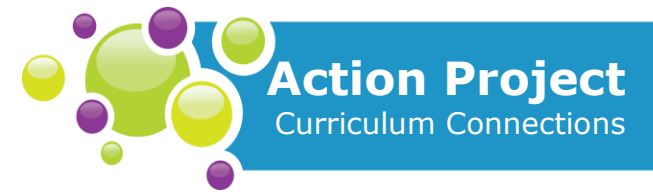


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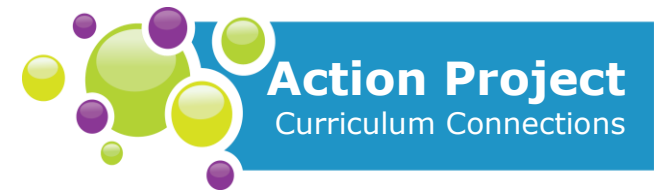


| Gr. | Course | Big Idea | Lesson | Competencies/Content |
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| 6 | Science Grade 6 (2016) (British Columbia) | The solar system is part of the Milky Way, which is one of billions of galaxies. | MINDS-ON 1, 2 | the position, motion, and components of our solar system in our galaxy <ul style="list-style-type: none"> - extreme environments including contributions of Canadians to exploration technologies (e.g., Canadarm, Newt Suit, VENUS and NEPTUNE programs) |
| | | | MINDS-ON 1, 2, 3 | Planning and conducting <ul style="list-style-type: none"> - Use equipment and materials safely, identifying potential risks |
| | | | ACTION 1, 2 | Questioning and predicting <ul style="list-style-type: none"> - Demonstrate a sustained curiosity about a scientific topic or problem of personal interest - Make observations in familiar or unfamiliar contexts - Identify questions to answer or problems to solve through scientific inquiry |
| | | | ACTION 1, 2 | Planning and conducting <ul style="list-style-type: none"> - With support, plan appropriate investigations to answer their questions or solve problems they have identified - Choose appropriate data to collect to answer their questions - Observe, measure, and record data, using appropriate tools, including digital technologies - Use equipment and materials safely, identifying potential risks |
| | | | ACTION 1, 2 | Processing and analyzing data and information <ul style="list-style-type: none"> - Construct and use a variety of methods, including tables, graphs, and digital technologies, as appropriate, to represent patterns or relationships in data - Identify patterns and connections in data |
| ACTION 1, 2 | Applying and innovating <ul style="list-style-type: none"> - Contribute to care for self, others, and community through personal or collaborative approaches - Co-operatively design projects - Transfer and apply learning to new situations - Generate and introduce new or refined ideas when problem solving | | | |



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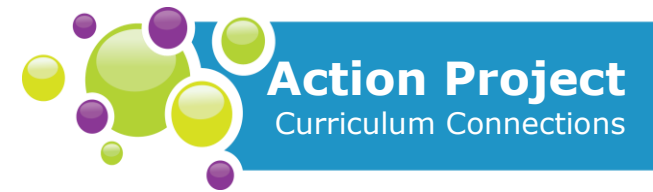
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| | | | ALL | <p>Communicating</p> <ul style="list-style-type: none"> - Communicate ideas, explanations, and processes in a variety of ways |
| 6 | Mathematics Grade 6 (2016) (British Columbia) | Data from the results of an experiment can be used to predict the theoretical probability of an event and to compare and interpret. | ACTION 1, 2 | <p>line graphs:</p> <ul style="list-style-type: none"> • table of values, data set; creating and interpreting a line graph from a given set of data |
| 6/7 | Applied Design, Skills, and Technologies 6/7 (2016) (British Columbia) | Complex tasks may require multiple tools and technologies. | MINDS-ON 1, 2, 3 | <p>simple algorithms that reflect computational thinking</p> for sorting, searching, sequence, selection, and repetition; specific statements to complete a simple task; |
| | | | ACTION 1, 2 | <p>visual representations of problems and data</p> graphs, charts, network diagrams, info graphics, flow charts, lists, tables, or arrays |
| | | | MINDS-ON 1, 2, 3 | <p>visual programming</p> for example, Kodu, Scratch |
| | | | CONSOLIDATION | <p>visual programming</p> for example, Kodu, Scratch |
| | | | CONSOLIDATION | Applied Design; Applied Technologies |
| 8 | Applied Design, Skills, and Technologies 8 (2016) (British Columbia) | Complex tasks may require multiple tools and technologies. | MINDS-ON 1, 2, 3 | <p>Computational Thinking</p> <ul style="list-style-type: none"> - software programs as specific and sequential instructions with algorithms that can be reliably repeated by others - debugging algorithms and programs by breaking problems down into a series of sub-problems |
| | | | MINDS-ON 1, 2, 3 | <p>programming languages, including visual programming</p> for example, Scratch, Alice, Greenfoot, BlueJ |
| | | | ACTION 1, 2 | <p>programming modular components</p> for example, Arduino, LEGO Mindstorms |

