

5E Lesson Plan TLC

Key:

SEP - Science and Engineering Practice
 CCC - Crosscutting Concept
 DCI - Disciplinary Core Idea
EP&C - Environmental Principles and Concepts
 DPA - Decision Point Assessment ESRs - Expected Student Responses

Lesson Topic/Concept:	Global Environmental Literacy
NGSS PE(s):	MS-ESS3-3 and MS ESS3-5, MS ETS 1-1 through MS ETS 1-5
NGSS 3 Dimensions	ESS3.C, ESS3.D, Cause & Effect, Asking Questions & Defining Problems, EP&C Principle 5
Enduring Understanding:	Human activities have severely altered the biosphere resulting in climate change.
Focus Question	How Might We Help Solve a Global Environmental Crisis?
Lesson Summary:	Using choice boards as a way to demonstrate learning and creating design thinking solutions for the 3 global environmental crises.

5E	Teacher Said	Student Said	3D
Engage	Teacher will show Dr. Sussman's video: Human Global Species Test	Students will watch the video: Human Global Species Test and give their initial rating.	SEP: Asking Questions & Defining Problems CCC: Cause & Effect DCI: ESS3.C, ESS3.D EPC: 5
Explore/Explain	Climate Change Choice board with STEM challenge	Design a water catcher Design a battery	SEP: Defining Problems CCC: Cause & Effect DCI: ETS1.A, ETS1.B, ETS1.C EPC: 5
Explore/Explain	Species Extinction Choice board with STEM challenge	Build a better habitat Build a habitat linking bridge Build a bird feeder or design an insect garden	SEP: Defining Problems CCC: Cause & Effect DCI: ETS1.A, ETS1.B, ETS1.C EPC: 5

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Explore/Explain	Global Pandemic Choice board with STEM challenge	Design a mask Design a way to keep people 6 ft apart	<p>SEP: Defining Problems</p> <p>CCC: Cause & effect</p> <p>DCI: ETS1.A, ETS1.B, ETS1.C</p> <p>EPC: 5</p>
Elaborate/Extend	<p><i>Questions/prompts/activities...</i></p> <p>Improve design from choice board based on student and teacher feedback</p>	<p><i>Actions/thinking/ESRs...</i></p> <p>Improve design from choice board based on student and teacher feedback</p>	<p>SEP: Defining Problems</p> <p>CCC: Cause & Effect</p> <p>DCI:ETS1.C</p> <p>EPC: 5</p>
Evaluate	<p><i>Questions/prompts/activities...</i></p> <p>What score would you give humans on the Human Global Species Test? OR How does your design impact 1 or both of the other 3 global environmental crises?</p>	<p><i>Actions/thinking/ESRs...</i></p> <p>Students will write a claim, evidence, reasoning that answers the question:What score would you give humans on the Human Global Species Test? Students will write a CER CER Template</p>	<p>SEP: Construct an explanation</p> <p>CCC: Cause and Effect</p> <p>DCI: ESS3.C, ESS3.D</p> <p>EPC: Principle 5 - Decisions Affecting Resources and Natural Systems are Complex and Involve Many Factors</p>
	DPA		

<p>Evidence: <i>Describe student Work to be collected and analyzed</i></p>	<p>CER Rubric (PDF)</p>
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