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| **Teachers** | Hughes Sci 7 team | **Subject Group and Discipline/MYP Year** | Science  Life Science  MYP1 |
| **Unit Title** | Biomes | **Unit Duration** | 3-4 weeks |

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| Key Concept | Related Concept(s) | Global Contexts |
| Change | Evidence, Interaction | Globalization & Sustainability (human impact on the environment) |

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| Statement of Inquiry |
| We use evidence to understand and predict the consequences of human impacts on our global environment. |
| Inquiry Questions |
| Factual: What is valid evidence? What are the characteristics of biomes?  Conceptual: How does evidence prove that climate change is happening? How do human activities impact the global environment?  Debatable: Do we have a responsibility to future generations? |

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| Objectives | Summative Assessment | Summative Assessment Justification |
| Criterion A:  i. outline scientific knowledge  ii. apply scientific knowledge and understanding to solve problems set in familiar situations and suggest solutions to problems set in unfamiliar situations  iii. interpret information to make scientifically supported judgments.  Criterion D:  i. summarize the ways in which science is applied and used to address a specific problem or issue  ii. describe and summarize the implications of using science and its application to solve a specific problem or issue, interacting with a factor  iii. consistently apply scientific language to communicate understanding clearly and precisely  iv. document sources completely. | Goal: Students will understand the impact of climate change on a specific biome.  Role: You are a scientist on a team working for an environmental protection agency  Audience: Congress  Situation: You are trying to protect a specific biome and must convince Congress what will happen to the biome if they do not pass legislation to protect the biome. You have been subpoenaed to testify before a congressional committee.  Product: presentation  Specifications:you must use media/visual; your presentation must be no more than 5 minute  . | This activity will help students understand and predict the consequences of human impacts (climate change) on our global environment (specific biomes)  Notes:   * Students will play the role of members of Congress while other students present their information (then flip) * Introduce the general problem using scaffolded materials including articles, videos, Xavier’s UN presentation |

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| Approaching to Learning |
| Criterion A:  In order for students to outline scientific knowledge, they must make connections between various sources of information AND present information in a variety of formats and platforms  In order for students to apply scientific knowledge and understanding to solve problems set in familiar situations and suggest solutions to problems set in unfamiliar situations, they must use critical thinking to gather and organize relevant information to formulate an argument  In order for students to interpret information to make scientifically supported judgments, they must use critical thinking to draw reasonable conclusions and generalizations  Criterion D:  In order for students to summarize the ways in which science is applied and used to address a specific problem or issue, they must use communication to organize and depict information logically  In order for students to describe and summarize the implications of using science and its application to solve a specific problem or issue, interacting with a factor, they must use communication to organize and depict information logically  In order for students to consistently apply scientific language to communicate understanding clearly and precisely, they must use communication to use and interpret a range of discipline-specific terms and symbols  In order for students to document sources completely, they must use communication to construct a bibliography according to recognized conventions |

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| Content | Learning Process |
| LS.9 The student will investigate and understand how organisms adapt to biotic and abiotic factors in an ecosystem. Key concepts include  a) differences between ecosystems and biomes;  b) characteristics of land, marine, and freshwater ecosystems; and  c) adaptations that enable organisms to survive within a specific ecosystem. | * observation lesson * graphing lesson * cause/effect lesson * earth/sun relationships lesson * biomes lesson * climate change lesson * biome projectley * assessment (presentations) * philosophical chairs: students represent business interests and environmental interests. DISCUSS: what do we need to do about global warming and what will be the impacts on business? (Use criterion D) (OPTION: do as Socratic seminar) |

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| Resources |
| climate change articles/info (including videos)  Green lab book (Understanding Our Environment) |

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| Prior to Teaching | During Teaching | After Teaching |
| PRIOR KNOWLEDGE   * earth/sun interrelationship * observation, inference, what constitutes valid evidence * cause/effect relationships * basic graphing (foundation for climatographs) * climate change 101 (Xavier’s Model UN powerpoint presentation)   + USGS presenter? or resource?   KEY VOCAB TO TEACH   * xxxx   KEY CONCEPTS TO TEACH   * adaptation (behavioural & physical) * climate * characteristics of biomes |  |  |