



Lanterna  
Education

# ENVIRONMENTAL SYSTEM SCIENCE GUIDE

---

FUNDAMENTAL PRINCIPLES AND APPROACHES  
FOR YOUR IB ESS PREPARATION.

Although ESS has the stereotype attached to it that it is super easy, and you might even hear some people make the claim ‘it’s not even a science’, it is not always so. This guide aims to highlight some fundamental principles and approaches that will give you a structured framework for your IB ESS preparation.

## Examination Structure

Here is a quick rundown on both the papers:

### PAPER 1

- Unseen case study
- 25% weightage, Full Marks: 40
- Calculators permitted
- 1 hour

### PAPER 2

- Section A short answer and data based questions
- Section B: Essay style questions
- 50% weightage, Full Marks: 65
- Calculators permitted
- 1.25 hours at SL and 2.25 hours at HL

Section B of paper 2, in particular, is usually the challenging aspect. The essay questions are in sets of three; you have a choice of two between four sets. The third question in each set is of 9 marks and is the one that has to be answered most in-depth, almost like a proper essay.

The other two questions are closer to long answer questions. The only way to improve on the essay questions is to practise beforehand and find a structure that works for you. Being confident in being able to analyse things from various perspectives can go a long way in your performance in this portion of Paper 2.

# PAPER 1: TIPS AND TRICKS

For this paper, you will be given a booklet with a previously unseen case study. Expect the booklet to be between 15-20 pages long. The case study will include information as well as a large number of visual data such as maps, graphs, diagrams, tables of data or information and so on. With the case study booklet, you will be given corresponding questions to answer.

Most of these questions are going to be super concise (between 1-3 marks), except the last question, which is going to ask you to provide a well-thought-out answer (almost like a mini-essay) using most if not all the information provided by the booklet.

**IMPORTANT:** keep in mind you have a ton of questions to do and just an hour, so you have to be quick. We recommend leaving at least 15 minutes for the last longer question.

Although most of the questions can be answered from the case study directly, you are still expected to use your own knowledge as well as ESS terminology. The idea is to test your pre-acquired ESS knowledge in an unseen real-life example.



- ✓ **UTILISE THE READING TIME.** Do a quick read to understand which direction is the case study going in.
- ✓ **THEN HIGHLIGHT ALL THE KEY FIGURES.** The questions should be in chronological order along with the case study, so usually, there is no need to go back and forth. You can just thoroughly review the case study while answering the questions. This will also help you retain all the information for the last question.
- ✓ Although, the case study will be unseen, and there is no way of practising the exact one. The type of questions are very similar each year, so you can most definitely **PRACTISE THE FORMAT BY DOING THE PAST PAPERS :)**

# PAPER 2: TIPS AND TRICKS

This paper has two sections, sections A and B.



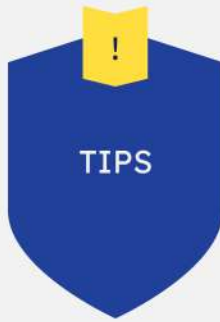
All the questions are compulsory. They are either short questions or data-based questions, so it should not take you too much time (45 mins max).



For Section B, we have the essay questions, the third one worth **9 marks** being the most extensive. In order to answer the 9-mark question to the best of your abilities, it is essential to look at the highest mark band to understand what is expected of you.

According to the highest markband (7-9 marks) your response should contain:

- ✓ substantial evidence of sound knowledge and understanding of ESS issues and concepts
- ✓ a wide breadth of knowledge statements effectively linked with each other, and to the context of the question
- ✓ consistently appropriate and precise use of ESS terminology
- ✓ effective use of pertinent, well-explained examples, where required, showing some originality
- ✓ thorough, well-balanced, insightful analysis
- ✓ explicit judgments/conclusions that are well-supported by evidence/arguments and that include some critical reflection.



- ✓ For the essay question, try to develop a rough outline or plan beforehand so that you do not miss out on any of the things you want to include in your answer.
- ✓ Make sure to use relevant examples in your answer and include as many perspectives as possible.
- ✓ Choose the questions in Section B wisely. Do the two you are most confident in and know that you have enough to say for the 9-mark question
- ✓ Remember that for structured questions, you don't necessarily need to have solved part a and b to be able to answer part c. If you're stuck on a sub part of a question, scan through the rest of it to see if there's anything else you can solve. Often, you will find that you are able to attempt a later part without needing to use a prior answer.

## How to revise and general tips:

1.

---

Be aware of the command term that is being used in the question and what it demands from you. This will give you a hint on how much and what kind of information is expected from you. Some of the common command terms are: define, draw, evaluate, list, measure and so on. After looking at a command term, you should immediately know what you need to write. If it says list, you need to be very brief. If you have been asked to evaluate, your answers have a lot more depth to them.

4.

---

ESS terminology is essential, and you should make it a point to include them in as many answers as possible. We recommend making flash cards with the most important ESS terminology along with their definitions. This is helpful for both short questions as well as in essays when you are trying to include more concepts.

2.

---

Do what helps you to retain information easily. After finishing a unit you could perhaps make a mind map quickly linking back all the concepts

3.

---

The best way to practise is by doing past papers. This not only builds your confidence but also gets you familiarised with the kind of questions that you can expect in your actual exam.

5.

---

Start early and be consistent with your practice. There is a tendency for students to leave ESS until the last minute. This is quite the mistake since cramming 8 units in two days is impossible.

## Use your teachers and tutors!

We think this is such a crucial point that many IB ESS students are unaware or choose to ignore.



**Don't be scared to approach your teacher and ask any questions you may have!** In case you do not understand a key concept or theory properly, do not hesitate to ask your teachers multiple times if need be

In addition, get your teachers to **mark one of your practice essays and ask them to provide proper feedback** on what is missing and how according to them, you would be able to improve.

---

**EVEN BETTER THAN USING YOUR TEACHERS COULD BE USING ONE OF LANTERNA'S VERY OWN EXPERIENCED TUTORS!**

---

Whilst your teachers are undoubtedly spammed with questions from other people in your class, **our tutors can sit down with you 1-on-1 online and help you plan, draft and finalise your engagement activity** and can help with any other piece of coursework or revision you might be struggling with!