

LIFE CYCLE OF A TEXTILE – SCHOOL PROGRAM

The *Life Cycle of a Textile* program will facilitate students' learning about textiles: what they are, and where they come from. Students will gain confidence in understanding different fibres and fabrics, as well as the social and environmental impact of the production, use, and disposal of textiles.

Through processes of inquiry, self-reflection, critical analysis, and hands-on skill-building, students will be invited to examine the ways in which they contribute to the life cycles of textiles in their lives, and how they themselves can take on practices of sustainability and stewardship with their own clothing.

The Textile Museum of Canada developed *the Life Cycle of a Textile Program* for Grade 6-12 students by analyzing the Ontario school curriculum. This program has a direct link to their studies in Science, Geography, Environmental Science, Biology, Equity, Diversity, Social Justice, Clothing, and Fashion.

The program will be tailored to each student group through consultation with educators, aligning the visit with current class content, learning expectations, and accessibility needs.

Links to the Ontario Curriculum Learning Expectations, Grade 6-12 (2023-24):

Sustainability is the concept of meeting the needs of the present without compromising the ability of future generations to meet their needs. Stewardship involves understanding that we need to use and care for the natural environment in a responsible way and making the effort to pass on to future generations no less than what we have access to ourselves. Values that are central to responsible stewardship are: using non-renewable resources with care; reusing and recycling.

Grade 6

Science and Technology

B1. Relating Science and Technology to Our Changing World

- Students will consider how **biodiversity** is affected by water system pollution in the textile industry

Sustainability & Stewardship

- Students will learn best practices for sustainability and stewardship – how repairing clothing and wearing natural fibres has a positive impact on the environment

Social Studies

B. People and Environments: Canada's Interaction with the Global Community

- Students will consider the importance of international cooperation when addressing the global issue of climate change

- Students will address Canada's role in the global textile manufacturing process, and how this impacts the environment and resources in other countries.

Grade 7

Science and Technology

B1. Relating Science and Technology to Our Changing World

- Students will learn the impact of human activities and technologies on the environment, through the lens of the textile and fashion industries
- Students will assess personal practices which can mitigate negative impacts and contribute to environmental sustainability

Geography

A. Physical Patterns in a Changing World

- Students will see objects from our Collection that were created using natural and recycled materials in response to climate change and pollution

B. Natural Resources Around the World: Use and Sustainability

- Students will consider how the extraction of oil is used to create textiles, and compare and contrast this process with the creation of textiles from other natural and manmade materials.

Grade 8

Science & Technology

C1. Relating Science and Technology to Our Changing World

- Students will learn how the textile industry impacts the scarcity of clean, fresh water

Sustainability & Stewardship

- Students will learn best practices for sustainability and stewardship – how repairing clothes and wearing natural fibres has a positive impact on the environment

Grade 9

Issues in Canadian Geography

B. Interactions in the Physical Environment

- Students will consider which textiles might be created in Canada, globally, and the environmental cost of moving resources or products between countries.

C. Managing Canada's Resources and Industries

- Students will analyze the sustainability of various resources used in creating textiles
- Students will consider the difference between cottage industries and commercial industries

Science

B. Biology

Sustainable Ecosystems and Climate Change

- Students will learn best practices for sustainability and stewardship:
 - How personal actions such as repairing clothes and wearing natural fibres can positively impact the environment
 - How wearing mended clothing is a political action that can impact the societal perception of what is “fashionable”.
 - How organizing clothing swaps and other group activities is a small but meaningful action that can impact their peers, and grow into larger actions that impact society.
- Students will consider how the government could impact environmental issues, in relation to sustainability, through legislating against “fast-fashion” and unethical production of textiles.

