CMS Lesson Plan

Teacher: H. Simpson Lesson Date: Week of 9/8/15

Tues-Weds

Subject: Physical Science

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| **GSE Assessment Limits/Standards:** *(What are the skills being taught? Which standards are being specifically addressed in this lesson?)*  **S8p2b,c**   1. **Explain what energy is** 2. **Distinguish between kinetic energy and potential energy** 3. **Identify the various forms of energy** | *Please indicate whether this plan is Monday, or Block specific plan. You will need a plan for Monday and one for your Block A days and your Block B days each week.* ***Tuesday-Friday***  **Block A Monday** |
| **Lesson Objective/Learning Intention:** *(What will my students KNOW by the end of the lesson? What will they DO to learn it?)*  *KNOW*   * *Energy is the ability to cause change* * *Kinetic Energy is the energy an object has due to its motion. Kinetic energy depends on the object’s speed and mass.* * *Potential energy is the energy an object has due to its position* * *Potential Energy depends on an objects height and mass* * *Thermal energy increase as temperature increase.* * *Chemical energy is the energy stored in bonds in molecules* * *Light energy also called radiant energy is the energy contained in light* * *Electrical energy is the energy contained in the electric current* * *Nuclear energy is the energy contained in the nucleus of an atom*   DO | |

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| **TIME** | **INSTRUCTIONAL SEQUENCE** | **FORMATIVE ASSESSMENT** |
|  |  | Note: A variety of formative assessments should be used at key points throughout the lesson. |
| 5-10min | **Get started/Drill/Do Now:** *(What meaningful activity will students complete as soon as they enter the classroom?)*  *Do Now---DOK levels 1,2,3 on board*  Students will be given a $10.00 bill and asked to change it in as many ways as they can. Each group is given 3 minutes. What are the different ways $10.00 was changed? At any point was the value of the $10.00 reduced or changed? Energy does not change it only changes form. |  |
| 5min | **Engage/Motivation:** (*How will student interest be sparked? Is there prior Knowledge*  Two students will roll two balls rather fast…one a bowling ball and another a tennis ball to hit some pins. Why did the bowling ball cause more pins to be hit? More mass and speed causes kinetic energy to increase .Demonstrate potential energy by having two vase on a book shelf |  |
| 15in | **Whole Group Instruction:** *(Focus lessons [explicit teaching/modelingPowerpoint on different types of energy.*  Powerpoint on Energy |  |
| 5min | **Group Practice/Small Group Instruction:** (teacher-facilitated group discuss. Use graphic organizer  to write definitions of each and draw a picture .Complete for homework | **What is the difference between potential and kinetic energy?** |
| 10 min | **Independent Practice**: *(individual practice, discussion, writing process.)*  Students will each create a sentence for each picture. | **What is energy?**  **What are the different types of energy?** |
| 5 min | **Evaluate Understanding/Assessment:** *(How will I know if students have achieved today’s objective?) Students will discuss at their table and come up with a summary of their understanding.* |  |
| 5 min | **Closing Activities/Summary/DLIQ:** *(How will I tie up loose ends, reinforce/revisit the objective and connect the lesson.*  *A representative from each group will tell 3 things they learned, two .questions they have and 1 thing that was amazing.* |  |
|  | **Enrichment/Extension/Re-teaching/Accommodations:** *(How will my lesson satisfy the needs of all learners?)*  Enrichment: Jigsaw Pre- read Energy Transformation on pgs. 379-385 Answer self- check on pg. 395  Re-teach Accommodations-Ball has kinetic energy when it leaves your hand; kinetic energy is converted to potential energy as ball rises; potential energy is converted to kinetic as ball falls.  Your temperature is higher than your surroundings, so thermal energy is transferred from you to your surrounding (role play) |  |

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| **Notes:** |

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| **Structure** | **Instructional Strategies Used- Please highlight, bold, or underline** |
| Whole Group | -Anticipatory guides/sets -Book/author talks -Cornell Notes  -Close Reading -Questioning the Author (QtA) -Question-Answer-Relationships (QAR)  -Text annotation -Think aloud -Think/Pair/Share |
| Guided Practice/Small group | -Anticipatory guides/sets -Book/author talks -Cornell Notes  -Close Reading -Literature Circles -Questioning the Author (QtA)  -Question-Answer-Relationships (QAR) -Reading conferences -Reciprocal teaching  -Strategy groups -Text annotation -Think aloud  -Think/Pair/Share -Writing Conferences |
| Independent Practice | -Anticipatory guides/sets -Book/author talks -Cornell Notes  -Close Reading -Literature Circles -Questioning the Author (QtA)  -Question-Answer-Relationships (QAR) -Reading conferences -Reciprocal teaching  -Strategy groups -Text annotation -Think aloud  -Think/Pair/Share -Writing Conferences |

