

# IB Environmental Systems and Societies (SL)

## Course Outline 2018–20



Teachers: Mr. A. Brewer (Mr. B.)  
 Email: [abrewer@vsa.edu.hk](mailto:abrewer@vsa.edu.hk)  
 Course site: [www.newbreweress.weebly.com](http://www.newbreweress.weebly.com)

### Overview:

The intent of this course is to provide students with a perspective of the interrelationships between environmental systems and the societies that exist there. One that enables societies to adopt an informed personal response to the wide range of pressing environmental issues. Students' attention is frequently drawn to their own relationship with their environment and the significance of choices and decisions they make. The teaching approach of this course is conducive to students evaluating the scientific, ethical and socio-political aspects of issues.

### DP 1 Year 11 Syllabus content

DP 1 (Year 11) Units	Weeks	Brief Description
<b>Environmental Value systems</b>	Aug. 27 - Sept. 14	1.1 Historical events that have affected the development of the environmental value movement. The wide spectrum of environmental value systems.
<b>Rainforests</b>	Sept. 17 - Nov. 23	1.2 & 2.3 Systems and models and flows of energy found in the carbon cycles of a rainforest. 1.3, 2.1 & 2.2 Energy passed through populations and communities of a rainforest ecosystem. 1.4 & 2.5 investigating the rainforest ecosystem and the human impacts.
<b>Temperate Ecosystems and the Yellowstone Wolf</b>	Nov. 26 - Feb. 1	2.2, 2.3 & 2.4 Investigating Temperate biomes development, succession and the impact of DDT on bald eagle populations. 3.1, 3.2 & 3.3 The wolf populations of Yellowstone National Park (USA) and the impact of human influence. 3.4 The reintroduction and conservation of wolf populations.
<b>Populations in Asia</b>	Feb. 18 - May 3	8.1 Population demographics of Asian countries. 8.2, 8.4 & 1.4 Resource based natural capital, human carrying capacity and sustainability of populations. 1.5 & 8.3 Creation of and solutions to the waste problem in Hong Kong.
<b>Atmospheric Pollution</b>	May 6 - June 28	6.1 Structure of the atmosphere. 6.2 & 6.3 Ozone in the stratosphere and troposphere. 7.1 Energy mix and security. 6.4 Acid deposition

### Year 12 Environmental Systems AT A GLANCE

DP 2 (Year 12) Units	Weeks	Brief Description
<b>Climate Change</b>	Aug. - Oct.	7.2 Environmental impacts of greenhouse gases and carbon footprint. 7.3 Mitigation of adaption to impending climate change impacts.
<b>Soils, Food and Masarang</b>	Oct. -Dec	5.1 Soil development, characteristics and nutrient cycles in Grassland and Rainforest biomes. 5.2 Food system choices and problems for countries found within grassland and rainforest biomes. 5.3 Soil degradation and conservation techniques. 5.2, 2.4, 2.5, 3.3 & 3.4 Food vs. Conservation in Borneo.
<b>Water</b>	Jan - Apr	4.1 Measurement and availability, 4.2, 7.2 Fresh water security in South East Asia, availability and contamination. 4.4 Measuring water pollution. 4.3 Over harvesting of the world's fish stocks and aquaculture.

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### Assessments

Your final mark will be determined by an externally assessed written exam and a series of internally assessed lab reports. The weighting of each is as below:

Assessment component	Weighting
<b>External Marked Assessments</b>	
<b>Paper 1 - 1 hour (Case study short answer) 40 Marks</b> <ul style="list-style-type: none"> <li>Students will be provided with a range of data in a variety of forms relating to a specific, previously unseen case study.</li> <li>Questions will be based on the analysis and evaluation of the data in the case study.</li> </ul>	<b>25%</b>
<b>Paper 2 - 2 hours (Short answer and structured essay) 65 Marks</b> <ul style="list-style-type: none"> <li>Paper 2 consists of two sections, A and B.</li> <li>Section A (25 marks) is made up of short-answer and data-based questions.</li> <li>Section B (40 marks) requires students to answer two structured essay questions from a choice of four. Each question is worth 20 marks.</li> </ul>	<b>50%</b>
<b>Internal Marked Assessments - 10 hours cumulative</b> 30 marks	<b>25%</b>

### Internally assessed:

Internal assessment is a key component of the ESS course, contributing 25% to the final assessment. This should be reflected in teaching the knowledge, skills and understanding required to undertake the work, as well as the total time allocated to carry out the investigation itself.

