respiratory admissions. The topic was also covered in the Climate Change and Health Inquiry Immersion elective. Additionally, during the Justice and Advocacy in Medicine (JAM) 2 block, students had the option to engage in advocacy projects on a topic of their choice, with some groups focusing on the health impacts of wildfires in Los Angeles on different populations.	

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:	3

Score explanation: In UCSF's Pathogen and Host Defense (PHD) 2 block, an online lecture titled Emerging Infections: Rabies, Enteroviruses, and Arboviruses includes testable learning objectives that address the impact of climate change on infectious disease patterns. These objectives require students to "explain how shifts in climate could increase the incidence of vector-borne infectious diseases using Chikungunya, Dengue virus, and Zika virus as exemplars" and to "explain how environmental and demographic changes have influenced the emergence of disease (e.g., Ebola virus)." This content encourages students to understand the relationship between climate change and the geographical distribution of vector-borne infectious diseases.

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. (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
Score explanation: In the Airways, Blood, and Circulation (ABC) 2 block, a testable learning objective to "understand the impact of climate change on the burden of respiratory disease" was included in the Obstructive and Restrictive lung disease lecture. Additionally, the Core Inquiry Curriculum (CIC) includes a required workshop, "Air Quality, Health Disparities, and Environmental Justice", which highlights the disproportionate burden of air pollution and climate change on lower socioeconomic populations, with a focus on respiratory and cardiovascular health. This workshop actively engages students in research, discussion, and peer presentations on contributing factors and health outcomes. Further, the optional Climate Change and Health Inquiry Immersion allows students to explore the "connections between environmental damage, climate change, and human health", including a focus on air pollution and respiratory health.	

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. (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
Score explanation: The Core Inquiry Curriculum (CIC) includes a required workshop, Air Quality, Health Disparities, and Environmental Justice, which highlights the disproportionate burden of air	

pollution and climate change on lower socioeconomic populations. A key learning objective of this workshop is to "describe interconnections among climate change, air quality, and health, with an emphasis on respiratory and cardiovascular health." Students actively engage in research, discussion, and peer presentations on contributing factors and health outcomes. Additionally, in the Life Stages block during the Aging-Related Physiology small group, a learning objective prompts students to "explain how aging physiology leads older adults to be more susceptible to the health effects of climate change-induced extreme heat and how extreme heat is linked to postural hypotension," encouraging an in-depth exploration of the cardiovascular implications of heat and climate change.

1.7. Does your <u>medical school</u> 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
Score explanation: This topic was addressed in the Brain, Mind, and Behavior (BMB) block, where the Anxiety Disorders lecture included slides specifically focused on climate change anxiety. In elective coursework, such as the Environmental Justice and Community Organizing elective and the Inquiry Immersion mini-courses on Environmental Justice and Climate Change, climate anxiety and strategies for fostering resilience were explored. Special attention was given to ensuring that individuals passionate about climate health do not feel discouraged in their work, emphasizing techniques to inspire hope and sustain engagement in advocacy.	

1.8. Does your <u>medical school</u> curriculum address the relationships between health, individual patient food and water security, ecosystem health, and climate change?	
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: During the Justice and Advocacy in Medicine (JAM) 2 block, students attended a lecture on Food Sovereignty, which focused on food security in the context of Native American communities, with very brief mention of its impact on health. In the Renal, Endocrine, GI, and Nutrition (REGN) block, malnutrition was introduced as a risk factor for various disease	

processes; however, no reference was made to the causes of malnutrition, such as food insecurity driven by climate change.

1.9. Does your <u>medical school</u> 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:	2
Score explanation: During an Environmental Justice panel in the Justice and Advocacy in Medicine (JAM) 2 block, the effects of air pollutants and wildfires on marginalized communities were examined, with a specific focus on individuals living in SROs. A student-faculty co-led discussion group followed this panel, allowing students to explore the respiratory and cardiovascular risks associated with increased pollution, with many discussions centering on how these effects disproportionately impact communities of color and low-income populations. Additionally, in the optional Environmental Justice Inquiry Immersion curriculum, students examined the effects of redlining and the placement of industrial sites near marginalized communities. One specific topic addressed was the Bayview-Hunters Point community, where residents already face disproportionate exposure to environmental toxins—an issue that will be exacerbated by rising sea levels due to climate change.	

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. (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 Pathogens & Host Defense (PHD) block, an online lecture on Emerging Infections discussed how shifts in climate could increase the incidence of vector-borne infectious diseases, using Chikungunya, Dengue virus, and Zika virus as examples. Students also learned how environmental and demographic changes influence the emergence of disease, with a focus on Ebola virus. Additionally, the Protozoa lecture in PHD included a slide on the relationship between climate change and Malaria. However, global health issues impacted by climate change were not discussed outside the context of infectious diseases.	

