

BC Science “I can” continuum of curricular competencies

	K	1/2	3/4	5/6	7/8	9/10
Questioning and predicting	<ul style="list-style-type: none"> I demonstrate curiosity and a sense of wonder about the world I can observe objects and events in familiar contexts I can ask simple questions about familiar objects and events 	<ul style="list-style-type: none"> I demonstrate curiosity and a sense of wonder about the world I can observe objects and events in familiar contexts I can ask questions about familiar objects and events I can make simple predictions about familiar objects and events 	<ul style="list-style-type: none"> I demonstrate curiosity about the natural world I can observe objects and events in familiar contexts I can identify questions about familiar objects and events that can be investigated scientifically I can make predictions based on prior knowledge 	<ul style="list-style-type: none"> I demonstrate a sustained curiosity about a scientific topic or problem of personal interest I can make observations in familiar or unfamiliar contexts I can identify questions to answer or problems to solve through scientific inquiry I can make predictions about the findings of their inquiry 	<ul style="list-style-type: none"> I demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal interest I make observations aimed at identifying my own questions about the natural world I can identify a question to answer or a problem to solve through scientific inquiry I can formulate alternative “If...then...” hypotheses based on their questions I can make predictions about the findings of their inquiry 	<ul style="list-style-type: none"> I demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal interest I make observations aimed at identifying their own questions, including increasingly abstract ones, about the natural world I can formulate multiple hypotheses and predict multiple outcomes
Planning and conducting	<ul style="list-style-type: none"> I can make exploratory observations using their senses I can safely manipulate materials I can make simple measurements using non-standard units 	<ul style="list-style-type: none"> I can make and record observations I can safely manipulate materials to test ideas and predictions I can make and record simple measurements using informal or non-standard methods 	<ul style="list-style-type: none"> I can suggest ways to plan and conduct an inquiry to find answers to my questions I consider ethical responsibilities when deciding how to conduct an experiment I can safely use appropriate tools to make observations and measurements, using formal measurements and digital technology as appropriate I can make observations about living and non-living things in the local environment I can collect simple data 	<ul style="list-style-type: none"> I explore and pose questions that lead to investigations With support, I can plan appropriate investigations to answer my questions or solve problems I have identified I can decide which variable should be changed and measured for a fair test I can choose appropriate data to collect to answer their questions I can observe, measure, and record data, using appropriate tools, including digital technologies I can use equipment and materials safely, identifying potential risks 	<ul style="list-style-type: none"> I can collaboratively plan a range of investigation types, including field work and experiments, to answer their questions or solve problems they have identified I can measure and control variables through fair tests I can observe, measure, and record data (qualitative and quantitative), using equipment, including digital technologies, with accuracy appropriate to the task I ensure that safety and ethical guidelines are followed in my investigations 	<ul style="list-style-type: none"> I can collaboratively and personally plan, select, and use appropriate investigation methods, including field work and lab experiments, to collect reliable data (qualitative and quantitative) I assess risks and address ethical issues associated with my proposed methods I can select and use appropriate equipment, including digital technologies, to systematically and accurately collect and record data
Processing and analyzing data and information	<ul style="list-style-type: none"> I can discuss my observations I can represent my observations and ideas by drawing I can experience and interpret the local environment 	<ul style="list-style-type: none"> I can experience and interpret the local environment I can sort and classify data and information using drawings or provided tables I can compare my observations with my predictions through discussion I can identify simple patterns and connections 	<ul style="list-style-type: none"> I can experience and interpret the local environment I can sort and classify data and information using drawings or provided tables I can use tables, simple bar graphs, or other formats to represent data and show simple patterns and trends I can compare my results with my predictions, suggesting possible reasons for my findings 	<ul style="list-style-type: none"> I can experience and interpret the local environment I can construct and use a variety of methods, including tables, graphs, and digital technologies, as appropriate, to represent patterns or relationships in data I can identify patterns and connections in data I can compare data with predictions and develop explanations for results I demonstrate an openness to new ideas and consideration of alternatives 	<ul style="list-style-type: none"> I can experience and interpret the local environment I can construct and use a range of methods to represent patterns or relationships in data, including tables, graphs, key, scale models, and digital technologies as appropriate I seek patterns and connections in data from my own investigations and secondary sources I use scientific understandings to identify relationships and draw conclusions 	<ul style="list-style-type: none"> I can experience and interpret the local environment I seek and analyze patterns, trends, and connections in data, including describing relationships between variables and identifying inconsistencies I can use knowledge of scientific concepts to draw conclusions that are consistent with evidence I can analyze cause-and-effect relationships



