

YEAR 7 SCIENCE
EARTH AND SPACE SCIENCES
WORKSHEET - DAY/NIGHT AND SEASONS

Use Chapter 6.1 of Science Quest 7 to answer Q 1-10 given below.

UNDERSTANDING AND INQUIRING

REMEMBER

- 1 Explain the difference between the revolution and rotation of the Earth.
- 2 How long does it take the Earth to complete one:
 - (a) rotation
 - (b) revolution?
- 3 Explain why we experience day and night.
- 4 Why does the sun rise in the east and set in the west?
- 5 During which season does Australia tilt towards the sun?
- 6 Explain why it is usually warmer on a summer's day than on a winter's day.
- 7 Explain why there are 365 days in most years but 366 days in every fourth year.

THINK

- 8 Explain, with the aid of a diagram, why the South Pole is in darkness during the Southern Hemisphere's winter.
- 9 Use the diagram at right to answer the following questions.
 - (a) Which of the locations A, B, C, D and E:
 - (i) are in daylight
 - (ii) are experiencing summer
 - (iii) are experiencing the longest day
 - (iv) are experiencing the shortest day?
 - (b) In which of the locations that are in daylight will the sun set first?



- 10 Explain why both the time and position of sunrise and sunset are not the same every day.

BRAINSTORM

- 11 In a small group, brainstorm to compile a list of occupations in which day-to-day work is affected by seasonal changes. Provide a brief description of how each occupation is affected.

INVESTIGATE AND THINK

- 12 Observe the position of the shadow of a tree trunk or vertical pole from time to time on a sunny day.
 - (a) Explain how the shadow moves during the day from sunrise to sunset.
 - (b) How do you think prehistoric people have explained the movement of the shadow?
 - (c) What does the shadow tell you about the sun and the Earth?
 - (d) How would you expect the length of the shadow to change from summer to winter?
 - (e) In ancient times a vertical stick was used as a daylight clock. It was called a sundial. Describe the disadvantages of sundials.

INVESTIGATE

- 13 Use the internet or other resources to find out when and where the astronomer Al-Battani lived and worked, and what contribution he made to an understanding of the seasons.
- 14 Use the **Day, night and time zones** interactivity in your eBookPLUS to determine whether it is day or night in any location of the world at a specific time.

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