

RESEARCH LESSON NAME: “ Taking Care of Mother Earth” AND “Environmental Issues and You”	Developed by: Helen Corral-Bonner
LESSON OVERVIEW	
NGSS-Disciplinary Core Idea(s): ESS3.C: Human Impacts on Earth Systems The sustainability of human societies and the biodiversity that supports them requires responsible management of natural resources. (HS-ESS3-3)	
NGSS-Performance Expectation: Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.(HS-ESS3-1)	
NGSS-Science & Engineering: Constructing Explanations and Designing Solutions	
NGSS-Crosscutting Concepts: Cause and Effect Empirical evidence is required to differentiate between cause and correlation and make claims about specific causes and effects. (HS-ESS3- 1)	
CCSS ELA-Writing <ul style="list-style-type: none"> • Research to Build and Present Knowledge • Production and Distribution of Writing Math- <u>Algebra II</u> Making Inferences and Justifying Conclusions S IC	
AICS- <u>Earth and Space Science Standard D:</u> Develop an understanding of the central interaction of sunlight (external energy) and the earth's heat (internal energy) which drive a variety of natural earth system cycles and relate this knowledge to traditional American Indian values/beliefs such as the Mother Earth concept, reverence for water and wind, the power of the Circle. [Energy in the earth system]	
Vocabulary: Pollution, Depletion, Loss of Biodiversity, Natural Resources, Economic Loss	
Materials: Project Description Criteria Sheet with PPT slide layout, Memory Stick, Jump or Thumb Drive	
Recommended Group Size: 1-2	

ACCOMMODATIONS & MODIFICATIONS	
English Learners	<p>The teacher will pair limited ELL</p> <ul style="list-style-type: none"> – students with fluent Bilingual students – The teacher will provide the student with individualized attention during class. – The teacher will review the previous lesson to check for understanding and link to other topics as related. – The teacher will check for understanding by asking questions out loud to the class or an individual as related to the unit. – Students will be encouraged to help one another as they move through the daily assignment, lab activity and/or project. – The teacher will write lecture notes on White and Chalk Board; students will be encouraged to ask questions. – The teacher will encourage/ask the class to ask questions for clarification and understanding. <p>The teacher will move around the classroom to monitor comprehension</p>
At-Risk/Below Grade Level	<ul style="list-style-type: none"> – The teacher will provide the student with individualized attention during class. – The teacher will review the previous lesson to check for understanding and link to other topics as related. – The teacher will check for understanding by asking questions out loud to the class or an individual as related to the unit. – Students will be encouraged to help one another as they move through the daily

	<p>assignment, lab activity and/or project.</p> <ul style="list-style-type: none"> – The teacher will write lecture notes on White and Chalk Board; students will be encouraged to ask questions. – The teacher will encourage/ask the class to ask questions for clarification and understanding. <p>The teacher will move around the classroom to monitor comprehension</p>
Special Education	<ul style="list-style-type: none"> – The teacher will provide the student with individualized attention during class. – The teacher will review the previous lesson to check for understanding and link to other topics as related. – The teacher will check for understanding by asking questions out loud to the class or an individual as related to the unit. – Students will be encouraged to help one another as they move through the daily assignment, lab activity and/or project. – The teacher may shorten assignment to accommodate special needs
GATE	<ul style="list-style-type: none"> – Students will be encouraged to help one another as they move through the daily assignment, lab activity and/or project. – Students may be assigned to lower functioning groups for peer to peer tutoring.

OBJECTIVES

- TLW be able to differentiate between the 3 main Environmental Problems
- TLW be able to identify an environmental issue/problem on the tribal lands/reservation
- TLW be able to investigate the cause(s) of the environmental problem and offer solutions to correct the issue.
- TLW be able to describe the cultural importance and impact the environmental issue is having on their tribal lands/reservations.
- TLW be able to create a Power Point Presentation to share in class using available technology.
- TLW be able to use various Microsoft programs and the Internet.

INTRODUCTION

Students will be introduced to the Native American Ten Commandments and then discuss the correlation how they are aligned with being a modern day Environmentalist/Conservationist. Students will then receive a criteria sheet outlining the PowerPoint slide presentation they must create and the information, pictures and references they must include. There are 2 variations to this lesson/assignment.

INDEPENDENT PRACTICE

“Environmental Issues and You” is geared towards 9th and 10th graders and requires them to create slides for 6 specific questions. “Taking Care of Mother Earth” is geared towards 11th and 12th graders that will require students to “Role Play” in different scenarios and write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content for the various roles and specific questions for each. Students must create a PowerPoint slide presentation using Microsoft or Google Chrome Software.

EXTENSION

Students present their PowerPoint Slide Show to their peers and share for Parent Conference and Open House Events