



Illuminating Minds: The Art and Science of Light

2024-2025



AGA KHAN MUSEUM



ONTARIO
SCIENCE
CENTRE
An agency of the
Government of Ontario



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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.

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.



Program Description

Embark on an exciting journey where science, art, and history converge in *Illuminating Minds: The Art and Science of Light*, a collaborative program by the Aga Khan Museum and the Ontario Science Centre. Students will delve into the Museum's Collections alongside *Light: Visionary Perspectives* – the 10th-anniversary exhibition, featuring immersive installations that challenge perceptions and inspire reflection on the boundless possibilities of light.

Complementing this artistic exploration, the Ontario Science Centre brings the science of light to life through interactive demonstrations and experiments, deepening students' understanding of light's role in the natural and technological world.

Aligned with the Ontario curriculum, the program connects visual arts, science, and social studies, while promoting creative and critical thinking for Grades 4 to 12.

From the art of storytelling to the science of optics, light, and shadow, students will engage in dynamic, cross-disciplinary learning that fosters creativity, curiosity, and an appreciation for how light shapes our understanding of the world.



Learning Outcomes

Knowledge and Understanding

- Understand the role of light in both art and science, including its historical and contemporary applications in Islamic art, optics, and modern scientific contexts.
- Describe the relationship between art and science, particularly how light, optics, and geometric design intersect in both cultural and scientific explorations.

Skills and Abilities

- Apply scientific principles of light, optics, and shadow through interactive demonstrations and experiments, linking these concepts to artistic practices.
- Interpret artworks and installations from the *Light: Visionary Perspectives* exhibition, analyzing the artistic use of light, shadow, and perception.

Attitudes, Behaviors, and Values

- Develop an appreciation for light's significance across cultures, fostering respect for the connections between art, science, and history.
- Cultivate curiosity and engagement with cross-disciplinary learning, showing enthusiasm for discovering how light influences both creative expression and scientific inquiry.

Understanding Concepts and Processes

- Analyze the scientific and artistic implications of light, optics, and shadow, exploring their impact on perception, creativity, and technological advancements.
- Evaluate the cultural and historical importance of light in Islamic art, recognizing its dual role in both artistic innovation and scientific exploration.

Think, Organize, Learn, and Behave

- Use critical thinking strategies to connect artistic and scientific concepts, reflecting on how light shapes our understanding of the world across multiple disciplines.
- Adjust personal learning strategies based on insights gained from the program, integrating artistic and scientific knowledge in creative and analytical ways.



Social Outcomes

Stronger and Safer Communities

1. **Foster collaboration and respect:** Through interdisciplinary learning, students engage in cooperative activities that encourage teamwork, communication, and the appreciation of diverse perspectives, helping to create inclusive environments both in and out of the classroom.

Strengthening Public Life

1. **Enhance engagement:** The program encourages active participation in the exploration of art and science, empowering students to contribute meaningfully to discussions and engage in broader community conversations about these fields.
2. **Promote cultural and scientific literacy:** By connecting art and science, the program strengthens students' understanding of both, enriching their perspectives and equipping them with the tools to become informed and engaged citizens.

Collaboration Impact

1. **Strengthen community ties through collaboration:** The partnership between the Aga Khan Museum and the Ontario Science Centre exemplifies the power of cultural and scientific institutions working together to provide high-quality, interdisciplinary programs that meet the educational needs of local communities and inspire deeper engagement with art and science.



