

# Handling Data: Pictograms

Newcastle-under-Lyme College



## Tutor Notes

This resource was developed to address the needs of some Entry 3 and Level 1 ability learners who had no prior knowledge or experience in working with pictograms. The worksheet based activity is designed to build their foundations in this area and can be developed to work alongside other numeracy activities.

### Main Curriculum References

*Actual references covered will depend on the learner group and level, and how the resource is used by the teacher.*

**HD1/E3.1** Extract numerical information from lists, tables, diagrams and simple charts (a) understand that the title, labels, key, etc. provide information (b) use a scale to extract numerical values.

**HD1/E3.2** Make numerical comparisons from bar charts and pictograms (a) understand that comparisons can be made from the height or length of the bars, or the number of pictures (b) understand that a picture or icon in a pictogram can represent more than one, but that each picture or icon represents the same number.

**HD1/E3.4** Organize and represent information in different ways so that it makes sense to others (a) know how to present data in tables, charts and diagrams (b) know how to use a simple scale to represent data in a bar chart or pictogram (c) understand the different elements in charts, e.g. the title, axis, scale, key (d) label diagrams and charts.

*It is worth noting that the maths involved in this activity also supports achievement of the following curriculum references:*

N1/E2.1	N1/E3.1	Counting skills
N1/E3.3	N1/L1.3	Addition facts and skills
N1/E3.5	N1/L1.5	Recall multiplication facts; multiply by 10
MSS1/E3.1	MSS1/L1.1	Add, subtract, multiply sums of money

Feel free to adapt this resource to meet your own needs.

Tony Jenkins  
Skills for Life Officer  
Newcastle-under-Lyme College  
[tony.jenkins@nulc.ac.uk](mailto:tony.jenkins@nulc.ac.uk)

© Tony Jenkins 2007, 2008

*To obtain an editable version of the original Word document please send an adult basic skills resource that you would like to share to [maggie@skillsworkshop.org](mailto:maggie@skillsworkshop.org) THANK YOU.*

Name \_\_\_\_\_ Date \_\_\_\_\_

## Everyday Maths: Pictograms

A pictogram is an attractive way of displaying data. Instead of using a bar or a pie chart you can use pictures.

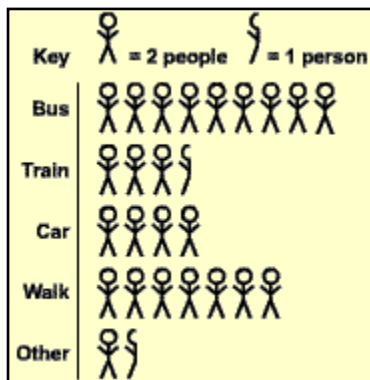
### Example

50 children were asked which method of transport they used to travel to school. The results are given below:

Bus 18      Train 7      Car 8      Walk 14      Other 3

Represent this data in the form of a pictogram.

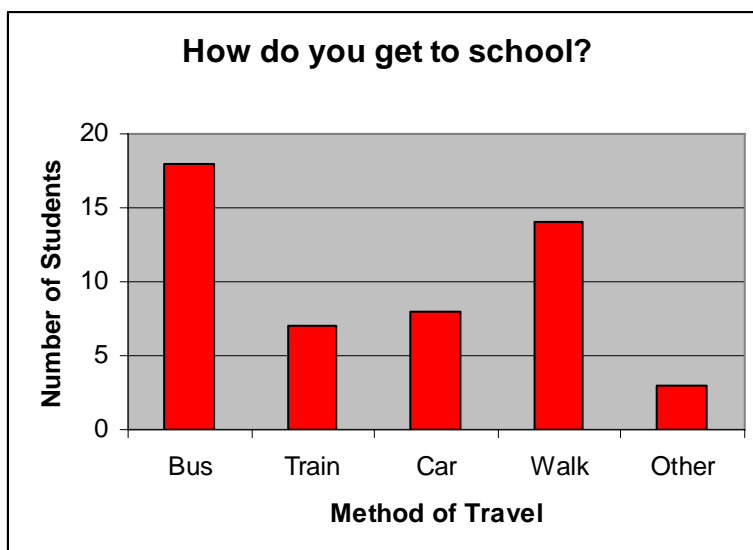
### The Answer



Remember a pictogram should always have a **key**. In this example the **key** shows that each stickperson represents 2 people.

Source: <http://www.bbc.co.uk/schools/gcsebitesize/maths/datahandlingfi/representingdatav3.shtml>

Here is exactly the same information displayed in a bar chart and in a table.






