



Answers

Sample answer: Two parts of the skateboard are the axle and the wheel.

InCopy Notes

DSN: please adjust the arrow so that the tip of the arrow touches the end of the axle [pjm-7357-1/21/11].
1. File CED by BPN 2/21/11:

InDesign Notes

- 1. DSN/EDIT- I have altered moved the caption and altered the depth of the white band. If you need additional room for the "What do you Think" we can accomodate --PR 1/14
- 2. EDIT/DSN- Do we need the caption for the skateboarder? Seems like the second caption covers the content well. --PR 1/14

Answers

1. A: Answers will vary. Students can use found materials or students can buy an inexpensive kit to make their own car.
- B: axle: the rod that connects the two wheels, allowing them to turn freely; wheel: a solid disk or a rigid circular ring connected by spokes to a hub, designed to turn around an axle passed through the center
- C: Answers will vary. Students can use corks as wheels, pencils as axles, etc.

Unit 2

Work, Energy, and Machines

Lesson 1

Work, Energy, and Power

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Lesson 2

Kinetic and Potential Energy

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Lesson 3

Machines

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Unit Review

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InCopy Notes

DSN: Yes, two more WOLs under the first two parts of 1. Think About It would be great, if you can fit them. EBR 1/19

CITIZEN SCIENCE

A Day at the Races

Both simple and complex machines can make work easier and play more exciting. Creating a small-scale downhill racing machine is a fun way to learn about simple machines.

1 Think about It

A Investigate some ways to create a small-scale downhill racer with everyday objects. Make notes about your research.

B Most downhill racers will have two axles and four wheels. Define “axle” and “wheel” below and explain what function each would serve in a racer.

C Check out the recycling bin in your school, classroom, or home. Can you use any recycled materials to make a downhill racer? (Safety note: Some materials are toxic or dangerous. Before you touch anything, ask your teacher.)

2 Ask a Question

What are some ways that you could make a downhill racer go faster? Do some research and write notes below.

3 Make a Plan

Draw a sketch of a small-scale downhill racer that you would make. Label it, and note if any of the parts are recycled.

The downhill racer is traveling over 20 mph! Do you think the driver is frightened or exhilarated?

Take It Home

With an adult, make the small-scale downhill racer you designed. Challenge the adult to design and help you make a different downhill racer. Conduct a race to find out which racer was faster. Think about how the design may affect speed.

Unit 2 Citizen Science 77

12345

InDesign Notes

1. ED: Please provide the text for detailed content on page 76.

2. ED: Do items under 1 need more WOLs? MW 1.13

12345

InCopy Notes

1. MW & PR: I don't think it is necessary to see the driver's face--the question is more about the speed and ability to control the vehicle [pjm-7357-1/21/11].

InDesign Notes

1. ED: even though this is a lo-res image, I don't think we will be able to see the face of the driver to answer caption question. MW 1.13 + I agree -PR 1/14

2. EDFF/DSN- Do we really need to say “Turn in your design to your teacher?” -PR 1/14

3. DSN- I hve altered layout a bit to give some more space for the activity -PR 1/14

4. EDFF/DSN- Is the enough room to do #2? -PR 1/14