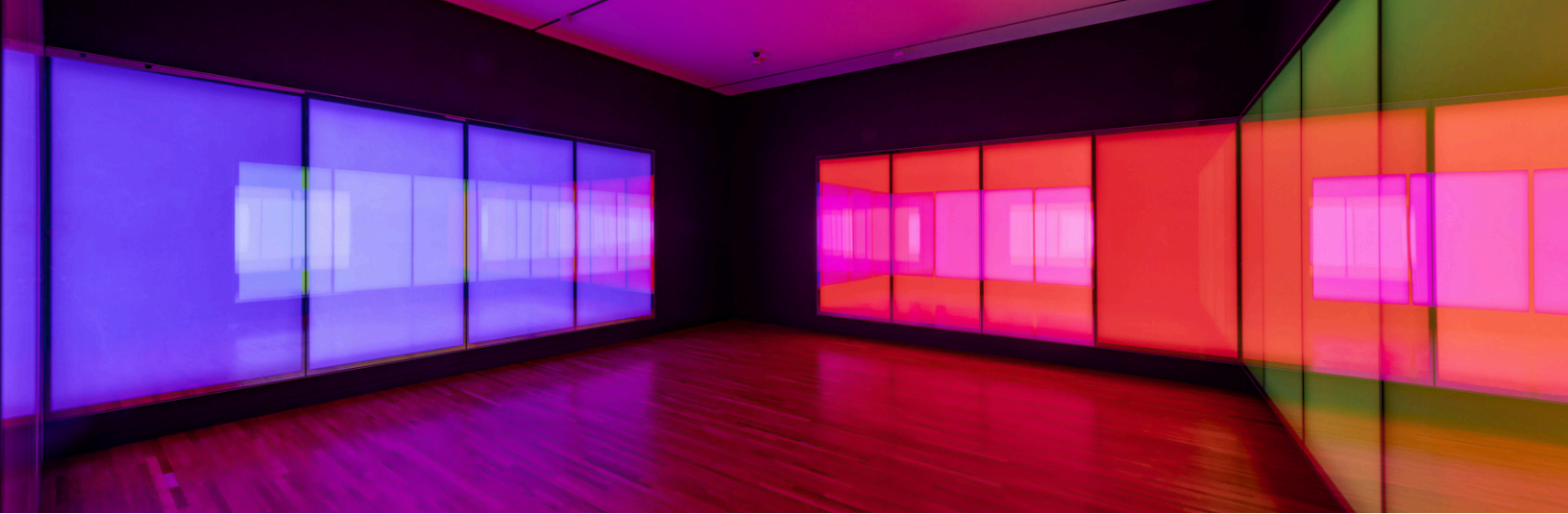
Curriculum Connections

Grades 4-6

Grade	Subject	Strand	Overall Expectation
4	The Arts	D. Visual Arts	D2. Reflecting, Responding, and Analyzing D3. Exploring Forms and Cultural Contexts
	Science and Technology	A. STEM Skills and Connections C. Matter and Energy, <i>Light and Sound</i>	A1. STEM Investigation and Communication Skills A3. Applications, Connections, and Contributions C1. Relating Science and Technology to our Changing World C2. Exploring and Understanding Concepts
5	The Arts	D. Visual Arts	D2. Reflecting, Responding, and Analyzing D3. Exploring Forms and Cultural Contexts
	Science and Technology	A. STEM Skills and Connections	A1. STEM Investigation and Communication Skills A3. Applications, Connections, and Contributions
6	The Arts	D. Visual Arts	D2. Reflecting, Responding, and Analyzing D3. Exploring Forms and Cultural Contexts
	Science and Technology	A. STEM Skills and Connections	A1. STEM Investigation and Communication Skills A3. Applications, Connections, and Contributions
	Social Science	A. Heritage and Identity: Communities in Canada, Past and Present	A1. Application: Diversity, Inclusiveness, and Canadian Identities A2. Inquiry: The Perspectives of Diverse Communities

Grades 7-8

Grade	Subject	Overall Expectation	Specific Expectation/ Strand
7	The Arts	D. Visual Arts	D2. Reflecting, Responding, and Analyzing D3. Exploring Forms and Cultural Contexts
8	The Arts	D. Visual Arts	D2. Reflecting, Responding, and Analyzing D3. Exploring Forms and Cultural Contexts



Curriculum Connections, *cont.*

Grades 9-12

Grade	Subject	Overall Expectation	Specific Expectation/ Strand
9	Visual Arts	B. Reflecting, Responding and Analyzing	B1. The Critical Analysis Process B2. Art, Society, and Values B3. Connections Beyond the Classroom
		C. Foundations	C2. Conventions and Techniques
10	Visual Arts	B. Reflecting, Responding and Analyzing C. Foundations	B1. The Critical Analysis Process B2. Art, Society, and Values B3. Connections Beyond the Classroom C2. Conventions and Techniques
	Science	A. Scientific Investigation Skills and Career Exploration E. Physics: Light and Geometric Optics	A1. demonstrate scientific investigation skills (related to both inquiry and research) in the four areas of skills E1. Relating Science to Technology, Society, and the Environment E2. Developing Skills of Investigation and Communication E3. Understanding Basic Concepts
11	Visual Arts	B. Reflecting, Responding and Analyzing C. Foundations	B1. The Critical Analysis Process B2. Art, Society, and Values B3. Connections Beyond the Classroom C2. Conventions and Techniques
12	Visual Arts	B. Reflecting, Responding and Analyzing C. Foundations	B1. The Critical Analysis Process B2. Art, Society, and Values B3. Connections Beyond the Classroom C2. Conventions and Techniques
	Science, Physics	E. The Wave Nature of Light	E1. Relating Science to Technology, Society, and the Environment E2. Developing Skills of Investigation and Communication E3. Understanding Basic Concepts