Program: Energy Revealed	Grade 5 – Ontario Math Curriculum Connections	

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Activity Name	Organizing Idea	Learning Outcome
Activity: Knowing Energy: Stair Climb	B. Number: B2. Operations	B2.1 - use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations
Activity: Knowing Energy: Tea at Home	B. Number: B2. Operations	B2.1 - use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations
Activity: Knowing Energy: Race to a kWh	B. Number: B2. Operations	B2.1 - use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations
Activity: Knowing Energy: How Intense is Your Electricity Usage?	B. Number: B2. Operations	B2.1 - use the properties of operations, and the relationships between operations, to solve problems involving whole numbers and decimal numbers, including those requiring more than one operation, and check calculations
Activity: Knowing Energy: The Electricity Grid	**N/A**	
Activity: Knowing Energy: Renewables	**N/A**	
Activity: Knowing Energy: The Big Picture	**N/A**	
Activity: All About the Baseline	**Grade 7-12**	
Activity: Can You Observe How You Conserve?	**N/A**	
Activity: Energy Hogs	C. Algebra: C1. Patterns and Relationships	C1.1 - identify and describe repeating, growing, and shrinking patterns, including patterns found in real-life contexts
		C1.2 - create and translate growing and shrinking patterns using various representations, including tables of values and graphs
		C1.3 - determine pattern rules and use them to extend patterns, make and justify predictions, and identify missing elements in repeating, growing, and shrinking patterns

Activity: Extra Energy Investigation	C. Algebra: C1. Patterns and Relationships	C1.1 - identify and describe repeating, growing, and shrinking patterns, including patterns found in real-life contexts
		C1.2 - create and translate growing and shrinking patterns using various representations, including tables of values and graphs
		C1.3 - determine pattern rules and use them to extend patterns, make and justify predictions, and identify missing elements in repeating, growing, and shrinking patterns
Activity: How Smart is Your Smart Board?	**Grade 7-12**	
Activity: Imagination Station	C. Algebra: C1. Patterns and Relationships	C1.1 - identify and describe repeating, growing, and shrinking patterns, including patterns found in real-life contexts
		C1.2 - create and translate growing and shrinking patterns using various representations, including tables of values and graphs
		C1.3 - determine pattern rules and use them to extend patterns, make and justify predictions, and identify missing elements in repeating, growing, and shrinking patterns
Activity: Small Appliance Energy Reliance	D. Data: D1. Data Literacy	D1.2 - collect data, using appropriate sampling techniques as needed, to answer questions of interest about a population, and organize the data in relative-frequency tables
		D1.3 - select from among a variety of graphs, including stacked-bar graphs, the type of graph best suited to represent various sets of data; display the data in the graphs with proper sources, titles, and labels, and appropriate scales; and justify their choice of graphs
		D1.6 - analyse different sets of data presented in various ways, including in stacked-bar graphs and in misleading graphs, by asking and answering questions about the data, challenging preconceived notions, and drawing conclusions, then make convincing arguments and informed decisions
Activity: Start Me Up!	**N/A**	
Activity: Take a Look	D. Data: D1. Data Literacy	D1.2 - collect data, using appropriate sampling techniques as needed, to answer questions of interest about a population, and organize the data in relative-frequency tables
		D1.3 - select from among a variety of graphs, including stacked-bar graphs, the type of graph best suited to represent various sets of data; display the data in the graphs with proper sources, titles, and labels, and appropriate scales; and justify their choice of graphs
		D1.6 - analyse different sets of data presented in various ways, including in stacked-bar graphs and in misleading graphs, by asking and answering questions about the data, challenging preconceived notions, and drawing conclusions, then make convincing arguments and informed decisions
Activity: Total Energy vs Total Cost	**Grade 7-12**	

Activity: Understanding Energy Efficiency in Your School	**Grade 7-12**	
Activity: Community Walk	**N/A**	
Activity: School Energy Audit	**Grade 7-12**	
Activity: Energy Efficient Lighting	B. Number: B1. Number Sense	B1.1 - read, represent, compose, and decompose whole numbers up to and including 100 000, using appropriate tools and strategies, and describe various ways they are used in everyday life
		B1.3 - represent equivalent fractions from halves to twelfths, including improper fractions and mixed numbers, using appropriate tools, in various contexts
		B1.5 - read, represent, compare, and order decimal numbers up to hundredths, in various contexts
	B. Number: B2. Operations	B2.4 - represent and solve problems involving the addition and subtraction of whole numbers that add up to no more than 100 000, and of decimal numbers up to hundredths, using appropriate tools, strategies, and algorithms
		B2.6 - represent and solve problems involving the multiplication of two-digit whole numbers by twodigit whole numbers using the area model and using algorithms, and make connections between the two methods
		B2.9 - represent and create equivalent ratios and rates, using a variety of tools and models, in various contexts
	C. Algebra: C1. Patterns and Relationships	C1.2 - create and translate growing and shrinking patterns using various representations, including tables of values and graphs
	D. Data: D1. Data Literacy	D1.6 - analyse different sets of data presented in various ways, including in stacked-bar graphs and in misleading graphs, by asking and answering questions about the data, challenging preconceived notions, and drawing conclusions, then make convincing arguments and informed decisions
	E. Spatial Sense: E2. Measurement	E2.1 - use appropriate metric units to estimate and measure length, area, mass, and capacity
Activity: Find the Phantom Load	D. Data: D1. Data Literacy	D1.2 - collect data, using appropriate sampling techniques as needed, to answer questions of interest about a population, and organize the data in relative-frequency tables
		D1.3 - select from among a variety of graphs, including stacked-bar graphs, the type of graph best suited to represent various sets of data; display the data in the graphs with proper sources, titles, and labels, and appropriate scales; and justify their choice of graphs
		D1.6 - analyse different sets of data presented in various ways, including in stacked-bar graphs and in misleading graphs, by asking and answering questions about the data, challenging preconceived notions, and drawing conclusions, then make convincing arguments and informed decisions

