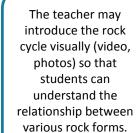
## Instructional Unit Title: Earth's Changing Surface

The teacher may introduce and facilitate an investigation of physical and chemical properties of rocks and minerals so that students can utilize new skills to identify and categorize various rocks and minerals.



The teacher may introduce examples of the layers of the earth and demonstrate heat transfer (convection) within those layers so that students can visualize earth structure and energy transfer.

The teacher may lead a discussion using various resources regarding historical progressions leading to the development of plate tectonic theory so that students can begin to consider how scientific advances have continuously advanced our understandings of Earth processes.

## Science High School - Earth Science

The teacher may use simulations to demonstrate plate tectonics so that students can analyze the ways in which technology can advance understandings of theoretical principles.



The teacher may introduce research and case studies on regional catastrophic events so that students can analyze the relationship between plate movement and potential geologic hazards.



The teacher may present simulations and videos so that students can begin considering the connections between natural hazards and specific instances of tectonic activity.

Teachers may engage students in investigations of plate boundaries so that students can explore land formations and hazards that may result from plate interactions.



The teacher may use case studies related to tectonic activity so that students can examine and utilize qualitative research to deepen their understandings of theoretical principles.



The teacher may use models and other visual resources to demonstrate various plate tectonic boundaries (and resultant features and landforms) so that students can begin modeling the outcomes of plate interactions.



The teacher may provide data sets so that students can explore the predictive possibilities and limitations of seismic data/histories.



The teacher may provide a case study of a particular area (e.g., Hawaii, Japan, San Andreas Fault, Yellowstone, and Ring of Fire) so that students can evaluate the area's resources, risks, and viability as a site for future/sustainable human settlement.



**PERFORMANCE ASSESSMENT**: You are a member of a community taskforce or someone very interested in the economic success of your community. You might, for example, be a Real Estate developer, a local Geologist, a homeowner, a Preservationist, someone representing the EPA, etc. Recently, a famous company has proposed future construction near a geologically active area. As a community member/interested party, you have a very strong opinion about the construction due to potential hazards and implications of development based on technological evidence of plate tectonic theory. You will present your opinion at the next upcoming city council meeting and need to include ideas around plate movement, the causal relationship between natural hazards and tectonic theory, persuasive evidence, and technological evidence that assisted you in defending a position.

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.