

# Types of Energy with Biofuels Applications

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## Introduction:

To fully understand and engage with the NARA process, it is helpful for students to understand basic physics principles. In this lesson students learn about the various types of energy. Using this knowledge, students analyze the biofuel process.



## Objective:

After this lesson students should be able to understand and identify the various types of energy such as kinetic, potential, thermal, chemical, gravitational and elastic energy. They should also have a better understanding of the NARA process.



## The Lesson:

- Students start by discussing “what is energy?”.
- Students are then divided into groups. Each group is given a card describing a type of energy and then asked to come up with an example of that type of energy.
- Each group goes around and shares what they learned from their card and their example.
- They identify the types of energy in various steps of the NARA process. This shows their understanding of the types of energy.
- We then discuss each step as a group to assess student comprehension of the process.

## Testing:

This lesson was taught to a group of 6-9<sup>th</sup> graders at the McCall Outdoor Science School. After the lesson, most students had a good grasp of what energy is, and the various types of energy.

## Conclusion:

I would recommend this lesson for 8<sup>th</sup>-10<sup>th</sup> graders because some of the younger students had trouble understanding such abstract concepts. Overall this lesson was effective in teaching the various types of energy, and the NARA biofuels process



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