

Program: Re-Energy

Grade 8 - Alberta Science Curriculum Connections



Activity Name	Organizing Idea	Learning Outcome
Activity: Renewable Energy Sources	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
	Freshwater and Saltwater Systems	Investigate and interpret linkages among landforms, water and climate
Activity: What is Renewable Energy?	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
	Freshwater and Saltwater Systems	Investigate and interpret linkages among landforms, water and climate
Activity: Build a Solar Car	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices

Activity: Build a Solar Oven	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
Activity: Construire un Four Solaire	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
Activity: Introduction to Solar Electricity	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
Activity: Introduction to Solar Heat Energy	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices

Activity: Solar Energy Transition with Six Nations of the Grand River	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
Activity: Electrifying the Future of Transportation Guide	Grade 9-12	
Activity: Build an Electric Vehicle Model	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
Activity: Exploring Electric Vehicle Charging Stations	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
Activity: History of the Electric Vehicle	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices

Activity: How is Your Community Adapting For Electric Vehicles?	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
Activity: Planning a Trip in Your Electric Vehicle	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
Activity: Electric Vehicles and Charging Stations with Six Nations of the Grand River	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
Activity: What EV Should You Buy?	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices

Activity: Build a Wind Turbine	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
Activity: Introduction to Wind Energy	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
Activity: Wind Turbine Simulator	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
Activity: Build a Hydroelectric Generator	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
	Freshwater and Saltwater Systems	Investigate and interpret linkages among landforms, water and climate
		Analyze human impacts on aquatic systems; and identify the roles of science and technology in addressing related questions, problems and issues

Activity: Introduction to Hydro Energy	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
	Freshwater and Saltwater Systems	Investigate and interpret linkages among landforms, water and climate
		Analyze human impacts on aquatic systems; and identify the roles of science and technology in addressing related questions, problems and issues
Activity: Pumped Hydro Storage	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
	Freshwater and Saltwater Systems	Investigate and interpret linkages among landforms, water and climate
		Analyze human impacts on aquatic systems; and identify the roles of science and technology in addressing related questions, problems and issues
Activity: Build a Biogas Generator	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
	Freshwater and Saltwater Systems	Investigate and interpret linkages among landforms, water and climate
		Analyze human impacts on aquatic systems; and identify the roles of science and technology in addressing related questions, problems and issues

Activity: Introduction to Biomass Energy	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
	Freshwater and Saltwater Systems	Investigate and interpret linkages among landforms, water and climate
		Analyze human impacts on aquatic systems; and identify the roles of science and technology in addressing related questions, problems and issues
Activity: Build a Flywheel Model	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
Activity: Build a Penny Battery	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
Activity: Endothermic and Exothermic Reactions	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices

Activity: Energy Storage Match	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
Activity: Exploring Energy Storage in Your Community	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
Activity: Exploring How To make a Battery	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices
Activity: Heat Transfer Lab	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices

Activity: The Electrostatic Effect	Mechanical Systems	Illustrate the development of science and technology by describing, comparing and interpreting mechanical devices that have been improved over time
		Analyze machines by describing the structures and functions of the overall system, the subsystems and the component parts
		Investigate and describe the transmission of force and energy between parts of a mechanical system
		Analyze the social and environmental contexts of science and technology, as they apply to the development of mechanical devices