

Name: \_\_\_\_\_

# **IB Geography 11 Course Outline**

## **Curriculum Outline**

### **I) Physical Geography and Management: Geographic Themes (HL and SL)**

- **Geophysical Hazards**  
(eg earthquakes, volcanoes, and mass movement) including risk assessment and response
- **Extreme Environments**  
[eg cold and high-altitude environments (polar, glacial areas, periglacial areas, high mountains in non-polar latitudes) hot, arid environments (hot deserts and semi-arid areas)  
– opportunities and challenges in agriculture, mining, and tourism)
- **Freshwater – Issues and Conflicts**  
(eg drainage basins, rivers, wetlands, hydrological cycle, dams, floodplain management)

**Note:** In grade 11, these topics will be introduced looking at the key vocabulary and concepts and brief case studies. In Grade 12, these topics will be re-visited with a greater emphasis on in depth case studies from around the world.

### **II) Human Geography: Geographic Perspectives - Global Change (HL and SL)**

- **Changing Population**  
(eg high income countries / low income countries / middle income countries, population pyramids, demographic transition model, migration, gender equality issues)
- **Global climate—vulnerability and resilience**  
(i.e. causes, consequences, and responses to global climate change)
- **Global resource consumption and security**  
(eg poverty reduction strategies, ecological footprints, access to food, water, and energy, recycling, divergent views on population growth and resource use trends)

**Note:** In grade 11, aspects of these topics will be introduced with more in depth study coming in grade 12.

### **III) (HL Extension – Grade 12) Geographic Perspectives—Global Interactions**

- **Power, places and networks**  
(eg globalization indices, global superpowers and their economic/geopolitical/cultural influence, global trade, international aid, free trade zones, economic migration)
- **Human development and diversity**  
(eg UN Sustainable Development Goals, Human Development Index, microfinancing, fair trade, cultural diffusion, glocalization, diaspora, local sourcing of food)
- **Global risks and resilience**  
(eg hacking, identity theft, tax avoidance, drones, 3D printing, transboundary pollution, re-shoring of economic activity by TNCs, crowd-sourcing technologies)

**Note:** This section focuses on **globalization** and explores the positive and negative economic, political, and social / cultural impacts of an increasingly integrated world.

## **Field Studies (HL and SL)**

**Field Study work is a mandatory component of IB Geography. A formal field study report accounts for 25% (SL) or 20% (HL) of a student's final IB Grade (i.e. Internal Assessment).**

A formal field study of **Burns Bog, Watershed Park, and the Serpentine Wildlife Management Area is planned for Grade 12.** There are several other field studies planned which will help **build skills and knowledge** towards the formal field study.

- **Howe Sound and Whistler Village**
  - ~~Friday October 25, 2019~~ **Friday Nov. 1, 2019**: 7:00am to 9:00pm (First Semester)
  - Monday May 25, 2019: 7:00am to 9:00pm (Second Semester)
- **Panorama Ridge / Watershed Park / QE Park / Point Grey**
  - Friday January 10, 2020: 8:30am to 3:00pm (First Semester)
  - Friday May 1, 2020: 8:30am to 3:00pm (Second Semester)
- **Burns Bog, Watershed Park, and the Serpentine Wildlife Management Area** (Sept. 2020)
- **Duprez Ravine & Semiahmoo Bay Walking Trip** (2021 – date to be announced)

**Note: Basic Mapping Skills** will also be covered and integrated into the Physical Geography and Field Studies portions of the course. **Furthermore, students are highly encouraged to pay attention to the news and to relate current events to the topics studied in the course.**

## **Geographic Skills**

Skill	Examples
Locate and differentiate elements of the Earth's surface	Using: <ul style="list-style-type: none"> <li>• direction</li> <li>• latitude</li> <li>• longitude</li> <li>• grid references and area references</li> <li>• scale</li> <li>• political units.</li> </ul>
Interpret, analyse and, when appropriate, construct tables, graphs, diagrams, cartographic material and images	All kinds of maps, including: <ul style="list-style-type: none"> <li>○ isoline and isopleth maps</li> <li>○ choropleth maps</li> <li>○ topological maps</li> <li>○ dot maps</li> <li>○ flow maps</li> <li>○ thematic maps (including mental maps)</li> <li>○ topographic maps</li> <li>• proportional symbols</li> </ul>

	<ul style="list-style-type: none"> <li>• aerial photographs</li> <li>• ground-level photographs</li> <li>• satellite images</li> <li>• graphs, including scatter, line, bar, compound, triangular, logarithmic, bipolar graphs</li> <li>• pie charts</li> <li>• flow diagrams/charts</li> <li>• population pyramids</li> <li>• Lorenz curves</li> <li>• cross-profiles (sections)</li> <li>• rose diagrams</li> <li>• development diamonds.</li> </ul>
<p>Undertake statistical calculations to show patterns and summarize information</p>	<p>Such as:</p> <ul style="list-style-type: none"> <li>• totals</li> <li>• averages (means, medians, modes)</li> <li>• frequencies</li> <li>• ranges of data (differences between maximum and minimum)</li> <li>• densities</li> <li>• percentages</li> <li>• ratios.</li> </ul>
<p>Research, process and interpret data and information</p>	<p>Types of data and information:</p> <ul style="list-style-type: none"> <li>• measures of correlation (including Spearman rank and chi-squared)</li> <li>• measures of concentration and dispersion (including nearest neighbour and location quotients)</li> <li>• measures of spatial interactions</li> <li>• measures of diversity</li> <li>• indices and ratios (including Gini coefficient, ecological footprint, Human Development Index (HDI), dependency ratio)</li> <li>• textual information</li> <li>• observations</li> <li>• opinions, values and perceptions.</li> </ul>

