A sustainability mindset enables us to think and act with collective futures in mind. As sustainability-minded individuals, Humber graduates lead by example. They promote equitable and sustainable practices in their professional and personal lives. They act responsibly in environmental, economic and social ways that protect our planet and contribute positively to the well-being of our communities.

Competency	Anticipatory Thinking and Innovation	Equity & Social Justice	Flexibility & Adaptability	Taking Responsibility	Strategic Action	Systems Thinking
Related HLOs	Systems Thinking; Critical Thinking; Collaboration; Innovation; Leadership; Strategic Problem Solving	Equity, Diversity & Inclusion; Systems Thinking; Critical Thinking;	Critical Thinking; Communication; Digital Fluency; Innovation; Leadership; Professionalism	Equity, Diversity & Inclusion; Critical Thinking; Leadership	Critical Thinking; Collaboration; Communication; Innovation; Leadership; Professionalism; Strategic Problem-Solving	Critical Thinking; Innovation; Leadership; Strategic Problem-Solving
Foundational **Developmental**	Generate questions to predict and reflect on possible risk and change (1, 2) Interpret, analyze, and critically evaluate trends presented in statistical data. Apply the Precautionary Principle to real-world problems and scenarios (adapted from (1) Lead and collaborate on innovative projects (1) Envision, analyze, and evaluate possible futures, including scenarios with multi-generational timescales (1)	Identify perspectives of self and others (1) Accept and embrace a diversity of opinions, experiences, or perspectives (1) Demonstrate transcultural understanding with empathy, solidarity, and compassion (1) Understand and sympathize for the needs, perspectives, and actions of others (1) Communicate with compassion and solidarity with others (1) Demonstrate empathy and a willingness to change perception. (1)	Communicate effectively in intercultural and interdisciplinary contexts using appropriate communication technologies (1) Communicate successfully in intercultural contexts through empathy, understanding, and tolerance for ambiguity (4) Cope with conflicts, competing goals and interests, contradictions, and setbacks (1) Critically evaluate how environmental and global issues are presented in media (1)	Initiate learning through self-motivation (1) Behave equitably, ethically and sustainably in personal and professional contexts (1) Show a willingness to learn and innovate (1) Take responsibility for one's actions (1) Take responsibility for motivating others (1) Reflect on one's own values, perceptions and actions (1) Exhibit high frustration tolerance (1) Innovate and act entrepreneurially by taking informed and	Actively and responsibly engage in sustainability initiatives and activities (1) Create, co-create, and collaborate in sustainability initiatives (1) Collaborate with others on the application of ideas and strategies (1) Plan and execute sustainability projects (1) Collaborate on solving problems and conducting research on sustainability issues (1) Design and implement interventions, transitions,	Articulate causal and correlational relationships (1) Identify, empirically verify, and articulate a system's key components, structure, and dynamics (1) Use a sustainable development lens to analyze the interconnections between economic growth, environmental stewardship and social cohesion (OECD p. 6) Analyze complex systems across different scales and domains of inquiry (1) Lead system orientation and mapping in collaborative

Proficient		Explore Indigenous Ways of Being, Knowing & Doing Articulate goals aligned with the UN's Sustainable Development Goals (SDGs), including the eradication of global poverty and hunger, and equal access to economic and natural resources. (4) Describe, negotiate, and reconcile principles, values, aims, and goals for sustainability (1) Apply ethics, justice, social and ecological integrity, and equity	Cope with uncertainty, develop new attitudes and values, and act productively and meaningfully, even when goals shift (OECD 3) Appreciate, evaluate, contextualize, and use knowledge and methods of different disciplines (1)	responsible action (OECD, p. 5) Challenge norms, practices, and opinions (1)	and transformations for sustainability (1) Show empathy while leading and collaborating (1) Deal with conflicts by learning from other perspectives (1) Organize, lead, and control processes, projects, interventions, and transitions (1) Identify scopes of creativity (1) Develop new knowledge, insights, ideas, techniques, strategies and solutions, and applying them to problems both old and new (OECD, p. 5) Create new value by asking questions, collaborating with others and trying to think "outside the box" (p. 5, OECD) Work on complex problems in interdisciplinary contexts	interdisciplinary contexts (1) Application of modelling (qualitative or quantitative) (Lara's note: I need help with this one) Analyze systemic features such as feedback, inertia, stocks and flows, and cascading effects(1) Evaluate complex systems phenomena, including unintended consequences, path dependency, systemic inertia, and intentionality (1)

					Be a “change agent”: Manage, assess and evaluate organizational change towards sustainability goals. (source?)	

