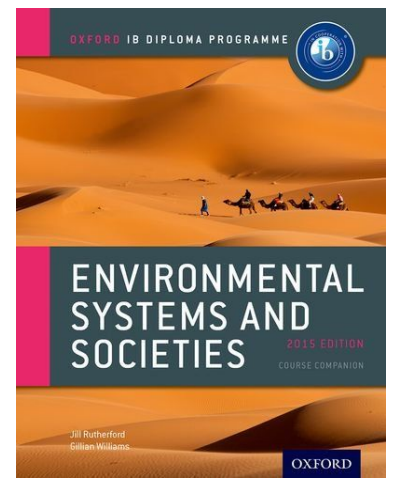


## **IB Environmental Systems and Societies** **Summer Assignment**

Go go Google Classroom and join the course webpage using this code: **qtyiv32**  
Once logged on, go to the course information link on the left and follow the instructions to sign up for **Remind** messages. Logging into these is your first assignment for the course, and will be a component of your grade.

**Due: Monday, June 11th**



**Second**, you will have to purchase the IB Environmental Systems and Societies textbook from the Oxford Press (**ISBN: 978-0198332565**). You can purchase either a hard copy or an online ebook; if you have a tablet/laptop you may bring it to class. Please be sure to purchase the **2015 edition**, this is the edition that relates to our particular course test. You must have your book (physical or ebook) everyday in class.

Your summer assignment will consist of three (3) parts. The goal of these three parts is to 1.) provide you with a term study guide/resource to use throughout the year 2.) get you thinking about potential topics for your Internal Assessment that interest you 3.) introduce you to the overarching concepts covered in Topic 1 that we will continuously revisit throughout this course.

### **PART I: KEY TERM GLOSSARY**

Once you have your book, you will notice that there is no cumulative glossary of terms in the back. Your first summer assignment is to make your own glossary of the terms I have given to you (separate list attached). I will also be posting a google doc on to our Classroom page. Each student is to submit a typed, neatly outlined glossary in alphabetical order with the section each key term is located in. As you will be using this as your own personal document for the entire year, students must work on these individually, and can personalize their glossaries as they see fit (definitions can be from the book and expanded upon with different sources, pictures may be added, etc.). Students can add to the digital document as the year goes on, but all term definitions are due as follows, with a **final hard copy due the first day of class.**

#### **Glossary Term Due Dates:**

June 23rd: Abiotic factors-Biotic index

June 30th: Carrying capacity- Ecosystem

July 7th: Ecotone-Habitat diversity

July 14th: Herbivory-Negative feedback loop

July 21st: Net primary productivity-Productivity

July 28th: Pyramid of biomass-Sustainability

August 4th: Sustainable development-Zonation

## **PART II: RESEARCH FOR INTERNAL INVESTIGATION**

The Internal Assessment (IA) is an individual investigation of a research question that has its foundations in the environment and society that has been designed and implemented by the student. The investigation is submitted as a written report between 1,500 to 2,250 words long.

During the summer, you will need to explore a variety of databases that contain secondary demographic, development, environmental data. The IA consists of:

- Identifying an ESS issue & focusing on one of its specific aspects
- Develop methodologies to generate data that are analyzed to produce knowledge & understanding of the focus
- Applying the outcomes of investigation to provide understanding or solutions in the broader ESS context

The goal is to locate broad area of environmental interest so that when evaluating the research process and findings of your study, you will be able to discuss the extent to which your study applies to the environmental issue that interests you. Suggested websites/data base to explore include:

[NASA Earth Data Search](#)

[CIA World Factbook](#)

[World Bank](#)

[NOAA](#)

[Stroud Center](#)

[Gapminder](#)

[Data Nuggets](#)

<https://www.census.gov/>

[Air Resource Board of CA](#)

[US Geological Survey](#)

[HJ Andrews Experimental Forest, Oregon](#)

Topics covered in class include: air, water, and soil pollution, habitat loss, population studies and impact on resources, resource management, alternate fuels, endangered/introduced species, agricultural practices....What environmental issue would you like to know more about? As you review websites, look for variables that you can compare and contrast. You will record your websites and findings in a Google Doc located on Classroom. **Locate and print at least 3 articles** to help you develop research questions. **Annotate articles looking for variables to compare.** Articles can be local and/or global in scope. **Articles will be due the first day of school. The IA Website Review table on Classroom will be due on August 1st.**

## **PART III: TOPIC 1 OVERVIEW**

Topic 1 introduces us to the concepts touched upon in every subsequent chapter within the IB syllabus. You will be exploring this topic throughout the summer. We will revisit this topic in the beginning of school **briefly**. This topic will also help you decide on your Internal Assessment topics.

For each subsection of the topic you will be required to:

- Read
- Complete a mini assignment (submitted online)
- Take a quiz (online)

Below is an outline of the Topic 1 portion of the summer assignment (more information will be provided on Classroom)

### **Topic 1 Overview**

1. Topic 1.1 - Environmental Value Systems
  - a. Read through Topic 1.1
  - b. Create an EVS graphic organizer
  - c. EVS Questionnaire
  - d. Quiz 1.1
2. Topic 1.2 - Systems & Models
  - a. Read through Topic 1.2
  - b. Create a Systems Diagram
    - i. You
    - ii. Plant or Animal
  - c. Quiz 1.2
3. Topic 1.3 - Energy & Equilibria
  - a. Read through Topic 1.3
  - b. Quiz 1.3
4. Topic 1.4 - Sustainability
  - a. Read through Topic 1.4
  - b. Ecological Footprint Quiz
  - c. Quiz 1.4
5. Topic 1.5 - Humans & Pollution
  - a. Read through Topic 1.5
  - b. Quiz 1.5