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. (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
Score explanation: During the Core Inquiry Curriculum, the lecture Frontiers in Medicine: Impact of Environment on Reproductive Health covered common chemical toxins and their effects on reproductive health. Learning objectives included identifying reproductive health outcomes linked to prenatal exposure to environmental chemicals and understanding the unequal distribution of toxic exposures across populations. Additionally, the optional two-week Environmental Justice course in Inquiry Immersion explored the impact of environmental toxins such as phthalates, PFAs, PM2.5, and pesticides on reproductive health, incorporating both formal presentations and independent research.	

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. (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
Score explanation: During the Airways, Blood, and Circulation (ABC) 2 block, the Obstructive and Restrictive Lung Disease lecture covered how climate change exacerbates air pollution, wildfires, and pollen seasons, leading to increased COPD and asthma morbidity. Specific examples highlighted the impact of wildfires in relation to San Francisco's geographical location. Additionally, in Justice and Advocacy in Medicine (JAM) 2, a panel titled Frontiers in Medicine: Environmental Justice explored the health effects of wildfires and heat waves, particularly on residents of single-room occupancy (SRO) housing in San Francisco. In the Inquiry Immersion curriculum, students who elected to take the two-week Environmental Justice course investigated the impacts of plastics, pesticides, and pollution on individual and community health. One specific topic addressed was the disproportionate environmental burden faced by the San Francisco Bayview-Hunters Point community and residents of the San Joaquin Valley.	

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. (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: During the Justice and Advocacy in Medicine (JAM) 2 block, a required panel on Native American Perspectives on Healthcare, Health, and Wellness featured community members discussing their experiences navigating western medicine spaces. While planetary health was not the primary focus, the discussion introduced Indigenous knowledge of land stewardship and community needs. This was further explored in the lecture Food Sovereignty: The Challenges and Implications, which examined the effects of climate change on cultural foods and highlighted the role of Indigenous knowledge in restoring these food sources and enhancing the surrounding ecosystem.	

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. (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
Score explanation: As part of the Justice and Advocacy in Medicine (JAM) 1 & 2 curriculum, students explore how various systemic processes disproportionately harm marginalized populations, including individuals with low SES, houseless populations, Indigenous communities, incarcerated individuals, and communities of color. A key topic discussed is historic redlining and its lasting health consequences, for example placing marginalized communities in closer proximity to industrial zones that release toxic chemicals. In Ground School, the curriculum addressed the San Joaquin Valley's increased exposure to insecticides and pesticides, particularly among farmworkers, who face heightened occupational health risks. In the Life Stages 2 block, students had a testable learning objective to "understand environmental issues related to puberty and exogenous exposure to hormonally active compounds," prompting discussions on how industrial toxic chemicals impact health and well-being of adolescents. Additionally, in the optional Inquiry Immersion course, Environmental Justice, students engaged in an in-depth exploration of anthropogenic environmental toxins and their impact on the Bayview-Hunters Point community and the San Joaquin Valley.	

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. (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:	1
Score explanation: In our Renal, Endocrine, GI, & Nutrition 1 (REGN 1) block, we had lectures on nutrition. The lecture mentions the health benefits of a plant-based diet, but doesn't link them to environmental health benefits. This lecture did not mention sustainability or reduced greenhouse gas emissions as a benefit of plant-based diets. A lecture that emphasizes the connection between personal and climate health may provide a stronger argument for promoting a plant-based diet. The Inquiry Immersion elective course, titled "Climate Change and Health" covered the impact of red meat on contributing to increased greenhouse gas emissions and air & water pollution in the Food, Water, Climate and Health session.	

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. (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: The facilitator guide for this the "Air Quality, Health Disparities, and Environmental Justice Workshop" within the Core Inquiry Curriculum has a bullet point that highlights how healthcare contributes to increased greenhouse emissions. This point could be clearly made in the student guide and is encouraged to be more specific about how healthcare contributes to an increased carbon footprint.	

