

Name Emily Mitchell

Lesson Plan Template

Learning Segment Focus Science – Human impact on the environment **Lesson** **of**
Topic Recycling/Harmful materials **Date** **Grade** 8

Student Outcomes

Specific learning objectives for this lesson.	Students will recognize objects that negatively impact the environment. Students will compare the use of harmful materials and connect this to the real world. Students will identify an environmental issue. Students will develop a solution to the issue.
Justify how learning tasks are appropriate using examples of students' prior academic learning .	Students will have already collaborated with their peers, and this will strengthen their communication and social skills. Students have already studied the Earth and what can happen if the climate crisis progresses. Students have prior knowledge of terms such as climate change, global warming, and environmental issues.
Justify how learning tasks are appropriate using examples of students' personal, cultural, linguistic, or community assets .	24 students in total: 11 boys, 13 girls. 5 English Learners 2 hearing impaired 3 special needs 1 paraplegic who uses a wheelchair 14 come from impoverished neighborhoods, 10 are middle-class 9 students read at grade level 9 students read 1-2 grades below grade level 6 students read 3-5 grades below grade level

State Academic Content Standards

List the state academic content standards with which this lesson is aligned. Include abbreviation, number & text of the standard(s).	8-ETS1-1: Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions. 8-ETS1-2: Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem. 8-ETS1-4: Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.
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Key Vocabulary

What vocabulary terms/content specific terminology must be addressed for students to master the content?	Environment, Climate Change, Global Warming, Plastic, Aluminum, Styrofoam, Glass, Reduce, Reuse, Recycle
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Academic Language Support

What are the Academic Language Function(s) (the content and language focus of the learning task represented by the active verbs within the learning objectives/outcomes) and explain how they are utilized in the lesson plan? What planned Academic Language Supports will you use to assist students in their understanding of key academic language to express and develop their content learning and to provide varying supports for students at different levels of Academic Language development? How do these supports address all three Academic Language Demands (vocabulary, syntax, and discourse) ?	Word Wall for students to refer to as they work. Hands-on material so that students can connect their learning. Use of technology to enhance student learning and expose them to a variety of learning platforms.
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Materials

Materials needed by the teacher for this lesson. (such as books, writing materials, computers, models, colored paper, etc.)	Smartboard, Internet access, computer, role play example, spreadsheet, metal straws.
Materials needed by students for this lesson. (computers, journals, textbook, etc.)	Computers/iPads, Internet access

Lesson Timeline with Instructional Strategies & Learning Tasks

Amount of Time	Teaching & Learning Activities (This should be a BULLETED LIST)	Describe what YOU (teacher) will be doing and/or what STUDENTS will be doing during this part of the lesson. (This should be VERY DETAILED)
	<u>Introduction:</u> Introduction to topic	I will introduce my students to what recycling is and why it is important. I will ask my students to tell me what they know about reducing, reusing, and recycling. I will type their answers into a Google Doc that will be broadcast onto the board so everyone can see. After we discuss what ideas were shared, we will watch a video that further explains human impact on the environment: https://www.youtube.com/watch?v=GqDb3j1mv8Y
	<u>Instruction:</u> Student-led instruction Formative assessment Role Play	Next, students will break off into groups of 4 to research recycling and how waste affects the environment using these websites: https://www3.epa.gov/recyclecity/ https://climatekids.nasa.gov/ https://www.dosomething.org/us/causes/environment Students will complete a digital infographic that showcases what they have learned! The infographic will need to have at least 1 picture/graphic, 3 facts, and 1 resource. Students will share their infographics with me so I can present them on my website. Next, we will practice the role play model of teaching with recycling! I will explain what role play is and how it is beneficial for students to practice real-world skills and transfer their knowledge to these situations. I will ask for 2 volunteers for the role play. The issue we will be examining is “How can we encourage people to reduce, reuse, and recycle?” An example is attached at the end of the lesson plan. We will discuss how to solve the issue of 1) ignorance about environmental impact and 2) overconsumption of paper and plastic materials.

	<u>Closure:</u> Formative assessment and gathering knowledge	At the end of the lesson, students will be asked to keep track of their paper and plastic usage. They will track their consumption over 4 weeks and the data will be entered into a spreadsheet. At the end of the four weeks, we will compare each student's data in addition to data from other classes. Each student will be given a metal straw as an incentive for working so hard today.

