

Core Knowledge Digital Engagements, Science

Grade 4, Physical Science, Engagement 3

For the Teacher

Overview of Grade 4, Physical Science, Engagement 3

In this whole-class, teacher-facilitated activity, students answer questions to uncover the parts of a complete image. At completion, the image is assembled and revealed.

What You Need

- The means to project this interactive for whole-class viewing
- Grade 4 Core Knowledge Science Student Readers, *Energy Transfer and Transformation* (Students should be allowed to use the book to seek answers. Looking up information on demand is a valuable skill to practice!)

Advance Preparation

- Plan a way to keep track of which students have already answered and which students are still eligible for a turn. Collectively, the screens include thirty questions, so each student in class should get at least one turn.
- **Download these instructions.** The download will include your **Answer Key**.

How to Facilitate

- Beginning with the screen following this one, project the engagement in the largest format possible for whole-class viewing.
- Clicking on most text on the screen activates voice audio of the text. Or you may choose to do the reading aloud for students.
- Go over expectations with students before beginning.
- Call on students to participate one at a time.
- Have each student navigate as you click on questions. If the answer is incorrect, the robot piece will not be revealed. You can choose to move on to another student or allow students to make multiple attempts for incorrect answers.
- If you have more questions than students, after all students have had a turn to answer a question, allow volunteers to have a second turn. Or complete the remaining questions as a group.

(continued)

Answer Key

1. the ability to cause change
2. sound waves
3. lift it higher
4. speed and direction
5. energy of motion
6. The candle emits light, and the wax melts.
7. The wind moves the blades that turn the parts inside to produce electricity.
8. the distance an object could travel in a certain amount of time
9. catching a fast moving ball
10. more
11. It causes greater change, like hurting your hand more or bouncing higher.
12. It gets louder.
13. the movement of energy from one object or place to another
14. Energy transfers from the girl's hands to the wheelbarrow.
15. a sunburn or feeling of warmth on your skin
16. The spoon gets hot.
17. D, B, C, A
18. Greater energy results in greater speed, or the more speed something has, the more energy it has.
19. when two objects come together with impact
20. The ball's motion energy moves to the pins, making them fall.
21. The impact causes vibrations that travel through the air to our ears.
22. Faster moving objects transfer more energy and cause bigger changes and louder noises.
23. the bowling ball because it has more mass and transfers more energy
24. B. a fast-moving baseball
25. The change of one form of energy to another form of energy.
26. A toaster changes electrical energy to heat.
27. Batteries are made of chemicals that have stored energy, which transforms to electrical energy. Rechargeable batteries can convert electricity to stored energy to be used later.
28. A, C, D
29. Solar cells transform sunlight to electrical energy, which can be used to power devices.
30. a series of steps used to find a solution to a problem