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**Curriculum Design Project - Statement of Purpose**

The current human population of the world as this rationale is being written is 7,015,102,587 and continues to increase every minute (U.S. Census Bureau, 2012). With the rapidly growing number of people inhabiting the Earth, we are placing an ever-increasing burden on how many people our environment and the world’s resources can support. It is crucial that students understand how their choices and actions impact the ecosystem, and in turn empower them to come up with a plan of action to change their personal habits. Quite often students have trouble seeing the personal relevance of science and biology. This curriculum has been designed to link the content of a Biology class to students’ everyday lives, and hopefully change the way teenagers and the school community impact the natural environment based on their life style choices. In order to do this, a typical Ecology unit has been revamped to develop a curriculum based on the essential question: How do humans impact our Earth and the interrelationships among its living and nonliving elements?

The first two subunits are fairly straight forward in the way that they are organized and taught, which is in a concept-related, sophistication sequencing pattern. However, the last subunit is focused on incorporating problem-based learning to connect the content to students’ lives using an inquiry-related, methods of inquiry pattern (Chiarelott, 2006, p. 42). In an article focused on making science relevant to students’ lives, Lynda Jenkins states: “If science educators are going to change the average ‘‘non-scientist’’ student’s perception of science, then they are going to have to alter the way that they teach science” (Jenkins, 2011, p. 502). This curriculum design intends to accomplish this task of changing the way this content matter is typically taught.

South Carolina Science Standard B-6.6 states that students should be able to “explain how human activities (including population growth, technology, and consumption of resources) affect the physical and chemical cycles and processes of Earth” (SC Department of Education, 2008), but the suggested assessments are very straight forward and do not encourage student inquiry. In fact, there is little room in the current school calendar to take the time to incorporate a problem-based unit because there is a state mandated end of course test. However, it is important to take the needs of the learner and society in to account when teaching an ecology unit because it is extremely relevant to their lives and the future of the human race and the Earth as we know it.

This curriculum follows a learner-centered design, focusing on the humanistic philosophy. The emphasis of the overall unit is on the experiences, interests and needs of the students (Ornstein, 2009, p. 206). Students today like to experience active, hands-on learning, while understanding the reason for what they are learning. Curriculum that is designed following a problem-based learning model has the ability to “relate subject matter content to real world situations” which is the key concept between contextual teaching and learning (Chiarelott, 2006, p. 5). This curriculum design has a major objective of making students more environmentally conscious while meeting the standards that the state has designed. In fact, students’ need for engagement and relevance will be met because this design helps students “understand the nature of science and begin to contextually understand what it means to be part of a larger environmental community” (Jenkins, 2011, p. 507). During this unit, as students meet the objectives set forth, explore their personal impact on the environment, and develop an action plan for decreasing their impact, the needs of society will also be met, because environmental awareness has been raised.

The purpose of this curriculum design is to change the way ecology is taught so that it is more relevant to students’, while also meeting the need to raise environmental awareness among students and the school community. Throughout the unit, students will work within the steps of the scientific method and develop their analysis and critical thinking skills, while collaborating on their action plan. At the end of the unit, the primary educational goal is that the student can summarize in detail how humans impact our Earth and the interrelationships among its living and nonliving elements.

**References**

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