

THE CONSERVATION OF ENERGY

In our last video we talked to you campers about Physics, this week was Chemistry, but did you know that BOTH deal with the Conservation of Energy? Check out the videos below, and then try to answer some of the questions!

Good Thinking! - Chemical Reactions in Action

Video link :

<https://tinyurl.com/chemicalreac>



Check our Battery Video with Amber on our Facebook page!



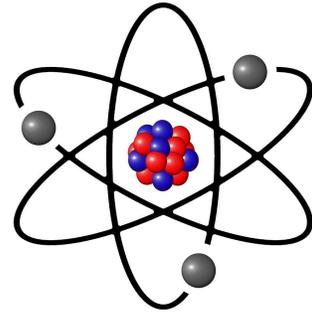
What types of energy are mentioned in the battery video?

How could we apply what we have learned from the videos to the experiments we did today? List at least three suggestions.

Are Chemical reactions final, meaning you can never go back to the original materials? If so, what would that mean for the energy in the system?

Does temperature play a role in chemical reactions? Why or why not? Think back to some of the experiments you observed or did!

Everything has energy. Chemical energy is stored within the tiny particles, called atoms. Those atoms are held together in a bond. If a bond is broken or created, chemical energy is transferred in something called a chemical reaction. Sometimes when materials mix, chemical reactions occur, and energy is released.



QUESTIONS:

In the experiments from the Kitchen Chemistry video, ones you've watched or done, do you notice any energy being released?

Is this energy created or destroyed?

All mixtures are a result of chemical change. Is this true? Why or why not?

Matter comes in three forms: solid, liquid, and gas. Solid water is called ice. It becomes ice through freezing. When ice is melted it becomes liquid. If liquid water is heated, it becomes a gas, or steam. When you change a solid to liquid or liquid to gas, or even a liquid to a solid, energy must be added or removed.



Some materials need more energy to freeze or melt than others.

QUESTIONS:

Are phase changes physical or chemical changes?

Does a phase change follow the Law of Conservation of energy?

Can a substance change directly from solid to a gas? Give an example.

Extra Video if you want to learn more!

Conservation of Energy - Bozeman Science

Video link :

<https://tinyurl.com/conservationboze>



Play the Match on Quizlet and then Try and define the terms below in your own words!

Play Match!

<https://tinyurl.com/energythermoterms>



- Chemical Change -
- Physical Change -
- Energy -
- Law of Conservation of Energy -
- Chemical Energy -
- Mechanical Energy -
- Heat energy -
- Sound energy -
- Nuclear energy -
- Electrical energy-
- Mixture -
- Solution -