

Supplementary material.

Table S1. Scoring and frequency of results in the content knowledge questionnaire pre- and post-intervention

Question	Scoring type	Correct answer	Total score (8 points)
Q1-Choose whether the following situations relate to weather or climate [33]*.	Dichotomous: Weather (W) or climate (C). <i>Each situation scores 0.5 points if assigned correctly.</i>	1. W 2. C 3. W 4. W 5. C 6. C 7. W 8. C	4 points
Q2. What are the leading air pollutants in the Basque Country?	Open ended. <i>At least 1 pollutant mentioned to score 1 point.</i>	1. Tropospheric ozone 2. Carbon monoxide 3. Particulate matter 4. Nitrogen oxides 5. Sulphur oxides 6. Volatile organic compounds	1 point
Q3. Which meteorological variables are used to describe the weather?	Open ended. <i>At least 1 variable mentioned to score 1 point.</i>	1. Temperature 2. Precipitation 3. Atmospheric pressure 4. Relative humidity 5. Dew point 6. UV index 7. Wind speed and direction	1 point
Q4. Do meteorological variables affect air quality? Reason your answer and give examples	Multiple choice. <i>Yes, No, I do not know.</i>	Yes + justification that mentions at least one weather variable affecting air's quality	1 point
Q5. What is the air quality in our campus? Reason your answer	Open ended. <i>In the pre-test the score is given if it is based in sound reasoning. In the post-test, the score is given if the answer is based on data from the Air Quality Network.</i>	Based on the average levels of air pollutants in our campus, the average air quality in February 2020 is good.	1 point

*Detailed description of question 1 (Q1), based on Keeley and Tucker's formative probe "Are they talking about climate or weather? [33] of the content knowledge questionnaire administered pre- and post-intervention. Answer keys are inserted next to each question. Each correct answer was scored 0.5 points:

Q1-Choose whether the following situations relate to weather or climate.

People like to talk about conditions that affect their lives. Climate and weather are two of those conditions. Put a C next to all the things people say that have to do with climate. Put a W next to all the things people say that have to do with weather.

- ☐ W A. "What shall I wear today?"
- ☐ C B. "What equipment do I need for the camping trip next summer?"
- ☐ W C. "It has rained on my birthday for the past three years."
- ☐ W D. "We just got 1 meter of snow in March. So much for global warming!"
- ☐ C E. "I wonder when I should plant the tomato seeds in my garden?"
- ☐ C F. "Our state has experienced the worst drought since records began 120 years ago."
- ☐ W G. "News flash! The drought in Spain has ended with the first significant storm this year dumping more than 250 mm of rain in many locations and filling most of the reservoirs to pre-drought conditions."
- ☐ C H. "We can't get low cost flood-insurance for our house anymore. The insurance company says the area is too great a risk."

Table S2. Tasks from the self-efficacy scale about ESD and from the perceived relevance of ESD scale based on [50]. Abbreviations used in Figures 4 and 5 are shown in italics

Fig 4. ESD self-efficacy: How easily do you think it would be for you to perform the following tasks on your own?

- 1-*Identify_science_news*: Identify the science that underlies a newspaper report about an environmental issue.
- 2-*Describe_human impact*: Describe how human activities can impact the environment.
- 3-*Predict_species survival*: Predict how changes to an environment will affect the survival of certain species.
- 4-*Interpret_science_climate change*: Interpret scientific information provided on a government website about climate change
- 5-*Educate_sustainability*: Educate others about sustainability issues
- 6-*Improve_environment*: Bring about and improvement in the environment, even if only in a small way, using my own skills and knowledge.

Fig 5. Perceived relevance of ESD: How much do you agree with the statements below?

- 1-*Environmental problem solving*: Teachers can play an important role in solving environmental problems through education
- 2-*ESD_future practice*: It is important to include education for sustainability in my future classroom practice.
- 3-*Environ. educ_early age*: It is important to teach environmental education to school students from an early age
- 4-*ESD_fad?*: Education for sustainability is a fad that will pass in time.
- 5-*ESD_pre-service*: It is important to include education for sustainability in pre-service teacher education programs
- 6-*ESD_pre-service_future ability*: The inclusion of education for sustainability on my pre-service teacher education will directly benefit my ability to teach students about sustainability

Table S3. Statistics of the scores in the pre- and post-implementation STEM knowledge questionnaires.

Statistics	Minimum	Maximum	Arithmetic mean	Standard deviation	Median	Mode	Quartile 1	Quartile 3
Pre-test	3.8	8.1	5.8	1.4	6.3	7	4	7
Post-test	5.0	10.0	7.6	1.4	7.5	7	7	9