CMS Lesson Plan

Teacher: McQueen

Wednesday Lesson Date: Week 9/8/15

Subject: Physical Science

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| **GSE Assessment Limits/Standards:** *(What are the skills being taught? Which standards are being specifically addressed in this lesson?)*  *S8P2a,b*  *4.Apply the law of conservation of energy to energy transformation*  *5.Identify how energy changes form*  *6. Describe how electric power plants produce energy*  *Main Idea: Energy can change form but can never be created or destroyed* | *Please indicate whether this plan is Monday, or Block specific plan. You will need a plan for Monday and one for your Block A days and your* ***Block B days each week. Wednesday*** |
| * **Lesson Objective/Learning Intention:** *(What will my students KNOW by the end of the lesson? What will they DO to learn it?)* * *KNOW* * **Heat is usually one of the forms of energy produced in energy transformation** * **The law of conservation of energy states that energy cannot be created or destroyed; it can only change form.** * **The total energy doesn’t change when an energy transformation occurs.** * **As an object rises and falls, kinetic and potential energy are transformed into each other, but the total energy doesn’t change.** * A generator converts kinetic energy into electrical energy * Burning fossil fuel produces thermal energy that is used to boil water and produce steam * In a power plant, steam is used to spin a turbine which then spins an electric generator | |

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| **TIME** | **INSTRUCTIONAL SEQUENCE** | **FORMATIVE ASSESSMENT** |
|  |  | Note: A variety of formative assessments should be used at key points throughout the lesson. |
| 5-10min | **Get started/Drill/Do Now:** *(What meaningful activity will students complete as soon as they enter the classroom?)*  Students discuss the types of energy they use to get ready for school. Explain how electrical energy was transformed to thermal energy to allow hair drying. Point out that energy changes from one form to another but is never destroyed.Revisit changing a $20.00 bill, the value never chan. |  |
| 5min | **Engage/Motivation:** (*How will student interest be sparked? Is there prior knowledge that should be tapped? Is there vocabulary that must be cleared? Is there brainstorming that student need to complete before the lesson begins?) Demonstrate how thermal energy movs from a cup of coffe to its surroundings.*  Have student read the law of conservation of mass. Brainstorm what it means.. |  |
| 30 min | **Whole Group Instruction:** *(Focus lessons [explicit teaching/modeling, strategy demonstration, activate prior knowledge], shared reading, shared writing, discussion, writing process. Demonstrate the law, then show brainpop video on Energy Transformation. Mini Lab o Analyzing Energy Transformation…p381* |  |
| 5 min | **Group Practice/Small Group Instruction:** (teacher-facilitated group discussion, student or teacher-led collaboration, student conferencing, re-teaching or intervention, writing process Students separate in groups based on color and their last post test score.  Green group(highest level peer read and take Cornell Notes. A lightbulb converts 10% of the electrical energy into to radiant energy. Make an hypothesis about all forms of energy. Yellow group(average score) will use graphic organizer to find main idea and supporting details and Red group will be retaught and supported by the teacher while revisiting their last test. |  |
| 30 min | **Independent Practice**: *(individual practice, discussion, writing process.)Demonstrate with a partner transformation of energy using hands and muscle fibers p. 382.*  Students will reread and complete worksheet on energy transformation |  |
| 10 min | **Evaluate Understanding/Assessment:** *(How will I know if students have achieved today’s objective?) The teacher will review and discuss the data and the trendsI In groups…each one, teach one…. starting with the speaker at the table The writer then reads what was discussed at the table.* |  |
| 10 min | **Closing Activities/Summary/DLIQ:** *(How will I tie up loose ends, reinforce/revisit the objective and connect the lesson to the unit?) What are we discussing today? What did we learn? How do we know this? Homework self check questions on p. 385*  *Which object has the most force when it hits the ground?* |  |
|  | **Enrichment/Extension/Re-teaching/Accommodations:** *(How will my lesson satisfy the needs of all learners?)*  Enrichment ( See small group instruction above)  Accommodations: |  |

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| **Resources/Instructional Materials Needed:** *(What do I need in order to teach the lesson?)* |
| **Notes:** |

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| **Structure** | **Instructional Strategies Used- Please highlight, bold, or underline** |
| Whole Group | -Anticipatory guides/sets -Book/author talks -Cornell Notes  -Close Reading -Questioning the Author (QtA) **-Question-Answer-Relationships (QAR**)  -Text annotation -Think aloud -Think/Pair/Share |
| Guided Practice/Small group | -Anticipatory guides/sets -Book/author talks -Cornell Notes  -Close Reading -Literature Circles -Questioning the Author (QtA)  -**Question-Answer-Relationships (QAR**) -Reading conferences - teaching Reciprocal  **-Strategy groups** -Text annotation -Think aloud  -Think/Pair/Share -Writing Conferences |
| Independent Practice | -Anticipatory guides/sets -Book/author talks -Cornell Notes  -Close Reading -Literature Circles -Questioning the Author (QtA)  -Question-Answer-Relationships (QAR) -Reading conferences -Reciprocal teaching  -Strategy groups -Text annotation -Think aloud  **Lab stations**  -Think/Pair/Share -Writing Conferences |

