

Program: Energy Revealed

Grade 7 - Alberta Science Curriculum Connections



Activity Name	Organizing Idea	Learning Outcome
Activity: Knowing Energy: Stair Climb	Heat and Temperature	Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: Knowing Energy: Tea at Home	Heat and Temperature	Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: Knowing Energy: Race to a kWh	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: Knowing Energy: How Intense is Your Electricity Usage?	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
		Analyze issues related to the selection and use of thermal technologies, and explain decisions in terms of advantages and disadvantages for sustainability
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures

Activity: Knowing Energy: The Electricity Grid	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
		Analyze issues related to the selection and use of thermal technologies, and explain decisions in terms of advantages and disadvantages for sustainability
	Structures and Forces	Describe and interpret different types of structures encountered in everyday objects, buildings, plants and animals; and identify materials from which they are made
		Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: Knowing Energy: Renewables	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
		Analyze issues related to the selection and use of thermal technologies, and explain decisions in terms of advantages and disadvantages for sustainability
	Interactions and Ecosystems	Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions
		Trace and interpret the flow of energy and materials within an ecosystem
		Describe the relationships among knowledge, decisions and actions in maintaining life-supporting environments
	Structures and Forces	Demonstrate and describe processes used in developing, evaluating and improving structures that will meet human needs with a margin of safety
Activity: Knowing Energy: The Big Picture	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures

Activity: All About the Baseline	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
		Analyze issues related to the selection and use of thermal technologies, and explain decisions in terms of advantages and disadvantages for sustainability
	Structures and Forces	Describe and interpret different types of structures encountered in everyday objects, buildings, plants and animals; and identify materials from which they are made
		Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: Can You Observe How You Conserve?	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: Energy Hogs	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
		Analyze issues related to the selection and use of thermal technologies, and explain decisions in terms of advantages and disadvantages for sustainability
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures

Activity: Extra Energy Investigation	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: How Smart is Your Smart Board?	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: Imagination Station	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
		Analyze issues related to the selection and use of thermal technologies, and explain decisions in terms of advantages and disadvantages for sustainability
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures

Activity: Small Appliance Energy Reliance	Interactions and Ecosystems	Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions
		Trace and interpret the flow of energy and materials within an ecosystem
	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: Start Me Up!	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
		Analyze issues related to the selection and use of thermal technologies, and explain decisions in terms of advantages and disadvantages for sustainability
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: Take a Look	Grade 4-6	
Activity: Total Energy vs. Total Cost	Interactions and Ecosystems	Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions
		Trace and interpret the flow of energy and materials within an ecosystem
	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures

Activity: Understanding Energy Efficiency in Your School	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: Community Walk	Interactions and Ecosystems	Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions
		Trace and interpret the flow of energy and materials within an ecosystem
	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: School Energy Audit	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures

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Activity: Energy Efficient Lighting	Interactions and Ecosystems	Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions
		Trace and interpret the flow of energy and materials within an ecosystem
	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: Find the Phantom Load	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: Home Energy Audit	Interactions and Ecosystems	Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions
		Trace and interpret the flow of energy and materials within an ecosystem
		Describe the relationships among knowledge, decisions and actions in maintaining life-supporting environments
	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures

Activity: Watchers and Seekers	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: Back to the Future	Interactions and Ecosystems	Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions
		Trace and interpret the flow of energy and materials within an ecosystem
	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: Changing Our Ways	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures

Activity: Exploring Our Energy Ethics	Interactions and Ecosystems	Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions
		Trace and interpret the flow of energy and materials within an ecosystem
		Describe the relationships among knowledge, decisions and actions in maintaining life-supporting environments
	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: Once Upon a Bike	Interactions and Ecosystems	Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions
		Trace and interpret the flow of energy and materials within an ecosystem
	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures

Activity: Puzzling Over Energy Issues	Interactions and Ecosystems	Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions
		Trace and interpret the flow of energy and materials within an ecosystem
		Describe the relationships among knowledge, decisions and actions in maintaining life-supporting environments
	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures
Activity: Ride, Roll and Stroll	Interactions and Ecosystems	Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions
		Trace and interpret the flow of energy and materials within an ecosystem
	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures

Activity: Speak for the Trees	Interactions and Ecosystems	Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions
		Trace and interpret the flow of energy and materials within an ecosystem
		Describe the relationships among knowledge, decisions and actions in maintaining life-supporting environments
	Plants for Food and Fibre	Analyze plant environments, and identify impacts of specific factors and controls
		Identify and interpret relationships among human needs, technologies, environments, and the culture and use of living things as sources of food and fibre
	Planet Earth	Describe and demonstrate methods used in the scientific study of Earth and in observing and interpreting its component materials
Activity: Taking the Lead	Interactions and Ecosystems	Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions
		Trace and interpret the flow of energy and materials within an ecosystem
	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
		Investigate and analyze the properties of materials used in structures

Activity: Walk a Mile	Interactions and Ecosystems	Investigate and describe relationships between humans and their environments, and identify related issues and scientific questions
		Trace and interpret the flow of energy and materials within an ecosystem
	Heat and Temperature	Illustrate and explain how human needs have led to technologies for obtaining and controlling thermal energy and to increased use of energy resources
		Describe the nature of thermal energy and its effects on different forms of matter, using informal observations, experimental evidence and models
		Apply an understanding of heat and temperature in interpreting natural phenomena and technological devices
	Structures and Forces	Investigate and analyze forces within structures, and forces applied to them
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