The internal assessment task involves the completion of an individual investigation of an ESS research question that has been designed and implemented by the student. The investigation is submitted as a written report. The report should be 1,500 to 2,250 words long.

The internal assessment investigation consists of:

- identifying an ESS issue and focusing on one of its specific aspects
- developing methodologies to generate data that are analysed to produce knowledge and understanding of this focused aspect
- applying the outcomes of the focused investigation to provide understanding or solutions in the broader ESS context.



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For internal assessment, a number of assessment criteria have been identified. Each assessment criterion has level descriptors describing specific achievement levels, together with an appropriate range of marks.

Identifying the context	Planning	Results analysis and conclusion	Discussion and evaluation	Applications	Communication	Total
6 marks 20%	6 marks 20%	6 marks 20%	6 marks 20%	3 marks 10%	3 marks 10%	30 100%

### Further Internally Assessed Work

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A written Test will follow the end of each unit. Tests are meant to give feedback to the teacher and students about what has been learned. All tests must be made up as soon as possible if missed due to an absence.

Students will be required to complete learning tasks within each unit. These will be in the form of video presentations, news reports, posters, blogs, etc. and most importantly lab reports.

Lab reports will be the only internal assessment to count as part of your final grade, all others will not count as part of your final grade. However, achievement in these assignments will determine your grade in DP1 (Year 11), your DP2 placement (diploma or certificate), as well as your expected grades; which are used for university placement applications.

### Internally Assessment Details

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- You will be expected to complete most of the assessment on your own time.
- Submit all work to Managebac and give a hard copy of your notes / tables.
- Assessments will be kept in a portfolio for the IB internal assessment.
- Students who are absent must make up the practical as soon as possible after school or during a free period.
- The class will determine the due date for the lab report.
  - Late work will affect students' university predicted grade as it demonstrates poor time management
- If you give me an excuse 24 hours BEFORE the report is due, I will consider an extension.

### Case studies and readings

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It is intended that students develop a sound understanding of the interrelationships between environmental systems (natural aspects) and societies (human aspects). The best way to achieve this goal is through the study of written content, media and lectures.

Students will be presented with materials to study mostly on their own time. Although these studies may not be directly assessed, students will be required to draw information from them by referring to them in both formative (labs, reports, presentations) and summative (quizzes, exams) assessments.

These will give the student a broader understanding of the topics and allow him/her to realize the relevance and importance of the topic.

**ex.** Conflict, Difficulties Marked Life in 'Biosphere II' (Interview with Jayne Pointer)

Why Biosphere II failed

Better understanding of how we are failing in Biosphere I

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### Homework:

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- Expect to read, work on a project, finish a lab report or study between each lesson. Many of the readings are online.
- You are expected to check the website daily for links.
- If you are absent, you should check the website to find out what work was missed and try to do the assignment before the next lesson.
- Expect to have quick quizzes on homework readings!
- Send me an email if you have questions or if you are going to be absent.
- All homework is posted on my website.
- The handouts will be on the site

### Textbook: Required

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Pearson Baccalaureate: Environmental Systems and Societies for the IB Diploma  
ISBN: 9781447990420

### Required Materials for each lesson

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- A notebook for notes and homework with sufficient paper and a number of transparent pockets
- A ruler
- A calculator
- The text book
- Something to write with: pen and/or pencil
- A folder for worksheets and handouts
- Your agenda or planner
- A laptop
- An internet connection at home

### Behaviour

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- Remove speakers from your ears before class starts, turn off your cell phone and take out your materials.
- Write homework in your agenda
- Participate in all learning activities
- Take notes that you can understand later
- Be considerate of others
- USE CLASS TIME PRODUCTIVELY!

### Rules for room 819

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- Drinks are allowed
- Food is not allowed
- Do not use cell phones during class
- Do not use your headphones unless the teacher allows it.
- Do not disrupt the learning of other students
- Do not chat, check your email, Facebook while using the school computers
- Safety rules and guidelines (will be presented in class) must be followed at all times.
- Do not leave rubbish behind in the room or you will clean the whole room the next time.
- Lab equipment must be cleaned up following an investigation. Equipment will not be lent to any student who does not clean up afterwards.



"Cleaning goes against entropy  
and the natural order."