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Teacher: H. Simpson Lesson Date: Week

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| **Lesson Objective/Learning Intention:** *(What will my students KNOW by the end of the lesson? What will they DO to learn it?)*  *KNOW*   * *Energy is the ability to cause change* * *Kinetic Energy is the energy an object has due to its motion. Kinetic energy depends on the object’s speed and mass.* * *Potential energy is the energy an object has due to its position* * *Potential Energy depends on an objects height and mass* * *Thermal energy increase as temperature increase.* * *Chemical energy is the energy stored in bonds in molecules* * *Light energy also called radiant energy is the energy contained in light* * *Electrical energy is the energy contained in the electric current* * *Nuclear energy is the energy contained in the nucleus of an atom* * **Heat is usually one of the forms of energy produced in energy transformation** * **The law of conservation of energy states that energy cannot be created or destroyed; it can only change form.** * **The total energy doesn’t change when an energy transformation occurs.** * **As an object rises and falls, kinetic and potential energy are transformed into each other, but the total energy doesn’t change.** * A generator converts kinetic energy into electrical energy * Burning fossil fuel produces thermal energy that is used to boil water and produce steam * In a power plant, steam is used to spin a turbine which then spins an electric generator   DO | |  | | | **Lesson Objective/Learning Intention:** *(What will my students KNOW by the end of the lesson? What will they DO to learn it?)*  *KNOW*  DO | |

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| **TIME** | **INSTRUCTIONAL SEQUENCE** | **FORMATIVE ASSESSMENT** |
|  |  | Note: A variety of formative assessments should be used at key points throughout the lesson. |
| 5 min | **Get started/Drill/Do Now:** *(What meaningful activity will students complete as soon as they enter the classroom?)*  Students will explain the law of conservation of energy. |  |
| 10 min | **Engage/Motivation:** (*How will student interest be sparked? Is there prior knowledge that should be tapped? Is there vocabulary that must be cleared? Is there brainstorming that student need to complete before the lesson begins?)*  *Students will* review vocabulary using a brain pop activity/quiz |  |
| min | **Whole Group Instruction:** *(Focus lessons [explicit teaching/modeling, strategy demonstration, a activate prior knowledge], shared reading, shared writing, discussion, writing pro*  Students will continue vocabulary review |  |
| min | **Group Practice/Small Group Instruction:** (teacher-facilitated group discussion, student or teacher-led collaboration, student conferencing, re-teaching or intervention, writing process.  Students will complete weekly assessment on Energy. |  |
| 35 min | **Independent Practice**: *(individual practice, discussion, writing process.)*  Students will complete weekly assessment on Energy. |  |
| min | **Evaluate Understanding/Assessment:** *(How will I know if students have achieved today’s objective?) Completion of the activity questions and conclusion Weekly Assessment on Energy* |  |
| 5 min | **Closing Activities/Summary/DLIQ:** *(How will I tie up loose ends, reinforce/revisit the objective and connect the lesson to the unit*  *DLIQ* |  |
|  | **Enrichment/Extension/Re-teaching/Accommodations:** *(How will my lesson satisfy the needs of all learners?)* |  |

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| **Resources/Instructional Materials Needed:** *(What do I need in order to teach the lesson?) will research*  Brainpop quiz/activity  Weekly Assessment |
| **Notes:** |

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| **Structure** | **Instructional Strategies Used- Please highlight, bold, or underline** |
| Whole Group | -Anticipatory guides/sets -Book/author talks -Cornell Notes  -Close Reading -Questioning the Author (QtA) -Question-Answer-Relationships (QAR)  -Text annotation -Think aloud -Think/Pair/Share  **Video Notes** |
| Guided Practice/Small group | -Anticipatory guides/sets -Book/author talks -Cornell Notes  -Close Reading -Literature Circles -Questioning the Author (QtA)  -**Question-Answer-Relationships (QAR)** -Reading conferences -Reciprocal teaching  -**Strategy groups** -Text annotation -Think aloud  -Think/Pair/Share -Writing Conferences |
| Independent Practice | -Anticipatory guides/sets -Book/author talks -Cornell Notes  -Close Reading -Literature Circles -Questioning the Author (QtA)  **-Question-Answer-Relationships (QAR)** -Reading conferences -Reciprocal teaching  **-Strategy groups**  -Text annotation -Think aloud  **PBL**  -Think/Pair/Share -Writing Conferences |