

Main Criteria: Forward Education
Secondary Criteria: Ontario Curriculum
Subjects: Mathematics, Science, Technology Education
Grades: 7, 8, Key Stage 3

Forward Education

Smart Farming with Hydroponics & LED Grow Lights

Ontario Curriculum
Mathematics
Grade 7 - Adopted: 2020

STRAND / COURSE		Ontario Mathematics Curriculum Expectations – Grade 7
STRAND / OVERALL EXPECTATION	B.	NUMBER
STAGE / SKILLS	B2.	use knowledge of numbers and operations to solve mathematical problems encountered in everyday life
SUB-ORGANIZER / SPECIFIC EXPECTATION		Multiplication and Division

EXPECTATION B2.9. multiply and divide decimal numbers by decimal numbers, in various contexts

STRAND / COURSE		Ontario Mathematics Curriculum Expectations – Grade 7
STRAND / OVERALL EXPECTATION	C.	ALGEBRA
STAGE / SKILLS	C2.	demonstrate an understanding of variables, expressions, equalities, and inequalities, and apply this understanding in various contexts
SUB-ORGANIZER / SPECIFIC EXPECTATION		Equalities and Inequalities

EXPECTATION C2.3. solve equations that involve multiple terms, whole numbers, and decimal numbers in various contexts, and verify solutions

STRAND / COURSE		Ontario Mathematics Curriculum Expectations – Grade 7
STRAND / OVERALL EXPECTATION	D.	DATA
STAGE / SKILLS	D1.	manage, analyse, and use data to make convincing arguments and informed decisions, in various contexts drawn from real life
SUB-ORGANIZER / SPECIFIC EXPECTATION		Data Visualization

EXPECTATION D1.4. create an infographic about a data set, representing the data in appropriate ways, including in tables and circle graphs, and incorporating any other relevant information that helps to tell a story about the data

Ontario Curriculum
Mathematics
Grade 8 - Adopted: 2020

STRAND / COURSE		Ontario Mathematics Curriculum Expectations – Grade 8
STRAND / OVERALL EXPECTATION	C.	ALGEBRA
STAGE / SKILLS	C2.	demonstrate an understanding of variables, expressions, equalities, and inequalities, and apply this understanding in various contexts
SUB-ORGANIZER / SPECIFIC EXPECTATION		Equalities and Inequalities

EXPECTATION C2.3. solve equations that involve multiple terms, integers, and decimal numbers in various contexts, and verify solutions

STRAND / COURSE		Ontario Mathematics Curriculum Expectations – Grade 8
STRAND / OVERALL EXPECTATION	D.	DATA
STAGE / SKILLS	D1.	manage, analyse, and use data to make convincing arguments and informed decisions, in various contexts drawn from real life
SUB-ORGANIZER / SPECIFIC EXPECTATION		Data Collection and Organization

EXPECTATION D1.2. collect continuous data to answer questions of interest involving two variables, and organize the data sets as appropriate in a table of values

STRAND / COURSE		Ontario Mathematics Curriculum Expectations – Grade 8
STRAND / OVERALL EXPECTATION	D.	DATA
STAGE / SKILLS	D1.	manage, analyse, and use data to make convincing arguments and informed decisions, in various contexts drawn from real life
SUB-ORGANIZER / SPECIFIC EXPECTATION		Data Visualization

EXPECTATION D1.4. create an infographic about a data set, representing the data in appropriate ways, including in tables and scatter plots, and incorporating any other relevant information that helps to tell a story about the data

Ontario Curriculum
Science
Grade 7 - Adopted: 2022

STRAND / COURSE		Science and Technology Grade 7
STRAND / OVERALL EXPECTATION	STRAND A:	STEM Skills and Connections - Throughout Grade 7, in connection with the learning in the Life Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands, students will:
STAGE / SKILLS	A2.	Coding and Emerging Technologies: use coding in investigations and to model concepts, and assess the impact of coding and of emerging technologies on everyday life and in STEM-related fields

SUB-ORGANIZER / SPECIFIC EXPECTATION	A2.2.	identify and describe impacts of coding and of emerging technologies, such as artificial intelligence systems, on everyday life, including skilled trades
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STRAND / COURSE		Science and Technology Grade 7
STRAND / OVERALL EXPECTATION	STRAND A:	STEM Skills and Connections - Throughout Grade 7, in connection with the learning in the Life Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands, students will:
STAGE / SKILLS	A3.	Applications, Connections, and Contributions: demonstrate an understanding of the practical applications of science and technology, and of contributions to science and technology from people with diverse lived experiences

SUB-ORGANIZER / SPECIFIC EXPECTATION	A3.2.	investigate how science and technology can be used with other subject areas to address real-world problems
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STRAND / COURSE		Science and Technology Grade 7
STRAND / OVERALL EXPECTATION	STRAND B:	Life Systems - Interactions in the Environment By the end of Grade 7, students will:
STAGE / SKILLS	B1.	Relating Science and Technology to Our Changing World: assess the impact of human activities and technologies on the environment, and analyse ways to mitigate negative impacts and contribute to environmental sustainability

SUB-ORGANIZER / SPECIFIC EXPECTATION	B1.1.	assess the impact of various technologies on the environment
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SUB-ORGANIZER / SPECIFIC EXPECTATION	B1.2.	assess the effectiveness of various ways of mitigating the negative and enhancing the positive impact of human activities on the environment
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SUB-ORGANIZER / SPECIFIC EXPECTATION	B1.3.	analyse how diverse First Nations, Métis, and Inuit practices and perspectives contribute to environmental sustainability, including by using approaches such as Two-Eyed Seeing
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STRAND / COURSE		Science and Technology Grade 7
STRAND / OVERALL EXPECTATION	STRAND B:	Life Systems - Interactions in the Environment By the end of Grade 7, students will:
STAGE / SKILLS	B2.	Exploring and Understanding Concepts: demonstrate an understanding of interactions between and among biotic and abiotic components in the environment

SUB-ORGANIZER / SPECIFIC EXPECTATION	B2.8.	describe how different approaches to agriculture and to harvesting food from the natural environment can impact an ecosystem, and identify strategies that can be used to maintain and/or restore balance to ecosystems
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STRAND / COURSE		Science and Technology Grade 8
STRAND / OVERALL EXPECTATION	STRAND A:	STEM Skills and Connections - Throughout Grade 8, in connection with the learning in the Life Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands, students will:
STAGE / SKILLS	A2.	Coding and Emerging Technologies: use coding in investigations and to model concepts, and assess the impact of coding and of emerging technologies on everyday life and in STEM-related fields

SUB-
ORGANIZER /
SPECIFIC
EXPECTATION

A2.2. identify and describe impacts of coding and of emerging technologies, such as artificial intelligence systems, on everyday life, including skilled trades

STRAND / COURSE		Science and Technology Grade 8
STRAND / OVERALL EXPECTATION	STRAND A:	STEM Skills and Connections - Throughout Grade 8, in connection with the learning in the Life Systems, Matter and Energy, Structures and Mechanisms, and Earth and Space Systems strands, students will:
STAGE / SKILLS	A3.	Applications, Connections, and Contributions: demonstrate an understanding of the practical applications of science and technology, and of contributions to science and technology from people with diverse lived experiences

SUB-
ORGANIZER /
SPECIFIC
EXPECTATION

A3.2. investigate how science and technology can be used with other subject areas to address real-world problems