Science – Grade 5, 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.

4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
The science learner independently and consistently asks questions about phenomenon that lead to a fair test or brainstorm a practical technological problem.	The science learner generally asks questions about phenomenon that lead to a fair test or brainstorm a practical technological problem.	The science learner sometimes (or with support) asks questions about phenomenon that lead to a fair test or brainstorm a practical technological problem.	The science learner rarely asks questions that lead to an investigation.
The science learner independently and consistently considers appropriate variables; *dependent, independent and control* to formulate a hypothesis.	The science learner generally considers appropriate variables; *dependent, independent and control* to formulate a hypothesis.	The science learner sometimes (or with support) considers appropriate variables; *dependent, independent and control* to formulate a hypothesis.	The science learner rarely considers appropriate variables to formulate a hypothesis.
The science learner independently and consistently chooses appropriate materials and equipment for an investigation.	The science learner generally chooses appropriate materials and equipment for an investigation.	The science learner sometimes (or with support) chooses appropriate materials and equipment for an investigation.	The science learner rarely chooses appropriate equipment for an investigation.
The science learner independently and consistently describes the investigation procedures for a *fair test* or a solution to a practical problem.	The science learner generally describes the investigation procedures for a *fair test* or a solution to a practical problem.	The science learner sometimes (or with support) describes the investigation procedures for a *fair test* or a solution to a practical problem.	The science learner rarely describes the investigation procedures for a *fair test* or a solution to a practical problem.

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 collect data by observing and measuring, using tools and methods appropriate for the task.

4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
The science learner independently and consistently conducts appropriate investigation to test hypothesis or problem statement.	The science learner generally conducts appropriate investigation to test hypothesis or problem statement.	The science learner sometimes (or with support) conducts appropriate investigation to test hypothesis or problem statement.	The science learner rarely conducts appropriate investigations.
The science learner independently and consistently uses tools and equipment appropriately (e.g., proper handling, transport) in an investigation.	The science learner generally uses tools and equipment appropriately (e.g., proper handling, transport) in an investigation.	The science learner sometimes (or with support) uses tools and equipment appropriately (e.g., proper handling, transport) in an investigation.	The science learner rarely uses tools and equipment appropriately in an investigation.
The science learner independently and consistently records observations (*qualitative data*) and/or measurements (*quantitative data*).	The science learner generally records observations (*qualitative data*) and/or measurements (*quantitative data*).	The science learner sometimes (or with support) records observations (*qualitative data*) and/or measurements (*quantitative data*).	The science learner rarely record observations and/or measurements.
The science learner independently and consistently develop a model to predict and/or describe a phenomenon.	The science learner generally develop a model to predict and/or describe a phenomenon.	The science learner sometimes (or with support) develop a model to predict and/or describe a phenomenon.	The science learner rarely develops a model of a phenomenon.

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 collect data by observing and measuring, using tools and methods appropriate for the task.

4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
The science learner independently and consistently organizes tables and graphical displays.	The science learner generally organizes tables and graphical displays.	The science learner sometimes (or with support) organizes tables and graphical displays.	The science learner rarely organizes data collected.
The science learner independently and consistently constructs graphical displays of data (e.g., drawings, charts, maps, graphs).	The science learner generally constructs graphical displays of data (e.g., drawings, charts, maps, graphs).	The science learner sometimes (or with support) constructs graphical displays of data (e.g., drawings, charts, maps, graphs).	The science learner rarely constructs graphical displays of the data.
The science learner independently and consistently classifies objects and events.	The science learner generally classifies objects and events.	The science learner sometimes (or with support) classifies objects and events.	The science learner rarely classifies objects and events.
The science learner independently and consistently obtains information from sources and/or other reliable media to support results.	The science learner generally obtains information from sources and/or other reliable media to support results.	The science learner sometimes (or with support) obtains information from sources and/or other reliable media to support results.	The science learner rarely obtains information to support results.
The science learner independently and consistently uses data (*evidence*) to confirm or refute the hypothesis or initial problem.	The science learner generally uses data (*evidence*) to confirm or refute the hypothesis or initial problem.	The science learner sometimes (or with support) uses data (*evidence*) to confirm or refute the hypothesis or initial problem.	The science learner rarely uses data to support findings.

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.

4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
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 subject specific vocabulary.
The science learner independently and consistently discusses ideas and contributions of peers, teacher, and/or guests.	The science learner generally discusses ideas and contributions of peers, teacher, and/or guests.	The science learner sometimes (or with support) discusses ideas and contributions of peers, teacher, and/or guests.	The science learner rarely discusses ideas contributions of others.
The science learner independently and consistently communicates ideas using a variety of modes (e.g., digital technologies, models, simple reports).	The science learner generally communicates ideas using a variety of modes (e.g., digital technologies, models, simple reports).	The science learner sometimes (or with support) communicates ideas using a variety of modes (e.g., digital technologies, models, simple reports).	The science learner rarely communicates ideas using novel methods.
The science learner independently and consistently presents idea in a clear and logical order.	The science learner generally presents idea in a clear and logical order.	The science learner sometimes (or with support) presents idea in a clear and logical order.	The science learner rarely presents ideas in a logical manner.

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.

4 - Excelling	3 - Meeting	2 - Approaching	1 - Working Below
The science learner independently and consistently follows guidelines for safe use of equipment to conduct a scientific experiment.	The science learner generally follows guidelines for safe use of equipment to conduct a scientific experiment.	The science learner sometimes (or with support) follows guidelines for safe use of equipment to conduct a scientific 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 uses science knowledge when considering issues of concern to them.	The science learner generally uses science knowledge when considering issues of concern to them.	The science learner sometimes (or with support) uses science knowledge when considering issues of concern to them.	The science learner rarely uses science knowledge to consider issues.
The science learner independently and consistently reflects on various aspects of an issue to make decisions about possible actions.	The science learner generally reflects on various aspects of an issue to make decisions about possible actions.	The science learner sometimes (or with support) reflects on various aspects of an issue to make decisions about possible actions.	The science learner rarely makes decisions about action 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