




Scientific Explanation Guidelines

<p>I can write a scientific explanation to communicate what I have learned</p>	<p>Claim</p> 	<ul style="list-style-type: none"> • Appropriate and accurate: This is a clear statement addresses the question. To get full credit is also needs to be accurate. <i>If it is an open ended question, where there is no right answer, it does not have to accurate, just well supported</i> • Complete: The statement has to be a complete sentence that answers the whole question
	<p>Evidence</p> 	<p>Evidence is the qualitative or quantitative data that you believe best supports your claim.</p> <ul style="list-style-type: none"> • Related: The data has to come from your lab • Sufficient: To have sufficient data, you will usually need two data sets like high and low data. However, that could change depending on the question you are answering. Make sure to read directions closely to know what sufficient is for that question. <i>A good way to begin is: "I know this because..."</i>
	<p>Reasoning</p> 	<ul style="list-style-type: none"> • Links evidence to the claim: A good way to do this is use the following sentence frame to write the reasoning. <i>"Since (scientific principle).... and (what happened) ... then (restate claim)"</i> • Scientific Principle – Use something that you know is true, to justify why what happed validates your claim • Restate the claim: Then, restate you claim as a final confirmation of what you believe.

Examples

(Scientific principle, concept or idea in in bold)

Quantitative data

Which would be warmer during the day, the shore or the water?

*The shore would be warmer then the water. I know this because in our experiment when the light shined on the water and the sand for the same amount of time, the soil temperature was 30° C and the water was 20° C. **Since materials absorb energy at different rates** and the soil was warmer then the water, then in real life, the shore will be warmer than the water.*

Qualitative data

Is Brine Shrimp a living thing?

*Brine shrimp are living things. I know this because the brine shrimp in our experiment ate, they grew larger, respired and reproduced. **Since living things are able to obtain energy, grow, respire and reproduce** and our evidence shows that brine shrimp do the same thing, then they are living things.*