

Energy Changes

GLE 0607.10.1 Compare and contrast the three forms of potential energy.

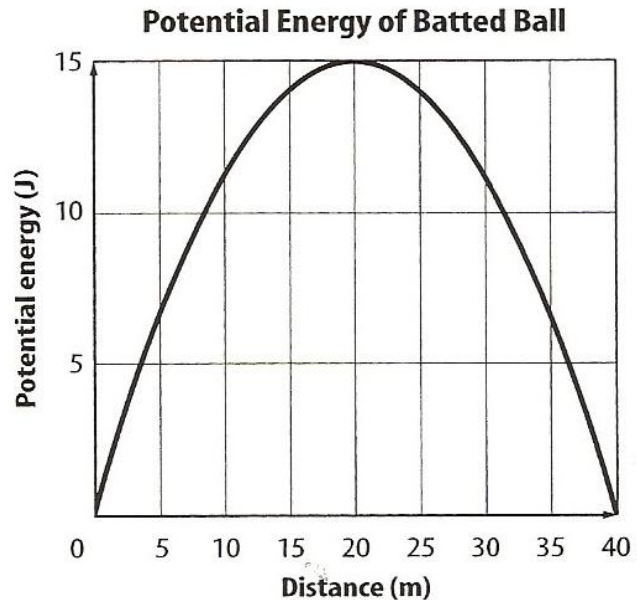
GLE 0607.10.2 Analyze various types of energy transformations.

GLE 0607.10.3 Explain the principles underlying the Law of Conservation of Energy.

GLE 0607.Inq.2 Use appropriate tools and techniques to gather, organize, analyze, and interpret data.

GLE 0607.Inq.5 Communicate scientific understanding using descriptions, explanations, and models.

The graph shows how the potential energy of a baseball changes after it is struck by a bat. The distance is measured from the position the batter was standing along the path of the ball until the ball hits the ground.



- How far did the ball travel?
- What type of potential energy does the ball have as it leaves the bat and rises into the air?
- The ball is moving away from the batter. How does its kinetic energy of the ball change?
- At what distance is the potential energy of the ball the greatest? Why?
- At what distance is the height of the ball the greatest?
- Why does the potential energy of the ball change?
- At what distance is the kinetic energy of the ball the least? Why?
- How much greater is the potential energy of the ball at a distance of 20 m from the batter than at a distance of 0 m?
- How much less is the kinetic energy of the ball at a distance of 20 m from the batter than at a distance of 0 m?
- Draw a line on the graph to show how the kinetic energy of the ball changes. Label the line.
- Explain how the graph shows the law of conservation of energy.