

<b>Task Background</b>	
<b>Domain &amp; Area:</b> Science - Earth and Space Science	
<p><b>MN Standard Adult High School Diploma Social Studies Competencies</b>  <b>Area 3: Earth and Space Science</b></p> <ul style="list-style-type: none"> <li>Explain aspects of earth and space changes as they relate to human interaction with global environments.</li> </ul>	
<p><b>Task Description:</b> The purpose of this task is to provide you an opportunity to demonstrate competency in a fundamental concept in earth and space science: human impacts on greenhouse gases and the carbon cycle. In this task, you will</p> <ul style="list-style-type: none"> <li>create a diagram demonstrating the relationship between the carbon cycle, use of fossil fuels, and climate change</li> <li>evaluate your own carbon footprint/usage using an online calculator and explain your connection to generating greenhouse gases</li> <li>create a visual presentation to share your footprint and any changes you resolve to make to lower your footprint</li> </ul> <p>Follow the directions for each activity carefully. The expectation is that you will complete the activities of this task mostly on your own. You may use resources such as dictionaries and research online as needed to complete the activities. Your teacher can provide feedback for revisions of your work as needed.</p>	
<b>Activities</b>	
<b>Title:</b> Carbon Footprint Calculator	<p><b>Materials:</b> To complete this activity you will need the <i>link</i> below and the handout “<i>Carbon Footprint Data Collection.</i>”</p> <ul style="list-style-type: none"> <li>Carbon Footprint Calculator:  <a href="https://www3.epa.gov/carbon-footprint-calculator">https://www3.epa.gov/carbon-footprint-calculator</a></li> </ul>
<b>Title:</b> Impacting the Carbon Cycle	<p><b>Materials:</b> To complete this activity, you will create a diagram of the carbon cycle, personalized with ways you participate in the cycle, using information from the Carbon Footprint Calculator. You may do this electronically or on paper.</p>
<b>Title:</b> Summary	<p><b>Materials:</b> To complete this activity, you will create a written summary of the connection between fossil fuels used to power homes and vehicles, the waste produced by humans, and</p>

**Student-Facing Document**

	increased greenhouse gases in the atmosphere. A clear explanation of how increased greenhouse gases accelerate climate change should be part of the summary.
<b>Title:</b> Create a Visual Presentation	<b>Materials:</b> This activity includes the “ <i>Earth and Space Science Task Rubric</i> ” handout, a tri-fold display board, and any materials, including markers, paper, glue, etc., you need to create the presentation.

<b>Checklist</b>
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<b>Activities</b>	<b>Date</b>	<b>Teacher Initials</b>
<b>1. Carbon Footprint Calculator</b> <ul style="list-style-type: none"> <li>a. Determine your household’s carbon footprint using the online calculator.</li> <li>b. Complete the “Carbon Footprint Data Collection” handout.</li> </ul>	<hr/> <hr/>	<hr/> <hr/>
<b>2. Impacting the Carbon Cycle</b> <ul style="list-style-type: none"> <li>a. Create a diagram of the carbon cycle, including ways you impact the cycle.</li> </ul>	<hr/>	<hr/>
<b>3. Summary</b> <ul style="list-style-type: none"> <li>a. Write your summary according to the activity directions.</li> </ul>	<hr/>	<hr/>
<b>4. Create a Visual Presentation</b> <ul style="list-style-type: none"> <li>a. Create the visual for presentation.</li> </ul>	<hr/>	<hr/>