**Subject area/course**: Science

**Grade level/band**: 5

**Task source**: Colorado Department of Education; Colorado Content Collaborative in Science

**Renewable and Nonrenewable Resources**

**STUDENT INSTRUCTIONS**

1. **Task context**:

WARNING! Coal has been depleted as an energy resource and will not be available to your city’s daily activities in six months. It is up to you, as a city utility engineer to come up with a solution to present to the local city council.

1. **Final product**:

* Identify the Impacts of coal depletion on your city;
* Identify all possibilities of replacement energy resources;
* Justify your choice of a replacement energy resource (you must include discussion about the sustainability of your choice, the renewable or non-renewable nature of your choice, and the geographical availability of your choice);
* Justify why you did not choose the other resource options.

**Additional Information**

1. **Knowledge and skills you will need to demonstrate on this task:**

* Develop and communicate an evidence-based scientific explanation.
* Analyze and interpret data to generate evidence.
* Review and analyze information presented by peers.
* Provide feedback to peers based on reasonable scientific evidence.
* Assess scientific explanations.
* Speak clearly and accurately to persuade an audience.
* Renewable or nonrenewable energy sources.
* Natural resources used to provide energy.
* Examples of nonrenewable resources provided by mining operations.
* The limited nature of nonrenewable energy sources.
* Ways in which the distribution of resources is accomplished to meet human needs.
* The reasons why towns are often built around resource extraction.
* The variety of renewable and nonrenewable resources the Earth and Sun provide.
* The ways in which the environment affects humans and vice versa.

1. **Materials needed:**

* Notes from classroom activities, presentations, and videos
* Primary and secondary sources from classroom
* Evidence from own investigations or research

1. **Time requirements:**

Completion Timeframe: 3 weeks

* You will be provided time (two weeks) and computer access to utilize the research skills developed throughout the unit on renewable and nonrenewable resources to accumulate the evidence needed to develop your presentation
* You will be provided computer access and time (one week) to generate your evidence based presentation

1. **Scoring:**

Your work will be scored using the Renewable and Nonrenewable Resources rubric. You should make sure you are familiar with the language that describes the expectations for proficient performance.