



Science Virtual Learning

# **6th Grade Science: Potential and Kinetic Energy**

May 19, 2020



## 6th Grade Science

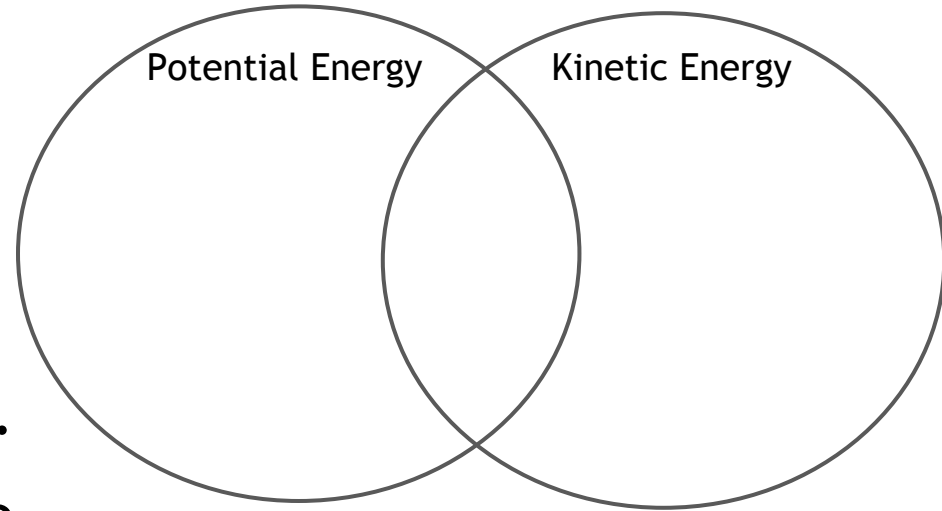
### Lesson: May 19, 2020

### **Objectives/Learning Targets:**

Students will understand the difference between potential and kinetic energy.

## Warm Up

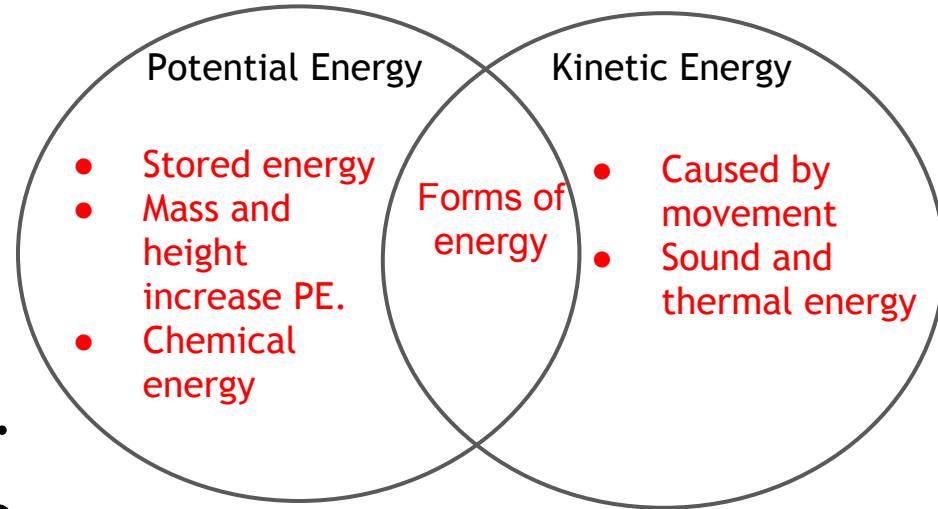
1. Watch the Study Jams [video](#) on Potential and Kinetic Energy.
2. While watching the video, complete a venn diagram on Potential and Kinetic Energy.
3. Feel free to watch and pause the video as needed.



