

CurriculumVisions Lesson

Students: fill in next to the word answer and return the document for assessment.

Science

Book: Friction (4E)

Pages 4-11

Everything here is based on our Curriculum Visions book Friction (4E).

Part 1

In this segment, we are going to think about what friction is and how it works.

You will need to go to pages 4-5 of the book.

In your own words, explain what causes friction?

Answers will vary.....

Look for an explanation that includes how surfaces have bumps and troughs, or mention of rough surfaces, and that the bumps and troughs interlock when surfaces rub together.

Go to pages 6-7. Does friction depend on the amount of area that is in contact? Does it depend on how much weight is pressing down on a surface? How could you prove your answers to these questions?

Answer.....

No; yes

Answer to the last question will vary. Look for an experiment that involves using a forcemeter to measure the force used to move a large block, a small block, a heavy block and a lighter block.

Go to pages 8-9. How could you test different materials to see which grips best?

Answers will vary.....

The answer could include wrapping different materials around a block and using a forcemeter to measure how much force is needed to move the block each time.

Go to pages 10-11. What are some examples of where we want a good grip? Chose one example and describe how we can get a good grip?

Answers will vary.....

When washing dishes (use soft, rubber gloves)

When playing sports such as football (using soft rubber soles on athletic shoes, or cleats/soft gloves)

When driving or running on a wet road (using rubber tyres or rubber soled shoes/using tyres and shoes with tread)

When driving on ice, mud or snow (using chains)

If you are interested in this topic, continue to browse the book and watch our amazing videos. They start right on the book cover.