Curriculum

Teaching Tip

A sustainability mindset requires interdisciplinary thinking. Consider how your students can engage with sustainability in your field in ways that interconnect to other disciplines:

“The incorporation of [sustainability and sustainable development] into curricula requires systems thinking and interdisciplinary approaches and calls for pedagogical innovations that provide interactive, experiential, transformative, and real-world learning” (Lozano, R., Merrill, Sammalisto, Ceulemans, and Lozano, F., 2017, p. 2)

Sustainability in the Classroom: Formative and Summative Assessment Ideas

- Case studies, real-life challenges, and scenarios
- Reflection tasks – online discussion forms, journals, videos
- Brainstorming, concept mapping, argument maps, and systems mapping
- Supply chain mapping
- Problem finding, problem solving and problem-analysis activities
- Collaborative learning (i.e., jigsaws), community building and social justice activities and projects
- Outdoor education projects (e.g., Humber Arboretum & Centre for Urban Ecology)
- Internationalization and Globalization projects
- Research projects, annotated bibliographies and academic reports
- Futures-thinking exercises
- Design-thinking: empathy, prototyping and iterating

Other sustainability opportunities to consider:

- Experiential Learning
- Gamification
- Backcasting and Outcomes-Thinking project management
- Systems simulations
- Student self-directed project

- Community Service Learning
- Participatory Action Research
- Campus Management Projects (program-wide, institutional wide)

Sample learning outcomes & assessments

Faculty of Business

Sample Learning Outcome	Assessment Ideas
Conduct sustainable fashion management business with consideration for environmental, human and financial issues.	Problem-analysis exercises, Case studies, Futures-thinking exercises
Evaluate barriers to embedding sustainability practices in corporate contexts.	Peer Assessment, Group presentation, Infographic, Student Development of Rubric
Contrast different factors for creating sustainable solutions in relation to core principles: people, the planet and profit.	Presentation of Chart/Table, Infographic, Discussion/Blog Post
Examine the role of social responsibility and culture in organizational performance.	Group presentation, Multimodal Project, Role-Play, Video, Infographic
Define sustainability, sustainable tourism, and the related concepts of sustainable development and impact assessment.	Students generate quizzes for each other; Online poll, Online Discussion/Blog

Faculty of Applied Sciences and Technology

Sample Outcome	Assessment Ideas
Explain the benefits of water conservation.	Paraphrasing Task, Artistic/Graphic, Students generate quizzes; Online poll, Online Discussion/Blog
Identify major Environmental and Resource concerns in Green Building Foundations	Collaborative concept mapping
Discuss the importance of the four R's in packaging: Reduce, Reuse, Recycle and Research.	Group presentation, Gamification (Creative Competition)

Faculty of Social and Community Services

Sample Outcome	Assessment Ideas
Adopt a theoretical framework to analyse a social problem and to draw conclusions about future resolution and impact of social issues	Group community project and presentation, design thinking exercise
Evaluate the impact of special interest groups on social and environmental issues	Futures-thinking exercise, Globalization project, Mapping a system
Examine concepts related to colonization, power, privilege and oppression	Systems mapping and analysis, social justice projects, academic reports
Assess the impact of colonization, racism and intergenerational trauma on Aboriginal Peoples (CRIM 2501)	Systems mapping and analysis, social justice projects
Identify and evaluate the impact of environmental policies on citizens, locally and globally.	Systems mapping and analysis, social justice projects

