

## STEM Academy @ Bartlett Weekly Lesson Plan Template

<b>Teacher(s):</b> Hobbs and Keel	<b>Subject:</b> Physical Science	<b>Lesson Focus:</b> Energy			
<b>Phase 1: Intended Curriculum (TKES 1: Professional Knowledge; TKES 2: Instructional Planning)</b>					
<b>Week of: September 16-20, 2019</b>					
<p><b>Standard(s):</b> SPS7. Obtain, evaluate, and communicate information to explain transformations and flow of energy within a system.</p> <p>a. Construct explanations for energy transformations within a system. (Clarification statement: Types of energy to be addressed include chemical, mechanical, electromagnetic, light, sound, thermal, electrical, and nuclear.)</p> <p>b. Plan and carry out investigations to describe how molecular motion relates to thermal energy changes in terms of conduction, convection, and radiation.</p> <p>c. Analyze and interpret specific heat data to justify the selection of a material for a practical application (e.g., insulators and cooking vessels).</p> <p>d. Analyze and interpret data to explain the flow of energy during phase changes using heating/cooling curves</p> <p><b>Learning Objective(s)/"I CAN" Statement(s):</b> I can explain energy transformations that occur within various systems.</p>					
<b>Phase 2: Delivered Curriculum (TKES 2: Instructional Planning; TKES 3: Instructional Strategies; TKES 4: Differentiated Instruction)</b>					
<b>Opening</b> How will the teacher introduce the lesson for the day?	Monday	Tuesday	Wednesday	Thursday	Friday
	Pre-Test on Energy	What can I do about topics I did not master for Force, Mass, and Motion?	Why do fires occur on Earth?	What energy transformations take place when you eat?	What energy transformations take place when you eat?
<b>Work Session</b> What task(s) will students work on to gain mastery of the learning objective?	Students will be completing the <a href="#">Pre-Test on Energy</a> on Google Forms Go to USA Test Prep There are 4 substandards for this unit. Click on any substandard that you need to review. Watch the videos, try the	Completing the Data Analysis for the Post-Test on Force, Mass, and Motion Go over missed questions from FMM Post-Test and address student needs and goals for mastery from SPS8 strands.	<a href="#">Introduction in Energy with PBL-</a> How has the amount of thermal energy from fires contributed/been affected by climate change?  Energy transformations related to climate change	Field Trip to SKIO OR <a href="#">Energy transformations in system:</a> Swing Eating a Sandwich Solar Cells Electric Motor Sound <a href="#">PhET Energy Simulation Activity</a>	Field Trip to SKIO OR <a href="#">Energy transformations in system:</a> Swing Eating a Sandwich Solar Cells Electric Motor Sound <a href="#">PhET Energy Simulation Activity</a> S

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	vocabulary, try the questions and/or try the performance tasks (usually matching) for one or more of the substandards. You decide which way is best for you to review. Continue doing this throughout the entire class period.	Energy rings-exploring energy through use of energy rings as a class then small groups. How did the rings move? What did you do to move the rings?			
<b>Closing/Debrief</b> How will students summarize the concept(s) learned during the lesson for the day?	How many reviews did you complete?	How did you perform on the post test for FMM? What are your goals for learning energy?	How has the amount of thermal energy changed on earth?	How does energy transform? Give at least three examples of different transformations.	How does energy transform? Give at least three examples of different transformations.
<b>Differentiation</b> Based on Data	Grouping based on data retrieved and analyzed from the pre-test and determined based on their goals for learning Energy.	Grouping based on data retrieved and analyzed from the pre-test and determined based on their goals for learning Energy.	Grouping based on data retrieved and analyzed from the pre-test and determined based on their goals for learning Energy.	Grouping based on data retrieved and analyzed from the pre-test and determined based on their goals for learning Energy.	Grouping based on data retrieved and analyzed from the pre-test and determined based on their goals for learning Energy.
<b>Assessment</b>	Monday	Tuesday	Wednesday	Thursday	Friday
How will you determine if students have mastered the objective(s)?	Post-Test Analysis of Data and Goal Setting from Pre-Test	Data Analysis	Ongoing assessment determined by the PBL for climate change and energy	Transformations Lab Activity Sheet	Transformations Lab Activity Sheet

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### Additional Information

<b>Homework</b>	Monday	Tuesday	Wednesday	Thursday	Friday
If homework is necessary, describe what students will do for additional practice	If classwork is not completed the students may use time at home to work on the assignment.	If classwork is not completed the students may use time at home to work on the assignment.	If classwork is not completed the students may use time at home to work on the assignment.	If classwork is not completed the students may use time at home to work on the assignment.	If classwork is not completed the students may use time at home to work on the assignment.