

Scientific Explanation – Project due Monday November 20, 2017

Create a scientific explanation for the question, " **How do the particles in matter change when a substance becomes hotter, cools down, or changes state?**" Your explanation must combine your claim you are making, the various pieces of evidence you collect to support your claim, and justification for why the evidence supports your claim (logical reasoning). The explanation must be well organized, contain clear thoughts and accurate scientific vocabulary.

As a scientist you will select the best way to communicate your scientific explanation. You may use one method or a combination of these methods. Be sure to include your **claim, evidence, and reason** for connecting the evidence to the claim.

Methods

- Represent your scientific explanation using a model (physical or diagram). Attach an image or a video demonstrating your model.
- Explain your scientific explanation using an oral communication method, such as a video of yourself, a conversation with another student, a skit, or an audio file. Attach your video or audio file.
- Present your scientific explanation in a creative written form using Board Builder, PowerPoint, Prezi, Google Docs, etc.

Evlotion Criteria

Scale	3	2	1	0
CLAIM	The claim includes a testable statement or conclusion that fully answers all components of the question.	The claim includes a testable statement or conclusion that answers most components of the question.	The claim includes a statement that answers some components of the question.	No response, or response not appropriate.
EVIDENCE	Data included in the explanation helps answer the question. Data comes from a variety of resources. Evidence is both appropriate and sufficient.	Data included in the explanation helps answer the question or problem, OR data comes from a variety of resources, AND evidence is both appropriate and sufficient.	Data included in the explanation helps answer the question or problem, OR data comes from a variety of resources, OR evidence is both appropriate and sufficient.	No response, or response not appropriate.
REASONING	The reasoning describes why the evidence is relevant and should be used to support the claim. The explanation includes the reasoning for how the evidence supports the claim. Scientific principles and scientific language link the evidence to the claim.	The reasoning describes why the evidence is relevant and should be used to support the claim, OR the explanation includes the reasoning for how the evidence supports the claim. Scientific principles and scientific language link the evidence to the claim.	The reasoning describes why the evidence is relevant and should be used to support the claim, OR the explanation includes the reasoning for how the evidence supports the claim. Scientific principles OR scientific language link the evidence to the claim.	No response, or response not appropriate.