## Warm Up

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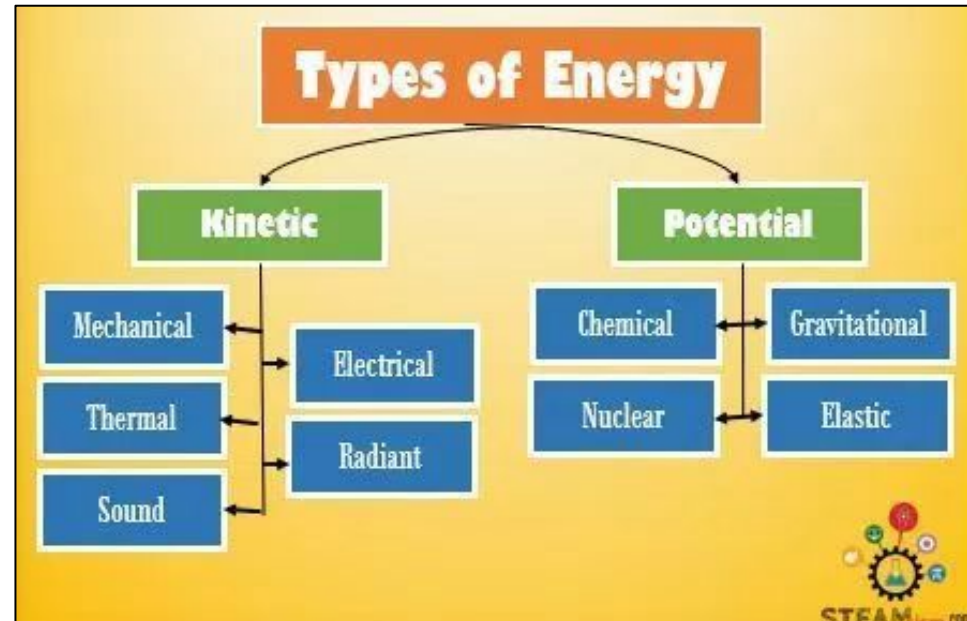
## Possible Answers



## Background Information

Potential Energy - The energy in matter due to its position or the arrangement of its parts (stored energy)

Kinetic Energy - The energy of a moving object





## Practice

Classify the following as a type of potential energy or kinetic energy. Use the letters P and K.

1. A bicyclist pedaling up a hill \_\_\_\_\_
2. An archer with his bow drawn \_\_\_\_\_
3. A volleyball player spiking a ball \_\_\_\_\_
4. A baseball thrown to second base \_\_\_\_\_
5. The chemical bonds in sugar \_\_\_\_\_
6. The wind blowing through your hair \_\_\_\_\_
7. Walking down the street \_\_\_\_\_
8. Sitting in the top of a tree \_\_\_\_\_
9. A bowling ball rolling down the alley \_\_\_\_\_
10. A bowling ball sitting on the rack \_\_\_\_\_

**Can you come up with any examples of potential energy and kinetic energy on your own?**



## Practice - Answer Key

Classify the following as a type of potential energy or kinetic energy. Use the letters P and K.

- |  |   |
|--|---|
| 1. A bicyclist coasting down a hill <b>K</b>   | 6. The wind blowing through your hair <b>K</b>    |
| 2. An archer with his bow drawn <b>P</b>       | 7. Walking down the street <b>K</b>               |
| 3. A volleyball player spiking a ball <b>K</b> | 8. Sitting in the top of a tree <b>P</b>          |
| 4. A baseball thrown to second base <b>K</b>   | 9. A bowling ball rolling down the alley <b>K</b> |
| 5. The chemical bonds in sugar <b>P</b>        | 10. A bowling ball sitting on the rack <b>P</b>   |

Can you come up with any examples of potential energy and kinetic energy on your own?

Answers may vary. Ex: Potential - sitting in a chair, Kinetic - sprinting in a race

## Practice

Open the [Energy Skate Park](#), click on Intro. You should see a U shaped track.

- Make sure bar graph is selected.
- Place your skater at the top and let go.
- Answer the questions to the right of this box, on your piece of paper.
- Pause your skater if you need to.

1. When does your skater have the most potential energy?
2. When does your skater have the least potential energy?
3. When does your skater have the most kinetic energy?
4. When does your skater have the least kinetic energy?
5. What claim can you make about the relationship between kinetic energy and potential energy?



## Practice - Answer Key

1. When does your skater have the most potential energy? **At the top of the track**
2. When does your skater have the least potential energy? **At the bottom of the track**
3. When does your skater have the most kinetic energy? **At the bottom of the track**
4. When does your skater have the least kinetic energy? **At the top of the track**
5. What claim can you make about the relationship between kinetic energy and potential energy? **As potential energy decreases, kinetic energy increases. As kinetic energy decreases, potential energy increases.**



## Additional Practice

1. Test your knowledge with this [quizizz](#).
2. Read the Energy Screams [article](#) & answer the questions that follow. Check your answers at the end!
3. Review potential and Kinetic energy in this [song](#).