

FSc Teaching & Learning Bulletin

Sustainable Development Goals and Science Education



The 17 interconnected [Sustainable Development Goals \(SDGs\)](#) which were adopted in 2015, focus on five key pillars: people, prosperity, planet, peace, and partnership. The overarching aim of the SDGs is to address and resolve global challenges such as poverty, inequality, health, climate change, and sustainable consumption, and to foster innovation and peace and justice. The goals target the eradication of poverty, preservation of the planet, and the assurance of prosperity and peace for all by 2030. This is to be achieved through global partnerships between developed and developing countries, necessitating immediate action.

In that context, science education plays a vital role in addressing the SDGs in several ways:

- It seeks innovative methods to integrate scientific knowledge and skills into real-world scenarios, and to connect knowledge with values and attitudes relevant to sustainability.

- It equips students with a comprehensive understanding of global challenges, such as climate change, water scarcity, energy transitions, and biodiversity loss.
- It attempts to overcome disciplinary boundaries to provide a thorough understanding of these problems while simultaneously delivering discipline-specific knowledge and skills to solve them.

At York University, the [SDG toolkit](#) is designed to incorporate the SDGs into classroom learning across disciplines. This initiative reinforces the university's commitment to fostering positive change for students, campuses, and local and global communities. By using the SDGs as a pedagogical framework, the toolkit strengthens the connection between education and its impact, aligns purpose with action, and motivates students to contribute towards shaping the future. It enables every program and faculty member to identify opportunities for SDG discussions, activities, or lessons within their classrooms.

The university has also introduced various [teaching approaches](#) to engage students and achieve learning objectives through the incorporation of SDGs into courses. These resources provide guidance on how to actively involve students in the classroom and [offer discipline-specific materials for instructors](#), including [sciences](#). This facilitates interdisciplinary collaboration and the integration of the UN SDGs into any classroom setting.

The [SDGs-in-the Classroom Community of Practice \(COP\)](#) at York University is dedicated to integrating the Sustainable Development Goals (SDGs) into the curriculum. The group, comprising faculty, instructors, administrative staff, and students, uses a co-creation approach to achieve shared goals, drawing on the diverse expertise and experiences of its members. The COP identifies curricular champions, develops resources, and provides support to faculty in embedding the SDGs into their courses and classroom activities. The SDG Curricular Champions, a subgroup of the COP, mentor faculty and promote student engagement in SDG-related activities, including the SDGs-in-Action Student Challenge. The COP's contributions have been instrumental in developing the SDG toolkit and organizing the annual SDG Curricular Showcase Event, which showcases faculty innovation in SDG education. The COP currently has over 60 members at York University.

SDG Resources:

- [How do science, technology and public policy contribute to Sustainable Development Goals?](#)
- [UNESCO Beyond Limits: New Ways to Reinvent Higher Education.](#)
- [UNESCO Knowledge-driven actions: transforming higher education for global sustainability.](#)
- [UNESCO Reimagining our futures together: a new social contract for education.](#)
- [Higher Education in the World Report 8. Special Issue. New Visions for Higher Education towards 2030. Abridged version.](#)
- [Extracts key concepts related to SDGs from documents and files.](#)
- [Compiled Keywords for SDG Mapping.](#)

Charles Hopkins and Katrin Kohl discussed the importance of STEM in addressing the UN's 2030 Agenda for Sustainable Development, emphasizing the urgency of collective responsibility to tackle pressing global issues, during a CoTL-hosted seminar in Winter 2023.

- [Presentation slides](#)
- [Watch the zoom video recording](#)

Below you can find another inspiring presentation by Charles Hopkins, the UNESCO Chair at York University, entitled "Educating for Tomorrow's Unknowns: Sustainability Front and Centre" as part of the Public Lecture Series at York University.

- [Resource List](#)
 - [Presentation Slides](#)
 - [Watch Video](#)
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Recent Workshops

Open Educational Resources (OER)

If you missed the talk on "Exploring Open Education in the Sciences" presented by the Faculty of Science and the Committee on Teaching and Learning (CoTL), featuring Stephanie Quail, Director of the Open Scholarship Department at York University Libraries, you can still catch up.



Please click the link below to watch the recording of this two-hour online workshop and access the presentation slides.

- [Zoom video recording](#)
 - [Presentation slides](#)
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Upcoming Events

FSc Teaching & Learning Coffee & Connect

As teaching faculty, our days can be busy, filled with back-to-back classes, meetings, and other tasks. Here is an opportunity to pause, connect, and recharge over a cup of coffee and treats.

