

Honors Biology. Claims, Evidence and Reasoning (CER) Rubric

	4 Advanced	3.5 Proficient	3 Developing	2.5 Emerging	
Claim – a statement that answers the original research question	<ul style="list-style-type: none"> Scientifically accurate Completely answers the question 	<ul style="list-style-type: none"> Scientifically accurate Nearly completely answers the question 	<ul style="list-style-type: none"> Partially scientifically accurate Partially answers the question 	<ul style="list-style-type: none"> Is not scientifically accurate overall Does not adequately answer the question 	No claim
Evidence – scientific data that supports the claim	<ul style="list-style-type: none"> The data (IV and DV numbers) are scientifically appropriate to support the claim. The data are thorough and convincing – enough details and evidence provided. Proper units are used with the data Effectively incorporates the results of the appropriate statistical test, including a screenshot of the test from GraphPad. 	<ul style="list-style-type: none"> The data are scientifically appropriate to support the claim The data are sufficient and convincing, but tend to be more general and not as specific and in depth Evidence may be repetitive Incorporates the results of the appropriate statistical test, including a screenshot of the test from GraphPad. 	<ul style="list-style-type: none"> The data relate to the claim, but are not entirely scientifically appropriate The data are not sufficient, though generally support the claim The results of the appropriate statistical test are somewhat misinterpreted or used in a way that don't support the claim. 	<ul style="list-style-type: none"> There is some evidence provided, but it is not logically linked to the claim or scientifically appropriate An incorrect statistical test was used to analyze these data. 	No evidence provided
Reasoning – a justification that links the claim and evidence	<ul style="list-style-type: none"> Reasoning clearly links evidence to claim Appropriate scientific principles (class concepts) are used There are sufficient scientific principles to make links clear between claim and evidence 	<ul style="list-style-type: none"> Reasoning adequately links claim to evidence Includes related scientific principles. Reasoning tends to be more general and shows only partial depth of content understanding 	<ul style="list-style-type: none"> Reasoning does not adequately link claim to evidence, or clarify why data count as evidence Includes related and non-related scientific principles, and shows little depth of content understanding 	<ul style="list-style-type: none"> Reasoning is clearly insufficient and relates only tangentially to question and claim at hand Scientific understanding is very limited 	Does not provide reasoning
Language and Vocabulary	<ul style="list-style-type: none"> Response clearly and effectively expresses ideas using precise, scientifically appropriate descriptions and vocabulary 	<ul style="list-style-type: none"> Response adequately expresses ideas and scientifically appropriate descriptions and vocabulary, but they are more general than specific 	<ul style="list-style-type: none"> Response inconsistently and sometimes inappropriately expresses ideas or scientific descriptions and vocabulary 	<ul style="list-style-type: none"> Scientific language and vocabulary are not precise or appropriate 	Not understandable
Focus and Organization	<ul style="list-style-type: none"> Focus only on question at hand Logical progression of ideas Clearly stated and focused claim that is strongly maintained 	<ul style="list-style-type: none"> Focus mainly on question at hand, some loosely connected material present Logical progression of ideas Clearly stated and focused claim that is adequately maintained 	<ul style="list-style-type: none"> Focus not consistent on question at hand Progression of ideas not entirely logical Have a claim, but it's not entirely clear or maintained 	<ul style="list-style-type: none"> Focus not at all consistent Progression of ideas not logical Have an unclear claim that is not maintained 	No clear focus or organization