



Planet Earth: Understanding and Protecting our Environment

Learn about the physical geography of Earth and discover how to use this knowledge to protect our natural environment.

If your students are completing the whole of this course online and are not participating in the teacher-led lessons based on it, then they can complete useful and engaging activities based on the content covered. You can choose for your students to complete individual tasks by themselves or encourage group work. Though you may have your own ideas about what your students can do with the course content, we've made things easy for you by suggesting some activities that you can submit to your students below. Instructions for the students can be found later in this document.

Individual student tasks taken from the course

Reflection: Students write a 500-word reflection on what they have learned from the course, including anything they might do differently now as a result of their learning, and anything additional they found out from their own reading around the topic. They will submit this reflection as a written essay, podcast, or video.

Activity 1: Students write an individual reflection answering the following question.

- Do you think it is the highest priority to manage the human impact on the hydrosphere, biosphere, or geosphere? Why?

Devices can be used for research if needed.

Activity 2: Students explore the managing coastal erosion exercise on Step 2.4. They can explore it multiple times. They then write a summary of what they have learned are the key things to consider when managing coastal erosion, and how different people in the community might have different opinions.

Research task: Students research an invasive species in their area, or a place that interests them, and then write a short report about it. They can look back at the examples of invasive species, choose one of their own, or select one of the following examples:

- Australian Acacia trees
- Norway Maple in the USA
- Water Hyacinth outside South America
- Giant Hogweed in Canada

As they conduct their research, they should aim to answer the following questions:

- Where does the species come from, and where is it classed as invasive?
- How and why was the species introduced to the region where it is now invasive?
- What are the consequences of the spread of the species? Find at least one example.
- Has any action been taken to reduce the spread of the invasive species, and has this been effective?

Consider the quality and reliability of the information they have referred to and keep a note of the sources they have used as part of their research.

Using their research, they then write a short report summarising the current challenges and developments of the invasive species in their chosen region. They should include the sources of information that they have used and describe the key findings. They should think about what they can conclude from their research about the current challenges and developments.

Group tasks based on the course

Research task: In their groups, students research the impact of desertification on two sites of their choosing – including an international and UK/USA/European-based site to compare the impacts on low and higher rainfall-based areas.

Each group should use their findings to produce a report, presentation, video (or any other medium of their choice).

Discussion task: Students discuss (and take notes on their discussion):

- Why is soil important?

Collaborative task: Students find data online on different indicators of climate change:

- Marine sediments
- temperature levels
- CO₂ levels
- species numbers/extinction rates.

They then highlight and explain any patterns or links they see.

Additional support

You can use the [How to use FutureLearn guide](#) with your students to get them started. There is also a school-facing [Guide to safeguarding and security on FutureLearn](#) if you need it.

Test

You can use the test questions listed in the student instructions below as a short assessment to enable your students to demonstrate what they have learned on the course. The assessment has 15 marks in total.

The questions have been designed to be flexible and open. The questions indicate which steps the answers can be found on. The marks available reflect the likely length and complexity of the answer expected, and how many points they are likely to make. For example, a 5-mark question might reflect a longer, more complex question, or one where they have asked to describe or explain a number of elements. Depending on the level and ability of your students, you can decide how you wish to award the marks, so they are appropriate for your class.

Each question suggests which steps the students may wish to return to answer the questions. **You can decide if you want to include this information when you share the assessment with your students.**

Student instructions

Reflection

Write a 500-word reflection of what you have learned from the course. It should include anything you might do differently now because of what you learned, and anything additional you found out in your reading around the topic. Submit this reflection to your teacher as a written essay, podcast, or video.

Activity 1

Write a reflection answering the following question:

- Do you think it is the highest priority to manage the human impact on the hydrosphere, biosphere, or geosphere? Why?

Activity 2

Explore the managing coastal erosion exercise on Step 2.4. You can explore it multiple times. Then, write a summary of what you have learned are the key things to consider when managing coastal erosion, and how different people in the community might have different opinions.

Research task

Your task is to find out about an invasive species in your area, or a place that interests you, and write a short report about it. Look back at the examples of invasive species, choose one of your own, or select one of the following examples:

- Australian Acacia trees
- Norway Maple in the USA
- Water Hyacinth outside South America
- Giant Hogweed in Canada

As you conduct your research, aim to answer the following questions:

- Where does the species come from, and where is it classed as invasive?
- How and why was the species introduced to the region where it is now invasive?
- What are the consequences of the spread of the species? Find at least one example.
- Has any action been taken to reduce the spread of the invasive species, and has this been effective?

Consider the quality and reliability of the information you have referred to and keep a note of the sources you have used as part of your research.

Using the research you conducted, write a short report summarising the current challenges and developments of the invasive species in your chosen region. Include the sources of information that you have used and describe the key findings. Think about what you can conclude from your research about the current challenges and developments.

Group discussion

In your group, discuss:

- Why is soil important?

Take notes of your discussion points and submit them to your teacher.

Group collaborative task

Find data online on different indicators of climate change:

- Marine sediments
- temperature levels
- CO₂ levels
- species numbers/extinction rates

Highlight and explain any patterns or links they see and write an individual summary of your group's findings.

Group research task

In your group, research the impact of desertification on two sites of your choosing – including an international and UK/USA/European-based site.

Compare the impacts of desertification on these two low and higher rainfall-based areas. Are there similarities, differences, or patterns? Are the physical and human impacts different? Have people's responses been different?

Use findings to produce a report, presentation, video (or any other medium of your choice).

Test

Complete the assessment questions below to demonstrate your understanding of the course. You can refer back to the course to find the answers or more detail as you need to. You should not however share your answers with other students.

Your answers should be written in full sentences and be appropriately detailed. Make sure you read the questions carefully before starting to answer. Each question shows how many marks are available – use this to guide how much detail or how many points you need to include.

[The questions also indicate where you can start to look to find the answer. You can also include information from other steps if that is relevant.]

1. How does ice influence the earth's climate and environment? Give at least two examples and explain your answers. (4 marks) [Step 1.3]
2. What is a eutrophic water system? Explain how it happens and its impacts. (3 marks) [Step 1.4]
3. Explain two reasons why soil is important. Explain your answer. (2 marks) [Step 1.13/14]
4. What is the marine sediment record and why is it useful to scientists? (3 marks) [Step 1.15]
5. What is an invasive species? Describe an example and explain its impact. (3 marks) [Step 2.12]