	<p>Processing and interpreting:</p> <ul style="list-style-type: none"> <li>• classify data and information</li> <li>• analyse data and information</li> <li>• describe patterns, trends and relationships</li> <li>• make generalizations and identify anomalies</li> <li>• make inferences and predictions</li> <li>• make and justify decisions</li> <li>• draw conclusions</li> <li>• evaluate methodology.</li> </ul>
<p>Collect and select relevant geographic information</p>	<p>Making:</p> <ul style="list-style-type: none"> <li>• observations, including field sketches and sketch maps</li> <li>• images.</li> </ul> <p>Conducting:</p> <ul style="list-style-type: none"> <li>• interviews.</li> </ul> <p>Taking:</p> <ul style="list-style-type: none"> <li>• measurements.</li> </ul>
<p>Evaluate sources of geographic information</p>	<p>In terms of:</p> <ul style="list-style-type: none"> <li>• accuracy</li> <li>• relevance</li> <li>• bias.</li> </ul>
<p>Produce written material (including essays, reports and investigations)</p>	<p>Presenting:</p> <ul style="list-style-type: none"> <li>• material in a clear and well-structured way.</li> </ul> <p>Responding:</p>

- appropriately to command terms.

## The IB learner profile

The geography syllabus is closely linked to the IB learner profile, which strives to develop internationally minded people who recognize their common humanity and shared guardianship of the planet, and who help create a better and more peaceful world. By following the geography syllabus, students will have fulfilled the attributes of the IB learner profile. For example, the requirements of the internal assessment provide opportunities for students to develop every aspect of the profile.

For each attribute of the learner profile, a number of examples selected from the skills and content of the geography syllabus are given below.

Learner profile attribute	Geography syllabus
Inquirers	Applying geographic skills by acting upon a geographic inquiry topic or sub-topic and collecting and selecting relevant geographic data, including the use of <b>GIS</b> .
Knowledgeable	Studying the content, especially the interdisciplinary aspects, of the optional themes, the SL/HL core theme, and the HL extension.
Thinkers	Applying geographic skills, including researching, processing and interpreting data and information, and the subsequent synthesis and evaluation of their knowledge and understanding. This may be expanded by systems thinking and approaches to complexity science.
Communicators	Using geographic skills, such as producing and presenting material, including essays, reports and case studies or investigations, to fellow students. This may include making links to TOK, or communicating information graphically—such as through infographics.

Principled	Applying geographic skills to research, process and interpret data and information. In cases where sensitive topics are being dealt with, students can make and justify decisions by identifying opinions, values and perceptions.
Open-minded	Using geographic skills to evaluate sources of geographic information in terms of reliability, bias, relevance and accuracy.
Caring	Considering content from the syllabus such as those elements related to sustainability and acting on CAS opportunities—especially those related to aspects of the UN Sustainable Development Goals.
Risk-takers	Considering their geographic skills in making and justifying decisions.
Balanced	Collecting primary data in fieldwork and the subsequent treatment, display and analysis of the information.
Reflective	Using geographic skills to evaluate methodology, develop clear logical arguments and draw conclusions where appropriate.

**Required Course Materials:**

1. Three ring binder (2 1/2 to 3 in.) with three hole punched, lined paper, and five dividers
2. Pen (**regular blue or black ink only**), pencil, ruler, highlighter, and calculator.
3. Textbooks (always bring these to class unless told otherwise).
4. All your notes and materials handed out in class should be kept in proper order as indicated on the **Notebook Organizer** handout. Your notebook will be marked towards the end of the semester.

**Attendance:** I do not expect this to be a problem but as a reminder, good attendance is mandatory to ensure success and to achieving very high marks. If away, you are responsible for bringing a note explaining your absence. Lateness to class will result in detention time after school unless there is a legitimate excuse and a note to back up that excuse.

**Work Habits:** I do not expect this to be a problem either. It cannot be stressed enough how important it is to stay on top of your work. You will be required to complete several demanding assignments as well as tests in your courses over the next two years; however, through good study habits and a good work ethic you will be successful and will achieve excellent marks!

**Geography is no exception!** You have the ability, and will be given the opportunity to achieve **exceptional marks** in this course, but **you must be willing to apply yourself to its study!**

**Homework:** Some homework checks will be done and will contribute to your final school mark.

**Late Assignments:** Most assignments may be handed in one day late with a 10% penalty. The 10% penalty will not apply if there is a legitimate excuse for lateness (i.e. away due to illness) and a note to back up the excuse. Certain assignments (i.e. labs) will be expected to be completed within class time. **Note:** The Notebook and UN Climate Change Conference Speech cannot be handed in late and next year the formal field study draft and final formal field study report will not be accepted late. **Note:** **There are two optional Bonus Marks opportunities available to all students to help further improve your mark [see Marks Chart]. No further opportunities will be provided at the end of the course.**

**Missed tests or quizzes:** **10% will be deducted for writing late** unless you have a legitimate excuse for missing the test / quiz and a note to back up that excuse. **Writing a test that has been missed must be done as soon as possible. There will be no opportunity to write missed tests at the end of the course. There are also no test rewrites, but as mentioned in the previous section, there are two optional Bonus Marks opportunities available to all students to help further improve your mark [see Marks Chart].**

**Ready to Participate:** You are **expected to be prepared for each and every class** with notebook, text, pen and pencil and all other relevant material. Please put away and turn off cell phones when you enter the classroom unless asked to use the internet on a cell phone to do research. Please ask permission to go to the washroom and only one person out at a time. Please remain seated until dismissed by me.

