UbD Template 2.0

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Audience: ESL LEVEL 3 CONTENT (Project Based)

Lesson Plan: Global Education: Super viruses

Global Competencies: Investigating the World, Recognizing Perspectives & Communicating Ideas.

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| **Stage 1 Desired Results** | | |
| ESTABLISHED GOALS  Virginia English 9 State Standards  9.0 English 9 Standards:  9.2 The student will make planned oral presentations.  9.4 The student will read and analyze a variety of informational materials (manuals,  textbooks, business letters, newspapers, brochures, reports, catalogs) and  nonfiction materials, including journals, essays, speeches, biographies, and  autobiographies.  9.6 The student will develop narrative, expository, and informational writings to inform, explain, analyze, or entertain and persuade.  9.7 The student will edit writing for correct grammar, capitalization, punctuation, spelling, structure and paragraphing.  9.8 The student will credit the sources of both quoted and paraphrased ideas.  9.9 The student will use print, electronic databases, and online resources to access.  **Biology Standards**  BIO.1 The student will plan and conduct investigations in which  • hypotheses are formulated based on direct observations and information from scientific literature;   * variables are defined and investigations are designed to test hypotheses   • graphing and arithmetic calculations are used as tools in data analysis  •conclusions are formed based on recorded quantitative and qualitative data | ***Transfer*** | |
| *Students will be able to independently use their learning to…*  **T1** analyze and evaluate sources of information and the forces behind them  **T2** be able to communicate and collaborate successfully through writing and speech to other local or global audiences  **T3** recognize perspectives of other project members  **T4** pool knowledge and resources  **T5** be able to apply these literacy skills to other world issues  **T6** realize themselves as global citizens through collaboration with other classrooms around the world  **T7** take action as global citizens by drawing attention to global issues  **T 8** be compassionate and show understanding to other global citizens.  **T 9** think like scientists and apply the scientific method in investigating the world.  **T 10** apply analysis, and investigating and problem solving skills to other arenas and disciplines. | |
| ***Meaning*** | |
| UNDERSTANDINGS  *Students will understand that*   * They need to able to separate good information from bad. * They need to recognize the slant of the sources of information * They need to think as a scientist as they form research questions, make inferences, create graphs, and interpret data. * They use observations, evidence and scientific reasoning to answer questions and solve difficult problems | ESSENTIAL QUESTIONS   1. What are the causes? 2. Where are they found? 3. What are the different types? 4. What are the symptoms? 5. How are they spread? 6. Are there any demographic or geographical patterns? 7. What are the trends 8. What are the cures? 9. Which infectious diseases are more resistant to prophylactics? 10. Who is researching them? 11. Which international organizations are combating them? |
| ***Acquisition*** | |
| *Students will know…*   * How to recognize bias * How to write effective grammatically correct reports * How to use different media to obtain information. * How to research and effectively credit sources * How to connect the local outbreak of Pulmonary Tuberculosis with superbugs in Africa and Asia; by connecting Here/Now ; Then/Now/Later; Interest/Disinterest dynamics. Connection to self) * Be able to identify the various superbugs * Be able to differentiate viruses from bacteria * The conditions leading to the origin of superbugs. * The factors encouraging the spread of superbugs. | *Students will be skilled at…*   * Collaboration with all audiences * Interpreting text features * Crediting primary and secondary/local and international sources * Accessing & evaluating online sources * Analyzing reports for veracity and bias * Writing scientific reports * Using data analysis tools such as graphing * Identifying and analyzing causes and effects * Collecting and interpreting data * Drawing conclusions |
| **Stage 2 - Evidence** | | |
| **Evaluative Criteria** | **Assessment Evidence** | |
| Correctly located information, accurately identified stages, accurate detailed information & conclusions, grammatically correct format  Correctly collected, identified, coded, labeled ,analyzed interpreted & cited products;  Collaborative, respectful participation; grammatically accurate format; appropriate language  Complete, analyzed, accurate, fully evaluated effective, detailed, logical conclusions; cited products; cross cultural perspectives; multiple & varied sources  Accurate, logical progression of the argument from hypothesis to conclusion; correct use of academic language, grammar and format, correct citations of sources,  bright, clear communication, engaging performance  Accurate, logical progression of the argument from hypothesis to conclusion; engaging, innovative, persuasive ,knowledgeable, visually pleasing presentation; clearly communicated. | TRANSFER TASK(S):   1. Students will investigate Yellow Fever in Cuba in the early 1900s through a short web quest (PBS) and fill in a graphic organizer based on the Scientific Method 2. Students will collaborate in groups or pairs or individually to investigate areas around the world where Malaria is prevalent using data from the CDC and other sources from different countries. Each group will choose a region to investigate. These assessments will follow the steps of the scientific method and will collect data based on observation and research to form a hypothesis, identify causes, effects, symptoms, conclusions. Possible solutions will be suggested . Based on ability, products could be a map, a report or a prezi. (prezi.com – a new kind of presentation). The take action piece will be to donate funds for *Malaria No More,* an NGO providing mosquito nets. 3. Students will collaborate in groups, pairs or individually. They will select either waterborne or airborne infectious disease to investigate. Using data from CDC, the UN, WHO and other sources, they will select a product. Differentiated according to ability, they could either plot the outbreaks on a world map or research using a graphic organizer for the Scientific Method then complete a report; or complete a chart detailing the demographics of the affected areas (SES, Level of education, income per capita etc.) and research prophylactic treatment & prevention. The chart will be added to the other groups and posted on the wall. 4. Final Report: Students will gather their research into a report and role play as a tv reporter investigating their infectious disease. They will videotape each other. 5. Final Activity: Using their research, Students will role play as doctors attending a conference on Infectious Diseases. They will take turns as either exhibitors or as doctors attending the conference. They will have a visual display and either a prerecorded looping photo story or power point on their research into infectious diseases. Each participant will have a questionnaire with a series of questions relating to each exhibit as they rotate. They will then evaluate the effectiveness and originality of the presentation and the accuracy of the research using a rubric. Finally, a poll will be conducted to determine the best exhibit. | |
| 80% passing rate or higher on tests  Correct completion of tasks  Accurate representations of data in text features. | OTHER EVIDENCE:   * Introductory worksheets to Problem Solving Scenarios * Vocabulary Tests using Academic Language for problem solving and investigation * Tests identifying and reading text features such as Charts & Tables * Different Graphs such as Bar & Line * Graphic Organizers showing text structures such as sequence * Readings from various books | |
| **Stage 3 – Learning Plan** | | |

