

<b>TITLE OF LESSON</b> Social Justice/Art: How can we protect ourselves from the spread of disease?	<b>CURRICULUM AREA &amp; GRADE LEVEL</b> Biology & High School	<b>DATE OF LESSON</b> Days 7-8 of the Zombie Apocalypse Thematic Unit
--	---	--

<b>CA CONTENT STANDARD(S) ADDRESSED</b> Standard Set 10, Physiology (Infection & Immunity): 10d Students know there are important differences between bacteria and viruses with respect to their requirements for growth and replication, the body's primary defenses against bacterial and viral infections, and effective treatments of these infections.	<b>CA ELD STANDARD(S) ADDRESSED</b> ELD Collaborative Standard 9. Presenting (Expanding) - Plan and deliver a variety of oral presentations and reports on grade-appropriate topics that present evidence and facts to support ideas using growing understanding of register.
--	--

<b>BIG IDEA ADDRESSED</b> Diseases, such as a zombie outbreak, are extremely popular in pop culture right now. Many students enjoy this topic without knowing the science background of the topic. In this lesson we delve into how students can protect themselves from disease and how cultures in the past perceived disease.	<b>ESSENTIAL QUESTIONS ADDRESSED</b> <ol style="list-style-type: none"> <li>How can we educate our community about ways to prevent the spread of illness?</li> <li>How can we consume and produce art to understand past epidemics and educate ourselves for future possible outbreak events?</li> </ol>
---	--

<b>OBJECTIVE(S) OR LEARNING GOAL(S)</b> <ul style="list-style-type: none"> <li>Cognitive: After creating their protective gear, students will be able to form and present an explanation of how they enhanced the body's primary defenses against bacterial and viral infections, and effective treatments of these infections.</li> <li>Language Development: After creating their protective gear, students will plan and deliver a variety of oral presentations and reports on an explanation of their design that present evidence, using facts to support ideas using growing understanding of register.</li> </ul>	<b>ASSESSMENT(S)</b> <ul style="list-style-type: none"> <li>Informal, Formative: During the whole class discussion, the teacher will identify and address gaps in student knowledge regarding diseases.</li> <li>Formal, Summative: As the students present their rationales for their protective gear, the teacher will assess whether their explanations stay true to the nature of the spread of viruses and bacteria.</li> </ul>
---	--

<b>PREDICTION OF LIKELY DIFFICULTIES STUDENTS MAY ENCOUNTER WITH THIS MATERIAL</b> Students are likely to associate television show's zombie qualities, such as the Walking Dead, with the introduction of disease. Although the theme of this ITU aims to capture attention based on the popular topic, it is also meant to educate on real life disease, not fantasy fiction ideas.
--

<b>INSTRUCTIONAL STRATEGIES:</b> <i>What the teacher does to help students cope with the difficulties in order to succeed</i>			<b>STUDENT ACTIVITIES:</b> <i>What the students do</i>		
<b>STEPS</b> (Fill in each box with specific information)	<b>LEARNING STYLE(S) ADDRESSED</b>	<b>REASONS/RATIONALES</b>	<b>STEPS</b> (Fill in each box with specific information)	<b>LEARNING STYLE(S) ADDRESSED</b>	<b>REASONS/RATIONALES</b>
Anticipatory Set ("Into") 1. Teacher will host brief conversation on the outfits of <a href="#">beak doctor</a> , <a href="#">medicine men</a> , and other modern day clothing used to prevent the spread of contagious disease to caretakers. 2. Teacher will question students on the purpose of different aspects of the medical gear.	Visual	The creepy images will be an attention grabber for students.	Anticipatory Set ("Into") 1. Students will see images of different medical costumes worn throughout different periods of time. 2. Students will participate in a whole class discussion on the purpose of the medical gear.	Visual	The creepy images will be an attention grabber for students.
Instruction ("Through") 3. Teacher will briefly	Visual, Linguistic	Surprising facts from the past	Instruction ("Through") 3. Students will hear teacher will briefly explain inaccurate costume choices that may surprise students, such as the smelling herbs	Visual, Linguistic	Surprising facts from the past that are wrong give students confidence in their current

