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| **Unit 7** | **Knowledge (group)** | **Comprehension** | **Application (individual)** | **Analysis** | **Creative Thinking** | **Critical thinking** |
| **Work and  Power** | Restate the vocabulary “work” and “power” in your own words and be able to provide the equations and examples for each.**\*\*Video Commercial\*\*** **(max 1.5 minutes)** | Explain how work and *motion* act together.**\*\*Comic Strip\*\*** | Apply the equations for work and power to solve word problems containing applicable variables.**Work and Power \*\*Worksheet\*\*** | Contrast the difference between work and power.**\*\*Picture Dictionary\*\*** | Create a super hero, give him a task, and calculate his work and power.**\*\*Your Choice\*\*** | Machines make work more efficient.  Think of a problem in society and create a machine to make the work more efficient. **\*\*Poster\*\*** |
| **Energy Part 1** | Recognize the differences between Kinetic and Potential Energy and how they relate to the Law of conservation of Energy**\*\*News Broadcast\*\*(max 2 minutes)** | Describe different types of potential and kinetic energy**\*\*Create a list and categorize different activities\*\*** | Apply the equations for potential, kinetic, and mechanical energy to solve word problems containing applicable variables. **Equations on Energy \*\*Worksheet\*\*** | Describe the difference between potential energy and Kinetic energy and examine what happens at each stage of an object transitioning in energy.  Include Mechanical Energy.**\*\*Flow Chart\*\*** | Create a rollercoaster ride that shows both Kinetic and Potential energy(Be creative: name it, give it a theme, Etc.)**\*\*Your Choice\*\*** | Justify the benefits of kinetic and potential energy.**\*\*Write a poem\*** |
| **Energy Part 2** | Describe the different types of energy and provide an example of each.**\*\*Puppet Show\*\* (max 3 minutes)** | List the 7 different types of energy and definitions of each type.**\*\*Children’s  Book\*\*** | Apply the definitions of energy to different scenarios to determine which type of energy is being used.**Energy Conversions \*\*Worksheet\*\*** | Discuss how we can use more than one type of energy to fuel our lives and how they would work together.**\*\*Create a Board Game\*\*** | Pick one type of energy and discuss the pros and cons of using it in our daily lives. Include one way we could optimize it to help make our lives better.**\*\*Your Choice\*\*** | Imagine that we live in a utopian society. Discuss clean energy, how we can use it,  and how it works.**\*\*Write a fairy tale\*\*** |
| **Nuclear Energy** | Restate the definitions of nuclear energy, fission and fusion.  Recount a scenario when each occurs.**\*\*Write a Song/Rap\*\* (max 3 minutes)** | Describe HOW fusion and fission work.**\*\*Build a model of  a Nuclear Power Plant\*\*** | Apply the definitions of fission and fusion to solve fission and fusion equations.**Nuclear Equations \*\*Worksheet\*\*** | Compare the reactions in nuclear bombs and nuclear power plants.**\*\*Infographic\*\*** | Imagine we do not have fusion or fission, anywhere.  Speculate would life be like.**\*\*Your Choice\*\*** | Detail the events of 3 nuclear disasters and present a conclusion about the benefits or drawbacks to nuclear energy with these.**\*\*Timeline\*\*** |

**The shaded portions of the above chart are required**: The “Knowledge” portions must be completed in a group (max 3 people). Keep in mind that all group members are responsible for contributing to this product and will be graded equally. The “Application” portions must be completed individually.

**You must pick ONE item to complete from the “Comprehension, Analysis, Creative Thinking, and Critical Thinking” categories each of the topics.**  This can be completed individually **or** in a group (max 3 people). Keep in mind that if you choose to work in a group, that all group members are responsible for contributing to the product and will be graded equally.:

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| --- | --- | --- | --- | --- |
| **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| **4/25**Chromebooks for Research on Work & PowerWork and Power LabStart Video Commercial  | **4/26**Classroom for Application and Individual PracticeWork time for Video/ start on 3rd product | **4/27**QUIZ on Work/PowerWork time to finish all Work and Power Products**DUE: All products by 11:59 pm** | **4/28**Present Video Commercials Chromebooks for Research On Energy Part 1 and 2 | **4/29**Work time on News Broadcast |
| **5/2**Work time on Puppet Show | **5/3**Classroom for Application and Individual PracticeEnergy Lab | **5/4**QUIZ on Energy Part 1 and 2Work time to finish all Energy Part 1 and 2 Products**DUE: All products by 11:59 pm** | **5/5**Present News Broadcast and Puppet ShowsChromebooks for Research on Nuclear Energy | **5/6**Classroom for Application and Individual Practice |
| **5/9**Work time on Song/Rap | **5/10**QUIZ on Nuclear EnergyPresent SongsBegin Study Guide**DUE: All products by 7:00 am** | **5/11**Review Unit 7: Energy TEST Unit 7 | **5/12**  | **5/13** |

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