Grade 10

Applied Science

D. Earth and Space Science: Earth’s Dynamic Climate

- **D1.** analyse effects of human activity on climate change, and effects of climate change on living things and natural systems
- **D2.** investigate various natural and human factors that have an impact on climate change and global warming
- **D3.** demonstrate an understanding of various natural and human factors that contribute to climate change and global warming.
- Students will analyse how the textile and fashion industries have positive and negative effects on climate change, human rights, animal rights, and the natural environment.
- Students will consider how the government could impact environmental issues, in relation to sustainability, through legislating against “fast-fashion” and unethical production of textiles.
- Students will identify how Canadian’s contribute to climate change through the textile and fashion industries, within the country and in majority-world countries.

Academic Science

D. Earth and Space Science: Climate Change

- **D1.** analyse some of the effects of climate change around the world, and assess the effectiveness of initiatives that attempt to address the issue of climate change
- **D2.** investigate various natural and human factors that influence Earth’s climate and climate change
- **D3.** demonstrate an understanding of natural and human factors, including the greenhouse effect, that influence Earth’s climate and contribute to climate change.
 - Students will analyse how the textile and fashion industries have positive and negative effects on climate change, human rights, animal rights, and the natural environment.
 - Students will consider how the government could impact environmental issues, in relation to sustainability, through legislating against “fast-fashion” and unethical production of textiles.

- Students will identify how Canadian's contribute to climate change through the textile and fashion industries, within the country and in majority-world countries.

Clothing

- **C3.1** identify common natural and synthetic fibres (*e.g., cotton, silk, linen, wool, hemp, rayon, polyester, nylon, spandex*) and describe their characteristics
 - Students will have the opportunity to touch and view different fibres, and will discuss their characteristics
- **C3.2** explain how knowledge of natural and synthetic fibres and fabrics, including how they are produced, can affect clothing choices (*e.g., the selection of breathable lightweight cottons and rayons for summer clothes; wool or polar fleece for winter outerwear; silk or cashmere for softness next to the skin; organic cotton or hemp to limit environmental damage arising from the production of traditionally farmed cotton or petroleum-based polyester; down or synthetic fibre for insulation in outerwear*)
 - Students will learn how fibres are produced, and compare the methods of production in relation to environmental sustainability.
- **C3.3** describe ways, including environmentally responsible ways, to care for garments to maintain their appearance and extend their life (*e.g., with respect to following clothing care labels; laundering, ironing, removing stains from, and storing garments made from different kinds of fabrics; using environmentally responsible detergents and stain-removal practices*)
 - Students will consider the importance of taking care of clothing in relation to environmental sustainability. This includes looking at the fibre content of labels, and properly laundering items
- **D2. Tools and Technologies:** identify a variety of tools and technologies associated with the creation of clothing and accessories, and use tools and technologies safely and correctly when creating and/or repairing clothing and accessories;
- **D3. Procedures, Skills, and Techniques:** demonstrate the ability to use appropriate procedures, skills, and techniques to create and repair clothing or accessories
- Students will participate in a hands-on activity to learn the ability to repair and/or alter personal clothing or accessories using basic sewing skills
- Students will consider how they may create new clothing or accessories from recycled materials or garments

Grade 11

Environmental Science, Post-Secondary Preparation

- **B1.** analyse social and economic issues related to an environmental challenge, and how societal needs influence scientific endeavours related to the environment
- **B2.** investigate a range of perspectives that have contributed to scientific knowledge about the environment, and how scientific knowledge and procedures are applied to address contemporary environmental problems
- **B3.** demonstrate an understanding of major contemporary environmental challenges and how we acquire knowledge about them.

- Students will consider the social and economic issues related to the textile and fashion industries
- Students will learn how human activities have led to environmental problems, through the lens of the textile and fashion industries
- Students will identify how the textile and fashion industries impact vulnerable communities, in Canada and in majority-world countries
- **E1.** analyse economic, political, and environmental considerations affecting waste management strategies
- **E2.** investigate the effectiveness of various waste management practices
- **E3.** demonstrate an understanding of the nature and types of waste and strategies for its management.
 - Students will learn about textile waste in Canada, and how that waste is managed.

