



INTERNATIONAL DAY OF WOMEN AND GIRLS IN SCIENCE

**With the Aga Khan Museum and
Ontario Science Centre 2025**



AGA KHAN MUSEUM



**ONTARIO
SCIENCE
CENTRE**
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Program Information

Date: February 19, 2025

Time: 11 am–12 pm

Length of session: 1 hour

Target audience: Grades 6–12

Format: Virtual

Free | Register here: [LINK](#)

Registration will be open from January 30 to February 18, 2025



Program Information

Join us for a special virtual event in celebration of International Day of Women and Girls in Science, where we honour the incredible contributions of women in both the sciences and the arts. This event offers a unique opportunity for students to explore how these fields intersect and complement each other, shaping our understanding of the world and solving real-world challenges.

Through insightful conversations with two inspiring guest speakers — Radha Chaddah, a visual artist and scientist, and Thuc-Nghi Pham, a Science Educator at the Ontario Science Centre — students will gain valuable perspectives on career paths, the impact of creativity on scientific inquiry, and the role of science in artistic expression.

This event is designed to spark curiosity, critical thinking, and meaningful dialogue, with an interactive Q&A session where students can engage directly with our speakers.

Celebrate the remarkable achievements of women in science and discover how their contributions continue to shape and transform our world.



1.1 Aga Khan Museum Mission and Vision

Mission – Through the arts, the Aga Khan Museum sparks wonder, curiosity, and understanding of Muslim cultures and their connection with other cultures.

Vision – To impact lives and contribute to more inclusive and peaceful societies.

1.2 Goals

- Understand how the arts and sciences intersect and complement each other in solving real-world problems.
- Discover the unique experiences of our guest speakers and explore the wide range of career opportunities in both the arts and sciences.
- Gain valuable insights into their personal and professional journeys across these fields.
- Develop an appreciation for how creativity shapes scientific inquiry and how science informs artistic expression.
- Enhance their critical thinking and questioning skills through an interactive Q&A session with the guest speakers.



Radha Chaddah

Radha Chaddah is a Toronto based visual artist and scientist. Born in Owen Sound, Ontario she studied Film and Art History at Queen's University (BAH), and Human Biology at the University of Toronto, where she received a Master of Science for her research on stem cells. Radha makes art about invisible things using light as her primary medium.

Her work examines the interconnectedness of our material reality from the micro to the macro. In her studio she designs large scale projected light installations for public exhibition. She shoots her source imagery in laboratories at the University of Toronto, using electron and fluorescence microscopes. Her photographs and light installations have been exhibited across Canada and internationally. She has lectured on her artistic practice and cell biology at the Aga Khan Museum, the University of Toronto, the Ontario College of Art and Design University and the Textile Museum of Canada. Radha is the founder of Under 5 Studio, which brings together traditional and new media artists to produce work for public exhibition.



Thuc-Nghi Pham

Thuc-Nghi Pham is a Science Educator at the Ontario Science Centre. She finished her undergraduate studies in Biomedical Sciences at York University, where she also worked at the Science Engagement Program, which provides science camps and programs to the community. Through her work there, she fell in love with the field of informal education. She later completed her Masters of Science in Molecular and Cellular Biology at York University, where her thesis explored how erythropoietin inhibits chemotherapy-induced cell death in leukemia cells through a p53-based pathway.

As a Science Educator, Thuc-Nghi creates engaging and fun educational experiences, livestreams, shows, and workshops for students from kindergarten to grade 12. Some programs she has worked on include a virtual cells and systems program focused on providing a holistic view of how the environment affects cells and organs, and a high school biotechnology symposium about CRISPR and the ethical implications of genomic editing.

In her spare time, she enjoys drawing portraits while on the subway, making science-themed papercraft and pop-up cards, playing video games, and freelancing as a graphic designer.



Program Highlights

- Guest Speaker Conversations: Explore the intersections of arts and science through the stories and experiences of Radha Chaddah and Thuc-Nghi Pham.
- Q&A Session: Engage with our speakers and ask questions about their career paths, challenges, and successes.

About the Partnership

The partnership between the Aga Khan Museum and the Ontario Science Centre represents an innovative collaboration that bridges art, science, and education to deliver exceptional learning experiences. By combining the Museum's expertise in cultural storytelling and artistic exploration with the Science Centre's leadership in scientific discovery and interactive engagement, this partnership creates programs of unparalleled quality.

Through initiatives like *Illuminating Minds: The Art and Science of Light*, the partnership reimagines how art and science can work together to inspire curiosity and foster a deeper understanding of the world. This forward-thinking collaboration exemplifies a shared commitment to delivering impactful, interdisciplinary programs that connect learners with new ideas, ignite their creativity, and enrich their educational journeys.

Curriculum Connections

GRADE 10

Grade	Subject	Overall Expectations	Specific Expectations
10	Career Studies (GLC20)	B. Exploring and Preparing for the World of Work B3. Identifying Possible Destinations and Pathways	B3.1 use a research process to identify and compare a few postsecondary options that suit their aspirations, skills, interests, values, and personal circumstances. B3.2 identify the pathways towards their preferred destinations, including the courses and/or specialized programs that lead to the destination and meet the requirements for a secondary school certificate or diploma, as well as the supports available at school and in the community that can enhance their secondary education.