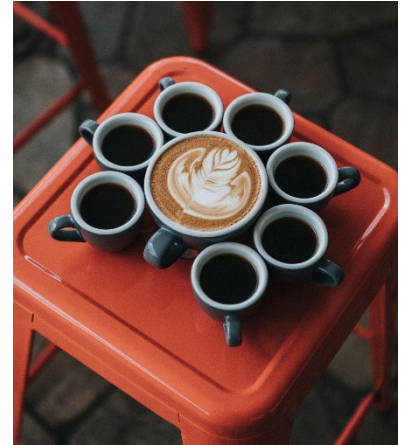
Date: November 15, 2023

Time: between 9 - 11 am

Location: LSB Lobby

Kindly RSVP to let us know you're coming, and we'll ensure we have enough treats to go around!

[REGISTER HERE](#)



The Science Book Club

The EdSci book club is brought to you by the Pedagogical Innovation Chair (PICSE) in collaboration with the FSc Committee on Teaching and Learning (CoTL). All instructors, post-docs, and graduate students in the Faculty of Science are welcome.

The club will be reading [Clark, D., & Talbert, R. \(2023\). Grading for Growth: A Guide to Alternative Grading Practices that Promote Authentic Learning and Student Engagement in Higher Education. Taylor & Francis](#) - which can be accessed through YorkU libraries for free.

[REGISTER HERE](#)

Academic Integrity & Assessment (Workshop Series by the Teaching Commons)

Series of online workshops that explore the intricate relationship between assessment practices and academic integrity. You can choose to attend one, two, or all three of these informative sessions and gain valuable insights into maintaining academic integrity in your teaching environment.

Wednesday, November 1, 2023 | 11:00 am -12:00 pm

Academic Integrity and Summative Tests and Exams

Registration is now closed

Wednesday, November 8, 2023 | 11:00 am -12:00 pm

Academic Integrity and Group Work

****Note new date - rescheduled from October 4, 2023****

[REGISTER HERE](#)

Access and Equity in Online Teaching

In this fully online course, participants will embark on a journey of experiential learning. Each week, you will engage in hands-on learning activities designed to help you explore and implement strategies for leveraging online technology to enhance access and promote equity.

This course will run from **November 13 to December 15, 2023** and can count towards the Certificate of Proficiency in Teaching for eLearning.

[REGISTER HERE](#)

Doing and Building Access in Experiential Education (*in-person*)

Experiential education offers a dynamic and enriching learning opportunity for students and often plays a crucial role in course or program completion. However, it's important to acknowledge that many disabled and marginalized students encounter new or heightened barriers to access in experiential education settings. This is why this workshop is dedicated to addressing these challenges and fostering a more inclusive learning environment.

This session will take place on **Thursday, November 14th, from 2:00 pm - 3.30 pm** in DB 1012 (Keele Campus).

[REGISTER HERE](#)

Course Design Intensive Workshop

This is a one-week intensive online workshop designed to get you started on your course design journey. This workshop is tailored for course directors who are eager to revamp existing courses or create entirely new course designs.

*There are two synchronous meetings during the workshop. Please note that attendance at both synchronous sessions is mandatory, and there are asynchronous activities that you will be expected to complete during that week.

The synchronous workshops are scheduled at:

Wednesday, December 6, 2023 and Wednesday, December 13, 2023
10:30 am to 12:00 pm

[REGISTER HERE](#)

Instructional Skills Workshop (ISW) (*in person*)

This is an intensive, 3-day peer-based workshop. You will teach 10-minute lessons on each of the three days, and receive feedback from peers. There will be plenty of opportunities to individually and collectively further develop your teaching effectiveness.

*Please note that registration closes on Monday December 4, at 11:59pm ET

Since this workshop is peer-based, your commitment to participate on all 3 days, **Tuesday, December 12, Wednesday, December 13, and Thursday, December 14** is required, as your success depends on the other participants in the workshop, and their success in the workshop depends on you.

[REGISTER HERE](#)

Since this workshop is peer-based, your commitment to participate on all 3 days—**Monday, December 18, Tuesday, December 19, & Wednesday, December 20**—is required, as your success depends on the other participants in the workshop and their success in the workshop depends on you.

[REGISTER HERE](#)

We want to hear from you!

Do you have an idea, suggestions, feedback, or comments to share? Whether you'd like to discuss specific matters or engage in conversations on a wide range of topics related to teaching and learning, we welcome your input.

We invite you to reach out to us by email at aacp@yorku.ca or sciadcp@yorku.ca. Your insights are invaluable, and we genuinely appreciate your contributions.