**The Topic 1 Overview readings, assignments, and quizzes should all be completed and submitted (on Classroom) by the day before school starts. DO NOT leave it all to the last minute.**

## IB Environmental Systems and Societies Glossary Terms

**Bold/\* = Key term**      **Not bolded = in text**      **[Ch./Sect] = term location**

**Abiotic factors [2.1]\***  
Acute pollution [1.4]  
**Adaptation [7.3]\***  
**Adaptive capacity [7.3]\***  
**Agribusiness [5.2]\***  
Anthropocentric worldview [1.1]  
Anthropogenic [2.3]  
**Aquaculture [4.3]\***  
Autotrophs [2.2]  
Bioaccumulation [2.2]  
Biocentric worldview [1.1]  
**Biochemical oxygen demand (BOD) [4.4]\***  
Biodegradable pollutants [1.4]  
Biogeochemical cycle [2.3]  
Biomagnification [2.2]  
**Biome [2.4]\***  
**Biosphere [2.4]\***  
**Biotic factors [2.1]\***  
**Biotic index [4.4]\***  
**Carrying capacity [2.1]\***  
Cash cropping [5.2]  
Chemosynthetic organisms [2.2]  
Chronic pollution [1.4]  
Climate [7.2]  
Closed system [1.2]  
**Commercial agriculture (or farming) [5.2]\***  
**Community [2.2]\***  
**Conservation biology [3.4]\***  
Cornucopians [1.1]  
**Crude birth rate (CBR) [8.1]\***  
**Crude death rate (CDR) [8.1]\***  
Deep ecologists [1.1]  
Deep water currents [4.1]  
**Doubling time (DT) [8.1]\***  
Ecocentric worldview [1.1]  
**Ecological Footprint (EF) [1.4]\***  
**Ecological pyramids [2.2]\***  
**Ecosystem [2.2]\***

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Ecotone [3.4]

**Efficiency [1.3]\***

**Energy security [7.1]\***

**Entropy [1.3]\***

Environmental Impact Assessment (EIA) [1.4]

Environmental Managers [1.1]

**Environmental Value System (EVS) [1.1]\***

**Eutrophication [4.4]\***

Exponential growth [2.1]

Feedback loop [1.3]

**First Law of Thermodynamics/Law of Conservation of Energy [1.3]\***

**Fishery [4.3]\***

Food chain [2.2]

Food web [2.2]

**Fundamental niche [2.1]\***

**Genetic diversity [3.1]\***

**Gross primary productivity (GPP) [2.3]\***

**Gross secondary productivity (GSP) [2.3]\***

**GWP [7.2]\***

**Habitat [2.1]\***

**Habitat diversity [3.1]\***

Herbivory [2.1]

Heterotrophs [2.2]

**Hotspot [3.1]\***

**Indicator species [4.4]\***

Interspecific competition [2.1]

Intraspecific competition [2.1]

**Isolated system [1.2]\***

**J population curve [2.1]\***

Keystone species [3.4]

K-strategist species [2.4]

**Less economically developed country (LEDC) [5.2]\***

**Limiting factors [2.1]\***

**Maximum sustainable yield (MSY) [2.3]\***

**Mitigation [7.3]\***

**More economically developed country (MEDC) [5.2]\***

Mutualism [2.1]

**Natural increase rate (NIR) [8.1]\***

Natural selection [3.2]

**Negative feedback loop [1.3]\***

**Net primary productivity (NPP) [2.3]\***

**Net productivity (NP) [2.3]\***

**Net secondary productivity (NSP) [2.3]\***

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**Niche [2.1]\***

Non-point source pollution (NPS) [1.4]

**Non-renewable natural capital [8.2]\***

Non-use valuation [8.2]

**NSP [2.3]\***

Open system [1.2]

Parasitism [2.1]

**Photosynthesis [2.2]\***

Point source pollution (PS) [1.4]

**Pollution [1.4]\***

**Population [2.1]\***

**Population dynamics [2.1]\***

**Positive feedback loop [1.3]\***

Predation [2.1]

**Preservation biology [3.4]\***

Primary pollutants [1.4]

**Productivity [2.3]\***

Pyramid of biomass [2.2]

Pyramid of productivity [2.2]

**Realized niche [2.1]\***

**Renewable natural capital [8.2]\***

**Respiration [2.2]\***

r-strategist species [2.4]

**S population curve [2.1]\***

**Salinity [2.5]\***

**Second Law of Thermodynamics [1.3]\***

Secondary pollutants [1.4]

Solid domestic waste (SDW)/municipal solid waste (MSW) [8.3]

**Speciation [3.2]\***

**Species [2.1]\***

**Species diversity (in communities) [3.1]\***

**Species diversity [2.5]\***

Stable equilibrium [1.3]

**Steady state equilibrium [1.3]\***

**Subsistence agriculture (or farming) [5.2]\***

**Succession [2.4]\***

**Sustainability [1.4]\***

**Sustainable development [1.4]\***

**System [1.2]\***

Technocentric worldview [1.1]

Theory of evolution [3.2]

**Total fertility rate (TFR) [8.1]\***

Tragedy of the commons [1.4]

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**Transect [2.5]\***

**Transfers [1.2]\***

**Transformations [1.2]\***

**Turbidity [2.5]\***

Umbrella species [3.4]

Unstable equilibrium [1.3]

Use valuation [8.2]

**Water budget [4.1]\***

**Water pollution [4.4]\***

Weather [7.2]

**Zonation [2.4]\***