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)	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)	1
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 anaestheisa's environmental impacts, such as total intravenous anaesthesia or choosing less environmentally harmful anaesthetic gas options with reduced greenhouse gas emissions. (1 point)	1
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)	2
Score explanation: There is a dedicated panel session titled, "High Value Cancer Screening Panel" which discusses the health and cost harms of overmedicalization and over-treatment, but doesn't touch on the environmental co-benefit. Additionally, UCSF offers an elective titled, "High-Value Care" where certain talks briefly touch on the additional environmental benefits of deprescribing. The core curriculum discusses the weight-management and mental health impacts of non-pharmaceutical approaches to healthcare, such as exercise, but doesn't connect it to the environmental impact. The core curriculum nor any electives address how surgical and anesthetic waste impacts the climate; however, some students in their Clinical Microsystems Clerkship are conducting a quality improvement project on reducing anesthetic gas waste to reduce greenhouse gas waste emissions. However, this is not available to all students and is not an elective. There is no discussion of the environmental impact of metered-dose inhalers compared to dry powder inhalers. The "Air Quality, Health Disparities, and Environmental Justice Workshop" within the Core Inquiry Curriculum has the opportunity for students to discuss strategies to reduce waste in healthcare settings, but is not discretely mentioned in the student guide.	

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 **no** strategies introduced for having conversations with patients about climate change. (0 points)

Score Assigned:	2

Score explanation: One of the learning objectives of the "Air Quality, Health Disparities, and Environmental Justice Workshop" within the Core Inquiry Curriculum was to discuss ways healthcare providers can advocate for environmental justice for their patients. Within this small group, a portion of the session was focused on role-playing a provider-patient encounter, where the patient is concerned about how poor air quality affects their and their children's health and strategies to limit the negative effects. This workshop provided an opportunity to navigate climate health conversations with their patients. Additionally, the session included a series of questions that encourage reflection on best communication practices and challenges. This workshop split the group into two, where only one group had the opportunity to engage in the role-play practice. The other group worked on developing advocacy ideas to support climate health initiatives, but did not have the opportunity to discuss communication strategies. A suggestion to improve this workshop is to give everyone in the small group the chance to role-play. Additionally, during Life Stages 1, a lecture titled "Frontiers in Medicine: Impact of Environment and Reproductive Health" discusses clinical strategies to navigate conversations around environmental exposures.

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: During ABC2, a pharmacology lecture titled "Obstructive and Restrictive Lung Diseases: Clinical Approach" has a learning objective that describes the importance of taking an environmental exposure history in the context of interstitial lung diseases. Additionally, in the small group titled "Pulmonary Integration Cases", one of the cases of hypersensitivity pneumonitis focused on questions related to environmental and occupational exposures. In Life Stages 1, a lecture titled "Prenatal Care Thru an Equity Lens" discusses the importance of taking an exposure and environmental history. Additionally, the Life Stages reader includes additional details about what an environmental history looks like for pregnant patients and children.

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

Score explanation: This year, there have been no major changes to planetary health curriculum at UCSF, but some minor changes. Within UCSF, additional work towards incorporating content into the geriatrics, reproductive health, and pediatrics lectures (Life Stages). At a UC wide level, the Climate Ambassador project, sponsored by the UC Center for Climate, Health and Equity is an inter-professional climate curriculum project to develop planetary health curricular roadmaps and educational materials for health professional students and trainees.

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: At UCSF, planetary health topics are well integrated throughout the curriculum. The Justice and Advocacy in Medicine block provides more opportunity to focus on climate change, planetary health knowledge is interspersed throughout the preclinical curriculum throughout the first and second years. During the pulmonary unit within Airways, Breathing, and Circulation 2 (ABC 2), an understanding of air pollution and environmental exposures was well-emphasized in lecture and small groups. During Life Stages 1, there was a lecture dedicated to elucidating the role of environmental exposures on pregnancy and delayed puberty. Life Stages 2 also emphasized how climate change increases the health vulnerability of older adults. In Pathogens and Host Defenses 2 (PHD2), lectures described how many infectious diseases are emerging due to climate change. In Brain, Mind, and Behavior (BMB), the lectures emphasize climate change as a social determinant of mental health and delve into climate change anxiety. Additionally, within the required Inquiry Immersion block during first year, students could elect to take the Climate Change and Health mini-course or the Environmental Health & Advocacy mini-course.

Learning objectives from first and second year curriculum are included below:

