4th Grade Freedom 7

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| **Stage 1- Desired Results** | **Stage 2- Assessment Evidence** |
| **Brief Overview***Established Goal*- Energy facilitates change. | **Performance Task****Transfer**Task: Students will design a school, home or building of their choice. The design of the building needs to include renewable sources of energy and ways to conserve energy using the: reduce, reuse, and recycle model. The design should emphasize conservation and reducing the carbon footprint. The following types of renewable energy sources must be included: ***wind, solar, geothermal and hydropower***. |
| *Primary:*SC.4.P.10.2 Investigate and describe that energy has the ability to cause motion or create change.*Cognitive Complexity/Depth of Knowledge Rating:* ModerateSC.4.P.10.3 Investigate and explain that sound is produced by vibrating objects and that pitch depends on how fast or slow the object vibrates.*Cognitive Complexity/Depth of Knowledge Rating:* HighSC.4.P.10.4 Describe how moving water and air are sources of energy and can be used to move things.*Cognitive Complexity/Depth of Knowledge Rating:* Moderate*Secondary:*SC.4.P.10.1Observe and describe some basic forms of energy, including light, heat, sound, electrical, and the energy of motion.*Cognitive Complexity/Depth of Knowledge Rating:* ModerateSC.4.P.11.1 Recognize that heat flows from a hot object to a cold object and that heat flow may cause materials to change temperature.*Cognitive Complexity/Depth of Knowledge Rating:* LowSC.4.P.11.2 Identify common materials that conduct heat well or poorly.*Cognitive Complexity/Depth of Knowledge Rating:* Low |
| **Transfer-** | **Stage 3 Learning Plan** |
| *Student will demonstrate*:How energy is transformedThe types, uses, sources, collection of energy, storage, and delivery of energy to consumers. | 1. **Students** will **apply thinking and reading** skills as they identify different forms of energy with levelled readers and add information to Energy flip books.
2. Students will **apply thinking skills** as they participate in an online Energy Scavenger Hunt in pairs with differentiated levelled questions are assigned to students. They will **evaluate** and **synthesize** various questions about the different energy types and how they are generated and connected and **present findings** as they write answers down.
3. Students will **acquire knowledge** and **comprehend** as they **read** concept related stories in the Journeys reading series- Lesson 29 Save Timber Woods!/Poetry, The World According to Humphrey, and The City of Ember.
4. Students will apply **thinking** skills as they **communicate** information related to different forms of energy through the April book report whereby students selected a book within their A.R. reading range related to energy, and choose a project from a menu.
5. Students will participate in power-on day activities to explore the different forms of energy in a hands-on manner.

Students will **synthesize** energy related science concepts in the science textbook and Science Levelled Readers – Chapters 11 – 14 |
| **Make Meaning-**  |
| *Understandings** Characteristics of energy
* What is energy conservation and how it works
* How energy is transformed and transferred (Change)
 | *Essential Questions** What are the different forms of energy?
* What might happen if we do not conserve energy?
* How do we know we are conserving energy?
* How does energy change from one form to another?
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| **Acquisition of Knowledge** |
| * *Students will know*
* The different forms of energy.
* Heat can cause change in temperature.
* Types of materials are a factor in heat conduction
 | * *Students will be able to do:*
* Identify examples of the different forms of energy.
* Describe how heat causes change in temperature and give examples.
* Identify materials that are good and poor conductors of heat.
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