Understanding Fashion

- **C2. Fabrics, Fibres, and the Environment**
 - Students will learn the characteristics of knit, woven, and manmade textiles, as well as their applications in fashion, home décor, and industrial settings.
 - Students will be given a basket of fibre samples, to touch and compare.
 - Students will view items from our Collection created with natural dyes. They will see physical samples of natural dyes such as madder root, indigo powder, and cochineal.
 - Students will compare the production process of various fibres and fabrics, and discussing them in relation to environmental sustainability.

Equity, Diversity & Social Justice, Workplace Preparation

- **B3.1** describe ways in which one’s personal choices or behaviour (*e.g., socially conscious consumption, support for fair/ethical trade, involvement in co-construction of public policy, personal language use, expanding one’s political awareness*) can help empower individuals and reduce the impact of inequity or social injustice in local, national, and international contexts
Students will demonstrate an understanding of the effects of individual actions that are grounded in environmental awareness
 - Students will discuss how wearing mended clothing is a political action that can impact the societal perception of what is “fashionable”.
 - Students will consider how organizing clothing swaps and other group activities is a small but meaningful action that can impact their peers, and grow into larger actions that impact society.
- **D2. Human Rights, Equity, and Antidiscrimination:** demonstrate an understanding of their rights and responsibilities relating to equity and human rights, and of how to appropriately address situations involving discrimination, harassment, and the denial of rights
 - Students will learn how the production of textiles and the fast-fashion industry can be a human-rights issue in which workers are exploited for capital gain

Earth and Space Science, Post-Secondary Preparation

- **E1.** analyse technologies used to explore for and extract Earth materials, and assess the economic and environmental impact of the exploitation of such materials
 - Students will consider how the extraction of oil is used to create textiles, and compare this process with the creation of textiles from other natural and manmade materials.

The World of Fashion, Post-Secondary Preparation

- **C2. Global Textile Production**
 - Students will learn how fibres are produced, and compare the methods of production in relation to environmental sustainability.
 - Students will learn how the production of textiles and the fast-fashion industry can be a human-rights issue in which workers are exploited for capital gain
 - Students will consider how the extraction of oil is used to create textiles, and compare this process with the creation of textiles from other natural and manmade materials.
- **C3. Globalization and Social Responsibility**
 - Students will discuss the ethics behind the globalization of the fashion industry, and the implications of outsourcing production to world-majority countries
 - Students will compare cottage-industries and mass-manufacturing; especially how the fast fashion industry contributes to human rights violations.
 - Students will consider the impact of “fast-fashion” on local artists/craftspeople who create socially-responsible fashion.
 - Students will discuss responsible fashion choices including mending their clothing, purchasing second-hand, using local marketplaces, and supporting artists.

Equity & Social Justice: From Theory to Practice, Post-Secondary Preparation

- **D1.** Promoting Equity and Social Justice: demonstrate an understanding of how personal values, knowledge, and actions can contribute to equity and social justice, and assess strategies that people use to address equity and social justice concerns
 - Students will discuss how wearing mended clothing is a political action that can impact the societal perception of what is “fashionable”.
 - Students will consider how organizing clothing swaps and other group activities is a small but meaningful action that can impact their peers, and grow into larger actions that impact society.

Challenge & Change in Society, Post-Secondary Preparation

- **B2.3** explain various means of creating social change (*e.g., direct action, protest, advocacy, community organization, revolution, political activism*)
 - Students will discuss how wearing mended clothing is a political action that can impact the societal perception of what is “fashionable”.
 - Students will consider how organizing clothing swaps and other group activities is a small but meaningful action that can impact their peers, and grow into larger actions that impact society.

- **D3.1** describe the effects of unfair exploitation (*e.g., black market sales, human trafficking, the drug trade, human rights violations, use of child labour, expropriation of land*) on individuals and groups
 - Students will learn about the unfair exploitation within the textile and fashion industries, especially in the context of “fast-fashion”
- **D3.3** Identify environmental changes that have resulted from the unchecked exploitation of fossil-fuel resources (*e.g., environmental degradation, climate change*), and assess the impact of these changes on the well-being of Canadians
 - Students will consider how the extraction of oil is used to create textiles, and discuss how this impacts the environment