- *Understand the impact of climate change on the burden of respiratory disease. (ABC 2)*
- *Describe the diagnostic approach to patients with possible interstitial lung disease, including obtaining a full occupational, hobby, and environmental exposure history, a thorough drug history, and a review of systems for systemic illnesses. (ABC 2)*
- *Describe interconnections among climate change, air quality, and health, with an emphasis on respiratory and cardiovascular health. (ABC 2 CIC)*
- *Explain how systemic inequities lead to differential exposure to air pollution and thus contribute to health disparities. (ABC 2 CIC)*
- *Describe specific ways health providers can advocate for environmental justice at both the interpersonal (health provider – patient) level and systemic level. (ABC 2 CIC)*
- *Explain how shifts in climate could increase the incidence of vector-borne infectious diseases using Chikungunya, Dengue virus and Zika virus as exemplars. (PHD 2)*
- *Explain how environmental and demographic changes have influenced the*
- *emergence of disease (e.g. Ebola virus). (PHD 2)*
- *Describe the main sources and pathways of developmental exposure to environmental chemicals and the prevalence of exposure. (Life Stages 1 CIC)*
- *Explain how the health impacts of environmental exposure are distributed unequally within and between populations (Life Stages 1 CIC)*
- *Identify key health outcomes that have been linked to preconception and prenatal exposure to environmental chemicals. (Life Stages 1 CIC)*
- *Understand environmental issues related to puberty and exogenous exposure to*
- *hormonally active compounds. (Life Stages 1)*
- *Explain how aging physiology leads older adults to be more susceptible to the health effects of climate change induced extreme heat and how extreme heat is linked to postural hypotension. (Life Stages 2)*

While UCSF integrates planetary health topics well, there is room to include additional topics throughout all blocks. For example, ABC1 (cardiovascular block) could include information on how heat stress impacts cardiovascular health. REGN 1 could emphasize the environmental and health co-benefits of a plant-based sustainable diet.

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:	0
Score explanation: As of now, there is not a specific faculty/staff member to incorporate elements of planetary health or sustainability content into the existing curricula. While many people are working on this separately, there is not a centralized approach or significant endorsement from UCSF SOM curricular leaders.	

Section Total (58 out of 72)	**A-**

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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: Among many faculty members at the School of Medicine with a primary research focus in planetary health and healthcare sustainability, Dr. Sheri Weiser investigates the impact that food insecurity and extreme weather events resulting from climate change have on the treatment outcomes of HIV and other chronic diseases. Dr. Weiser and Dr. Arianne Teherani are the Founding Co-Directors of the UC Center for Climate, Health and Equity, with research on the health impacts of climate change specified to be a pillar of the Center's mission. Dr. Teherani's research focuses on education for climate change, ecosystems degradation, sustainability, and health. Dr. Tracey Woodruff, the Director of the UCSF EaRTH Center and the Program on Reproductive Health and the Environment, conducts research on how environmental toxins and pollutants impact pregnancy and child development. Dr. Seema Gandhi's primary research focus is reducing anesthesia-related GHG emissions and operating room waste. Serving on the Bay Area Air Quality Management District Advisory Council and the National Academy of Sciences Committee on Emerging Science for Environmental Health Decisions, Dr. Gina Solomon's research centers on the intersection of environmental health, climate change, toxicology and air pollution, with a special focus on impacts on disadvantaged communities. Dr. Thomas Newman, Professor Emeritus of Epidemiology and Biostatistics, has focused his research on environmental health and the impacts of exposure to endocrine-disrupting chemicals on child development and health outcomes.	

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: The UC Center for Climate, Health and Equity - based at UCSF and founded by UCSF faculty - names research as one of its core pillars. Research interests include pathways through which climate change shapes physical and mental health across the lifespan, climate solutions that maximize both human health and environmental benefits, and the critical factors (e.g. socioeconomic determinants and systemic injustices like environmental racism) that shape the health impact of and responses to climate change. In an effort to extend research opportunities to faculty and fellows, the Center launched the Climate and Health Seed Grant Program to support interdisciplinary research projects across the UC system that advance understanding of the human health impacts of climate change and the climate solutions that advance health equity. *The UCSF EaRTH Center (Environmental Research and Translation for Health) is an interdisciplinary group that focuses on the impacts of harmful environmental pollutants on health and human development, offering numerous grants to support environmental health research for faculty and clinicians. For instance, the EaRTH Center launched the Seedling Awards Program, designed to enhance current research projects with an environmental health focus or to collect preliminary research data to support a NIH/NIEHS grant submission. Similarly, the EaRTH Center Innovation Awards in Environmental Health allocate $12,000-15,000 to selected junior faculty and clinicians to embark on new projects in basic, epidemiological, or translational science or clinical/education in environmental health. The Center itself is supported by the National Institute of Environmental Health Sciences of the NIH.* *UCSF is affiliated with the University of California Global Health Institute's (UCGHI) Center for Planetary Health, which addresses the interconnectedness of global environmental changes and human health.*	

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:	3
Score explanation: The Community Engagement Core of the EaRTH Center informs all EaRTH Center priorities based on community input through the Stakeholder Advisory Board (SAB). The SAB consists of practicing health professionals and others working at the intersection of environment and health, including a certified nurse midwife, an ecology professor and environmental justice advocate, community health workers, and public health professionals. Together, they represent the environmental health research and education needs of their respective communities, review projects and pilot grants, and disseminate research findings to accelerate their implementation.	

