

Introduction to Energy, Energy Transformations, and the Law of Conservation

Delta College STEM Explorer

Water Wheel Project

Day One:

Learning Objectives: Students will learn that energy can take on various forms and that it can be transferred from one type to another. Students will understand that, although energy sometimes seems to be “lost” during certain transfers and even “gained” during others, it cannot actually be created or destroyed; it only changes forms.

Part One: Journal Entry #1:

Without accessing any resources answer the following questions: What is energy? Where does energy come from?

Part Two: Khan Academy Video: Introduction to Energy

Click on the following link and watch the video.

<https://www.khanacademy.org/science/biology/energy-and-enzymes/the-laws-of-thermodynamics/v/introduction-to-energy>

Part Three: Journal Entry #2:

After watching the Khan Academy video, how would you modify your response to the first journal question?

Part Four: Experimenting with the pHet Simulation:

Open the Energy Forms and Changes Simulation by clicking on the following link:

<https://phet.colorado.edu/en/simulation/energy-forms-and-changes>

Click on the play button to begin. Spend 10 minutes “playing around” with this open-ended simulation, taking note of the various effects of changing around the numerous options.

Part Five: Journal Entry #3:

In a short paragraph, explain what you learned about energy while experimenting with the simulation.

End of Lesson 1

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Directions:

Open the “Energy Forms and Changes Simulation” found here: include download link. Follow the directions found on the document. When finished, submit the assignment to your teacher in accordance with his/her directions.