

Program: Energy Revealed

Grade 7 – Ontario Math Curriculum Connections



Activity Name	Organizing Idea	Learning Outcome
Activity: Knowing Energy: Stair Climb	B. Number: B2. Operations	B2.1 - use the properties and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations
Activity: Knowing Energy: Tea at Home	B. Number: B2. Operations	B2.1 - use the properties and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations
Activity: Knowing Energy: Race to a kWh	B. Number: B2. Operations	B2.1 - use the properties and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations
Activity: Knowing Energy: How Intense is Your Electricity Usage?	B. Number: B2. Operations	B2.1 - use the properties and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations
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	D. Data: D1. Data Literacy	D1.3 - select from among a variety of graphs, including circle 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 circle 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: Can You Observe How You Conserve?	N/A	
Activity: Energy Hogs	N/A	
Activity: Extra Energy Investigation	N/A	

Activity: How Smart is Your Smart Board?	D. Data: D1. Data Literacy	D1.2 - collect qualitative data and discrete and continuous quantitative data to answer questions of interest, and organize the sets of data as appropriate, including using percentages
		D1.3 - select from among a variety of graphs, including circle 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 circle 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: Imagination Station	N/A	
Activity: Small Appliance Energy Reliance	D. Data: D1. Data Literacy	D1.2 - collect qualitative data and discrete and continuous quantitative data to answer questions of interest, and organize the sets of data as appropriate, including using percentages
		D1.3 - select from among a variety of graphs, including circle 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 circle 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	Grade 4-6	
Activity: Total Energy vs Total Cost	B. Number: B2. Operations	B2.1 - use the properties and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations
	D. Data: D1. Data Literacy	D1.2 - collect qualitative data and discrete and continuous quantitative data to answer questions of interest, and organize the sets of data as appropriate, including using percentages
		D1.3 - select from among a variety of graphs, including circle 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 circle 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: Understanding Energy Efficiency in Your School	N/A	
Activity: Community Walk	N/A	

Activity: School Energy Audit	N/A	
Activity: Energy Efficient Lighting	B. Number: B1. Number Sense	B1.1 - represent and compare whole numbers up to and including one billion, including in expanded form using powers of ten, and describe various ways they are used in everyday life
	B. Number: B2. Operations	B2.1 - use the properties and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations
	C. Algebra: C1. Patterns and Relationships	C1.1 - identify and compare a variety of repeating, growing, and shrinking patterns, including patterns found in real-life contexts, and compare linear growing patterns on the basis of their constant rates and initial values
		C1.2 - create and translate repeating, growing, and shrinking patterns involving whole numbers and decimal numbers using various representations, including algebraic expressions and equations for linear growing patterns
	D. Data: D1. Data Literacy	D1.2 - collect qualitative data and discrete and continuous quantitative data to answer questions of interest, and organize the sets of data as appropriate, including using percentages
		D1.6 - analyse different sets of data presented in various ways, including in circle 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	E2.2 - solve problems involving perimeter, area, and volume that require converting from one metric unit of measurement to another
Activity: Find the Phantom Load	D. Data: D1. Data Literacy	D1.2 - collect qualitative data and discrete and continuous quantitative data to answer questions of interest, and organize the sets of data as appropriate, including using percentages
		D1.3 - select from among a variety of graphs, including circle 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 circle 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	N/A	

Activity: Back to the Future	B. Number: B1. Number Sense	B1.1 - represent and compare whole numbers up to and including one billion, including in expanded form using powers of ten, and describe various ways they are used in everyday life
		B1.7 - convert between fractions, decimal numbers, and percents, in various contexts
	B. Number: B2. Operations	B2.1 - use the properties and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations
	C. Algebra: C1. Patterns and Relationships	C1.1 - identify and compare a variety of repeating, growing, and shrinking patterns, including patterns found in real-life contexts, and compare linear growing patterns on the basis of their constant rates and initial values
		C1.2 - create and translate repeating, growing, and shrinking patterns involving whole numbers and decimal numbers using various representations, including algebraic expressions and equations for linear growing patterns
	D. Data: D1. Data Literacy	D1.2 - collect qualitative data and discrete and continuous quantitative data to answer questions of interest, and organize the sets of data as appropriate, including using percentages
		D1.6 - analyse different sets of data presented in various ways, including in circle 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	E2.2 - solve problems involving perimeter, area, and volume that require converting from one metric unit of measurement to another
Activity: Changing Our Ways	B. Number: B1. Number Sense	B1.1 - represent and compare whole numbers up to and including one billion, including in expanded form using powers of ten, and describe various ways they are used in everyday life
		B1.7 - convert between fractions, decimal numbers, and percents, in various contexts
	C. Algebra: C1. Patterns and Relationships	C1.1 - identify and compare a variety of repeating, growing, and shrinking patterns, including patterns found in real-life contexts, and compare linear growing patterns on the basis of their constant rates and initial values
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	D. Data: D1. Data Literacy	D1.2 - collect qualitative data and discrete and continuous quantitative data to answer questions of interest, and organize the sets of data as appropriate, including using percentages
		D1.6 - analyse different sets of data presented in various ways, including in circle 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	D. Data: D1. Data Literacy	D1.6 - analyse different sets of data presented in various ways, including in circle 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: Puzzling Over Energy Issues	N/A	
Activity: Ride, Roll and Stroll	B. Number: B1. Number Sense	B1.1 - represent and compare whole numbers up to and including one billion, including in expanded form using powers of ten, and describe various ways they are used in everyday life
		B1.7 - convert between fractions, decimal numbers, and percents, in various contexts
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	E. Spatial Sense: E2. Measurement	E2.2 - solve problems involving perimeter, area, and volume that require converting from one metric unit of measurement to another
Activity: Speak for the Trees	D. Data: D1. Data Literacy	D1.2 - collect qualitative data and discrete and continuous quantitative data to answer questions of interest, and organize the sets of data as appropriate, including using percentages
		D1.3 - select from among a variety of graphs, including circle 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 circle 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: Taking the Lead	D. Data: D1. Data Literacy	D1.6 - analyse different sets of data presented in various ways, including in circle 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: Walk a Mile	B. Number: B1. Number Sense	B1.1 - represent and compare whole numbers up to and including one billion, including in expanded form using powers of ten, and describe various ways they are used in everyday life
		B1.7 - convert between fractions, decimal numbers, and percents, in various contexts
	B. Number: B2. Operations	B2.1 - use the properties and order of operations, and the relationships between operations, to solve problems involving whole numbers, decimal numbers, fractions, ratios, rates, and percents, including those requiring multiple steps or multiple operations
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