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: UCSF has several websites that compile ongoing and past research, upcoming climate health events, sustainability efforts, and funding resources. The Environmental Research and Translation for Health (EaRTH) Center website showcases relevant research and pilot projects, as well as upcoming events, funding opportunities, and faculty involvement within the Center. The UC Center for Climate, Health and Equity website similarly houses updated information about future climate health events and current initiatives of the Center. The UCSF Office of Sustainability website contains information about health and waste metrics and campus sustainability programs as well as the annual Climate Action Fellowships and UCSF Sustainability Award.	

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

Score explanation: UCSF hosted multiple symposiums and events on climate health over the past year, including the following:

- *2024 NorCal Symposium on Climate, Health, and Equity — hosted by the UC Center for Climate, Health and Equity in collaboration with Stanford and UC Davis, this year's event explored the role of informatics and AI in enhancing solutions and resilience to the impacts of climate change, featuring contributions from local organizations, experts in public health, and informaticians*
- *UCSF EaRTH Center 4th Annual Research and Translation Forum — this year's theme was "Use of cutting edge in vitro/in silico tools to understand chemical impacts on human 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 point)
No, the institution is **not** a member of such an organisation. (0 points)

Score Assigned:	1

Score explanation: The UCSF School of Medicine and the UCSF-UC Berkeley Joint Medical Program are members of the Global Consortium on Climate and Health Education. The UCSF Institute for Global Health Sciences is a member of the Planetary Health Alliance.

Section Total (17 out of 17)	**100%**

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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:	3
Score explanation: At UCSF's Environmental Research and Translation Center (EaRTH), there is a community engagement core that partners with multiple organizations to promote planetary and environmental health, especially at the local level. These partnerships are longitudinal, and many medical students have worked on projects to support these partnerships, including a 2-3 year internship with the EaRTH 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: At UCSF, an elective in the fall (Community Organizing, Environmental Justice, and the Bayview Neighborhood) is offered for medical students. In this elective, speakers from the community discuss the local impact of environmental damage. There is another offered in the spring quarter (Climate Resilience: Personal & Community Resilience in the Changing Climate) in which students who join will work together to create class climate projects. These projects are designed to be community focused but aren't denoted as community facing.	

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: The UCSF Office of Sustainability, the UCSF EaRTH Center, and the UC Center for Climate, Health and Equity each have their own newsletters. Students may subscribe if interested, but there is no communication about joining these newsletters or updates in general newsletters sent by the School of Medicine.	

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:	2
Score explanation: Every year at UCSF, the Department of Occupational, Environmental and Climate Medicine offers a CME course focused on planetary health. In March 2024, the conference focused on "Work and Environmental Respiratory Disease and Updates in Occupational and Environmental Medicine". The EaRTH center also hosted 7 events focused on environmental health, including one two-day bootcamp on theories and methods to study environmental health	

disparities. These events hosted by the EaRTH center are geared to equip post-graduate professionals with the resources to understand and partake in planetary health initiatives.

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:	2
Score explanation: The Western Pediatric Environmental Health Specialty Unit (PEHSU) developed two new resources for health professionals: an e-Toolkit and a "Prescriptions for Prevention". The Prescriptions for Prevention are accessible guides that include a large variety of topics, such as specific environmental hazards and sources of exposure. PEHSU has multiple fact sheets and guide sheets for health professionals, patients, and families, which can be found here.	

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:	1
Score explanation: While UCSF Health is lacking patient education materials related to climate change and health, Zuckerberg San Francisco General Hospital offers resources for patients regarding air quality and extreme heat. UCSF Health has the infrastructure to include patient education on topics related to environmental health within their Library and Resource Center, but has not yet included resources. It would be reasonable to include similar patient education on heat-related illnesses and air-quality health safety measures.	

Section Total (12 out of 14)	**85.7%**

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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: The UC President's Bonnie Reiss Climate Action Fellowship funds student-generated projects that support the UC system's goal to produce zero-net greenhouse gas emissions by 2025. For the 2024-2025 fellowship year, the program featured five UCSF fellows engaging in projects at UCSF related to campus energy/decarbonization, campus engagement, campus resilience, health engagement, and health decarbonization.	

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: Launched by the UCSF EaRTH Center, the Environmental Scholars Program (ESP) is a one to three year community-based clinical and research program that provides medical or nursing students at UCSF with a summer internship experience to learn about factors in the environment that determine health outcomes. Students are placed in a community clinic or	

community health organization to work on projects that investigate environmental exposures such as community health and safety concerns, often for underserved communities with multiple potential environmental chemical exposures. Past placements included PSE Healthy Energy, the Bayview Hunters Point Community Advocates, Western States Pediatric Environmental Specialty Unit, and West Oakland Environmental Indicators Project. Students will also help support and co-implement an environmental health elective for their peers, which is a newly added component of the program.

