

Lesson 2: Charts and tables (2)

→ pages 78–80

1. a) $21 + 14 = 35$

Alice won 35 marbles in December and May.

b) Otis won 18 marbles in May.

Alice won 14 marbles in May.

$18 - 14 = 4$

Otis won 4 more marbles in May than Alice.

c) The children won 70 marbles in May.

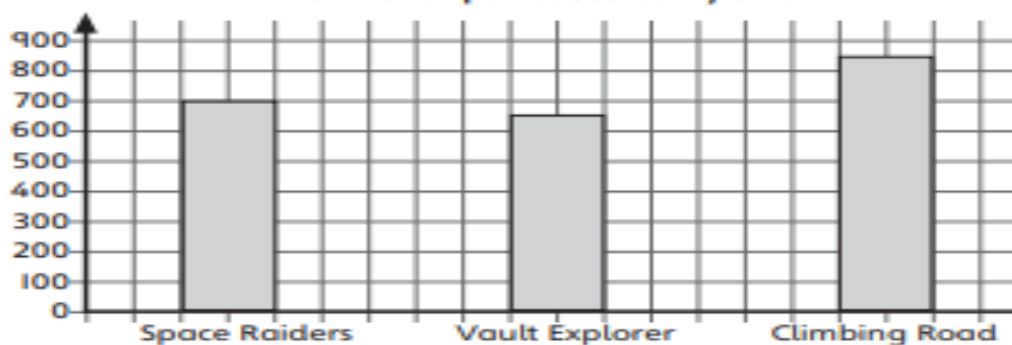
2. **Number of visitors**

| | History Museum | Science Museum | Total |
|----------|----------------|----------------|-------|
| Saturday | 625 | 800 | 1,425 |
| Sunday | 745 | 725 | 1470 |
| Monday | 390 | 390 | 780 |

3. **Number of points earned**

| | Space Raiders | Vault Explorer | Climbing Road |
|-------|---------------|----------------|---------------|
| Sarah | 700 | 650 | 850 |
| Tom | 550 | 200 | 800 |

Number of points scored by Sarah



4. a) 20

b) Wednesday

130

Reflect

Answers will vary; look for children discussing both pictograms and bar charts and giving reasons for which graph they prefer.

Lesson 3: Line graphs (I)

→ pages 81–83

1. a) 20 c) 60
b) 55 d) 150
2. a) 110
b) 12 pm
3. The shadow was the longest at 8:00 am.
It was 130 cm long.
The shadow was the shortest at 12:00 pm.
It was 30 cm long.
Many different answers possible; for example:
The shadow was the same length at both 9:00 am and 10:00 am.
The shadow was the same length at both 10:15 am and 2:30 pm.
4. No. Line graphs are used to track changes over periods of time. Bar graphs are used to make comparisons between different groups. Since this data is making comparisons, a bar chart is more suitable.
5. a) Vertical axis labelled in tens from 0.
0 written at start of horizontal axis; 60 written half-way between 30 and 90.

| | | | | | |
|----------|------------|----------|------------|-------------|-------------|
| Time | 30 minutes | 60 miles | 90 minutes | 120 minutes | 150 minutes |
| Distance | 20 miles | 45 miles | 55 miles | 55 miles | 80 miles |

- b) The graph is level between 90 and 120 minutes which means that the car was not moving, so it must have been in a traffic jam at this time.

Reflect

Line graphs are used to track changes over a periods of time, whereas bar graphs are used to make comparisons between different groups.

Lesson 4: Line graphs (2)

→ pages 84–86

1. a) There was 6 mm more water in the container at 11 am.

b) It took 2 hours for the water to increase from 22 mm to 32 mm.

Explanations may vary; for example:

The graph shows the water level between 11 am and 12 pm as being horizontal. This means it stopped raining for one hour and took 2 hours for the water level to raise from 22 mm to 32 mm.

At 11 am the water level reached 22 mm and at 1 pm it had reached 32 mm, so it took 2 hours for the water level to increase from 22 mm to 32 mm.

2. a) Evie took 9,000 steps during the day.

b) Evie took about 1,750 steps between 12 pm and 3 pm.

c) 1 hour

3. 72 m (approximately)

Explanations may vary; for example:

The top of the graph shows the greatest height the ball reaches before it drops back to the ground.

4. Different answers possible; for example:

The temperatures in Spain are very different when comparing summer and winter temperatures, with much warmer temperatures in July compared with December. The warmest temperature is 32 °C at 12 pm in July and the coldest is 5 °C at 8 am and 5 pm in December. The temperatures on 1 July are more than or equal to 18 °C and the temperatures on 1 December are less than or equal to 18 °C.

Reflect

Different answers are possible; for example:

One important thing I am going to remember when looking at line graph data is read the axes clearly / look for different gradients in the line / use the data to make comparisons / use a ruler to read across the graph.

Lesson 5: Problem solving – graphs

→ pages 87–89

- Lily and Maisie took 2,000 more steps than Tom and Kieron.
 - Gracie walked 6,500 steps.
- 7
 - Belfast
 - Edinburgh
- Otis walked furthest in the last 2 hours of his walk.
 - Explanations may vary; for example:
In the first 2 hours he walked $5 \text{ km} - 0 \text{ km} = 5 \text{ km}$
and in the last 2 hours he walked
 $17 \text{ km} - 11 \text{ km} = 6 \text{ km}$.
 - £72 ($12 \times £6$)
- Approximately 4,250 ($8,500 - 4,250$)

Reflect

Different questions are possible; for example:

Estimate the difference between the population of Spixworth and Windermere; Which town has the largest population?