**Academic Honesty:** **This is absolutely essential.** Unless an assignment has been designated as partner work, the work submitted must be your own. Moreover, work from previous students cannot be used. For the formal field study, data collection does have a group and partner component to it, but the formal field study report with all its analysis and conclusions must be your own. **See the separate Academic Honesty Declaration Form which the student reads carefully, signs, and returns to the teacher.**

**Mr. Mleziva's Geography Website:**  
**[www.mleziva.info/geog12online.htm](http://www.mleziva.info/geog12online.htm)**

**Evaluation:** Your **school mark** in IB Geography 11 will be based on the assignments and tests indicated in the Marks Chart on the next page. Please note that the items listed in the Marks Chart are **subject to possible change** at the teacher's discretion.

## Marks Chart

Description of Item	Your Mark	Out of
Five Basic Themes of Geography Exercise		10
Four Categories of Industry Exercise		15
Random Homework Check		10
Random Homework Check		10
Tectonic Processes Test Multiple Choice		40
Tectonic Processes Test Essay		24
Erosion & Weathering / Glaciers Test Multiple Choice		35
Erosion & Weathering / Glaciers Test Short Answer		21
Erosion & Weathering / Glaciers Test Essay		24
Glaciers Lab		16
Mapping Skills Test		31
Rivers Test Multiple Choice		30
Rivers Test Short Answer & Diagrams		16
Rivers Test Written Response		18
Rivers Lab		15
Deserts and Coasts Test Multiple Choice		28
Deserts and Coasts Test Short Answer		7
Deserts and Coasts Test Diagrams		8
Deserts and Coasts Lab		17
Pan. Ridge / QE Park etc. Field Study Assignment		15
Howe Sound/Whistler Field Study Assignment		20
Howe Sound/Whistler Field Study Report		50
UN Climate Change Conference		50
Notebook Check		40
Mapping Skills <i>Bonus</i> Test (worth up to 10 bonus marks)		0
World Map <i>Bonus</i> Quiz (worth up to 10 bonus marks)		0
<b>Total</b>		<b>550</b>

**Note:** The Old UBC Conversion Grid will be used to determine your IB Predicted Grade from your % earned. At the end of the semester, when an IB Predicted Grade will be assigned, the new Grid recommended by The British Columbia Association of International Baccalaureate World Schools (BCAIBWS) will be used to determine your final % for this school year.

### Old UBC Conversion Grid

IB Predicted Grade	Final Report Card % Range (HL & SL)
0	0-49
1	50-59
2	60-69
3	70-75
4	76-85
5	86-89
6	90-95
7	96-100

### New BCAIBWS Grid\*

IB Predicted Grade	Final Report Card % (HL)*	Final Report Card % (SL)	*The HL scale will be applied to all students in IB Geography 11 as HL and SL students do the same work in Grade 11. The two different scales will be used in Grade 12 when the classes are separate.
1	0-69	0-49	
2	70-75	50-69	
3	76-85	70-75	
4	86-89	76-85	
5	90-95	86-89	
6	96-97	90-95	
7	98-100	96-100	



## **IB Grade Descriptors**

### **Grade 7 Excellent performance**

Demonstrates: conceptual awareness, insight, and knowledge and understanding which are evident in the skills of critical thinking; a high level of ability to provide answers which are fully developed, structured in a logical and coherent manner and illustrated with appropriate examples; a precise use of terminology which is specific to the subject; familiarity with the literature of the subject; the ability to analyse and evaluate evidence and to synthesize knowledge and concepts; awareness of alternative points of view and subjective and ideological biases, and the ability to come to reasonable, albeit tentative, conclusions; consistent evidence of critical reflective thinking; a high level of proficiency in analysing and evaluating data or problem solving.

### **Grade 6 Very good performance**

Demonstrates: detailed knowledge and understanding; answers which are coherent, logically structured and well developed; consistent use of appropriate terminology; an ability to analyse, evaluate and synthesize knowledge and concepts; knowledge of relevant research, theories and issues, and awareness of different perspectives and contexts from which these have been developed; consistent evidence of critical thinking; an ability to analyse and evaluate data or to solve problems competently.

### **Grade 5 Good performance**

Demonstrates: a sound knowledge and understanding of the subject using subject-specific terminology; answers which are logically structured and coherent but not fully developed; an ability to provide competent answers with some attempt to integrate knowledge and concepts; a tendency to be more descriptive than evaluative although some ability is demonstrated to present and develop contrasting points of view; some evidence of critical thinking; an ability to analyse and evaluate data or to solve problems.

### **Grade 4 Satisfactory performance**

Demonstrates: a secure knowledge and understanding of the subject going beyond the mere citing of isolated, fragmentary, irrelevant or 'common sense' points; some ability to structure answers but with insufficient clarity and possibly some repetition; an ability to express knowledge and understanding in terminology specific to the subject; some understanding of the way facts or ideas may be related and embodied in principles and concepts; some ability to develop ideas and substantiate assertions; use of knowledge and understanding which is more descriptive than analytical; some ability to compensate for gaps in knowledge and understanding through rudimentary application or evaluation of that knowledge; an ability to interpret data or to solve problems and some ability to engage in analysis and evaluation.

