

CurriculumVisions Lesson

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

Science

Book: Keeping warm and cool (4C)

Pages 4-13

Everything here is based on our Curriculum Visions book Keeping warm and cool (4C).

Part 1

In this segment, we are going to think about how heat travels.

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

Design an experiment to demonstrate that heat travels from warm places to cold places. If your teacher agrees, try it out.

Answers may vary.....

Students may want to replicate the experiment shown on page 5. Or, they may come up with an idea of their own.

Go to pages 6-7. With your teachers' permission, practice using a thermometer to measure the temperature of water. Why do you need to leave the thermometer in the water for 30 seconds before taking the reading?

Answer.....

Because it takes a few seconds for the liquid in the thermometer to come to the right level.

Go to pages 8-9 What is conduction? What materials make good conductors? What materials make insulators?

Answers.....

Conduction is when heat travels between objects that are touching - from the warmer object to the cooler object. Metals make good conductors. Nearly everything besides metal, including air and water, are insulators.

Go to pages 10-11

What is convection? Draw a picture of a room showing how a convector heater works to warm a room. Show the direction the warm and cool air in the room moves using arrows.

Answer.....

Convection is when warm air rises and cool air falls, creating a current that brings warm air to all the parts of a room. The picture may vary but should look similarly to picture 3 on page 11.

Go to pages 12-13

What is radiation? Explain why, when you stand in front of a fire on a cold day, your front warms up but your back stays cold?

Answer.....

Radiation is when heat travels in rays, so that things warm up without touching. The heat rays can only travel in a straight line, so the rays from the fire reach your front, but they cannot bend around you to reach your back.

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