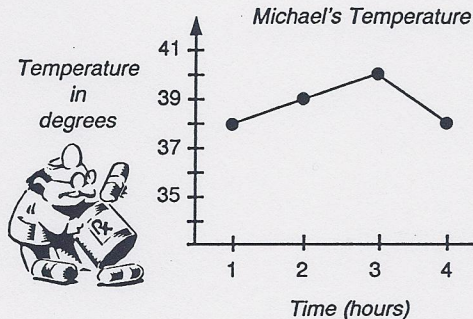# Displaying Data: Time-Series Graphs

Data that changes with time can be graphed on a time-series graph.

Example:

Michael has been unwell. He recorded his temperature every hour for 4 hours. These results are shown on the graph.

Michael's Temperature

Temperature in degrees

Time (hours)

All time-series graphs should have ....
- a title or name,
- time on the bottom axis
- label and scale on each axis
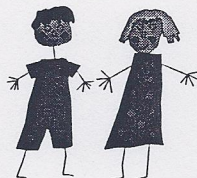- ● or X to mark each point, joined by lines.

From this graph we can see that Michael's temperature was 39°C after two hours. What was his temperature after 4 hrs?

Creating Time-Series Graphs

Task 15

During a school week, Monday to Friday, Wendy recorded the number of pupils away from class each day.
Below is a table of her findings.

Mon	Tues	Wed	Thur	Fri
5	2	3	1	4

1. Create a **time-series graph** to display these results.
2. On what day of the week were the most pupils away?
3. On what day were there 2 pupils away?

Every day after school, for 1 week, the number of cars parked in the wrong place outside the school gate was noted. These results are shown in the table.

Mon	Tues	Wed	Thur	Fri
3	5	2	6	4

4. Create a **time-series graph** to display these results.
5. On what day were there 5 cars parked in the wrong place?
6. What would be a good way to tell the parents NOT to park in the wrong place?

Every day Jim goes for a run around the same course. He records the time it takes him, to the nearest minute. He has run 7 times so far and these are his times.

17	18	16	17	16	16	15

7. Create a **time-series graph** to display his times.
8. What was his most common time taken to run the course?

Each day for a week, starting on Sunday, the air temperature (°C) at the airport at 3:00 p.m. was recorded. These were the results.

23°C	26°C	13°C	19°C	24°C	26°C	18°C

9. Create a **time-series graph** to display these results.
10. What day(s) of the week was the temperature highest?
11. On what day do you think it might have rained? Explain why.

Collecting Time-Series Data

Task 16

- Using a thermometer, record the temperature of your classroom every 30 minutes, or each hour, of the school day. Create a **time-series graph** of your results.