Faculty of Business

Sample Learning Outcome	Assessment Ideas
Conduct sustainable fashion management business with consideration for environmental, human and financial issues.	Group feasibility project, systems mapping, SWOT analyses
Evaluate barriers to embedding sustainability practices in corporate contexts.	Peer Assessment, Group presentation, Infographic, Student Development of Rubric
Contrast different factors for creating sustainable solutions in relation to core principles: people, the planet and profit.	Presentation of Chart/Table, Infographic, Discussion/Blog Post
Examine the role of social responsibility and culture in organizational performance.	Group presentation, Multimodal Project, Role-Play, Video, Infographic
Define sustainability, sustainable tourism, and the related concepts of sustainable development and impact assessment.	Students generate quizzes for each other; Online poll, Online Discussion/Blog

Faculty of Applied Sciences and Technology

Sample Outcome	Assessment Ideas
Explain the benefits of water conservation.	Paraphrasing Task, Artistic/Graphic, Students generate quizzes; Online poll, Online Discussion/Blog
Identify major Environmental and Resource concerns in Green Building Foundations	Collaborative project, recommendations report, infographic

Faculty of Health Sciences and Wellness

Sample Outcome	Assessment Ideas
Apply best practices for sustainability in biotechnology.	Lab assignments, group project
Analyze the impact of biotechnology on environmental and industrial sectors.	Systems mapping, design thinking exercises, futures-thinking exercise
Apply perspectives and approaches to all areas of development for the purposes of designing learning experiences with a focus on nature, outdoor play, and Indigenous knowledge. (Early Childhood Education)	Field placement assessment, work plan, video proposal, infographic

Faculty of Media Studies and Creative Arts

Sample Outcome	Assessment Ideas
Locate the self in the context of dominant and non-dominant group relations, particularly as it relates to supporting cultural values, production and consumption (ARTC 5200)	Reflection paper, presentation, infographic, systems mapping exercise
Evaluate the ethics and social responsibility of international organizations engaged in PR campaigns from a Canadian perspective as a novice PR practitioner (PBRL 4505)	Critical response paper, collective campaign project

Faculty of Liberal Arts & Sciences and Innovative Learning

Sample Outcome	Assessment Ideas
Explain key theories related to the nature of moral obligations to future generations.	Systems Map, Infographic, Multimodal Report; Documentary Short
Present solutions to complex problems related to our moral obligations to future generations.	Simulations, Case Studies, Systems Map and Report; Podcast, Debate, Model UN Panel

Compare and evaluate opposing positions concerning the future and social change in both global and Canadian contexts. Sociology – An Introduction (SOCI 150) -	Formal debate, systems analysis, futures-thinking exercises

References

Almers, E., (2013). Pathways to action competence for sustainability: Six themes. *The Journal of Environmental Education*. 44(2), 116-127. DOI: 10.1080/00958964.2012.719939

Education for Sustainable Development Goals: Learning Objectives (2018). UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000247444

Humber International Development Institute (IDI) Monitoring Tools for Education for Employment and Community Development (2019). Completed by Marshall Wilcox.

Kealiikanakaoleohaililani, K., Giardina, C. P. (2016). Embracing the sacred: An Indigenous framework for tomorrow's sustainability science. *Sustainability Science*, *11*(1), 57-67.

Lozano, R., Barreiro-Gen, M., Lozano, F. J., & Sammalisto, K. (2019). Teaching sustainability in European higher education institutions: Assessing the connections between competences and pedagogical approaches. *Sustainability*, *11*(6). https://www.mdpi.com/2071-1050/11/6/1602

Lozano, R., Merrill, M. Y., Sammalisto, K., Ceulemans, K. & Lozano, F. J. (2017). Connecting competences and pedagogical approaches for sustainable development in higher education: A literature review and framework proposal. *Sustainability*, *9*(1). https://www.mdpi.com/2071-1050/9/10/1889

Transformative Competencies for 2030. (2019). OCED Future of Education and Skills 2030. https://www.oecd.org/education/2030-project/teaching-and-learning/learning/transformative-competencies/Transformative_Competencies_for_2030_concept_note.pdf