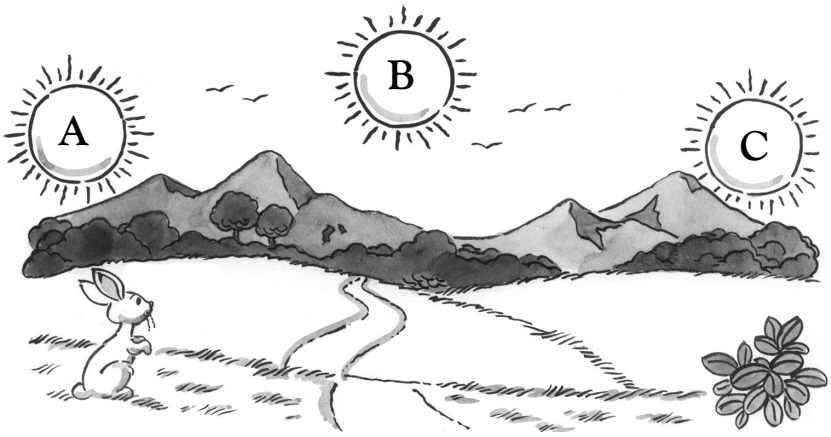
Sun tracks

Background knowledge

You know that on any single day, the Sun will rise and set. However, it is Earth that is moving. It takes 24 hours for Earth to make a complete rotation on its axis. As it moves, the Sun appears to change its position in the sky. The Sun appears to rise in the east when the part of Earth you are on is turning towards the Sun, and appears to set in the west when your hometown is turning away from the Sun. In addition to rotating on its axis, Earth is also revolving around the Sun. It takes an average of 365 days, or one year, to make one complete orbit around the Sun.

Science activity

The picture shows the Sun at three times during one summer day. First it was in position A, then B, and finally C.



Which side of the picture is the east? .....

What time is it at position B? .....

What will soon happen at position C? .....

Science investigation

Make a sundial. On a sunny morning, stand a 50 cm-long stick in the ground in your garden or school. Mark the position of the end of the stick's shadow with a rock or other item that will not easily blow away. Repeat this every hour so that by evening you have at least seven marks on the ground. What pattern can you see? Explain why the shadow moved.

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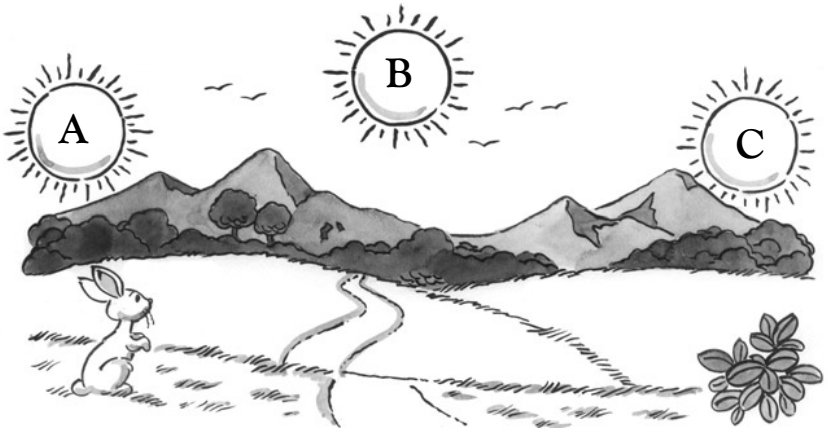

Which side of the picture is the east? The left side is east.

What time is it at position B? Midday – 12 o'clock

What will soon happen at position C? About 4 o'clock in the afternoon.

Science investigation

The apparent movement of the Sun is caused by Earth's rotation. For this activity, the child should notice that the shadow gets shorter as midday approaches. It then appears to move to the other side and become longer again.

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