Program: Re-Energy	Grade 3 – Ontario Science and Technology Curriculum Connections	

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Activity Name	Organizing Idea	Learning Outcome
Activity: Renewable Energy Sources	**Grade 7-12**	
Activity: What is Renewable Energy?	**Grade 7-12**	
Activity: Build a Solar Car	A. Stem Skills and Connections	A1. STEM Investigation and Communication Skills – Use a scientific research process, a scientific experimentation process, and an engineering design process to conduct investigations, following appropriate health and safety procedures
		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
	C. Matter and Energy: Forces and Motion	C2. Exploring and Understanding Concepts – Demonstrate an understanding of how forces cause motion and changes in motion
	D. Structures and Mechanisms: Strong and Stable Structures	D2. Exploring and Understanding Concepts – Demonstrate an understanding of the concepts of strength and stability as they relate to structures with various forms and functions, and of the factors that affect structures' strength and stability
Activity: Build a Solar Oven	A. Stem Skills and Connections	A1. STEM Investigation and Communication Skills – Use a scientific research process, a scientific experimentation process, and an engineering design process to conduct investigations, following appropriate health and safety procedures
		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
Activity: Construire un Four Solaire	A. Stem Skills and Connections	A1. STEM Investigation and Communication Skills – Use a scientific research process, a scientific experimentation process, and an engineering design process to conduct investigations, following appropriate health and safety procedures
		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

Activity: Introduction to Solar Electricity	A. Stem Skills and Connections	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
Activity: Introduction to Solar Heat Energy	A. Stem Skills and Connections	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
Activity: Solar Energy Transition with Six Nations of the Grand River	A. Stem Skills and Connections	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
Activity: Electrifying the Future of Transportation Guide	**Grade 9-12**	
Activity: Build an Electric Vehicle Model	A. Stem Skills and Connections	A1. STEM Investigation and Communication Skills – Use a scientific research process, a scientific experimentation process, and an engineering design process to conduct investigations, following appropriate health and safety procedures
		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
	C. Matter and Energy: Forces and Motion	C2. Exploring and Understanding Concepts – Demonstrate an understanding of how forces cause motion and changes in motion
	D. Structures and Mechanisms: Strong and Stable Structures	D2. Exploring and Understanding Concepts – Demonstrate an understanding of the concepts of strength and stability as they relate to structures with various forms and functions, and of the factors that affect structures' strength and stability
Activity: Exploring Electric Vehicle Charging Stations	**Grade 7-12**	
Activity: History of the Electric Vehicle	**Grade 7-12**	
Activity: How is Your Community Adapting for Electric Vehicles?	**Grade 7-12**	
Activity: Planning a Trip in your Electric Vehicle	**Grade 7-12**	
Activity: Electric Vehicles and Charging Stations with Six Nations of the Grand River	A. Stem Skills and Connections	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
Activity: What EV Should You Buy?	**Grade 7-12**	

Activity: Build a Wind Turbine	A. Stem Skills and Connections	A1. STEM Investigation and Communication Skills – Use a scientific research process, a scientific experimentation process, and an engineering design process to conduct investigations, following appropriate health and safety procedures
	C. Matter and Energy: Forces and Motion	C1. Relating Science and Technology to Our Changing World – Assess the impacts of various forces on society and the environment
		C2. Exploring and Understanding Concepts – Demonstrate an understanding of how forces cause motion and changes in motion
	D. Structures and Mechanisms: Strong and Stable Structures	D2. Exploring and Understanding Concepts – Demonstrate an understanding of the concepts of strength and stability as they relate to structures with various forms and functions, and of the factors that affect structures' strength and stability
Activity: Introduction to Wind Energy	A. Stem Skills and Connections	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
	C. Matter and Energy: Forces and Motion	C1. Relating Science and Technology to Our Changing World – Assess the impacts of various forces on society and the environment
		C2. Exploring and Understanding Concepts – Demonstrate an understanding of how forces cause motion and changes in motion
Activity: Wind Turbine Simulator	A. Stem Skills and Connections	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
	C. Matter and Energy: Forces and Motion	C2. Exploring and Understanding Concepts – Demonstrate an understanding of how forces cause motion and changes in motion
Activity: Build a Hydroelectric Generator	A. Stem Skills and Connections	A1. STEM Investigation and Communication Skills – Use a scientific research process, a scientific experimentation process, and an engineering design process to conduct investigations, following appropriate health and safety procedures
	D. Structures and Mechanisms: Strong and Stable Structures	D2. Exploring and Understanding Concepts – Demonstrate an understanding of the concepts of strength and stability as they relate to structures with various forms and functions, and of the factors that affect structures' strength and stability

Activity: Introduction to Hydro Energy	A. Stem Skills and Connections	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
	C. Matter and Energy: Forces and Motion	C1. Relating Science and Technology to Our Changing World – Assess the impacts of various forces on society and the environment
		C2. Exploring and Understanding Concepts – Demonstrate an understanding of how forces cause motion and changes in motion
	D. Structures and Mechanisms: Strong and Stable Structures	D1. Relating Science and Technology to Our Changing World – Assess the importance of form, function, strength, and stability in structures to society and the environment
Activity: Pumped Hydro Storage	**Grade 7-12**	
Activity: Build a Biogas Generator	**Grade 7-12**	
Activity: Introduction to Biomass Energy	**Grade 7-12**	
Activity: Build a Flywheel Model	A. Stem Skills and Connections	A1. STEM Investigation and Communication Skills – Use a scientific research process, a scientific experimentation process, and an engineering design process to conduct investigations, following appropriate health and safety procedures
	D. Structures and Mechanisms: Strong and Stable Structures	D2. Exploring and Understanding Concepts – Demonstrate an understanding of the concepts of strength and stability as they relate to structures with various forms and functions, and of the factors that affect structures' strength and stability
Activity: Build a Penny Battery	A. Stem Skills and Connections	A1. STEM Investigation and Communication Skills – Use a scientific research process, a scientific experimentation process, and an engineering design process to conduct investigations, following appropriate health and safety procedures
	D. Structures and Mechanisms: Strong and Stable Structures	D2. Exploring and Understanding Concepts – Demonstrate an understanding of the concepts of strength and stability as they relate to structures with various forms and functions, and of the factors that affect structures' strength and stability
Activity: Endothermic and Exothermic Reactions	**Grade 7-12**	
Activity: Energy Storage Match	**Grade 7-12**	
Activity: Exploring Energy Storage in Your Community	**Grade 7-12**	
Activity: Exploring How to Make a Battery	**Grade 7-12**	
Activity: Heat Transfer Lab	**Grade 7-12**	
Activity: The Electrostatic Effect	**Grade 7-12**	