

CURRICULUM ALIGNMENT – Baseload vs. Peak Demand

Alberta

| Grade | Course Name and Number | Unit | Outcome |
|-------|------------------------|--|--|
| 7 | Grade 7 Science | Unit C: Heat and Temperature (Social and Environmental Emphasis) | Specific Outcome 1.4: Identify examples of personal and societal choices in using energy resources and technology. |
| 7 | Grade 7 Science | Unit C: Heat and Temperature (Social and Environmental Emphasis) | Specific Outcome 4.3: Identify positive and negative consequences of energy use and describe examples of energy conservation in their home or community. |
| 7 | Grade 7 Science | Unit C: Heat and Temperature (Social and Environmental Emphasis) | Skill Outcome (Analyzing and Interpreting): Compile and display data, by hand or computer, in a variety of formats, including diagrams, flow charts, tables, bar graphs and line graphs. |
| 7 | Grade 7 Science | Unit C: Heat and Temperature (Social and Environmental Emphasis) | Attitude Outcome (Interest in Science): Show interest in science-related questions and issues and pursue personal interests and career possibilities within science-related fields. |
| 7 | Grade 7 Science | Unit C: Heat and Temperature (Social and Environmental Emphasis) | Skill Outcome (Analyzing and Interpreting): Identify and evaluate potential applications of findings. |
| 7 | Grade 7 Science | Unit C: Heat and Temperature (Social and Environmental Emphasis) | Skill Outcome (Communication and Teamwork): Communicate questions, ideas, intentions, plans and results, using lists, notes in point form, sentences, data tables, graphs, drawings, oral language and other means. |
| 9 | Grade 9 Science | Unit D: Electrical Principles and Technologies (Science and Technology Emphasis) | General Outcome 3: Identify and estimate energy inputs and outputs, for example, devices and systems, and evaluate the efficiency of energy conversions. |
| 9 | Grade 9 Science | Unit D: Electrical Principles and Technologies (Science and Technology Emphasis) | Specific Outcome 3.2: Apply appropriate units, measures and devices in determining and describing quantities of energy transformed by an electrical device. |
| 9 | Grade 9 Science | Unit D: Electrical Principles and Technologies (Science and Technology Emphasis) | General Outcome 4: Describe and discuss the societal and environmental implications of the use of electrical energy. |
| 9 | Grade 9 Science | Unit D: Electrical Principles and Technologies (Science and Technology Emphasis) | Specific Outcome 4: Describe the by-products of electrical generation and their impacts on the environment. |

| | | | |
|----|-----------------|--|--|
| 9 | Grade 9 Science | Unit D: Electrical Principles and Technologies (Science and Technology Emphasis) | Attitude Outcome (Stewardship): Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and a sustainable environment. |
| 9 | Grade 9 Science | Unit D: Electrical Principles and Technologies (Science and Technology Emphasis) | Skill Outcome (Analyzing and Interpreting): Analyze qualitative and quantitative data and develop and assess possible explanations. |
| 9 | Grade 9 Science | Unit D: Electrical Principles and Technologies (Science and Technology Emphasis) | Skill Outcome (Communication and Teamwork): Communicate questions, ideas, intentions, plans and results, using lists, notes in point form, sentences, data tables, graphs, drawings, oral language and other means. |
| 10 | Science 10 | Unit A: Energy and Matter in Chemical Change (Nature of Science Emphasis) | Attitude Outcome (Stewardship): Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and a sustainable environment. |
| 10 | Science 10 | Unit D: Energy Flow in Global Systems (Social and Environmental Contexts Emphasis) | Specific Outcome 4.6: Assess, from a variety of perspectives, the risks and benefits of human activity, and its impact on the biosphere and the climate. |
| 10 | Science 10 | Unit D: Energy Flow in Global Systems (Social and Environmental Contexts Emphasis) | Attitude Outcome (Stewardship): Demonstrate sensitivity and responsibility in pursuing a balance between the needs of humans and a sustainable environment. |
| 10 | Science 10 | Unit D: Energy Flow in Global Systems (Social and Environmental Contexts Emphasis) | Skill Outcome (Analyzing and Interpreting): Compile and display, by hand or by computer, evidence and information in a variety of formats, including diagrams, flow charts, tables, graphs and scatterplots. |
| 10 | Science 10 | Unit D: Energy Flow in Global Systems (Social and Environmental Contexts Emphasis) | Skill Outcome (Analyzing and Interpreting): Propose alternative solutions to a given practical problem, identify the potential strengths and weaknesses of each, and select one as the basis for a plan. |
| 10 | Science 10 | Unit D: Energy Flow in Global Systems (Social and Environmental Contexts Emphasis) | Skill Outcome (Communication and Teamwork): Select and use appropriate numeric, symbolic, graphical and linguistic modes of representation to communicate ideas, plans and results. |
| 10 | Science 10 | Unit D: Energy Flow in Global Systems (Social and Environmental Contexts Emphasis) | Skill Outcome (Communication and Teamwork): Develop, present and defend a position or course of action, based on findings. |
| 12 | Science 30 | Unit C: Electromagnetic Energy | Specific Outcome 30–C1.7k: Describe electrical energy in kilowatt hours and joules, using the equation $E_e = Pt$ for electrical energy and the equation $P = VI$ for power. |

| | | | |
|----|----------------|------------------------------------|--|
| 12 | Science 30 | Unit C: Electromagnetic Energy | Specific Outcome 30–C2.3sts: Explain how the appropriateness, risks and benefits of technologies need to be assessed for each potential application from a variety of perspectives, including sustainability. |
| 12 | Science 30 | Unit D: Energy and the Environment | General Outcome 1: Students will explain the need for balancing the growth in global energy demands with maintaining a viable biosphere. |
| 12 | Science 30 | Unit D: Energy and the Environment | Specific Outcome 30–D1.3k: Apply the concept of sustainable development to increasing the efficient use of energy. |
| 12 | Science 30 | Unit D: Energy and the Environment | Specific Outcome 30–D1.4k: Explain the need to develop technologies that use renewable and non-renewable energy sources to meet the increasing global demand. |
| 12 | Science 30 | Unit D: Energy and the Environment | Specific Outcome 30–D2.1sts: Explain that decisions regarding the application of scientific and technological development involve a variety of perspectives, including social, cultural, environmental, ethical and economic considerations (evaluate the environmental and economic implications of energy transformation technologies). |
| 12 | Module ENM3010 | Energy & The Environment | Module Learner Expectation: Describe the social, economic and environmental significance of energy development. |