### **Grade 3 Mediocre performance**

Demonstrates: some knowledge and understanding of the subject; a basic sense of structure that is not sustained throughout the answers; a basic use of terminology appropriate to the subject; some ability to establish links between facts or ideas; some ability to comprehend data or to solve problems.

## **Grade 2 Poor performance**

Demonstrates: a limited knowledge and understanding of the subject; some sense of structure in the answers; a limited use of terminology appropriate to the subject; a limited ability to establish links between facts or ideas; a basic ability to comprehend data or to solve problems.

## **Grade 1 Very poor performance**

Demonstrates: very limited knowledge and understanding of the subject; almost no organizational structure in the answers; inappropriate or inadequate use of terminology; a limited ability to comprehend data or to solve problems.

## **Further Note regarding Evaluation:**

Your **final IB Grade (available in early July 2021)** is based upon:

- **Formal Field Study Report:** IB Internal Assessment (25% for **SL**; 20% for **HL**) [Fall 2020]
- **IB Exams:** *IB External Assessment Papers SL* [May 2021]  
*Paper 1 – Geographic Themes (Physical Geography) = 35%,*  
*Paper 2 – Geographic Perspectives – Global Change (Human Geography) = 40%*
- **IB Exams:** *IB External Assessment Papers HL* [May 2021]  
*Paper 1 – Geographic Themes (Physical Geography) = 35%,*  
*Paper 2 – Geographic Perspectives – Global Change (Human Geography) = 25%*  
*Paper 3 - Geographic Perspectives – Global Interactions (Human Geography) = 20%*

# **IB Geography 11**

## **Content Learning Outcomes and Vocabulary**

### **Module 1: The Nature of Geography**

#### **Unit One: Course Basics**

**Students should be able to:**

##### **A) Nature of Geography**

- 1) List the five basic themes of geography [i.e. location (absolute and relative), nature of place, human-environment interaction, movement, and regions] and be able to apply them to a particular place or issue
- 2) Apply major geography themes (i.e. pollution knows no borders, global citizenship, etc.) to various environmental issues and case studies
- 3) To review some basic world map facts and to introduce some new facts that will be elaborated upon during the course
- 4) To understand the steps necessary to help one think geographically when interpreting data on a map

5) To understand that geography is the "connecting thread" between the disciplines. To identify the relevance of geography to environmental decision making, careers, and recreational activities

### **B) Nature of the Environment**

- 1) Identify and define the four principle components or spheres of the environment (lithosphere, hydrosphere, atmosphere, and biosphere)
- 2) Illustrate the relationships between and the dynamic nature of the four environmental spheres
- 3) Understand and explain how people are affected by the four spheres, depend upon them, and transform them

### **C) Cultural Stages and Economic Activities**

- 1) Identify and explain the nature of the major **cultural stages of humanity (hunting and gathering, agrarian, industrial, and post-industrial)**
- 2) Describe the **four classifications of economic activities (i.e. primary, secondary, tertiary, quaternary)** and be able to apply them to various case studies
- 3) Explain the term **“development”** in terms of the four interrelated features of: **economic progress, technological improvement, social / cultural / political freedom, and justice** + define the concept of **“sustainable development”**
- 4) Identify and explain the key economic differences between **More Economically Developed Countries (MEDCs) / High Income Countries (HICs) vs. Less Economically Developed Countries (LEDCs) / Low Income Countries (LICs) vs. Newly Industrialized Countries (NICs)/ Middle Income Countries (MICs)/ Emerging Economies**

## **Unit Two: Mapping Skills**

### **Students should be able to:**

- 1) Calculate scale in three ways (i.e. linear, representative fraction, and verbal scale)
- 2) Move from one scale to another
- 3) Measure distances curved and straight
- 4) Calculate area using the squares method
- 5) Use a variety of map symbols
- 6) Calculate gradient in m/km,%, and ratio
- 7) Determine map directions especially when paired with an air photo
- 8) Understand the basic rules of contours lines
- 9) Draw and recognize topographic profiles; calculate vertical exaggeration
- 10) To review the basics of latitude and longitude
- 11) Use the military grid for determining location (using both 4 and 6 digit methods)
- 12) Make scale comparisons - large, medium, and small
- 13) Read and interpret topographic maps in regards to
  - a) climate
  - b) economic activities - forestry, mining, farming, port activities
  - c) transportation - logging roads, trails, roads, highways, railways
  - d) ethnic group
  - e) type of land form
  - f) agents responsible for relief
- 14) Interpret the two types of air photos in regards to similar items in #13, plus determining a) time of day b) recognition of various man-made features
  - c) approximate the scale of an air photo when twinned with a topographic map
- 15) Summarize the main uses of topographic maps, air photos, and satellite photos and computers to geographers

## Module 2: Physical Geography and Management

### Unit Three: Tectonic Processes

#### Students should be able to:

- 1) Describe the structure of the earth's interior, characteristics of each part, and explain how this knowledge has come about
- 2) Explain the theories of continental drift and plate tectonics
- 3) Distinguish between and give examples of the three types of plate boundaries and the types of landforms produced (i.e. mid oceanic ridge, trench, island arc)
- 4) Recognize the major tectonic plates and their direction of movement and interaction
- 5) Describe the three types of rocks by explaining their origin, major characteristics, landforms found in and examples of each type of rock
- 6) Explain the following aspects of earthquakes
  - a) four causes
  - b) focus and epicenter
  - c) major effects
  - d) dangers on the west coast of North America
  - e) shallow versus deep earthquakes
- 7) Explain where folding and faulting occur and list and describe the three major folds and four major faults; recognize the formation of horsts and grabens
- 8) Describe the two main types of volcanic lava: andesitic and basaltic
- 9) Describe the three types of volcanoes and give examples
- 10) Describe and identify four intrusive volcanic features and three extrusive features as well as geysers and hot springs
- 11) Outline the positive and negative effects of tectonic processes on topography, the atmosphere, and humans
- 12) Explain the correlation between earthquakes and volcanoes and why most happen in the Pacific Rim of fire
- 13) Explain how **diastrophism** helped to form the following features:
  - a) Rockies
  - b) Himalayas and Alps
  - c) Coastal Mts. of BC
  - d) East African Rift Valley