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:	2
Score explanation: The UCSF EaRTH Center is an interdisciplinary group that aims to focus on the impacts of harmful environmental pollutants on health and human development. Their website features mentors, projects achieved and underway, funding opportunities, and contact information. The UC Center for Climate, Health, and Equity (CCHE) is focused exclusively on climate change and its impacts on health, with a website that lists key UCSF affiliates and their contact information. The site also hosts several student initiatives, such as the American Medical Association (AMA) Climate Education Modules, Interview without Harm, and Wildfires and Health Education Hub.	

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: This year, a new registered campus group, the"Environmental Justice Coalition" was formed in an effort to streamline student efforts related to community activism and institutional advocacy around sustainability, environmental justice, and climate change. Events put on this year included a "Environmental Health and Sustainability" student and faculty mixer and a seminar discussion with Dr. Debra Hendrickson, a pediatrician focusing on the impact of climate change on children's health.	

4.5. Is there a student liaison representing sustainability interests who serves on a <u>department or institutional</u> 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 a medical student representative who sits on the UCSF Advisory Committee on Sustainability, with ongoing efforts by the Office of Sustainability to include student representation in other institutional committees. Additionally, there are two major avenues for input on the medical school curriculum, in partnership with Climate Justice members: the Anti-Oppression Curriculum Initiative (AOCI), through which student collaborators from the CCHE can provide input on the curriculum, and the Student Medical Education Council, where student members of the CCHE are given direct access to governance committee members to advocate for curricular topics. Lastly, students can advocate for sustainability best practices and curricular reform through the Curriculum Ambassador program.	

4.6. In the past year, has the <u>institution</u> 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.	1
Cultural arts events, installations or performances related to planetary health that have students as an intended audience.	1

Local volunteer opportunities related to building community resilience to anthropogenic environmental impacts.	0
Wilderness or outdoors programs (e.g., that organise hiking, backpacking, kayaking, or other outings for students)	1

Score explanation: A new lunchtime elective titled, "Community Organizing, Environmental Justice, and the Bayview Neighborhood" was held in Fall of 2025 led by collaboration with Dr. Kim Rhoads and environmental justice community activist from Bayview-Hunters Point, Arieann Harrison. Through the course, students engaged with leaders outside UCSF sharing about historic knowledge of environmental and public health issues impacting San Francisco's Bayview-Hunters Point community. Several of the sessions were led by Bayview-Hunters Point community members engaging in environmental justice projects.

A new lunchtime elective titled "Building Psychosocial and Planetary Resilience" was held in Spring 2024, led by Drs. Elissa Epel and Sheri Weiser (co-founder of the UC Center for Climate Health and Equity). The goal of the course was to equip students with tools, leadership, and knowledge needed to build mental health resilience in the face of climate change and other planetary challenges. This course was featured by NPR's Morning Edition and will be offered to all 10 UC campuses by Spring 2025.

A lunchtime elective titled "Climate Justice, Environment, Health & Professional Activism" (Medicine 170.56) was held in the Winter Quarter of 2025, led by James Nolan of the UCSF EaRTH Center in collaboration with division leadership of Occupational, Environmental and Climate Medicine.

Waste to Art (supported by Dr. Seema Gandhi, the UCSF Office of Sustainability, and the UC Office of President Carbon Neutrality Initiative fellowship program) is an annual challenge dedicated to transforming medical and laboratory waste into incredible and inspiring art pieces. Students are welcome to submit artwork for the challenge, with a final Waste to Art Exhibition and award ceremony hosted on campus in late spring.

UCSF continues to offer the Rec Pass to students, which gives training on wilderness and outdoor programs that follow Leave No Trace principles. Uniquely, there is also a "Wilderness Medicine" clinical elective (EM 140.31) offered to fourth-year medical students to learn and practice essential skills, such as basic preparedness, search and rescue, and wilderness improvisation, through an immersive experience in the Sierra Nevadas.

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:	3
UCSF has an Office of Sustainability with a full time director. The Office of Sustainability organizes the Advisory Committee on Sustainability, which includes campus representation from each school, including the School of Medicine (Dr. Katherine Gundling). This committee helps to oversee energy, utilities, infrastructure, food, and purchasing sustainability at UCSF's medical campuses.	

