



Getting Ahead – Pre-course Work

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Environmental Science A Level

Welcome to Environmental Science. In preparation for the start of the course, please complete these three tasks and have them with you to hand in during your first week of college in September.

These tasks should take you approximately four and a half hours to complete and are designed to give you an introduction to the subject, and the expectations we have for you to complete at least four and a half hours of independent study, per subject, per week.

Task 1 – “Scrapbook of Wonder” (individual research activity)

- Create a scrapbook that celebrates the natural wonders of our planet.
- Pick whatever interests and amazes you (plant, animal, habitat or ecosystem).
- Your “Scrapbook of Wonder” can be a physical book or an [online scrapbook](#)
- You must include lots of writing and pictures and it must celebrate our planet and life

Note: You can include anything you like from unique and interesting animals to highly biodiverse ecosystems. You could talk about coral reefs, forests or Antarctica. You could talk about mushrooms, cacti or cuttle fish. You could talk about pollinators or ocean food webs or how important soil is. You could talk about how living things adapt to different climates. The choice is yours.

Task 2 – Atmosphere and the impact of Climate Change (background knowledge)

Use the following resources to find out about the layers of the atmosphere and their role in protecting and maintaining life on the planet.

Resources:

- a) [Layers of the atmosphere](#) (video)
- b) The Earth’s Atmosphere [Interactive Simulation](#)
- c) [What is the greenhouse effect?](#) (video)

What have you learned? Answer the following questions...

Questions on Atmosphere and the impact of Climate Change...

1. Explain the science of why increased greenhouse gas emissions contribute to rising global temperatures.



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2. Explain how the greenhouse effect supports life on Earth, and why elevated greenhouse gases can create a less supportive environment for life on Earth.
3. Explain where greenhouse gases come from (think back to the carbon cycle listing natural sources and human activities that contribute).
4. Explain how plants impact atmospheric greenhouse gases.

Task 3 – The impact of climate change on Antarctica

Why are climate scientists so concerned about the instability of Antarctica's Thwaites glacier. Watch this video to find out - [Potential impacts of climate change on Antarctica](#)

Getting Equipped

You will need the following basic equipment for this course:

- Pens
- Pencil
- Ruler
- Scientific calculator
- Eraser
- Optional – highlighters
- A4 files
- A4 file dividers
- A4 Level arch file