

## Appendix One

### Implementing Common Core Standards & Essential Standards

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***CCSS.ELA-Literacy.RST.11-12.3*** Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

Students will create a USB solar charger from a complex list of technical directions. Students will also be responsible for creating a landscape model to perform water pollution measurements during significant rain event simulations.

***CCSS.ELA-Literacy.RST.11-12.7*** Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

***CCSS.ELA-Literacy.RST.11-12.9*** Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

Students will complete a capstone activity in which they will need to integrate material from several different units from the semester. They will evaluate current regions of the United States for their fossil fuel and alternative energy usage and then synthesize this information into a recommendation for switching their assigned region to power generation from alternative fuel sources only.

***NC Essential Standard EEn.2.5*** Understand the structure of and processes within our atmosphere.

Students will be completing a significant number of activities related to this standard, including looking at atmospheric composition, weather and climate, and ocean-atmosphere interactions. Students will also be investigating the effects of increased atmospheric disturbances leading to ocean acidification.

***NC Essential Standard EEn.2.8*** Evaluate human behaviors in terms of how likely they are to ensure the ability to live sustainably on Earth.

Students will be studying anthropogenic climate change and its relation to increased fossil fuel consumption. Students will research and recommend alternative energy sources for different regions of the country.