Unpacking Standard Template - Sample: Science

Established Goals:

**Construct a scientific explanation based on evidence for how the uneven distributions of Earth’s mineral, energy, and groundwater resources are a result of past and current geoscience processes.**

Stated or implied Big Ideas in the NOUNS and ADJECTIVES:

- evidence-based scientific explanation
- uneven distributions
- Earth resources (mineral, energy and groundwater)
- past & current geoscience processes

Stated or implied real-world performance in the VERBS:

- construct (an evidence-based scientific explanation)

A claim, based on evidence, with reasoning, and a rebuttal (counterclaim or alternative explanation)

Essential Questions Ideas:

**[FOCUS ON ENERGY FOR TWO WEEKS]**

- How does the human pursuit of energy around the world affect all humans and the earth itself?

Understanding Ideas:

Students will understand that:

**[FOCUS ON ENERGY FOR TWO WEEKS]**

Earth energy resources are:

- valued, essential, but limited and typically non-renewable;
- unevenly distributed around the world; and
- significantly changing in distribution as a result of removal by humans

Performance Task Ideas:

- Have students produce a PPT presentation, radio editorial or magazine article where they advocate increasing state and federal research and development dollars favoring one the energy resources:
  - fossil fuels
  - nuclear
  - hydropower
  - solar
  - wind
  - biomass
- Use the C-E-R-R framework and rubric
  - Claim: “In response to the question, we advocate for…”
  - Evidence: “Data has indicated…” “Per the articles…”
  - Reasoning: “Since we know…” “Based on…”
  - Rebuttal: “Some might argue that.. however…”
Identifying Essential Questions and Understandings

Topics and Big Ideas

The earth has influenced human activity for eons and now human activity is having a major impact on the Earth; The stewardship, sharing or hoarding of resources has caused both negative and positive outcomes for humans.

What essential questions are raised by this idea or topic? What, specifically, about the idea or topic do you want students to come to understand?

Why study ___________? So what?
What makes the study of ___________ universal?
If the unit on ___________ is a story, what’s the moral of the story?
What’s the Big Idea implied in the skill or process of ___________?
What larger concept, issue, or problem underlies ___________?
What couldn’t we do if we didn’t understand ___________?
How is ___________ used and applied in a larger world?
What is real-world insight about ___________?
What is the value of studying ___________?

Essential Questions:
- How does the human pursuit of energy around the world affect all humans and the earth itself?
  - Humans depend on Earth resources, many of which are not renewable or replaceable. Why are energy resources so important to humans?
  - All human activity draws upon natural resources. Why are energy resources distributed unevenly around the planet?
  - How does the search and use of natural energy resources create positive and negative consequences for the health of people and the natural environment?

Understandings:
Earth energy resources are:
- valued, essential, but limited and typically non-renewable;
- unevenly distributed around the world; and
- significantly changing in distribution as a result of removal by humans.