

## CurriculumVisions Lesson

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

### Science

Book: Simple electricity (4F)

Pages 18-23

Everything here is based on our Curriculum Visions book Book: Simple electricity (4F).

In this segment, we are going to learn more about how circuits work.

You will need to go to pages 18 and 19 of the book. Look at pictures A, B, and C of Picture 1 and A of picture 2. What is wrong with each of these circuits? Try to answer without looking at the text, only the pictures.

Answers.....

Picture 1: A The batteries are facing each other; B The batteries are facing away from each other; C A wire is not connected

Picture 2: The connectors both start from the same end.

What are some ways to reduce friction in water?

Answers will vary.....

Answers could include: streamlining, making things glide or cut through the water more easily, making boats pointy at one end, building boats from slippery materials

Go to pages 20-21. If you have three light bulbs that are 3 volts each, how many 1.5 volt batteries will you need to light all of the bulbs brightly?

Answer.....

6 (1.5 v+1.5 v+1.5 v+1.5 v+1.5 v+1.5 v = 9 volts)

Go to pages 22-23. What is the difference between a conductor and an insulator?

Answers.....

A conductor is a material that allows electricity to flow through it. An insulator is a material that does not let electricity pass through it.

Write down a plan for how you can use your circuit to test different materials to find out if they are conductors or insulators. If your teacher agrees, carry out your experiment.

Answers will vary.....

Encourage students to try a selection of materials. If you do not have alligator clips, they can use aluminium foil, but must make sure the connections are secure. If they cannot carry out the experiment, have them make an educated guess about different materials, based on what they have read in the student book.

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