

Human Impacts: How Can Our Impact Be Assessed?

A Carolina Essentials™ Activity

Student Worksheet



Overview

There is no doubt that human activities impact the environment. Man-made structures can be seen from space. Night lights imagery from NASA shows locations of people and the infrastructure to support them. Water quality data go back decades and weather data even further.

Phenomenon

Look at the picture of the Gulf Coast from space. What do you need to know to determine how human activities impact the planet?

When you look at the impact humans have on the environment, a number of factors come into play. Data must be available so claims about the impact of human activity can be evaluated and an argument made for continuing, decreasing, modifying, or stopping the activity. Here are a few things to think about:

- Are the impacts minor or major?
- What and who are affected by the impact?
- Can the action impact be reversed or mitigated?
- Is the impact short-term or long-term?
- How can data be collected to assess the impact of the human activity?
- What data needs to be collected, and for how long?

Spark your thinking by looking at the pairs of pictures below, and then determine what is necessary to evaluate the impact of the human activities pictured.

Essential Question

What information is necessary prior to designing a solution that reduces the impacts of human activities?

Activity Objective

Through group consensus, design a form that can be used to rate the impact of human activities prior to designing a solution that reduces the impact. Use the claim, evidence, reasoning (CER) framework.

Safety

No PPE is required for the activity.

Activity Procedures

1. Individually, look at the pairs of pictures below. Think carefully, considering short-term and long-term. In the space provided, jot down what information you need to know about the impacts of each human activity. Include what evidence you would need to gather to assess the impacts of each activity.
2. Share the information above that is critical for assessing impacts of human activities with your group members. Come to a consensus about the data that must be collected and questions that must be answered to make claims that rate the impacts of human activities.
3. Design a general form to rate the impacts of human activities. Be prepared to defend the form.

Continued on the next page.

SAFETY REQUIREMENTS

No PPE is required for the activity.

Human Activities



Student Response



Student Response



Student Response



Student Response



Results of Consensus Discussion

Factors to consider:

How to identify the potential for reversal or mitigation:

Data that needs to be gathered:

Questions that need to be answered:

Rough Draft

Human Impacts Assessment Form