Instructional Unit Title: Renewable and Nonrenewable Resources

Science 5th Grade

The teacher may brainstorm natural resources (e.g., solar, wind, coal, natural gas) so that students can begin defining and categorizing renewable and nonrenewable resources used by humans.



The teacher may present a variety of different maps of non-renewable and renewable resources use (local or state) so that students identify energy specific to geographic location.



The teacher can utilize infographics to illustrate the percentage of resource consumed by a specific geographic location (local or state) so that students can analyze and interpret data regarding resource use.



The teacher may use artifacts (and/or a guest speaker) to present information about energy use and daily life so that students can begin evaluating how energy is used in their own lives.



The teacher may provide primary or secondary sources related to human settlements so that students can deepen their understanding of the ways in which the physical environment dictates human settlements.



The teacher may use contemporary natural maps of Colorado (physical and resource) to enable students to discuss the connection between availability of resources and the location of human settlements.



The teacher may bring in sources related to energy consumption (e.g., school energy bill) so that students can make basic inferences or logical predictions about energy use.



The teacher may use examples of human, plant and animal energy consumption so that students can begin seeing the ways in which all organisms depend on/deplete environmental resources.



The teacher may use real-life scenarios of the depletion of natural resources in Colorado, so that students can develop and analyze the human impact on energy use and depletion.



The teacher may bring in different perspectives on current environmental energy concerns so that students can analyze and identify different proposed solutions.



The teacher may engage students in a debate (e.g., structured academic controversy) about one current natural resource issue so that students can present arguments supported by credible scientific evidence.



PERFORMANCE ASSESSMENT: WARNING! Coal has been depleted as an energy resource and will not be available to your cities 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. In order to accomplish this you must:

- 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.

This unit was authored by a team of Colorado educators. The unit is intended to support teachers, schools, and districts as they make their own local decisions around the best instructional plans and practices for all students. To see the entire instructional unit sample with possible learning experiences, resources, differentiation, and assessments visit http://www.cde.state.co.us/standardsandinstruction/instructionalunitsamples.