| IB Biology | | Per 1 | | 3/30-4/3 | | |
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| | **Unit/Theme** | **Objectives** | **Activities** | **Homework** | **Closure/Review** | **Assessment** |
| **M O N** | Option C1 Species and Communities | • The distribution of species is affected by limiting factors.<br>• Community structure can be strongly affected by keystone species.<br>• Each species plays a unique role within a community because of the unique combination of its spatial habitat and interactions with other species.<br>• Interactions between species in a community can be classified according to their effect.<br>• Two species cannot survive indefinitely in the same habitat if their niches are identical.<br>• Application: Distribution of one animal and one plant species to illustrate limits of tolerance and zones of stress.<br>• Application: Local examples to illustrate the range of ways in which species can interact within a community.<br>• Application: The symbiotic relationship between *Zooxanthellae* and reef-building coral reef species.<br>• Skill: Analysis of a data set that illustrates the distinction between fundamental and realized niche.<br>• Skill: Use of a transect to correlate the distribution of plant or animal species with an abiotic variable. | • Turn in DBQ 209<br>• Notes/Lecture: o.c1 Species and Communities<br>• Lab: Mark/Recapture<br>• Practical 5: Mesocosms<br>*Set up and seal<br>*Collect initial Data | • DBQ 607-608<br>• DBQ 605-606<br>• DBQ 609-610 | • Mesocosm Setup | • Mark and Recapture Lab |
| **T U E S** | No Class | No Class | No Class | No Class | No Class | No Class |
| **W E D** | 4.2 Energy Flow | • Most ecosystems rely on a supply of energy from sunlight.<br>• Light energy is converted to chemical energy in carbon compounds by photosynthesis.<br>• Chemical energy in carbon compounds flows through food chains by means of feeding.<br>• Energy released from carbon compounds by respiration is used in living organisms and converted to heat.<br>• Living organisms cannot convert heat to other forms of energy.<br>• Heat is lost from ecosystems.<br>• Energy losses between trophic levels restrict the length of food chains and the biomass of higher trophic levels.<br>• Skill: Quantitative representations of energy flow using pyramids of energy. | • Turn in DBQ 607-608<br>• Turn in DBQ 605-606<br>• Turn in DBQ 609-610<br>• Notes/Lecture: 4.2 Energy Flow<br>• Lab: Mark and Recapture Lab (DUE)<br>• Practical 5: Mesocosms<br>*Set up and seal<br>*Collect initial Data | • DBQ 214<br>• DBQ 216<br>• DBQ 219<br>• Read Option C2<br>• Begin Option C.2 Project | • Natural Selection Lab data | • Practical 5 Mesocosms |
| **T H U R S** | No Class | No Class | No Class | No Class | No Class | No Class |
| **F R I** | Option C2 Communities and Ecosystems | • Most species occupy different trophic levels in multiple food chains.<br>• A food web shows all the possible food chains in a community.<br>• The percentage of ingested energy converted to biomass is dependent on the respiration rate.<br>• The type of stable ecosystem that will emerge in an area is predictable based on climate.<br>• In closed ecosystems energy but not matter is exchanged with the surroundings.<br>• Disturbance influences the structure and rate of change within ecosystems. | • Turn in DBQ 214, DBQ 216, DBQ 219<br>• Notes/Lecture: Option C2 Communities and Ecosystems<br>• O.C.2 Project<br>-Buil.d Energy Pyramids (pg 618)<br>-Compare Gersmehl Diagrams (pg 619-620)<br>-Build a Food Web (pg 615)<br>• Practical 5: Mesocosms | • DBQ 616<br>• DBQ 622<br>• DBQ 621<br>• Read Option C3 | • Pyramids of Energy | • Practical 5 Mesocosms |