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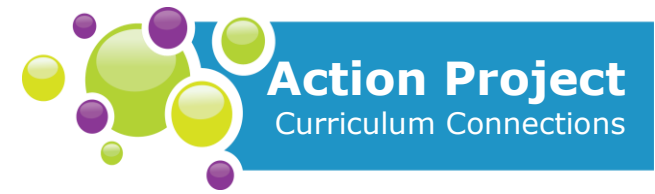
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| | | | CONSOLIDATION | programming languages, including visual programming for example, Scratch, Alice, Greenfoot, BlueJ |
| 8 | Mathematics Grade 8 (2016) (British Columbia) | Analyzing data by determining averages is one way to make sense of large data sets and enables us to compare and interpret. | ACTION 1, 2 | central tendency: <ul style="list-style-type: none"> mean, median, and mode |
| 9 | Mathematics Grade 9 (2016) (British Columbia) | Analyzing the validity, reliability, and representation of data enables us to compare and interpret. | ACTION 1, 2 | statistics: <ul style="list-style-type: none"> population versus sample, bias, ethics, sampling techniques, misleading stats analyzing a given set of data (and/or its representation) and identifying potential problems related to bias, use of language, ethics, cost, time and timing, privacy, or cultural sensitivity |
| 10 | Applied Design, Skills, and Technologies 10 (2018) (British Columbia) | Complex tasks may require multiple tools and technologies. | ALL | principles of computational thinking key components include decomposition, patterns and generalizations, abstraction, and algorithmic thinking |
| 11 | Science Grade 11: Earth Sciences (2018) (British Columbia) | Astronomy seeks to explain the origin and interactions of Earth and its solar system. | MINDS-ON 1, 2 | application of space technologies to the study of changes in Earth and its systems |
| | | | MINDS-ON 1, 2 | Applying and innovating Consider the role of scientists in innovation |
| | | | MINDS-ON 3 | Planning and conducting <ul style="list-style-type: none"> Use appropriate SI units and appropriate equipment, including digital technologies, to systematically and accurately collect and record data |
| | | | ACTION 1, 2 | Planning and conducting <ul style="list-style-type: none"> Collaboratively and individually plan, select, and use appropriate investigation methods, including field work and lab experiments, to collect reliable data (qualitative and quantitative) Use appropriate SI units and appropriate equipment, including digital technologies, to systematically and accurately collect and record data Apply the concepts of accuracy and precision to experimental procedures and data |

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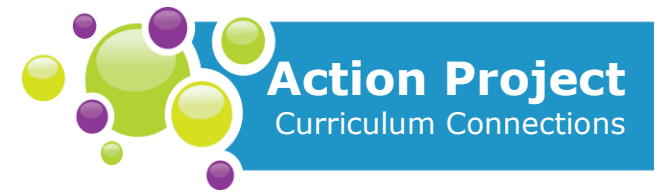
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| | | | <p>ACTION 1, 2</p> <p>Processing and analyzing data and information</p> <ul style="list-style-type: none"> • Seek and analyze patterns, trends, and connections in data, including describing relationships between variables, performing calculations, and identifying inconsistencies • Construct, analyze, and interpret graphs, models, and/or diagrams • Use knowledge of scientific concepts to draw conclusions that are consistent with evidence • Analyze cause-and-effect relationships |
| | | | <p>ACTION 2</p> <p>Communicating</p> <ul style="list-style-type: none"> • Communicate scientific ideas and information, and perhaps a suggested course of action, for a specific purpose and audience, constructing evidence-based arguments and using appropriate scientific language, conventions, and representations |
| | | | <p>ACTION 2</p> <p>Applying and innovating</p> <ul style="list-style-type: none"> • Contribute to care for self, others, community, and world through individual or collaborative approaches • Contribute to finding solutions to problems at a local and/or global level through inquiry • Implement multiple strategies to solve problems in real-life, applied, and conceptual situations |
| 11 | Science Grade 11: Science for Citizens (2018) (British Columbia) | Scientific processes and knowledge inform our decisions and impact our daily lives. | <p>MINDS-ON 1, 2</p> <p>natural hazards and responses</p> |
| | | | <p>MINDS-ON 1, 2</p> <p>Applying and innovating Consider the role of scientists in innovation</p> |
| | | | <p>MINDS-ON 3</p> <p>Planning and conducting</p> <ul style="list-style-type: none"> • Use appropriate SI units and appropriate equipment, including digital technologies, to systematically and accurately collect and record data |
| | | | <p>ACTION 1, 2</p> <p>Planning and conducting</p> <ul style="list-style-type: none"> • Collaboratively and individually plan, select, and use appropriate investigation methods, including field work and lab experiments, to collect reliable data (qualitative and quantitative) • Use appropriate SI units and appropriate equipment, including digital technologies, to systematically and accurately collect and record data |

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| | | | <ul style="list-style-type: none"> Apply the concepts of accuracy and precision to experimental procedures and data |
| | | ACTION 1, 2 | <p>Processing and analyzing data and information</p> <ul style="list-style-type: none"> Seek and analyze patterns, trends, and connections in data, including describing relationships between variables, performing calculations, and identifying inconsistencies Construct, analyze, and interpret graphs, models, and/or diagrams Use knowledge of scientific concepts to draw conclusions that are consistent with evidence Analyze cause-and-effect relationships |
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| | | ALL | <p>Scientific understanding enables humans to respond and adapt to changes locally and globally.</p> |
| | | ALL | <p>Questioning and predicting</p> <ul style="list-style-type: none"> Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal, local, or global interest Make observations aimed at identifying their own questions, including increasingly abstract ones, about the natural world |