GRADE 11-12

Grade	Subject	Overall Expectations	Specific Expectations
11	Biology (SBI3U) Chemistry (SCH3U) Environmental Science (SVN3M) Physics (SPH3U)	A. Scientific Investigation Skills and Career Exploration A2. Career Exploration	A2.1 identify and describe a variety of careers related to the fields of science under study and the education and training necessary for these careers. A2.2 describe the contributions of scientists, including Canadians to the fields under the studies.
	Gender Studies (HSG3M)	A. Research and Inquiry Skills A1. Exploring B. Foundations B1. The Social Construction of Gender B2. Power Relations, Sex, and Gender B3. Representations of Gender D. Implementing Change D1. Changes in the Workplace D2. Agents of Change	A1.1 explore a variety of topics related to gender studies to identify topics for research and inquiry. B1.2 explain how gender norms are socially constructed and may be culturally specific and describe possible tensions between an individual's gender performance and societal norms. B1.5 assess ways in which socially constructed gender roles and norms reflect the realities of women's and men's lived experiences locally and globally. B2.1 analyse the ways in which power and privilege are unequally distributed between and among males and females in homes, schools, workplaces, and community settings. B2.2 explain the differences as well as the links between individual and systemic forms of sexism and discrimination and describe ways in which these forms manifest themselves. B2.4 explain variations in power relations between men and women within patriarchal and matriarchal societies. B3.2 analyse the impact on individuals of stereotypical representations of gender in media and popular culture. B3.4 describe how visual art works, literature, and film can raise awareness of gender equity and changing gender expectations in society. D1.1 describe, with reference to both Canadian and global contexts, accomplishments of and barriers faced by women and men in areas in which females or males have been traditionally underrepresented. D1.2 assess the extent of changes that have occurred in the world of work as a result of women and men entering areas in which they have traditionally been underrepresented. D1.4 explain individual and systemic factors that contribute to the ongoing occupational segregation of men and women in certain jobs or professions. D2.2 describe a range of organizations outside Canada, including international organizations and initiatives, that contribute to gender equity.
	Equity, Diversity, and Social Justice (HSE3E)	A. Research and Inquiry Skills A1. Exploring B. Foundations B1. The Social Construction of Identity B3. Social Awareness and Individual Action	A1.1 explore a variety of topics related to equity, diversity, and/or social justice. B1.1 explain how various aspects of identity may be socially constructed and internalized. B1.4 explain how biases and stereotypes, including those related to race, class, gender, and sexual orientation, are transmitted through the media and popular culture and describe their possible impact on individuals. B3.1 describe ways in which one's personal choices or behaviour can help empower individuals and reduce the impact of inequity or social injustice in local, national, and international contexts. B3.3 explain how the media and popular culture can help create awareness of equity, social justice, and environmental issues.
	Designing Your Future (GWL30)	Personal Knowledge and Management Skills	Self-Knowledge: identify occupations and career goals that align with their interests and skills and identify the areas of growth needed to meet these goals.

Curriculum Connections

		Interpersonal Knowledge and Skills Exploration of Opportunities	<p>Connecting with the Community: demonstrate the ability to develop networks and other supportive relationships with individuals and groups in the school and community in a variety of ways for assistance with career exploration and planning.</p> <p>Opportunities: identify and describe selected community involvement and/or leisure opportunities that can contribute to their postsecondary work and learning goals.</p>
12	Biology (SBI4U) Chemistry (SCH4U) Earth and Space Science (SES4U) Physics (SPH4U) Science (SNC4M)	A. Scientific Investigation Skills and Career Exploration A2. Career Exploration	<p>A2.1 identify and describe a variety of careers related to the fields of science under study and the education and training necessary for these careers.</p> <p>A2.2 describe the contributions of scientists, including Canadians to the fields under the studies.</p>
	Challenge and Change in Society (HSB4U)	B. Social Change B2. Causes and Effects of Social Change	B2.6 explain the impact of social change on individuals in Canada and on Canadian society.
	Equity and Social Justice: From Theory to Practice (HSE4M)	Strand: B. Understanding Social Construction B1. Approaches and Perspectives B3. Media and Popular Culture Strand: C. Addressing Equity and Social Justice Issues C1. Historical and Contemporary Issues C2. Leadership Strand: D. Personal and Social Action D1. Promoting Equity and Social Justice	<p>B1.5 analyse how legislation, the courts, and public policy approach equity and social justice issues.</p> <p>B3.1 analyse stereotypes found in the media and popular culture and assess their impact.</p> <p>B3.3 demonstrate an understanding of various ways in which media and popular culture can be used to raise awareness of equity and social justice issues.</p> <p>C1.1 analyse the rationale for specific instances of social injustice in Canadian history and demonstrate an understanding of how perspectives on the issues related to these historical injustices have changed.</p> <p>C1.2 analyse a broad range of current equity and social justice issues in Canada with reference to the underlying social circumstances and potential strategies for addressing the issues.</p> <p>C2.1 evaluate the achievements of a range of individual Canadians in the areas of equity and social justice.</p> <p>D1.2 describe how education can help promote equity and social justice.</p>
	World Cultures (HSC4M)	B. The Concept of Culture B1. Understanding Culture	B1.3 describe multiple ways in which culture can influence an individual's perceptions, attitudes, and behaviours and can shape social institutions and practices.
	Canada: History, Identity and Culture (CHI4U)	E. Canada Since 1945 E1. Setting the Context E3. Diversity and Citizenship	<p>E1.1 analyse key social/cultural trends and developments in Canada during this period, including changes in social attitudes/values and assess their significance for the development of Canada, including the development of identity in Canada.</p> <p>E1.3 analyse ways in which technological and/or scientific developments during this period have contributed to the development of identity in Canada.</p> <p>E3.2 analyse how the lives, roles, and rights of Canadian women changed during this period</p>
	World Issues: A Geographic Analysis (CGW4C)	E. Changing Societies E2. Human Rights and Quality of Life	E3.2 analyse national and international responses to human rights violations in various parts of the world.

