

Predicting the Boiling Point of Water

Your report should be approximately two double spaced, twelve point font pages.

Outline:

What question were you trying to answer and why?

What did you do to answer your question and why?

What is your argument? (Here is where you use data to support your answer to the question.)

- You may include graphs or table in your report.

Recall, our guiding question is **"What happens at the molecular level when thermal energy is added to a substance?"** and your task was to **predict the amount of time it would take to heat any given sample of water to boiling.**

Rubric:

HP 4	P 3	NP 2	Dev 1
<p>My model:</p> <p>Correctly accounts for the mass and initial temperature of the water.</p> <p>Correctly explains the relationship between the amount of water, the initial temperature, and how long it takes to boil.</p> <p>Accurately predicts the amount of time it will take a sample of water to boil.</p> <p>The predictions are confirmed by tests and data is shared in the report.</p> <p>My report: Includes a complete and correct answer to the guiding question, supported by data that is included in the report, and justified with a complete explanation of the thinking behind the predictions made in the model.</p>	<p>My Model:</p> <p>Accounts for the mass and initial temperature of the water.</p> <p>Correctly states the relationship between the amount of water, the initial temperature, and how long it takes to boil.</p> <p>Predicts the amount of time it will take a sample of water to boil within 25% error.</p> <p>The predictions are tested and data is shared in the report, but the tests do not produce data the matches predictions.</p> <p>My report: Includes a complete and mostly correct answer to the guiding question, supported by data that is included in the report, and justified with an explanation of the thinking behind the predictions made in the model that is mostly complete and correct.</p>	<p>My Model:</p> <p>Accounts for the mass or initial temperature of the water.</p> <p>States the relationship between the amount of water, the initial temperature, and how long it takes to boil with minimal errors.</p> <p>Predicts the amount of time it will take a sample of water to boil within 50% error.</p> <p>The predictions are confirmed by tests but data is not included in the report.</p> <p>My report: Includes an answer to the guiding question, supported by data that is mentioned in the report, but not quoted or included, and justified with an explanation of the thinking behind the predictions made in the model that may be flawed.</p>	<p>My Model:</p> <p>Attempts to account for the mass or initial temperature of the water.</p> <p>States the relationship between the amount of water, the initial temperature, and how long it takes to boil with significant errors.</p> <p>Predicts the amount of time it will take a sample of water to boil with greater than 50% error, or does not make a prediction.</p> <p>Predictions are not tested.</p> <p>My report: Includes an answer to the guiding question that is significantly incomplete or incorrect. Data is not included in the report, and explanation of the thinking behind the predictions made in the model is incomplete or significantly incorrect.</p>