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| --- | --- | --- | --- | --- | --- | --- |
|  | **K** | **1/2** | **3/4** | **5/6** | **7/8** | **9/10** |
| **Questioning and predicting** | * 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
 | * 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
 | * 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
 | * 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
 | * 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
 | * 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** | * I can make exploratory observations using their senses
* I can safely manipulate materials
* I can make simple measurements using non-standard units
 | * 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
 | * 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
 | * 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
 | * 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
 | * 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** | * I can discuss my observations
* I can represent my observations and ideas by drawing
* I can experience and interpret the local environment
 | * 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
 | * 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
 | * 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
 | * 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
 | * 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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|  | **K** | **1/2** | **3/4** | **5/6** | **7/8** | **9/10** |
| **Evaluating** |  | * I can compare my observations with those of others
* I can consider some environmental consequences of my actions
 | * 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
 | * 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
 | * 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
 | * 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
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| **Applying and innovating** | * 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
 | * 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
 | * 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
 | * 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
 | * 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
 | * 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
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| **Communicating** | * I can share observations and ideas orally
* I can express and reflect on personal experiences of place
 | * 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
 | * 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
 | * 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
 | * 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
 | * 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
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