

ASSESSING & REPORTING 3–8 SCIENCE

Assessment and Reporting Overview and Tips

Assessing and reporting in science directly affects student learning, teacher practice, and communication with families. Assessment in Science should focus on growth and understanding of scientific literacy and sustainability, reminding us that the goal is for students to keep learning and building skills over time.

This document is intended to provide guidance for science teachers in Grades 3–8 in ASD-N regarding assessment practices. It aims to highlight the use of various assessment methods and clarify the provincial reporting scale.

Science Strands - Overview

Scientific Literacy

Focuses on students' ability to:

- Ask questions and make predictions
- Plan and conduct investigations
- Collect and interpret data
- Communicate scientific understanding
- Apply scientific knowledge to new situations

Emphasis on critical thinking and problem-solving skills.

Learning & Living Sustainably

Focuses on students' ability to:

- Understand the interconnectedness of environmental, social, and economic systems
- Analyze the impact of human actions on the environment
- Identify and propose sustainable solutions
- Act responsibly to promote sustainability

Emphasis on environmental stewardship and social responsibility.

Refer to full curriculum documents on GNB site: [NB Curriculum Framework](#)

Formative & Summative Assessment

Formative and summative assessments work together to provide ongoing feedback during learning and a clear picture of achievement at key points.

Assessment FOR Learning (Formative)

Purpose: To *improve* student learning.

Examples:

- Ongoing process.
- Provides feedback to students and informs instruction.
- Focuses on strengths and areas for growth.
- Observations
- Discussions
- Exit tickets
- Self/Peer assessment
- Scientific Journal
- Quizzes

Sample Achievement Indicators Checklist for Middle School:

Middle School Science - Formative Assessment Checklist of Scientific Literacy

As you are observing and having conversations with students actively 'doing science', you can use this checklist to take quick notes while they are practicing their Scientific Literacy skills.

Investigation

Student

Achievement Indicator	Look-Fors															
		✓	~	X												
Asks questions that lead to fair scientific tests or problems	✓ / ~ / X (Can also include date ex: 0.11) - Asks testable 'What happens if...?' questions - Refines vague questions with support															
Identifies dependent, independent, and control variables	- States change/measure/control - Variables match question															
Chooses and explains required equipment/materials	- Identifies appropriate tools - Explains why chosen															
Describes procedures for fair tests/investigations	- Lists steps clearly - Considers controls															
Develops working criteria (constraints, specifications)	- Identifies constraints - Sets clear criteria for success															
Responds to and acknowledges ideas of others	- Builds on peer input - Acknowledges contributions															

Assessment OF Learning (Summative)

Purpose: To *evaluate* student learning at a specific point in time.

- Summarizes student achievement.
- Used for reporting purposes.

Examples:

- Projects
- Performance tasks
- Presentations
- Tests / Lab notebook

Refer to the curriculum companion document: [Assessing, Evaluating, Reporting Holistic Curriculum K-8](#)

Report Cards

The provincial **1–4+ scale** is used on the **report card** to show overall achievement for each strand. It reflects a **holistic judgment** based on a synthesis of evidence gathered throughout the reporting period. It is not intended for use on evidence of learning throughout the term.

Evidence of Learning includes:

- **Observations** (teacher notes during activities/discussions)
- **Conversations** (student explanations, reflections)
- **Products** (work samples, projects, summative tasks)

Formative assessments (journals, exit tickets, discussions, self-assessment, quizzes, etc.):

- Are used throughout the term.
- Can use points, rubrics etc.
- Provide feedback for learning and inform instruction.
- Are not averaged for the report card grade.

At reporting time, teachers:

- Use **professional judgment** to synthesize all evidence of learning.
- Assign a **1–4+ level** using the provincial rubric.
- Consider the **whole picture of learning**.

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Best Practices:

- Co-construct rubrics with students.

- Do not weight categories such as quizzes, tests, homework, labs, etc. as it can create distortion. These products are one piece of triangulating evidence of learning.
- 1-4+ scale/rubric is reserved for the report card.
- Write report card comments that:
 - Highlight strengths
 - Identify areas for growth
 - Suggest next steps
 - Keep a **learner-centred focus**

Adapted from the New Brunswick Curriculum and Assessment Frameworks. See [NB Curriculum Website](#), [Assessing, Evaluating, Reporting Holistic Curriculum K-8](#) and [Assessment Rubric Examples](#) for more information.

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