

Science – Grade 4, 2022

Scientific Literacy

**GCO: Students will develop the skills required for scientific and technological inquiries, for solving problems, for communicating scientific ideas and results, for working collaboratively, and for making informed decisions.**

**SCO: Students will plan investigations by asking questions, making inferences, and selecting and using equipment or technology needed to solve a specific problem in the natural world.**

<b>4 - Excelling</b>	<b>3 - Meeting</b>	<b>2 - Approaching</b>	<b>1 - Working Below</b>
The science learner independently and consistently asks questions about familiar phenomenon.	The science learner generally asks questions about familiar phenomenon.	The science learner sometimes (or with support) asks questions about familiar phenomenon.	The science learner rarely asks questions about familiar phenomenon.
The science learner independently and consistently makes predictions related to the question posed.	The science learner generally makes predictions related to the question posed.	The science learner sometimes (or with support) makes predictions related to the question posed.	The science learner rarely makes predictions related to the question.
The science learner independently and consistently explains the data that will need to be collected to answer the question.	The science learner generally explains the data that will need to be collected to answer the question.	The science learner sometimes (or with support) explains the data that will need to be collected to answer the question.	The science learner rarely explains the data needed to answer the question.

## Science – Grade 4, 2022

### Scientific Literacy

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**SCO: Students will collect data by observing and measuring, using tools and methods appropriate for the task.**

<b>4 - Excelling</b>	<b>3 - Meeting</b>	<b>2 - Approaching</b>	<b>1 - Working Below</b>
The science learner independently and consistently uses appropriate methods and tools to collect data.	The science learner generally uses appropriate methods and tools to collect data.	The science learner sometimes (or with support) uses appropriate methods and tools to collect data.	The science learner rarely uses appropriate methods and tools for data collection.
The science learner independently and consistently records observations and/or measurements (data).	The science learner generally records observations and/or measurements (data).	The science learner sometimes (or with support) records observations and/or measurements (data).	The science learner rarely records observations or measurements (data).
The science learner independently and consistently creates a diagram or simple prototype (model) that includes important details.	The science learner generally creates a diagram or simple prototype (model) that includes important details.	The science learner sometimes (or with support) creates a diagram or simple prototype (model) that includes important details.	The science learner rarely creates diagram or simple prototype (model) with details

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<b>4 - Excelling</b>	<b>3 - Meeting</b>	<b>2 - Approaching</b>	<b>1 - Working Below</b>
The science learner independently and consistently represents data (e.g. tables and/or graphical displays) that is correctly titled and labelled.	The science learner generally represents data (e.g. tables and/or graphical displays) that is correctly titled and labelled.	The science learner sometimes (or with support) represents data (e.g. tables and/or graphical displays) that is correctly titled and labelled.	The science learner rarely represents data correctly.
The science learner independently and consistently develops sorting rules for grouping objects or concepts.	The science learner generally develops sorting rules for grouping objects or concepts.	The science learner sometimes (or with support) develops sorting rules for grouping objects or concepts.	The science learner rarely develops suitable sorting rules.
The science learner independently and consistently uses data to answer initial question or prediction.	The science learner generally uses data to answer initial question or prediction.	The science learner sometimes (or with support) uses data to answer initial question or prediction.	The science learner rarely uses data to answer initial question or prediction.

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**Scientific Literacy**

**GCO: Students will develop the skills required for scientific and technological inquiries, for solving problems, for communicating scientific ideas and results, for working collaboratively, and for making informed decisions.**

**SCO: Students will communicate using writing, drawing pictures, and oral language to express valid conclusions supported by data.**

<b>4 - Excelling</b>	<b>3 - Meeting</b>	<b>2 - Approaching</b>	<b>1 - Working Below</b>
The science learner independently and consistently uses appropriate science vocabulary numeric and symbol systems to share understanding.	The science learner generally uses appropriate science vocabulary numeric and symbol systems to share understanding.	The science learner sometimes (or with support) uses appropriate science vocabulary numeric and symbol systems to share understanding.	The science learner rarely uses appropriate science vocabulary, numeric and symbol systems.
The science learner independently and consistently responds to ideas and contributions of others to investigate phenomenon.	The science learner generally responds to ideas and contributions of others to investigate phenomenon.	The science learner sometimes (or with support) responds to ideas and contributions of others to investigate phenomenon.	The science learner rarely responds contributions and ideas of others.
The science learner independently and consistently uses evidence from data analysis to support claim or draw conclusions.	The science learner generally uses evidence from data analysis to support claim or draw conclusions.	The science learner sometimes (or with support) uses evidence from data analysis to support claim or draw conclusions.	The science learner rarely uses evidence from data analysis to support claim or draw conclusions.
The science learner independently and consistently presents ideas in a clear and logical order.	The science learner generally presents ideas in a clear and logical order.	The science learner sometimes (or with support) presents ideas in a clear and logical order.	The science learner rarely presents ideas in a logical way.

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**Science Technology Society Environment**

**GCO: Students will develop an understanding of the nature of science and technology, of the relationships between science and technology, and of the social and environmental contexts of science and technology.**

**SCO: Students will consider factors that support responsible application of scientific and technological knowledge and demonstrate an understanding of sustainable practices.**

<b>4 - Excelling</b>	<b>3 - Meeting</b>	<b>2 - Approaching</b>	<b>1 - Working Below</b>
The science learner independently and consistently follows guidelines for safe use of equipment to conduct an experiment.	The science learner generally follows guidelines for safe use of equipment to conduct an experiment.	The science learner sometimes (or with support) follows guidelines for safe use of equipment to conduct an experiment.	The science learner rarely follows science safety guidelines.
The science learner independently and consistently follows guidelines for safe use of tools to build a prototype of a solution.	The science learner generally follows guidelines for safe use of tools to build a prototype of a solution.	The science learner sometimes (or with support) follows guidelines for safe use of tools to build a prototype of a solution.	The science learner rarely follows technology safety guidelines.
The science learner independently and consistently applies scientific knowledge when considering issues of concern to them.	The science learner generally applies scientific knowledge when considering issues of concern to them.	The science learner sometimes (or with support) applies scientific knowledge when considering issues of concern to them.	The science learner rarely applies scientific knowledge to issues.
The science learner independently and consistently reflects on various aspects of an issue and make decisions about possible actions.	The science learner generally reflects on various aspects of an issue and make decisions about possible actions.	The science learner sometimes (or with support) reflects on various aspects of an issue and make decisions about possible actions.	The science learner rarely makes decisions about actions to take.

**Evidence of Learning: Suggested Sources**

Observations:

- Observe students during “warm up” activities
- Observe students during experiments
- Observe students during group work
- Observe student presentations and demonstrations
- “Gallery” walks

Conversations (oral/written):

- Conferences
- Interviews
- Whole class and group discussions
- Science journal entry
- Exit slips (written responses)
- Self- and peer assessment and reflection

Products:

- Quizzes (oral/written)
- Projects
- Tests
- Work samples
- Exit slips or other responses to questions
- Science journal entry
- Photos of student’s work
- Group problem solving records
- Portfolios