



Constructing an Explanation

Science, Grades 9-12

Assignment Objectives

- Guide students in constructing an explanation using their claim, scientific principles/knowledge, and evidence from observed data. Students will learn how to write their reasoning and utilize a Paper tutor for support.

Teacher Instructions

- This resource can be utilized on its own, or with our [Science Lab Report \(NGSS\) Activity](#). It is appropriate for any science discipline (Biology, Physics, Chemistry, etc.)
- Provide students with the activity below once they have carried out their investigation.
- After students have read the assignment instructions, have students work through the outline below to support with constructing their explanation.
- As students work through this activity, they will engage with a Paper Live Help Tutor & Paper's Review Center for support and feedback.

Ideas for Use

- Utilize during lab report projects to differentiate support as students are developing their scientific reasoning/explanation
- Independent practice

Constructing an Explanation

Step 1: Providing Scientific Knowledge

State Your Claim: Start your explanation by stating your claim.

What was the claim you originally made?
What were you trying to prove?



Provide some scientific principles/knowledge on your topic using the research you did and/or what you already knew. What background knowledge or research did you do before your activity/investigation? This will help prove you *understand* your chosen topic, and allow you to draw a connection to your evidence.

Pro Tip: **Work with a Paper Live Help tutor to start your Explanation.**

- Share your assignment instructions and rubric.
- Try asking your tutor: Can you help me to provide scientific knowledge on ____? Can you give me feedback on the scientific principles/knowledge on ____ for my activity?

Step 2: Prove Your Claim

Provide Evidence: Use the data and findings from your activity that prove your claim. Make sure to explain why they prove your claim.



Restate Your Claim: Wrap up your Explanation with a conclusion sentence that begins with a word such as "Therefore," "Hence," "Thus," "So," and restate the claim.



When all of the above steps are complete, choose at least one of the options for feedback and/or practice.

Option 1: Share with a Paper Live Help Tutor for review and to practice sharing.

- This is a great way to get immediate feedback, and also allows you to present your Explanation.
- Include your assignment instructions and this activity when you message your tutor.
- Try asking your tutor: Can you help me revise my Scientific Reasoning?
- Need help writing your full Explanation? Ask your tutor!

Option 2: Submit your Explanation to the Paper Review Center for Feedback.

- Include your written activity, assignment instructions (including the rubric), and this activity when you submit to the Review Center.
- Revise and continue to share your Explanation as needed.

Write your full Explanation below.