Lesson 1: Video We are the World . Students will watch a power point of the characteristics of 21st students. They will choose a characteristic such as caring, reflective, inquiring etc. They will understand that they are global citizens, recognize perspectives by appreciating their own and others’ heritage and languages . They will then introduce themselves in a short video as citizens of the world emphasizing the 21st century trait that they think is their strongest (ACQUIRE).

Lesson 2: Now & Then; Local & Global Students will understand the concept of infectious diseases by connecting the outbreak of TB in our school with the infectious disease, Yellow Fever in the US and then Cuba in the early 1900s through a short web quest (PBS) bookmarked on Blackboard. Students will be guided to find information and complete a chart and a graphic organizer based on the Scientific Method (Acquire).

Lesson 3: Around the World & Back Again Students will collaborate in groups or pairs or individually in a project to investigate areas in the US and around the world where Malaria is prevalent. Each group will choose a region to investigate. Students will follow a peacecorps member in African village. They will take part in an interactive activity on the Peace Corps website to understand the transmission of Malaria. They will also play an online game exploring the transmission of disease. Students will watch a video about using mosquito nets as preventatives. Students will be able to ask questions and examine perspectives from a Peace Corps member if a speaker is located in time (I am piloting the unit from Monday, the 11th November until just before Christmas). Also, if we are matched to a school in another part of the world, we hope to share data in the project. As a culminating activity, students will take action by donating to an ngo called *Malaria No More* which provides mosquito nets in affected areas (Transfer).

Lesson 4: Investigating Infectious Diseases - One Step More Students will collaborate in groups, pairs or individually once again. They will deepen their knowledge of “superbugs” and the scientific method. They will select either waterborne or airborne infectious diseases such as Ebola, SARS, and Bird Flu etc. to investigate. Using data from the CDC, the UN, WHO and other sources, they will select a product differentiated according to ability and choice. (Transfer).

Lesson 5: Final Report: Live on TV . Check the listings near you Students, in their groups, will gather their research into a report and role play as a tv reporter investigating their infectious disease. They will videotape each other using a camcorder (Make Meaning &Transfer).

Lesson 6. Final Activity: Doctors’ Conference on Infectious Diseases Using their research, Students will role play as doctors attending a conference on Infectious Diseases or as researchers/exhibitors. They will decide in their groups whether they will be either an exhibitor or doctors attending the conference. The doctors will circulate among the different exhibits displaying their research about their disease (Making Meaning & Transfer).