explain inaccurate costume choices that may surprise students, such as the smelling herbs in the beak doctor's outfit.		that are wrong give students confidence in their current knowledge.	in the beak doctors outfit.		knowledge.
Guided Practice ("Through") 4. Teacher will walk students through the rubric for their art project that focuses on creating a protective face mask out of art supplies.	Visual, Artistic	The rubric provides a guide for students.	Guided Practice ("Through") 4. Students will listen to the rubric explanation of their art project.	Visual, Artistic	The rubric provides a guide for students.
Independent Practice ("Through") 5. Teacher will walk around class answering questions and drawing out student creativity.	Visual, Artistic	Students are allowed to be creativity and have fun <i>in a science class!</i>	Independent Practice ("Through") 5. Students will be given various materials and asked to create their own protective gear (mask) based on what they have learned on bacteria and viruses.	Visual, Artistic	Students are allowed to be creativity and have fun <i>in a science class!</i>
Closure ( <i>summarize; make meaning of the lesson</i> ) 6. Teacher will listen to presentations, ask questions, and assess student understanding using the rubric.	Rational, Verbal, Linguistic	Having each student present their mask allows them to show off their creativity and have pride in the quality of their word.	Closure ( <i>summarize; make meaning of the lesson</i> ) 6. Each student will present their protective gear and provide an explanation for their choice of design.	Rational, Verbal, Linguistic	Having each student present their mask allows them to show off their creativity and have pride in the quality of their word.
Transfer ("Beyond") ( <i>opportunities to apply the learning</i> ) 7. Teacher will show the students the protective face mask comparison poster and allow them to think about how well their mask would hold up under the test.	Rational	This activity will lead into the next class where student test their face masks.	Transfer ("Beyond") ( <i>opportunities to apply the learning</i> ) 7. Students will be shown the mask testing poster and decide if they would like to test their own mask next class.	Rational	This activity will lead into the next class where student test their face masks.

**INFO ABOUT ENGLISH LANGUAGE LEARNERS:**

- Rodolfo: CELDT 4, Basic on CST, Likes soccer and video games, has come in for one-on-one support, but needs additional tutoring
- Vanessa: CELDT 4, Grade 9, Proficient/Advanced on CST
- Orlando: CELDT 3, Grade 10, Below Basic on CST testing, will not ask for help, but gladly accepts, very quiet, does not do homework, plays football

**INFO ABOUT STUDENTS W/ SPECIAL NEEDS:**

- Ryan C: 504, mild asthma, diabetic, Proficient/Advanced on CST, plays football
- Peyton: IEP, SLD, Basic on CST, likes football and gymnastics, interested in Cal Poly
- Angela: 504, No CST info available, plays JV soccer, quiet in class
- Jake: IEP, SLD, OHI; Below Basic/Basic on CST, very fidgety in class, trouble focusing, receiving one-on-one support
- Logan: IEP, Autism, performs very well in class, Proficient/Advanced on CST

**DIFFERENTIATION FOR ENGLISH LANGUAGE LEARNERS:**

- Content: Some of the words discussed in the images about historical protective gear could be confusing to EL students. One student volunteer will write ideas presented by class onto the board.
- Process: Students will be encouraged to write their explanation in both English and Spanish, practicing both

**DIFFERENTIATION FOR STUDENTS WITH SPECIAL NEEDS:**

- Content: Students with trouble focusing will be purposely included in class discussion.
- Process: Students with attention issues will be very engaged in this lesson because it involves hands on activities.

<p>so they feel comfortable in what they are saying.</p> <ul style="list-style-type: none"><li>• Product: Presentations will not be judged as much on language performance, but instead on content expressed and justification given.</li></ul>	
<p><b>RESOURCES</b></p> <ul style="list-style-type: none"><li>• Images of beak doctor, medicine men, and other modern day clothing</li><li>• Art supplies: paper mache, markers, paint, etc</li></ul>	<p><b>REFLECTION:</b></p> <p>Not applicable since lesson has not been taught.</p>