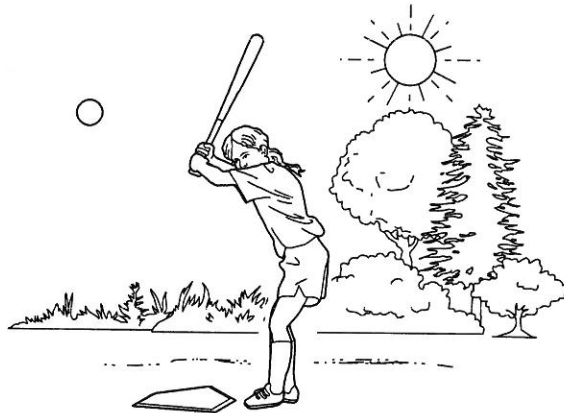


In the chapter on matter, you learned that energy is conserved. Instead of being created or destroyed, it is just changed from one form to another. The energy of the sunlight that reaches Earth is the ultimate source of most of the energy around us. Look at the illustration below, and identify the types of energy involved.



1. How did energy from sunlight provide the energy the girl needed to swing the bat? (**Hint:** What do you need to have energy?)

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2. When the girl hits the ball, she exerts a force on it. Does she do work on the ball in the scientific sense of the term? Explain why.

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3. After the girl hits the ball, it is moving very fast and has energy as a result. When the ball hits the fielder's glove, it stops moving. Given that energy can never be destroyed but merely changes form, what happened to the energy the ball once had? (**Hint:** If you are the fielder, what do you hear and feel as you catch the ball?)

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