

**Scientific argumentation** consists in engaging in argument from evidence by using appropriate and sufficient evidence and scientific reasoning to defend and critique claims and explanations about the natural and designed worlds. (From NGSS Science and Engineering Practices.)

SCORING DOMAIN	EMERGING	E/D	DEVELOPING	D/P	PROFICIENT	P/A	ADVANCED
<b>CLAIM</b>	<ul style="list-style-type: none"> <li>Does not answer the scientific question</li> <li>Is not based on scientific content</li> </ul>		<ul style="list-style-type: none"> <li>Partially answers the scientific question</li> <li>Is partially based on scientific content</li> </ul>		<ul style="list-style-type: none"> <li>Answers the scientific question</li> <li>Is based on scientific content</li> </ul>		<ul style="list-style-type: none"> <li>Answers the scientific question completely</li> <li>Is based on a nuanced understanding of the scientific content</li> </ul>
<b>EVIDENCE</b>	Presents no evidence (textual, experimental data, or multimedia) or evidence that is: <ul style="list-style-type: none"> <li>not sufficient</li> <li>not detailed</li> <li>not accurate</li> </ul>		Presents evidence (textual, experimental data, or multimedia) that is either: <ul style="list-style-type: none"> <li>partially sufficient</li> <li>partially detailed</li> <li>partially accurate</li> </ul>		Presents evidence (textual, experimental data, or multimedia) that is: <ul style="list-style-type: none"> <li>sufficient</li> <li>detailed</li> <li>accurate</li> </ul>		Presents compelling evidence (textual, experimental data, or multimedia) that is: <ul style="list-style-type: none"> <li>sufficient</li> <li>detailed</li> <li>accurate</li> </ul>
<b>ANALYSIS</b>	<ul style="list-style-type: none"> <li>Does not describe the evidence</li> <li>Does not identify trends in the evidence</li> <li>Does not make connections between pieces of evidence and the claim.</li> <li>Does not discuss strengths or limitations in the evidence.</li> </ul>		<ul style="list-style-type: none"> <li>Describes the evidence incorrectly or with minor errors</li> <li>Identifies trends in the evidence incorrectly or with minor errors</li> <li>Makes connections between pieces of evidence and the claim that are illogical or incorrect.</li> <li>Quickly and superficially mentions strengths or limitations in the evidence.</li> </ul>		<ul style="list-style-type: none"> <li>Describes the evidence</li> <li>Identifies trends in the evidence</li> <li>Makes connections between pieces of evidence and the claim.</li> <li>Assesses strengths and limitations in the evidence.</li> </ul>		<ul style="list-style-type: none"> <li>Describes the evidence thoroughly and accurately</li> <li>Identifies and explains trends in the evidence</li> <li>Makes connections between pieces of evidence and the claim with strong logical reasoning to support the connections.</li> <li>Assesses strengths and limitations in the evidence.</li> </ul>
<b>COUNTERCLAIM</b>	<ul style="list-style-type: none"> <li>No counter-claims evident.</li> </ul>		<ul style="list-style-type: none"> <li>Briefly alludes to counter-claims, or there is little or no evidence against them.</li> </ul>		<ul style="list-style-type: none"> <li>Counter-claims are clearly stated and student gives evidence to refute them</li> </ul>		<ul style="list-style-type: none"> <li>Counter-claims are clearly stated and the student gives evidence to conclusively refute them.</li> </ul>

<p><b>SOURCES</b> <i>What is the evidence that the student has chosen sources carefully?</i></p>	<ul style="list-style-type: none"> <li>● Restates information from a single source.</li> <li>● Expresses broad agreement with a source's perspective without assessing the strength or limitation of the source.</li> </ul>		<ul style="list-style-type: none"> <li>● Restates information from multiple sources.</li> <li>● Minimally addresses the strength or limitation of one important source.</li> </ul>		<ul style="list-style-type: none"> <li>● Summarizes evidence from multiple sources related to the argument.</li> <li>● Assesses the strengths or limitations of most important sources to support the argument or claims.</li> </ul>	<ul style="list-style-type: none"> <li>● Synthesizes evidence from multiple sources related to the argument.</li> <li>● Assesses the strengths and limitations of the most important sources to support and/or refute the argument or claim.</li> </ul>
<p><b>ORGANIZATION</b> <i>What is the evidence that the student can clearly communicate ideas to others?</i></p>	<ul style="list-style-type: none"> <li>● Main claim is not supported throughout text.</li> <li>● Ideas are disorganized, underdeveloped, or loosely sequenced.</li> </ul>		<ul style="list-style-type: none"> <li>● Main claim is evident but not consistently present throughout text.</li> <li>● Ideas are organized but not sufficiently developed or logically sequenced.</li> </ul>		<ul style="list-style-type: none"> <li>● Main claim is presented clearly and consistently throughout the text.</li> <li>● Sequence and organization reveal the reasoning and logic of the conclusions.</li> </ul>	<ul style="list-style-type: none"> <li>● Main claim is presented clearly and consistently throughout text and guides the organization.</li> <li>● Sequence and organization enhance the reasoning and logic of the conclusions.</li> </ul>
<p><b>CONVENTIONS</b> <i>What is the evidence that the student can accurately use scientific or academic conventions to communicate ideas to others?</i></p>	<ul style="list-style-type: none"> <li>● No correct use of scientific vocabulary from the unit.</li> <li>● No complex sentences.</li> <li>● No transitions.</li> <li>● Tone is mostly inappropriate for the kind of writing and intended audience.</li> </ul>		<ul style="list-style-type: none"> <li>● Uses correctly some, but not all appropriate scientific vocabulary learned in the unit.</li> <li>● Uses one or two complex sentences appropriately.</li> <li>● Transitions connect some, but not all parts of the project.</li> <li>● Uses a tone that is partially appropriate to the kind of writing and intended audience.</li> </ul>		<ul style="list-style-type: none"> <li>● Uses correctly all appropriate scientific vocabulary learned in the unit.</li> <li>● Uses several complex sentences appropriately.</li> <li>● Transitions connect different parts of the project.</li> <li>● Uses a tone that is mostly appropriate to the kind of writing and intended audience.</li> </ul>	<ul style="list-style-type: none"> <li>● Uses all scientific vocabulary learned in the unit, and correctly incorporates additional vocabulary from other units or resources. .</li> <li>● There is a range of sentence structures suited to different scientific purposes. .</li> <li>● Smooth transitions connect all parts of the project into a coherent product.</li> <li>● Uses a tone appropriate to the kind of writing and intended audience, with no deviations.</li> </ul>