

Population Dynamics – The Great Debate

Subject: Biology

Topic/Lesson: Essential Standard - Understand the impact of human activities on the environment (one generation affects the next).

Competencies/Objectives

Biology 2.2.1: Infer how human activities (including population growth, pollution, global warming, burning of fossil fuels, habitat destruction and introduction of nonnative species) may impact the environment.

Biology 2.2.2: Infer how human activities (including population growth, pollution, global warming, burning of fossil fuels, habitat destruction and introduction of nonnative species) may impact the environment.

Materials:

Power Point on Population Dynamics (Population Dynamics: The Great Debate), samples of literature and informational text, multi-media sources

<p>Procedures/Co-Teaching Approaches</p> <p>Anticipatory Set/ Building Background Knowledge</p>	<p>Teaming</p>	<p>Warm up question for students to answer as they enter class: What causes human populations to grow? Both teachers greet students as they enter and circulate during warm-up</p> <p>Discuss warm up question as a whole group. Accept all answers as this is just a brainstorming activity.</p> <p>As a class, review slides 1-10 and have students work with a partner for the exponential growth (allowance) activity. Teachers take turns with slides. This should be predetermined so they are prepared to discuss their particular slides.</p>
<p>Procedures/Co-Teaching Approaches</p> <p>Practice/Application</p>	<p>Parallel Teaching</p>	<p>Class is divided in half and students are heterogeneously grouped. Each half of the class will continue reviewing the remainder of the power point with their teacher.</p> <p>Towards the end of the Power Point, students will have to vote and ultimately decide which side of the debate they will represent. For larger classes, each teacher should divide their group into two or three groups. For example, in a class of 30 Teacher A should have 2-3 debate teams as opposed to trying to organize a group of 15 students into one debate team.</p> <p>Students work as a group (heterogeneously grouped) to prepare for the debate. Allow ample time for this. At least 20-30 minutes. Students may want to use supporting sources of information to strengthen their arguments. These can include the Biology</p>

		text book and/or online resources. Obtaining resources from the school media center may also help facilitate this activity. Students should answer all questions on the last three slides to be fully prepared for the debate.
Procedures/Co-Teaching Approaches Closure/ Wrap-up	Teaming or parallel	<p>Students will conduct the debate which will be mediated by the teachers. There are a few options for this, so teachers should choose what will work best with their particular classroom.</p> <p>Option A: Have all groups debate at the same time Option B: Only have two opposing debate teams at a time</p> <p>Debates should occur with all students either participating in the debate or participating in the audience. This allows them to hear the information and practice leaning about others' perspectives.</p>
<p>Assessment – Students will get back into their original groups and create a summary of what they learned including how their perspective was or was not changed due to the debate. This can be a poster, Power Point, News Paper article or other format depending on interest and learning modalities of learners. All students will also write a one-two page reflection (or other format as needed) of this activity that answers the following questions: 1) What was the most interesting fact they learned about Population Dynamics. 2) Why it is important to have information to support your argument 3) What they learned through the debate process.</p>		
<p>Specially designed instruction/accommodations for students with disabilities or other special needs:</p> <p>Small group instruction Powerpoint slides will be read aloud to ensure those reading below grade level can access the information Copies of Power Point for students who have this as an accommodation or have a Visual Impairment Allow students to produce verbal reflections if writing will impede their ability to demonstrate their learning</p>		
<p>Notes This topic lends itself to thematic units with English and/or Social Studies</p>		
Potential IEP goals	<p>After reading (or hearing) information from a non-fiction text, student will summarize three key points in his/her own words (via written passage or other representation), with 85% accuracy.</p> <p>After reading (or hearing) informational text, student will identify a cause/effect relationship accurately in 4 out of 5 trials.</p>	

Graphic Organizer – The Great Debate over Population Dynamics

Identify	The biggest problem overpopulation poses to our environment. Choices include air pollution, water pollution, extinction of species, or another choice.
<ul style="list-style-type: none"> • Why is this the greatest problem? <li style="text-align: center;">• 	
<ul style="list-style-type: none"> • What should be done about it? 	
<ul style="list-style-type: none"> • Why are the other issues less of a concern? 	
<ul style="list-style-type: none"> • What might happen if nothing is done to intervene regarding your top issue/problem? 	
<ul style="list-style-type: none"> • Why should we care about this problem? 	
Other interesting information	