

S8P2. a. I can analyze and interpret data to create graphical displays that illustrate the relationships of kinetic energy to mass and speed, and potential energy to mass and height of an object.

How to Analyze Kinetic & Potential Energy Graphs Video Notes



1. Energy is the ability to do _____, which is when a _____ is applied to an object and it _____. Both potential energy and kinetic energy have the ability to do _____. Potential energy is a form of energy that has the _____ to do work but is not actively doing work or applying any _____ on any other objects. Potential energy of an object is found in its _____ not in its _____. It is the energy of position, not of motion.

2. What 3 ways is potential energy released? _____

3. How is potential energy stored in an archer's bow? _____
How is this turned into kinetic energy? _____

4. How does the food we eat have potential energy? _____

Quick Check for Understanding!

Does potential energy always turn into kinetic energy? Explain why or why not. _____

5. Kinetic energy is created when potential energy is _____, forced into motion by _____ or _____ forces, and other ways that cause objects to move. Kinetic energy is the energy of _____. When work is done on an object it accelerates, it _____ the kinetic energy of an object.

6. What are the most important factors that determine kinetic energy? _____

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7. What is the relationship between mass and kinetic energy? _____

Is this a direct or inverse relationship? _____

Analyze the graph at 4 minutes in the video to answer the following questions.

8. Which car has the least kinetic energy? _____ Explain why. _____

9. Which car has the greatest kinetic energy? _____ Explain why. _____

10. What is the relationship between speed, mass, and kinetic energy? _____

11. What is the relationship between potential energy and mass? _____

12. What is the relationship between potential energy and height of an object? _____

13. What is the relationship between potential energy, mass, gravity, and height of an object? _____

Quick Check for Understanding:

Would you rather be hit on the head with a tennis ball falling from 2 feet above your head, or a tennis ball falling from 50 feet above your head? Explain your answer below. _____