

Can we travel through time?

A workshop in scientific reading, source checking and writing. Two 45-minute lessons; individual work or pairs.

Introductory level: lower secondary school. Extension: upper secondary school. Adapt vocabulary, sources and writing length to the class.

Learning objectives

- Distinguish observing old light from travelling into the past.
- Describe one example of time dilation.
- Separate experimental evidence, theoretical proposals and opinions.
- Write a clear explanation supported by two traceable sources.

Preparation

Review the article and sources before class. Provide the student worksheet, paper or school devices, and a school-approved submission channel. Students do not need a Stadia account for this activity.

Lesson 1 / Read and investigate

Minutes	Activity
0-5	Opening question: what does time travel mean to you?
5-15	Guided reading: observing the past, time dilation and travel into the past.
15-30	In pairs: choose one claim and check it against the two sources.
30-40	Classify the three worksheet statements and explain the reasoning.
40-45	Prepare a central question and a three-point article outline.

Lesson 2 / Write and revise

5 min: review the criteria. **20 min:** draft. **10 min:** peer feedback. **10 min:** revise and submit. Longer articles may require additional time.

Assess the reasoning

Expected answers

A. Looking at a distant star means receiving light emitted earlier.

Established physical result: light takes time to reach us. Receiving old light is not travelling into the past.

B. Two clocks at different elevations can measure different elapsed times.

Experimentally confirmed effect. For clocks stationary relative to Earth, other conditions being comparable, the lower clock runs more slowly. NIST describes measurements across about one millimetre.

C. We can already build a machine to return to yesterday.

Unsubstantiated claim. These sources provide no working technology for returning to the past. A mathematical solution does not establish that a usable machine can be built.

Assessment rubric / 0-8 points

Criterion	0 points	1 point	2 points
Understanding	Confused concepts	Main idea, incomplete distinctions	Accurate distinctions and a relevant example
Sources	Missing or untraceable	Named, partly linked to claims	Two traceable sources linked to claims
Reasoning	Evidence and hypotheses mixed	Some limits recognised	Evidence, hypotheses and uncertainty distinguished
Communication	Hard to follow	Readable; revision needed	Clear, structured and revised

Adaptation and sharing

Introductory task: short extracts, vocabulary support and 200-300 words. Advanced task: 500-800 words or analysis of a model's assumptions. Public publication is optional and must be agreed separately with the school. Follow the teacher's rules on AI assistance and disclose its use where required.

Reading and sources

Starting article: [Can we travel through time? - Stadia Vitae](#)

Source 1: [NASA Space Place - Is Time Travel Possible?](#)

Source 2: [NIST - JILA Atomic Clocks Measure Einstein's General Relativity at Millimeter Scale \(16/02/2022\).](#)

Sources consulted on 30 October 2026. Both external sources are in English; the teacher may provide translated extracts clearly identified as translations.