Tricky tracks: observation and inference in science

Learning objectives

1 Distinguish between observation and inference.

2 Recognise that scientific theories develop over time when new evidence becomes available.

Introduction

Scientists are always putting forward ideas or theories to try to explain the things they see happening in the world.

Scientists often test their ideas and theories by carrying out experiments.

Sometimes new ideas or evidence come along which do not fit existing scientific theories. Then, more experiments have to be carried out to see if the new idea is correct.

Question

1. Carefully study *Tricky tracks 1*. Write a short account of what you think has happened.

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2. Now carefully study *Tricky tracks* 2. What do you **observe**?

3. Why are the two animals heading towards the same point?

4. Next, carefully study *Tricky tracks* 3. What do you **observe**?

5. Return to look at Tricky tracks 1. What do you **observe**?

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6. Based on what you have found out so far, do you think we can ever know what has really happened?

7. What could you do to find out more about the situation?

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