Y5&6 – Maths using Statistics with links to Sustainable Travel - Lesson 1

Objectives:	• To solve problems using information presented in a line graph • To solve comparison, sum and difference problems using information presented in a line graph
Success Criteria:	• Accurate interpretation of the graph • Use of the graph to solve problems • An explanation of how the problem is solved

Starter Activity

http://www.taw.org.uk/lic/itp/line_graph.html

Using the Lorry driver's journey (click on data/journey) on the ITP, note down the important facts that you can establish on a white board.

Teacher Input with key questions:

Discuss: What is a line graph?
How does it vary from other ways of handling data?
What does this graph show?
What happened between hours two and three and four and five?

What other questions might we want to know? Make a list and in pairs try to answer them.

Reset the ITP using a different type of data – what does this show us now?

Why is the data different? (temperature, heights, bath time – different data set therefore, differently shaped graph)

LA 3b – 4c

Using the graphs on pages 2 and 3, work in pairs to interpret the data and answer the questions.
Record findings – LSA to support.

MA 4b – 4a

Using the graphs on pages 2 and 3, work in pairs to interpret the data and answer the questions.
Record findings –CT to support.

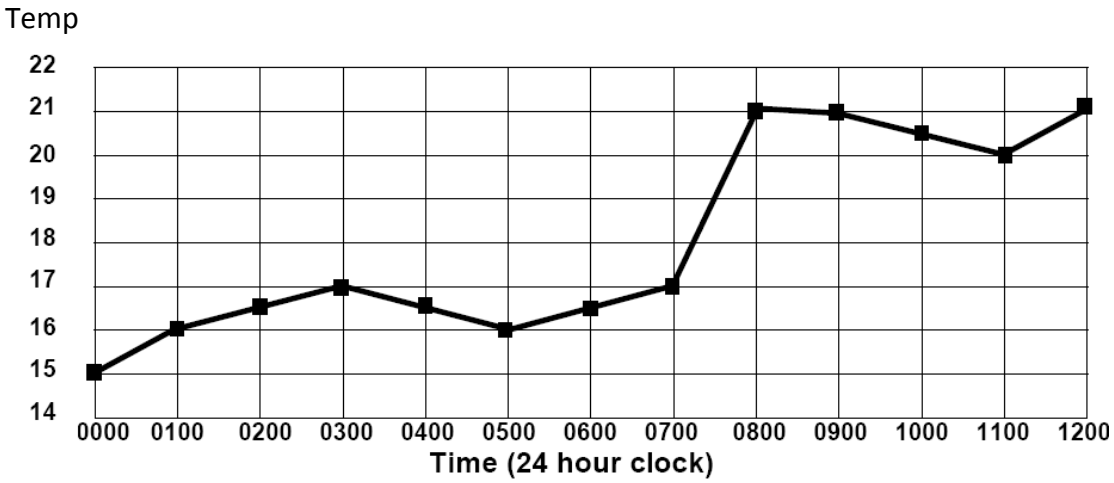
HA 5c – 5b

Independently, work in pairs to use the graphs on pages 2 and 3, interpret the data and answer the questions.

Plenary

What did we notice?
What benefits are there to using a line graph over other graphs?

Interpreting Line Graphs



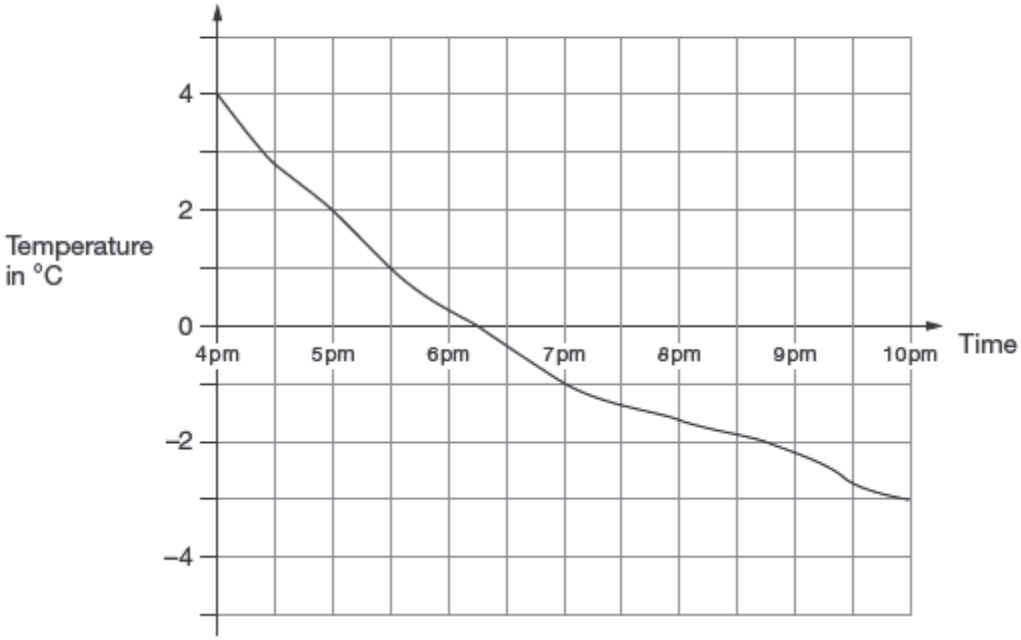
This graph shows the temperature in a room over twelve hours. Answer the questions below.

1) What was the lowest temperature recorded on the chart?
2) What was the temperature at 3 o'clock am?
3) What was the temperature at 11.00?
4) Which hour shows the biggest rise in temperature?
5) For how long was the temperature between 16 and 17 degrees?
6) Can you estimate the temperature at 07.30?
7) Can you estimate the temperature at 10.00?
8) What factors might be having an effect on the temperature change in this room?
9) Complete the table below using the line graph.

Time	Temperature
00.00	
01.00	
02.00	
03.00	
04.00	
05.00	
06.00	
07.00	
08.00	

Maths

This graph shows the outside temperature from 4pm to 10pm on a day in winter.



a) What was the lowest temperature recorded on the chart?

b) By how much did the temperature decrease in the first hour?

c) At what time did the temperature reach freezing point?

d) How far did the temperature drop between 4pm and 10pm?

e) Estimate the temperature at 7.30.

f) Estimate the time when the temperature was exactly -2.

g) For how long was the temperature below 0?

h) During which hour did the temperature fall by 2 degrees?

i) This graph shows winter. How do you think the temperatures would change in the different seasons of the year?

Extension

Draw a table to show the temperature at each hour.