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:	5

Score explanation: The UC system has chosen not to rely on offsets to achieve carbon neutrality. Based on research analyzing timeline, costs, and equity of emission reduction strategies, updated policy outlines a goal of 90% reduction in total emissions (scope 1, 2, and 3) by 2045 using a 2019 baseline. Within the UC system, UC Health has also signed on to the White House Climate Pledge, which outlines a more ambitious goal of reducing emissions by 50% by 2030 and achieving net zero emissions by 2050.

While small reductions in emissions have been made since 2008, levels of emissions reductions have stagnated. For example, the most recent statistics from the 2024 Annual Sustainability Report shows that UCSF's Scope 1 emissions amount to 77,785 metric tons of CO2 in 2023 (down from 79,260 in 2022). The report projects the level of emissions for the university through 2045, which shows the intention to reduce emissions all the way down to 0, which is a significant improvement in UCSF's stated goals from previous years,

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

Score explanation: 98% of electricity purchased by UCSF is from carbon free sources, mostly solar and hydroelectric. However, only 58% of total electricity consumed by UCSF is clean due to a substantial amount of natural gas generated at the UCSF Power Plant at Parnassus campus. The university has increased on-site generation of clean energy through solar projects at various sites including the Gateway Medical Building, Mission Bay Hospital, Mission Hall, Oyster Point, the School of Dentistry, Pride Hall, 3rd st Garage, Genentech Hall, Aldea, and at UCSF Fresno, though these sites only generate a marginal amount of power.

The UC policy outlines a goal to reach 100% clean electricity by 2025.

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

Score explanation: The UC system-wide Sustainable Practices policy requires that all new construction and renovations meet the Leadership in Energy and Efficiency Design (LEED) Silver criteria at a minimum, and the university has a goal of meeting LEED Gold certification for all new projects undertaken.

UCSF has 8 all-electric capital projects either completed or in progress, exemplifying their commitment to meeting the UC policy target of reducing carbon emissions by 90% from 2019 levels, by 2045. In total, UCSF now has 15 gold, 6 silver, and 5 certified buildings.

Although many buildings at Parnassus have been retrofitted to meet LEED certification, there is no University wide and health system wide plan to have existing buildings retrofitted to achieve LEED certification. UCSF Health should meet the University's goal of achieving LEED Gold certification for all new constructions with on-site and off-site sustainable energy generation and storage as potential off-sets for the massive energy used by our hospitals. One ambitious goal would be to aim for a LEED Platinum designation for a UCSF Hospital.

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

Score explanation: UCSF offers a shuttle service that connects all five major campuses, bike racks for cycling commutes, rideshare options, and pre-tax commuter benefits to employees in an effort to reduce the number of single occupancy vehicles (SOV) on the road and to reduce the carbon footprint of employee and student commute. The 2024 Annual Sustainability Report details that 72% of students and employees are utilizing alternative commuting methods, up from 71% in 2023. UCSF also offers 123 EV charging ports, down from 152 in 2023. The report also notes that 25% of the vehicles acquired in 2024 were electric (zero-emission), plug-in hybrid, or clean transportation fuel. They also note that scope 3 transportation emissions grew due to increases in

commute (approximately 6000 metric tons of carbon dioxide equivalent) and business travel (approximately 700 metric tons of carbon dioxide equivalent) emissions with greater returns to on-campus activities. Overall, this has led to an inadequate reduction in GHG emissions from transportation at UCSF.

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 medical school. (0 points)	
Score Assigned:	2
Score explanation: UCSF School of Medicine has a robust recycling and compost program on campus in an attempt to achieve zero-waste. The medical school buildings all have multiple waste bins throughout that enable students, staff, and faculty to separate trash, compost, and recycling. UCSF maintains a goal of zero waste (defined as diverting 90% of all campus solid waste from landfill) by 2020. The Office of Sustainability reports that total waste generation for 2024 increased to 1.48 lbs per person per day, up from 1.33 lbs per person per day in 2023. Total waste generation is tracking well and has already exceeded goals for 2030. In order to reach the goal of zero waste, the school could host more frequent bulky and e-waste drop-off days as well as furthering outreach and education on waste diversion.	

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:	1
Score explanation: As a University of California campus, UCSF follows the University of California Sustainable Procurement Guidelines, which outlines sustainability criteria for food and beverage procurement. Currently, the university recognizes the AASHE STARS 2.2 Technical	

Manual food and beverage sustainably or ethically produced criteria. UCSF campus procures 51% of food and beverage from sustainable sources, down from 57% last year, though still exceeding the 25% minimum goal outlined in the procurement guidelines. However, UCSF Health more broadly only procures 7% of food and beverages from sustainable sources, which represents a decrease in the amount of sustainable food and drink procurement from last year (11% in 2023). This shows the complacency of UCSF as a whole in sustainable food and beverage procurement, as well as a missed opportunity to substantially decrease the university's carbon footprint. Furthermore, newer statistics this year revealed that 44% of UCSF campus's food and beverage purchases were plant based. Reducing the amount of beef (or other foods that produce high amounts of carbon) purchased could substantially reduce UCSF's carbon footprint. The university does not have explicit goals or plans to continue increasing the percentage of food and beverages that are sustainably sourced, and could benefit from collecting more data from campus vendors to assess current status.

