

Curricular Competencies: Assessment and Reflection

The following proficiency scale will be used for your assessment.

Ex – Extending (4.5+)	E/P – Extending/ Proficient (4)	P – Proficient (3)	D – Developing (2)	E – Emerging (1-0)
Your work shows that you are thinking at a sophisticated level. You are able to think beyond yourself and demonstrate a high level of understanding and connectedness to the material	Your work in this area meets all the expectations and you are beginning to have a more sophisticated understanding of the concepts and competencies.	Your work meets all the expectations and understanding of the concepts and competencies relevant to the expected learning.	You are demonstrating a partial understanding of the concepts and competencies relevant to the expected learning	You are demonstrating an initial understanding of the concepts and competencies relevant to the expected learning (1)
				You are missing the concept or competency all together – most likely because you did not do anything. (0)

5	4.75	4.5	4.25	4	3.75	3.5	3.25	3	2.75	2.5	2.25	2.0	1.75	1.5	1.25	1	<1
99%	96%	93%	90%	87%	84%	81%	78%	75%	71%	68%	65%	62%	59%	56%	53%	50%	<50%

Evidence: Curricular Competency & Proficiency Criteria

Curricular Competency: QUESTIONING AND PREDICTING

- Make observations aimed at identifying your own questions about the natural world
- Formulate multiple hypotheses and predict multiple outcomes.

E	D	P	E/P	Ex

Working Towards Proficiency (areas needing work):

Proficiency means that I can...

- **identify** my own questions
- **distinguish** between independent, dependent and controlled variables
- **propose** an explanation for scientific phenomena
- **predict** multiple outcomes for the investigation
- **create** supported hypotheses and explain why you predict specific outcomes

Evidence of meeting or exceeding standards:

Curricular Competency: PLANNING AND CONDUCTING

E	D	P	E/P	Ex

- Collaboratively and individually plan, select, and use appropriate investigation methods
- Use appropriate SI units and appropriate equipment, including digital technologies, to systematically and accurately collect and record data.
- Apply the concepts of accuracy and precision to experimental procedures and data

Working Towards Proficiency (areas needing work):

Proficiency means that I can...

- **select** types of data to collect for the investigation
- **demonstrate** correct data collection methods
- **classify** qualitative and quantitative data
- **choose** appropriate SI units with correct significant figures
- **assess** relevancy of data & observations to collect
- **construct** coherent data & observation tables

Evidence of meeting or exceeding standards:

Curricular Competency: PROCESSING AND ANALYZING DATA AND INFORMATION

E	D	P	E/P	Ex

- Seek and analyze patterns, trends, and connections in data, including describing relationships between variables, performing calculations, and identifying inconsistencies.
- Construct, analyze, and interpret graphs, models, and/or diagrams.
- Use knowledge of scientific concepts to draw conclusions that are consistent with evidence.

Working Towards Proficiency (areas needing work):

Proficiency means that I can...

- **tabulate** relevant data/observations
- **interpret** meaning of relevant data
- **calculate** or manipulate relevant data if required
- **analyze** patterns or trends in data/observations
- **evaluate** outliers or irrelevant data/observations with clear explanation
- **draw conclusions** for acceptance or rejection of hypotheses using clear justification

Evidence of meeting or exceeding standards:

Curricular Competency: EVALUATING

E	D	P	E/P	Ex

- Evaluate their methods and experimental conditions, including identifying sources of error or uncertainty, confounding variables, and possible alternative explanations and conclusions.
- Describe specific ways to improve their investigation methods and the quality of their data.

Working Towards Proficiency (areas needing work):**Proficiency means that I can...**

- **identify** sources of error in the investigation
- **classify** types of error
- **modify** investigation to minimize error for future
- **evaluate** effect of compounding variables on the investigation
- **generate** possible alternatives and conclusions to the investigation
- **propose** questions, ideas & methods for future investigations

Evidence of meeting or exceeding standards:**Curricular Competency: COMMUNICATION**

E	D	P	E/P	Ex

- Communicate scientific ideas and information for a specific purpose and audience
- Constructing evidence-based arguments and using appropriate scientific language, conventions, and representations.

Working Towards Proficiency (areas needing work):**Proficiency means that I can...**

- **define** key vocabulary related to scientific idea
- **make connections** between theoretical concepts and analyzed data
- **relate** key evidence to scientific ideas
- **explain** why the chosen evidence supports or rejects the scientific ideas
- **construct arguments** to support or reject hypothesis with supporting evidence

Evidence of meeting or exceeding standards: