

How long did it take to travel across

Lesson Assessment

ANSWER KEY

1. A fuel is something that...
 - a. contains stored energy
 - b. can burn
 - c. releases heat
 - d. all of the above**

2. Steam locomotives (trains) move by burning fuel that...
 - a. releases energy from height
 - b. releases electrical energy
 - c. releases heat energy**
 - d. stores energy in batteries

3. **TRUE** or FALSE? (circle one) Energy comes in many forms.

4. How can you tell that stored energy is being released? Describe two pieces of evidence that you could see, hear, or feel.

<p>LESS sophisticated response:</p> <p><i>Students may not be able to generate two pieces of evidence.</i></p>	<p>MORE sophisticated response:</p> <p><i>Possible answers include:</i></p> <ul style="list-style-type: none"> • <i>starting to move, or moving faster</i> • <i>giving off heat</i> • <i>giving off light</i> • <i>making noise</i> • <i>going from high up to low down</i> • <i>seeing fire burn</i>
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5. How did transportation change because of the invention of the engine? In your answer, describe transportation before and after there were engines.

<p>LESS sophisticated response:</p> <p><i>Transportation got a lot faster. People used to walk or ride animals like horses. Now they can drive cars or fly in planes. They get energy from petroleum or electricity.</i></p>	<p>MORE sophisticated response:</p> <p><i>Transportation got much easier, faster, and cheaper. Before the engine, transportation relied on energy from food for people or animals to walk. Now, we can use energy sources that are more packed with energy, like petroleum or electricity.</i></p>
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6. In the space below, **draw a diagram** that shows energy being transferred from one place to another. Then, **label** the parts of the diagram. Include at least two types of energy.

You can use the heat spinners from the activity, or come up with your own example. You can get creative!

Answers will vary. For example, students may draw parts of their chain reaction machines or modes of transportation such as cars, planes, steam locomotives, or horse-drawn carriages. Answers should receive full credit for examples that 1) show energy transfer, 2) include two types of energy, and 3) are clearly labeled.