Activity: Home Energy Audit	**N/A**	
Activity: Watchers and Seekers	C. Algebra: C1. Patterns and Relationships	C1.1 - identify and describe repeating, growing, and shrinking patterns, including patterns found in real-life contexts
		C1.2 - create and translate growing and shrinking patterns using various representations, including tables of values and graphs
		C1.3 - determine pattern rules and use them to extend patterns, make and justify predictions, and identify missing elements in repeating, growing, and shrinking patterns
Activity: Back to the Future	B. Number: B1. Number Sense	B1.1 - read, represent, compose, and decompose whole numbers up to and including 100 000, using appropriate tools and strategies, and describe various ways they are used in everyday life
		B1.3 - represent equivalent fractions from halves to twelfths, including improper fractions and mixed numbers, using appropriate tools, in various contexts
		B1.5 - read, represent, compare, and order decimal numbers up to hundredths, in various contexts
	B. Number: B2. Operations	B2.4 - represent and solve problems involving the addition and subtraction of whole numbers that add up to no more than 100 000, and of decimal numbers up to hundredths, using appropriate tools, strategies, and algorithms
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	D. Data: D1. Data Literacy	D1.2 - collect data, using appropriate sampling techniques as needed, to answer questions of interest about a population, and organize the data in relative-frequency tables
		D1.6 - analyse different sets of data presented in various ways, including in stacked-bar graphs and in misleading graphs, by asking and answering questions about the data, challenging preconceived notions, and drawing conclusions, then make convincing arguments and informed decisions
	E. Spatial Sense: E2. Measurement	E2.1 - use appropriate metric units to estimate and measure length, area, mass, and capacity
		E2.5 - use the area relationships among rectangles, parallelograms, and triangles to develop the formulas for the area of a parallelogram and the area of a triangle, and solve related problems
		E2.6 - show that two-dimensional shapes with the same area can have different perimeters, and solve related problems

Activity: Changing Our Ways	D. Data: D1. Data Literacy	D1.2 - collect data, using appropriate sampling techniques as needed, to answer questions of interest about a population, and organize the data in relative-frequency tables
		D1.6 - analyse different sets of data presented in various ways, including in stacked-bar graphs and in misleading graphs, by asking and answering questions about the data, challenging preconceived notions, and drawing conclusions, then make convincing arguments and informed decisions
Activity: Exploring Our Energy Ethics	**N/A**	
Activity: Once Upon a Bike	**N/A**	
Activity: Puzzling Over Energy Issues	D. Data: D1. Data Literacy	D1.2 - collect data, using appropriate sampling techniques as needed, to answer questions of interest about a population, and organize the data in relative-frequency tables
	E. Spatial Sense: E2. Measurement	E2.1 - use appropriate metric units to estimate and measure length, area, mass, and capacity
Activity: Ride, Roll and Stroll	B. Number: B1. Number Sense	B1.1 - read, represent, compose, and decompose whole numbers up to and including 100 000, using appropriate tools and strategies, and describe various ways they are used in everyday life
		B1.3 - represent equivalent fractions from halves to twelfths, including improper fractions and mixed numbers, using appropriate tools, in various contexts
		B1.5 - read, represent, compare, and order decimal numbers up to hundredths, in various contexts
	B. Number: B2. Operations	B2.4 - represent and solve problems involving the addition and subtraction of whole numbers that add up to no more than 100 000, and of decimal numbers up to hundredths, using appropriate tools, strategies, and algorithms
		B2.6 - represent and solve problems involving the multiplication of two-digit whole numbers by twodigit whole numbers using the area model and using algorithms, and make connections between the two methods
		B2.9 - represent and create equivalent ratios and rates, using a variety of tools and models, in various contexts
	D. Data: D1. Data Literacy	D1.2 - collect data, using appropriate sampling techniques as needed, to answer questions of interest about a population, and organize the data in relative-frequency tables
		D1.6 - analyse different sets of data presented in various ways, including in stacked-bar graphs and in misleading graphs, by asking and answering questions about the data, challenging preconceived notions, and drawing conclusions, then make convincing arguments and informed decisions
	E. Spatial Sense: E2. Measurement	E2.1 - use appropriate metric units to estimate and measure length, area, mass, and capacity

Activity: Speak for the Trees	**Grade 7-12**	
Activity: Taking the Lead	**N/A**	
Activity: Walk a Mile	D. Data: D1. Data Literacy	D1.2 - collect data, using appropriate sampling techniques as needed, to answer questions of interest about a population, and organize the data in relative-frequency tables
		D1.6 - analyse different sets of data presented in various ways, including in stacked-bar graphs and in misleading graphs, by asking and answering questions about the data, challenging preconceived notions, and drawing conclusions, then make convincing arguments and informed decisions
	E. Spatial Sense: E2. Measurement	E2.1 - use appropriate metric units to estimate and measure length, area, mass, and capacity