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Evaluating		<ul style="list-style-type: none"> I can compare my observations with those of others I can consider some environmental consequences of my actions 	<ul style="list-style-type: none"> I can make simple inferences based on their results and prior knowledge I can reflect on whether an investigation was a fair test I demonstrate an understanding and appreciation of evidence I can identify some simple environmental implications of my own and others’ actions 	<ul style="list-style-type: none"> I can evaluate whether my investigations were fair tests I can identify possible sources of error I can suggest improvements to my investigation methods I can identify some of the assumptions and given information in secondary sources I demonstrate an understanding and appreciation of evidence I can identify some of the social, ethical, and environmental implications of the findings from my own and others’ investigations 	<ul style="list-style-type: none"> I reflect on their investigation methods, including the adequacy of controls on variables and the quality of the data collected I can identify possible sources of error and suggest improvements to my investigation methods I demonstrate an awareness of assumptions and can identify information given and bias in my own work and secondary sources I demonstrate an understanding and appreciation of evidence (qualitative and quantitative) I exercise a healthy, informed skepticism and use scientific knowledge and findings for their own investigations to evaluate claims in secondary sources I consider social, ethical, and environmental implications of the findings from my own and others’ investigations 	<ul style="list-style-type: none"> I can evaluate my methods and experimental conditions, including identifying sources of error or uncertainty, confounding variables, and possible alternative explanations and conclusions I can describe specific ways to improve my investigation methods and the quality of the data I can evaluate the validity of and limitations of a model or analogy in relation to the phenomenon modelled I demonstrate an awareness of assumptions, question information given, and can identify bias in my own work and secondary sources I can consider the changes in knowledge over time as tools and technologies have developed I exercise a healthy, informed skepticism and use scientific knowledge and findings to form their own investigations to evaluate claims in secondary sources Consider social, ethical, and environmental implications of the findings from their own and others’ investigations Critically analyze the validity of information in secondary sources and evaluate the approaches used to solve problems
Applying and innovating	<ul style="list-style-type: none"> I can take part in caring for myself, family, classroom and school through personal approaches I can transfer and apply learning to new situations I can generate and introduce new or refined ideas when problem solving 	<ul style="list-style-type: none"> I can take part in caring for myself, family, classroom and school through personal approaches I can transfer and apply learning to new situations I can generate and introduce new or refined ideas when problem solving 	<ul style="list-style-type: none"> I can contribute to care for myself, others, school, and neighbourhood through personal or collaborative approaches I can co-operatively design projects I can transfer and apply learning to new situations I can generate and introduce new or refined ideas when problem solving 	<ul style="list-style-type: none"> I can contribute to care for myself, others, and community through personal or collaborative approaches I can co-operatively design projects I can transfer and apply learning to new situations I can generate and introduce new or refined ideas when problem solving 	<ul style="list-style-type: none"> I can contribute to care for myself, others, community, and world through personal or collaborative approaches I can co-operatively design projects I can transfer and apply learning to new situations I can generate and introduce new or refined ideas when problem solving 	<ul style="list-style-type: none"> I can contribute to care for myself, others, community, and world through personal or collaborative approaches I can co-operatively design projects with local and/or global connections and applications I can transfer and apply learning to new situations I can generate and introduce new or refined ideas when problem solving I can contribute to finding solutions to problems at a local and/or global level through inquiry
Communicating	<ul style="list-style-type: none"> I can share observations and ideas orally I can express and reflect on personal experiences of place 	<ul style="list-style-type: none"> I can communicate observations and ideas using oral or written language, drawing, or role-play I can express and reflect on personal experiences of place 	<ul style="list-style-type: none"> I can represent and communicate ideas and findings in a variety of ways, such as diagrams and simple reports, using digital technologies as appropriate I can express and reflect on personal or shared experiences of place 	<ul style="list-style-type: none"> I can communicate ideas, explanations, and processes in a variety of ways I can express and reflect on personal, shared, or others’ experiences of place 	<ul style="list-style-type: none"> I can communicate ideas, findings, and solutions to problems, using scientific language, representations, and digital technologies as appropriate I can express and reflect on a variety of experiences and perspectives of place 	<ul style="list-style-type: none"> I can formulate physical or mental theoretical models to describe a phenomenon I can communicate scientific ideas, 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 I can express and reflect on a variety of experiences, perspectives, and worldviews of place

