

# Scientific Communication

The process of advancing or defending an idea or explanation.

Standard	No Evidence (0)	Beginning (1)	Developing (2)	Proficient (3)	Mastering (4)
<b>C-1. Models</b> Create useful models	No evidence of creating a model	You create a model	Your model has all the necessary parts but does not describe the relationships between them	Your model is detailed and accurate; it has all the parts and describes the relationships between them	<i>Your work is excellent and your model presents information in multiple formats</i>
<b>C-2. Arguments</b> Support or refute claims with evidence and reasoning	No evidence of argumentation that addresses the claim	Your argument addresses the question	Your argument addresses the question with a claim, some evidence, and some reasoning	Your argument addresses the question with a specific claim, sufficient evidence, and a logical chain of reasoning that completely supports the claim with accurate scientific knowledge	<i>Your work is excellent and your argument refutes a counter-claim</i>
<b>C-3. Explanations</b> Explain a topic with knowledge and examples	No evidence of explaining a topic	Your explanation addresses the topic	You accurately inform the reader about the topic using some scientific vocabulary and examples	You inform the reader about the topic using well organized and accurate scientific knowledge, appropriate scientific vocabulary, academic voice, and appropriate examples	<i>Your work is excellent and you add depth by applying the knowledge in new ways, introducing new examples, or making connections outside of the unit</i>

# Scientific Inquiry

The process of developing understanding and discovering knowledge through experimentation.

Standard	No Evidence (0)	Beginning (1)	Developing (2)	Proficient (3)	Mastering (4)
<b>I-1. Predictions</b> Develop testable predictions	No evidence of developing a prediction	You develop a prediction	You develop a testable prediction	You develop a prediction that is testable, incorporates accurate scientific knowledge and observations, and which you can reasonably investigate	<i>Your work is excellent and you explain what additional questions could come from testing your prediction</i>
<b>I-2. Investigations</b> Plan and conduct safe investigations	No evidence of investigation	You design and/or conduct an investigation	You design and/or conduct an investigation that aims to test a prediction	By applying accurate scientific knowledge, you design and/or conduct a controlled, objective, and safe investigation which will produce evidence useful for testing a prediction	<i>Your work is excellent and you explain why your investigation plan is reproducible</i>
<b>I-3. Data</b> Analyze and apply data	No evidence of data analysis	You analyze data	You analyze data and reveal valid evidence	You use an appropriate and detailed method to organize and analyze your data so that it reveals valid patterns or relationships that you apply as evidence	<i>Your work is excellent and you clearly explain your analysis methods</i>

# Engineering Design

The process of defining problems and designing solutions.

Standard	No Evidence (0)	Beginning (1)	Developing (2)	Proficient (3)	Mastering (4)
<b>E-1. Problems</b> Define problems that can be solved	No evidence of defining a problem	You define a problem	You define a real problem and its criteria and constraints	You completely, specifically, and accurately define the criteria and constraints of a real problem that can be reasonably solved	<i>Your work is excellent and you explain how the problem impacts society</i>
<b>E-2. Solutions</b> Construct and test solutions to problems	No evidence of designing a solution	You design a solution	You design a solution that addresses the problem, criteria, and constraints	You develop a solution, through iterative testing and application of accurate scientific knowledge, that solves a problem and meets the criteria and constraints	<i>Your work is excellent and you explain how your design is valuable and practical</i>

Excellent Work	
Written Work	<input type="checkbox"/> Clear and concise <input type="checkbox"/> Uses precise language and academic voice <input type="checkbox"/> Uses specific examples from a variety of reputable sources <input type="checkbox"/> Is edited and appropriately formatted
Visual Work	<input type="checkbox"/> Neat and tidy <input type="checkbox"/> Appropriately labeled <input type="checkbox"/> Large and clear enough to be easily read
Presented Work	<input type="checkbox"/> Spoken with a clear voice and with eye contact <input type="checkbox"/> Clearly rehearsed with minimal “fillers” (umm, uhhh) <input type="checkbox"/> Is concise and easy to follow <input type="checkbox"/> If filmed: camera is steady and neatly framed <input type="checkbox"/> If using visuals: words are concise and not read aloud

# Grading Scale

## Forest Ridge Course Grading Scale

<b>93-100%</b>	Student performance shows a thorough understanding of course concepts and skills and demonstrates understanding beyond the expectations of the course. Examples of going beyond the expectations include independently applying the learning in new situations, relating new learning to other concepts including those in other disciplines, developing original ideas, or demonstrating a level of skill beyond expectations for proficiency.
<b>83 - 92%</b>	Student performance consistently and independently demonstrates mastery of the course content and proficiency in skills.
<b>73-82%</b>	Student performance shows acceptable progress toward mastery of essential skills and concepts, though evidence of mastery is inconsistent or student needs prompting or other support in order to demonstrate mastery.
<b>63-72 %</b>	Student performance shows evidence of growth but does not yet show adequate/significant/enough progress toward mastery of the essential concepts and skills in the course.
<b>0-62%</b>	Student performance is not sufficient to reliably assess progress toward mastery of course content and skills.

## Science Department Assignment Grading Scale

<b>3.75 and above</b>	Excellent work <b>and</b> additional mastery work
<b>3.25 and 3.5</b>	Excellent work
<b>3.0</b>	Clearly proficient work
<b>2.5 and 2.75</b>	Nearly proficient with minor changes needed
<b>2.25 and below</b>	Work is not yet proficient

## Level to Score Conversion Table

<b>Level</b>	<b>0</b>	<b>0.5</b>	<b>0.75</b>	<b>1.0</b>	<b>1.25</b>	<b>1.5</b>	<b>1.75</b>	<b>2.0</b>
<b>Score</b>	0%	50%	58%	63%	65%	68%	70%	73%
<b>Level</b>	<b>2.25</b>	<b>2.5</b>	<b>2.75</b>	<b>3.0</b>	<b>3.25</b>	<b>3.5</b>	<b>3.75</b>	<b>4.0</b>
<b>Score</b>	76%	79%	82%	86%	89%	93%	96%	100%