**diastrophism:** the action of the forces that cause the earth's crust to be deformed, producing continents, mountains, changes of level, etc.

#### Vocabulary

- 1) tension
- 2) compression
- 3) sedimentary
- 4) metamorphic
- 5) magma and lava
- 6) igneous (intrusive & extrusive)
- 7) fossil
- 8) rock cycle
- 9) tectonic
- 10) normal fault
- 11) reverse fault
- 12) San Andreas Fault\*
- 13) \*tear or strike-slip fault or slip & slide fault or transform plate boundary
- 14) fold mountain
- 15) rift valley or graben
- 16) horst
- 17) anticline
- 18) syncline
- 19) theory of isostasy
- 20) shield cone
- 21) composite cone
- 22) cinder cone
- 23) caldera
- 24) fissure eruption
- 25) overfold
- 26) subducting & converging (basalt flood)
- 27) geosyncline
- 28) plates
- 29) focus & epicenter
- 29) diastrophism
- 30) viscosity
- 31a) batholith
- b) sill
- c) dike
- d) laccolith
- 32) crust (lithosphere)
- 33) mantle (mesosphere)
- 34) outer and inner core (centrosphere)
- 35) continental drift and Pangaea
- 36) sea floor spreading
- 37) seismograph and seismic waves
- 38) primary and secondary waves
- 39) tsunami
- 40) sial and sima
- 40) magnetic reversal
- 41) andesite
- 42) basalt
- 43) pyroclastic materials
- 44) vein or lode (i.e. crystallized metal ore found in a rock mass fissure)
- 45) plateau
- 46) fissure (i.e. a narrow opening – associated with diverging plates)
- 47) focus
- 48) epicenter
- 49) magnitude
- 50) Richter Scale
- 51) intensity
- 52) Modified Mercalli Scale

## **Unit Four: Erosion and Weathering (Gradational Processes)**

**Students should be able to:**

### **I) Weathering**

- 1) Explain the difference between weathering and erosion
- 2) Describe three types of physical (i.e. mechanical) weathering and three types of chemical weathering

### **II) Mass Wastage**

- 1) Define mass wastage
- 2) Explain five types of mass wastage
- 3) Describe preventative actions humans can take to reduce mass wastage

### **III) Karst Topography and Running Water**

- 1) Explain how Karst Topography forms
- 2) Describe the four major landforms associated with karst topography
- 3) Define the terms spring, artesian well, permeable rock, impervious rock, aquifer
- 4) List four ways that groundwater is important to humans

### **Vocabulary**

- 1) gradational forces
- 2) physical weathering
- 3) chemical weathering
- 4) frost shattering or freeze-thaw action
- 5) exfoliation
- 6) weathering
- 7) erosion
- 8) carbonation
- 9) mass wastage
- 10) joints
- 11) screes
- 12) earth pillar
- 13) soil creep
- 14) terracettes
- 15) landslides
- 16) gullying
- 17) mud flows
- 18) avalanche
- 19) leaching
- 20) rock fall
- 21) granular disintegration: grain-by-grain breakup of the outer surface of coarse-grained rock yielding sand and gravel and leaving behind rounded boulders.
- 22) pervious
- 23) impervious
- 24) spring
- 25) aquifer
- 26) artesian well
- 27) karst topography
- 28) sink hole (swallow hole)
- 29) stalactite
- 30) stalagmite
- 31) cave

## **Unit Five: Glaciers**

**Students should be able to:**

- 1) Describe three causes of ice ages
- 2) Describe the two types of glaciers and identify the two land areas that have most of the glacial ice of the earth
- 3) Describe the two main methods by which glaciers erode debris
- 4) Describe how glaciers affected North America during the ice ages, affect it today, and in the future
- 5) Describe how glacial landforms provide both problems and opportunities for humans
- 6) Examine glacial landforms and state whether they are produced by an alpine glacier, continental glacier, or both
- 7) Recognize glacial landforms on topographic maps and air photos

### **Vocabulary**

- 1) alpine or valley glacier
- 2) continental glacier
- 3) interglacial
- 4) neve or firn
- 5) quarrying or plucking
- 6) abrasion
- 7) ground moraine
- 8) striation
- 9) roche moutonnee
- 10) cirque
- 11) U shaped valley
- 12) lateral moraine
- 13) medial moraine
- 14) arete
- 15) hanging valley
- 16) truncated spur
- 17) finger or ribbon lake
- 18) terminal moraine
- 19) crevasse
- 20) tarn
- 21) pyramidal peak (horn)
- 22) drumlin
- 23) esker
- 24) outwash plain