Method	Number
Bus	18
Train	7
Car	8
Walk	14
Other	3

Which style of results do you prefer?

Name \_\_\_\_\_ Date \_\_\_\_\_

**Question 1 – Drinks Machine Survey**

Staff at a leisure centre recorded the number of drinks sold from a drinks machine over one week. The results have been displayed using a pictogram.

Day	Drinks Sold	Total
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Sunday		
	 = 10 drinks	

1a. Work out the total drinks sold for each day.  
Write your answers in the spaces above.

1b. On which day were the least drinks sold?

Answer:

1c. Which day was most popular for selling drinks?

Answer:

1d. How many drinks were sold over the entire week?

Answer:






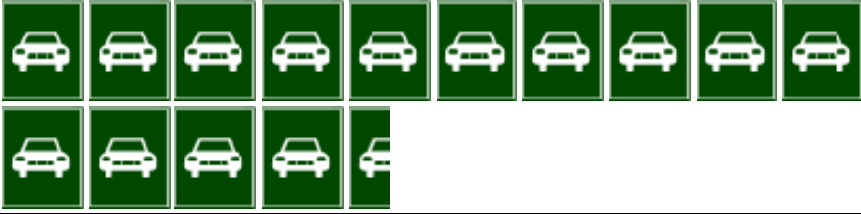

1e. If each drink costs 20p, what was the value of the drinks sold on Thursday?

Answer:

Name \_\_\_\_\_ Date \_\_\_\_\_

### Question 2 - Car Survey

The students at an engineering and design college conducted a survey to see which colours were the most popular for cars. They have displayed their results in a pictogram. Look at the pictogram carefully and then answer the questions.

Car Colour	Number of Cars	Total
Red		80
White		
Blue		35
Green		
Yellow		
Silver		
Black		75
<b>Key</b>	 = 10 cars	

2a. Complete the missing totals for White, Green, Yellow and Silver.

2b. Draw in the missing pictograms for Black

2c. Calculate the total number of cars seen by the students during their survey

**Answer:**

Name \_\_\_\_\_ Date \_\_\_\_\_

**Question 3 – The Smarties Survey**

Some Newcastle-under-Lyme students investigated the contents of the new Smarties hexagonal ‘tubes’. They summarised their results and produced this profile of an ‘average’ or ‘typical’ packet of Smarties.

Red	Lilac	Yellow	White	Green	Pink	Brown	Orange
8	5	4	2	7	2	4	9

Complete the pictogram frame below.

Use a key of  = 2 Smarties.









If you wish you can make each pictogram match the colour it is meant to be representing.

Give the pictogram a title.

\_\_\_\_\_









Smartie Colour	Number of Smarties	Total
<b>Key</b>		

## Pictograms - Answers

Day	Drinks Sold	Total
Monday		50
Tuesday		30
Wednesday		60
Thursday		30
Friday		50
Saturday		80
Sunday		70
Key  = 10 drinks		370

### Question 1 – Drinks Machine Survey








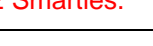

- 1a. Work out the total drinks sold for each day.  
Write your answers in the spaces above.  
**See pictogram**
- 1b. On which day/s were the least drinks sold?  
**Tuesday and Thursday**
- 1c. Which day was most popular for selling drinks?  
**Saturday**
- 1d. How many drinks were sold over the entire week?  
**370 drinks**
- 1e. If each drink costs 20p, what was the value of the drinks sold on Thursday? **30 x 20p = £6.00**

Car Colour	Number of Cars	Total
Red		80
White		50
Blue		35
Green		20
Yellow		20
Silver		145
Black		75
Key	 = 10 cars	425

### Question 2 - Car Survey

The students at an engineering and design college conducted a survey to see which colours were the most popular for cars. They have displayed their results in a pictogram. Look at the pictogram carefully and then answer the questions.

- 2a. Complete the missing totals for White, Green, Yellow and Silver. **See pictogram**
- 2b. Draw in the missing pictograms for Black. **See pictogram**
- 2c. Calculate the total number of cars seen by the students during their survey. **425**

Smartie Colour	Number of Smarties	Total
Red		8
Lilac		5
Yellow		4
White		2
Green		7
Pink		2
Brown		4
Orange		9
Key	 = 2 Smarties.	

### Question 3 – The Smarties Survey

The numbers and colours of sweets found in a typical tube of Smarties (other titles are possible)  
Completed pictogram shown left.