Technology Integration

Provide your rationale for your technology choices that accurately reflects those choices within your teaching context. Identify what technology(s) you are using as part of your lesson plan. Describe how the use of technology aligns to your learning objectives, content standards, and central focus. Explain how technology-based instructional strategies are essential to students accomplishing the learning objectives (beyond what could be accomplished without using the technology). Specify how the technology selections meet or exceed the needs/strengths of all students. Justify the "fit" of chosen technologies, showing how the content, instructional strategies, and technology "fit" together.	The use of a SmartBoard helps students to see the information and allows for quick copying of student thoughts onto the board. A YouTube video gives students a brief overview of our lesson in a way that is understandable to them. Students will use the Internet to research a topic and create a digital infographic as a means of assessment and proof of knowledge. The use of an Excel spreadsheet not only familiarizes students with the program but allows for an efficient means of data comparison.
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Accommodations/Modifications

How might I modify instruction for: <i>Remediation?</i> <i>Intervention?</i> <i>IEP/504?</i> <i>LEP/ESL?</i> (All students who have plans mandated by federal and state law.)	Students who need to be closer to the front due to eyesight or hearing will be placed there. English Learners will be grouped with strong English speakers. Sound fields will be used to accommodate our hearing-impaired students.
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Differentiation

How might you provide a variety of techniques (enhanced scaffolding, explicit instruction, contextualized materials, highlighters/color coding, etc.) to ensure all student needs are met? (All students who are not on specific plans mandated by federal and state law.)	Explicit Instruction: modeling the Role Play model of teaching (example provided), use of technology (Smartboard with enlarged text for visually impaired students; sound field system for hearing impaired students) More resources on teacher website to accommodate students who want to learn more or did not fully grasp the lesson at first.
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Assessments: Formative and/or Summative

Describe the tools/procedures that will be	☒ Formative / ☐ Summative	Digital infographic
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used in this lesson to monitor students' learning of the lesson objective(s) (include type of assessment & what is assessed).	X Formative / ☐ Summative	Data chart to track material use
	☐ Formative / ☐ Summative	

Research/Theory

Explain connections to theories and/or research (as well as experts in the field or national organization positions) that support the approach you chose and justify your choices using principles of the connected theories and/or research .	The Role Play model of teaching was developed by Fannie Shaftel. It has been proven to enhance student learning due to accessibility and ease. It requires no special tools or techniques, so all students can participate. It also empowers students and builds a sense of community in the classroom.
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Lesson Reflection/Evaluation

What went well ? What changes should be made? How will I use assessment data for next steps?	<i>TO BE FILLED IN AFTER TEACHING</i>
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Include supporting material such as slides, pictures, copy of textbook, and handouts for any activities students will be using as part of your lesson.

*adapted from: <http://webcache.googleusercontent.com/search?q=cache:EsQcNWuG1ZoJ:web.mnstate.edu/harms/StudentTeachers/edTPA-LessonPlan.doc+&cd=2&hl=en&ct=clnk&gl=us>; <http://www.moreheadstate.edu/getmedia/cd3fd026-939f-4a47-a938-29c06d74ca01/Lesson-Plan-and-Reflections.aspx>; <http://www.mcneese.edu/f/c/9cb690d2/Lesson%20Plan%20Rubric%20Aligned%20with%20InTASC.docx>; <https://www.uwsp.edu/education/Documents/edTPA/Resource12.pdf>; <https://www.uwsp.edu/education/Documents/edTPA/Resource11.pdf>; <https://www.uwsp.edu/education/Documents/edTPA/Resource11a.pdf>; <https://www.uwsp.edu/education/Documents/edTPA/LessonPlanTemplateSOE.docx>; <https://www.uwsp.edu/education/Documents/edTPA/SpecEdLessonPlanGuide.docx>; <https://www.uwsp.edu/education/Documents/edTPA/SpecEdLessonPlanTemplate.docx>

Role Play 1:

Katy—plays a diligent advocate for recycling and decreasing use of plastic.

Kaylee—plays someone who litters, doesn't know anything about the dangers of plastic and plastic waste, and who isn't interested in learning anything about it, initially.

Setting: Walking on a neighborhood sidewalk to school.

Characters: Katy walks behind Kaylee who is listening to music on headphones and drinking a energy drink in a plastic bottle.

Action: Kaylee finishes her bottle and tosses it to the side. Katy, a few steps behind, stops and picks up the bottle and catches up to Kaylee.

Dialogue:

KATY: touches Kaylee on the shoulder to get her attention. "Hi Kaylee!" (holding the bottle to her chest), "I noticed you dropped your bottle back there."

KAYLEE: "Hey Katy....Oh, I just tossed it since I was done with it." (nonchalantly)

KATY: "Oh, I guess everyone doesn't try to recycle like I do" (smiling). "Are you interested in hearing a little about why plastic needs to be recycled?"

KAYLEE: "Ummm....well, not really. My family isn't into that kind of stuff. I'm sure someone would've picked it up—they hire people to do that, right?"

END role play.

ROLE PLAY 2 and 3:

YOUR GROUP's TASK: The role play will be repeated with Kaylee throwing the plastic energy drink bottle as she walks to class. Now, YOUR GROUP will be walking behind her. How can you better approach the situation or what can you say or do to help Kaylee reflect on her actions or help her progress toward being more mindful about plastic reuse/recycling? PREPARE TO ROLE PLAY.

Characters:

Dialogue:

Questions for Debriefing or Generalizing the Experience:

- Which of the solutions to this problem do you think is best?
- Why?
- For whom is it best?
- Who will be unhappy with this solution?
- If you were Kaylee, what would you choose to do?
- If you were the others, what would you do differently?