25) erratic 26) fiord

## **Unit Six: Rivers**

### **Students should be able to:**

- 1) Describe the four types of erosion and the three methods by which rivers transport debris
- 2) Compare and contrast youthful, mature and old rivers in regards to:
  - a) landforms b) gradient c) discharge d) velocity e) sediment load
  - f) types of erosion g) uses to humans
- 3) Describe how the four types of deltas form and give examples of them in the world
- 4) Explain how rivers can rejuvenate and thereby gain their youthfulness
- 5) Recognize trellis, dendritic, and radial drainage systems
- 6) Explain how and why the inner bank (i.e. slip off slope / point bar) and outer river banks vary from each other
- 7) Explain how rivers are complex natural systems that greatly affect human activity and also can be completely changed by man such as through building dams and clearcutting trees near rivers
- 8) Explain the advantages and disadvantages of dams
- 9) Recognize river landforms on topographic maps and air photos
- 10) Recognize river valley profiles
- 11) Draw and label the hydrologic (water) cycle
- 12) Explain how a river basin can be better managed

### **Vocabulary**

- 1) rejuvenated river 2) youthful river 3) mature river 4) old river 5) trellis drainage
- 6) dendritic drainage 7) radial drainage 8) arcuate delta 9) bird's foot delta 10) estuarine delta 11) cuspate delta 12) drainage basin 13) suspension 14) solution
- 15) saltation (rock fragments bouncing on the river bed)
- 16) traction (rock fragments rolling on the river bed) 17) potholes 18) rapids 19) braiding 20) meander 21) floodplain 22) alluvium 23) river terrace 24) levee
- 25) hydrologic (water) cycle 26) vertical erosion 27) headward erosion 28) lateral erosion 29) oxbow lake 30) river complexity 31) slip off slope / point bar
- 32) abrasion or corrasion: the wearing away of bedrock caused by the rubbing, scouring, or scraping action of rock fragments or particles carried by streams, ice, wind, or waves 32) corrosion: the dissolving of soluble minerals by water in streams or waves; common in humid areas underlain by limestone rocks.

## **Unit Seven: Deserts**

### **Students should be able to:**

- 1) Name the most powerful source of erosion in deserts (i.e. water)
- 2) Describe methods by which wind transports materials in the desert (i.e. aeolian transport)
- 3) Describe landforms formed by wind erosion and wind deposition
- 4) Describe landforms formed by water action in deserts

### **Vocabulary**

- 1) dune 2) barchans or barchans 3) erg 4) loess 5) bolson 6) plateau 7) mesa 8) butte
- 9) badlands 10) canyon 11) talus 12) Hamada 13) wadi 14) alluvial fan 15) bajada

- 16) playa lake 17) deflation 18) exfoliation 19) oasis 20) saltation 21) suspension
- 22) surface creep

## **Unit Eight: Coastal Landforms**

### **Students should be able to:**

- 1) Describe the processes that shape coastal landforms
- 2) Describe the process of cliff retreat
- 3) Explain the process in the creation of a stack
- 4) Diagram and explain how longshore drift operates and how it helps to form spits, baymouth bars, and tombolos
- 5) Describe the major differences between emerging coastlines and submerging coastlines
- 6) Describe the significance of emerging and submerging coastlines to humans
- 7) Describe how coral reefs, atolls, and offshore bars form
- 8) Recognize coastal features on topographic maps and air photos

### **Vocabulary**

- 1) hydraulic action 2) corrasion 3) attrition 4) undercutting 5) headland 6) bay
- 7) blow hole 8) stack 9) arch 10) wave cut platform 11) swash 12) backwash
- 13) longshore drift 14) sandspit 15) off shore bar 16) bar 17) lagoon 18) groyne
- 19) submerging coastline 20) ria coastline 21) fiord coastline 22) longitudinal coastline 23) estuary 24) emerging coastline 25) tombolo 26) coral reef 27) atoll
- 28) wave refraction

## **Unit Nine: Weather**

**(Note : The items in Unit Nine will only be covered in general terms as useful background information.) Students should be able to:**

- 1) Identify forms of instrumentation and methods used to compile weather information
- 2) Demonstrate how weather information is collected (locally and internationally) and used to predict future weather conditions
- 3) Describe the characteristics and significance of the vertical, layered structure of the atmosphere especially the troposphere and the stratosphere
- 4) Define the following terms and state their significance in the mass energy exchange in the atmosphere: solar insolation, absorption, reflection, shortwave radiation, longwave radiation, convection, condensation, albedo
- 5) Describe how the atmosphere is largely heated from below
- 6) Describe the necessary conditions for precipitation
- 7) Describe using diagrams the three major methods by which moist air can be forced to rise and create precipitation
- 8) Describe the air masses of North America, giving their source regions, paths of movement, and generally associated weather conditions
- 9) Identify the major cloud types at the three levels including the two types of fog (i.e. radiation fog and advection fog)
- 10) Describe the major characteristics of high and low pressure zones and their accompanying sky cover
- 11) State what causes: a) wind b) sea breezes c) land breezes

- 12) Draw a diagram of the prevailing surface winds of the world giving their direction and name of each wind
- 13) Understand the role of the jet stream and upper air westerlies in influencing weather
- 14) Explain the history of a frontal low
- 15) Read and interpret a weather map including all major symbols
- 16) Explain the causes of hurricanes and tornadoes and how they affect human activity
- 17) To understand the nature of and impact of El Niño and La Niña .
- 18) To gain an understanding of the interrelatedness of the atmosphere and the oceans.
- 19) Explain how weather affects human activity (locally, nationally, and internationally)
- 20) Describe the major temperature controls (i.e. O LAMPNAS)