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

Score explanation: As a University of California campus, UCSF follows the University of California Sustainable Procurement Guidelines and also has their own Energy Conservation Policy. The UC-wide guidelines lay out the minimum sustainability requirements for products and services purchased by the university. Two types of "Green Spend" (the percentage of procurement budget spent on environmentally sustainable products) are defined: (1) required level green spend, which are the minimum mandatory requirements for each product category and (2) preferred level green spend, which is an additional, more ambitious sustainability goal. For example, purchasing standards for computers, monitors, and printers must have an EPEAT Bronze label to qualify as "required level" green spend, but must have EPEAT Gold or highest available EPEAT label to qualify for "preferred level" green spend. Categories of products included are: appliances, IT hardware, janitorial supplies, flooring, food and beverages, foodware, indoor furniture, lighting, office supplies, and water appliances. The most recent report relays the following: UCSF sustainable procurement in cleaning supplies is at 45% (down from 53%), office furniture is at 68% (down from 96%), electronics at 76% (up from 45%), and office supplies at 27% (down from 58%). While these guidelines represent a minimum standard of "Green Spend" on supply procurement (at least 25%) and thus meet the criteria for a score of 3, there is no plan at UCSF in place currently to continue to expand the percentage of sustainable procurement in each product category that we were able to find in the report.

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: The UCSF Office of Sustainability has published a Healthy Meetings and Event guide, which includes a "Sustainable Meetings and Events" to help event planners make sustainable choices in food, dishware/cutlery, and communication materials and even makes recommendations on transportation for events and how to handle leftover food. There is also a brief webinar posted on the UCSF office of sustainability website that walks event planners through the entire process. As of now, these event sustainability guidelines are recommended but not required.	

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:	2
Score explanation: The Sustainability Certification Program is a university-wide program where a team of experts meet with labs on-site and provide recommendations to reduce the lab's environmental impact, including waste reduction and energy efficiency. Once a lab has expressed interest and the initial assessment is made, action can be taken to "green" the lab. The SCP team then returns during the following quarter to see what improvements have been made and award points. Number of points earned assigns a bronze, silver, gold, or platinum certification, with platinum being the highest sustainability certification level. The program lists 39 labs at UCSF that have a certification, up from 35 last year. The 2024 Sustainability Annual Report further describes that UCSF is pushing for procurement restrictions that would stop labs from purchasing non-Energy Star -80°C freezers in alignment with UCSF's energy conservation policy. UCSF further hopes to accelerate the replacement of all non-Energy Star -80°C freezers through offering the ultra-low-temperature freezer rebate, provided to principal investigators for replacing old non-Energy Star units with new Energy Star freezers, which increased from $4,500 to $10,000.	

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 2019, UC faculty voted to divest from fossil fuel companies. In May 2020, the University reported that it divested $13.4 billion in endowment funds and its $70 billion pension fund from fossil fuels. However, upon comparing the UC's most recent list of asset holdings from 2024 to the Private Equity Stakeholder Project's report on the private equity firms that put the most money into the fossil fuel industry, the UC is still investing in many firms listed in this report including: Blackstone, KKR and co., Apollo, Ares, EnCap, Blackrock, Stonepeak, TPG Capital, and Brookfield. It is true that the UC does not directly invest in oil companies, but these investments demonstrate that the UC is financing a number of extractive industries and oil pipelines that will accelerate climate change despite claims of full divestment.

Section Total (23 out of 32)	**72%**

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

Section	Raw Score %	Letter Grade
Planetary Health Curriculum (30%)	(58/72) x 100 = 81%	A-
Interdisciplinary Research (17.5%)	(17/17) x 100 = 100%	A+
Community Outreach and Advocacy (17.5%)	(12/14) x 100 = 86%	A
Support for Student-led Planetary Health Initiatives (17.5%)	(13/15) x 100= 87%	A
Campus Sustainability (17.5%)	(23/32) x 100 = 72%	B
Institutional Grade	**(81x0.3 + 100x0.175 + 86x0.175 + 87x0.175 + 72x0.175) = 84.4%**	**A-**

Report Card Trends

Section Overview

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