

# Beneath the surface

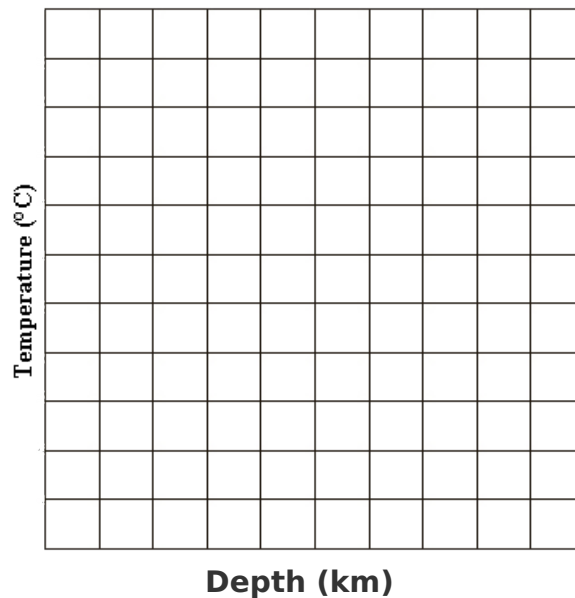
This task is about using data to explore temperature in the interior of the Earth.

The table below gives the temperatures recorded at different depths (as a change from the surface temperature) in a section of the Earth's crust.

|                         |   |    |    |    |    |     |   |     |     |
|-------------------------|---|----|----|----|----|-----|---|-----|-----|
| <b>Depth (km)</b>       | 0 | 1  | 2  | 3  | 4  | 5   | 6 | 7   | 8   |
| <b>Temperature (°C)</b> | 0 | 20 | 45 | 70 | 95 | 120 | ? | 170 | 195 |

a) Plot this data as a line graph.

## Temperature change with depth in the Earth's crust



b) From the graph, what is the temperature at a depth of 6 km? \_\_\_\_\_ °C

c) An underground coal mine is being developed in this area. If the miners could work in temperatures of 30°C or less, what is the maximum depth this coal mine could be?

\_\_\_\_\_ km

d) Calculate the average temperature change for each kilometer change in depth. \_\_\_\_\_ °C

e) Write a sentence explaining how the relationship between temperature and depth changes as the depth increases.

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