### **Vocabulary**

- 1) atmosphere 2) weather 3) climate 4) troposphere 5) stratosphere 6) ozone layer 7) insolation
- 8) radiation 9) conduction 10) convection 11) condensation 12) evaporation
- 13) jet stream 14) isobar 15) prevailing wind 16) aspect 17) low or depression or cyclone 18) high or anticyclone or ridge 19) Coriolis force 20) trade winds 21) thermal equator 22) sea breeze 23) land breeze 24) humidity 25) dew point 26) advection fog
- 27) radiation or ground fog 28) cumulus cloud 29) stratus 30) altocumulus & altostratus 31) cumulonimbus cloud 32) cirrus cloud 33) nimbostratus 34) temperature control
- 35) orographic precipitation 36) convective precipitation 37) frontal precipitation
- 38) rainshadow 39) front (warm, cold, occluded, stationary) 40) hurricane
- 41) tornado 42) frontal low 43) air mass 44) temperature inversion 45) continental polar air mass
- 46) maritime polar air mass 47) Arctic air mass 48) continental tropical air mass
- 49) maritime tropical air mass 50) meteorology 51) weather station model 52) ocean currents (warm and cold) 53) El Nino 54) La Nina 55) saturated 56) millibar
- 57) kilopascal 58) chinook 59) anabatic wind 60) katabatic wind

### **Unit Ten: Climates / Soils / Vegetation / Biomes / Agriculture**

**(Note : The items in Unit Ten will only be covered in general terms as useful background information.)**

#### **Students should be able to:**

- 1) State the difference between climate and weather
- 2) Name the major climatic elements and describe the influence of the following temperature controls (O LAMPNAS): ocean currents, latitude, altitude, mountain barriers, prevailing winds, nearness to water, amount of cloudiness, and slope
- 3) Describe the following climates, their causes, their location, and identify the climate graph associated with each:

Tropical Climates:

- Equatorial, Tropical Wet / Dry, Monsoon

Arid Climates:

- Desert, Cold Desert

Coastal Climates:

- Cool Climate-Moderate Winter, Mediterranean, Warm Climate-Wet

Continental Climates:

- Cool Climate-Severe Winter, Warm Climate-Wet



## **Vocabulary**

- 1) temperature controls
- 2) thermal equator
- 3) solstice
- 4) equinox
- 5) temperate climate
- 6) tropical
- 7) arid
- 8) equatorial
- 9) tropical wet/dry
- 10) monsoon
- 11) desert
- 12) cold desert
- 13) cool climate-moderate winter
- 14) mediterranean
- 15) warm climate-wet
- 16) cool climate-severe winter
- 17) warm climate-wet
- 18) coastal climate
- 19) continental climate
- 20) diurnal range
- 21) micro climate
- 22) macro climate

## **Students should be able to:**

### **I) Soils**

- 1) Describe the factors that influence soil formation
- 2) Understand the concept of horizons within a soil profile
- 3) Understand what leaching and capillary action is and how it affects soils
- 4) Describe the following soil types and recognize their soil profiles:
  - a) latosol
  - b) podzol
  - c) grey-brown podzol
  - d) chernozem
  - e) sierozem (desert soil)
  - f) tundra
- 5) Relate soil type to climate, vegetation, biomes, and agriculture

### **II) Vegetation**

- 1) Describe the two major factors that control the kind of vegetation that will grow in an area
- 2) Describe the distribution of vegetation on the earth
- 3) Relate vegetation to climate, soils, and biomes

### **III) Biomes**

- 1) Understand the definition of a biome and ecosystem
- 2) Understand the nature of the major biomes by relating them to climate, soils, and vegetation

### **IV) Agriculture**

- 1) Describe the agricultural activities in various parts of the world and how they relate to climate, soils, vegetation, and biomes

## **Vocabulary**

- 1) parent material
- 2) leaching
- 3) capillary action
- 4) soil profile
- 5) horizon
- 6) zonal
- 7) intrazonal
- 8) azonal
- 9) latosol
- 10) podzol
- 11) grey-brown podzol
- 12) chernozem
- 13) sierozem
- 14) tundra soil
- 15) humus
- 16) soil creep
- 17) megatherms
- 18) mesotherms
- 19) microtherms
- 20) hydrophytes
- 21) xerophytes
- 22) tropical rain forest
- 23) savanna
- 24) Mediterranean woodland and scrub or maquis vegetation (i.e. low-lying bushes) or sclerophyll forest (eg olive, oak, pine) or chaparral vegetation (i.e. a thicket of dwarf oak, low thorny bushes)
- 26) temperate deciduous forest
- 27) coniferous forest
- 28) mixed conifer-broadleaf forest
- 29) taiga or boreal coniferous forest
- 30) tundra
- 31) biome
- 32) fauna (i.e. animals)
- 33) biotic (i.e. refers to the living things in an ecosystem)
- 34) abiotic (i.e. refers to the non-living components of an ecosystem)
- 35) primitive subsistence
- 36) slash and burn agriculture
- 37) terracing
- 38) pastoral nomadism
- 39) commercial plantation
- 40) livestock
- 41) ecosystem
- 42) photosynthesis
- 43) herbivore / primary consumer
- 44) carnivore / secondary consumer
- 45) omnivore / tertiary consumer
- 46) primary producer (green plants capable of photosynthesis)
- 47) decomposer (bacteria and fungi)
- 48) food chain or food web

# Links to TOK in Geography

By Trevor Cole Wednesday, March 24, 2010

Source: [http://blogs.osc-ib.com/ib-blogs/ib-teacher-blogs/dp\\_biology/](http://blogs.osc-ib.com/ib-blogs/ib-teacher-blogs/dp_biology/)

## TOK in geography

Students of group 3 subjects study individuals and societies. This means that they explore the interactions between humans and their environment in time and place. As a result, these subjects are often known collectively as the “human sciences” or “social sciences”.

As with other subject areas, there is a variety of ways of gaining knowledge in group 3 subjects. For example, archival evidence, data collection, experimentation, observation, inductive and deductive reasoning can all be used to help explain patterns of behaviour and lead to knowledge claims. Students in group 3 subjects are required to evaluate these knowledge claims by exploring knowledge issues such as validity, reliability, credibility, certainty, and individual as well as cultural perspectives.

The relationship between group 3 subjects and TOK is of crucial importance and fundamental to the Diploma Programme. Having followed a course of study in group 3, students should be able to reflect critically on the various ways of knowing and methods used in human sciences, and in doing so, become “inquiring, knowledgeable and caring young people” (IBO mission statement).

During the course in geography a number of issues will arise that highlight the relationships between TOK and geography. Some of the questions that **could** be considered during the course are identified below.

- ***To what extent are the methods of the natural sciences applicable in the human sciences?***

- *Are the findings of the natural sciences as reliable as those of the human sciences? What is the meaning of 'a scientific law' in each area?*
- *To what extent can empathy, intuitive, and feeling be legitimate ways of knowing in the human sciences?*
- *Are there human qualities or behaviours that will remain beyond the scope of the human sciences?*
- *To what extent can information in human sciences be quantified?*
- *Do knowledge claims in the human sciences imply ethical duties?*
- *To what extent do the knowledge claims of the social sciences apply across different ages and cultures?*
- *To what extent can maps be viewed as the territory? Or 'Is the map the same as the territory it represents?'*
- *What danger is there of confusing the map, however detailed its representation is, with the actual territory?*
- *To what extent can Global warming or Climate change be viewed as the truth?*
- *To what extent may the change from 'The theory of Continental drift' to 'The theory of Plate Tectonics' be viewed as a paradigm shift'*
- *To what extent can we accept the view that every event and every phenomenon is unique and as such cannot be linked to any other event or phenomenon unless we impose a likeness or pattern?*

*To what extent are models simply our way of imposing a 'meaningful' pattern on reality?*

# Approaches to Learning

Approaches to learning provide the foundation for independent learning and encourage the application of students' knowledge and skills in unfamiliar contexts. Developing and applying these skills helps students learn how to learn.

## Definition:

- Tools that enable students to take responsibility for their own learning and develop learner profile attributes
- Represent general and subject-specific learning skills that students will develop and apply during the programme and beyond.

## Aim:

- Produce self-regulated learners who have been explicitly taught the skills of effective thinking and learning

ATL Skills	ATL Skill Clusters
Self-management	<p><b>Organization:</b> The skills of effectively managing time and tasks eg <b>Notebook Check, Internal Assessment and other assignment deadlines</b></p> <p><b>Affective:</b> The skills of managing state of mind</p> <p><b>Reflection:</b> The metacognitive skills of re-considering what has been taught and learned by reflection on content, ATL skills and learning strategies. eg <b>Howe Sound / Whistler Field Study Power Point Report, Rivers Mind Map, and Weather Assignment generating a variety of Questions and Answers</b></p>
Social	<p><b>Collaboration:</b> The skills of working cooperatively with others eg <b>Field Study Data Collection, Physical Geography Partner Labs, UN Climate Change Conference Simulation, Where Was It Made? Globalization Group Activity</b></p>
Communication	<p><b>Communication:</b> a) The skills of effectively exchanging thoughts, messages and information through interaction; eg <b>Class Discussions on various topics including current events, UN Climate Change Conference Simulation</b> b) The skills of reading, writing and using language to communicate information. eg <b>Various assignments, readings, and class discussions</b></p>
Research	<p><b>Information literacy:</b> The skills of finding, interpreting, judging and creating information. eg <b>Where Was It Made? Globalization Group Activity, Burns Bog/Watershed Park/SWMA Field Study – Internal Assessment (Gr. 12), Various Physical Geography Case Studies (Gr. 12 especially)</b></p>

	<p><b><u>Media literacy:</u></b> The skills of interacting with different media to compare and contrast different representations of information. <b>eg Utilizing DVD, website, textbook, newspaper, magazine sources for many areas of the course including Physical Geography Case Studies (i.e. earthquakes)</b></p>
<b>Thinking</b>	<p><b><u>Critical thinking:</u></b> The skills of critique of text, media, ideas and issues. <b>eg Classroom Discussions, UN Climate Change Conference Simulation</b></p> <p><b><u>Creative thinking:</u></b> The skills of invention —thinking creatively and developing new things and ideas. <b>eg Howe Sound / Whistler Field Study Power Point Report, Data representation in the Burns Bog/Watershed Park/SWMA Field Study Internal Assessment Report (Gr. 12)</b></p> <p><b><u>Transfer:</u></b> Utilizing skills and knowledge in multiple contexts. <b>eg utilizing information from other IB courses overlapping with topics in IB Geogarphy (eg History, Biology, Physics, Economics)</b></p>

**I hope your time with me as your teacher will be a positive and an enjoyable experience.**

**Student Name:** \_\_\_\_\_

**Parent or Guardian Signature:** \_\_\_\_\_

**(indicating that the IB Geography 11 Course Outline has been seen)**