

# Varied Fluency

## Step 1: Pictograms

### National Curriculum Objectives:

Mathematics Year 3: (3S1) [Interpret and present data using bar charts, pictograms and tables](#)

Mathematics Year 3: (3S2) [Solve one-step and two-step questions \[for example, 'How many more?' and 'How many fewer?'\] using information presented in scaled bar charts and pictograms and tables](#)

### Differentiation:

**Developing** Questions to support reading and interpreting of pictograms, using values of 1, 2, 5 or 10. No half pictures.

**Expected** Questions to support reading and interpreting of pictograms, using various values. Some pictograms include half pictures.



**Greater Depth** Questions to support reading and interpreting of pictograms, using commutative law to calculate a wider range of multiplication facts. Some pictograms include half and quarter pictures.

More [Year 3 Statistics](#) resources.

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## Pictograms

1a. Complete the missing sections of the pictogram using the information below.

Month	Number of Children
January	
February	
March	
April	
May	

Key:  = 1 child



- 4 children have their birthday in January.
- 2 more children have their birthday in March than February.
- 3 fewer children have their birthday in May than April.




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## Pictograms

1b. Complete the missing sections of the pictogram using the information below.

Crisp Flavour	Number of Children
Cheese	
Slightly salted	
Chilli	
Pickled onion	
Beef	






Key:  = 2 children


- 14 children like slightly salted flavoured crisps.
- 4 fewer children like pickled onion crisps than slightly salted crisps.
- 8 fewer children like beef crisps than chilli crisps.



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2a. Answer the questions about the school's favourite sport.

Class	Number of Children
Class 1A	
Class 2A	
Class 3A	
Class 4A	
Class 5A	






Key:  = 5 children


- How many children like football in class 2A?
- How many children like football in Class 4A and Class 5A?
- Which class liked football the most?
- Which two classes liked football the least?



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2b. Answer the questions about the children's favourite drink.

Drink	Number of Children
Lemonade	
Cola	
Juice	
Water	
Milk	

Key:  = 10 children

- How many children like juice?
- How many children like cola and milk?
- How many more children like water than lemonade?
- Which two drinks are the most popular?



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# Pictograms

3a. Complete the missing sections of the pictogram using the information below.

Transport	Number of Children
Walk	
Bicycle	
Car	
Bus	
Taxi	

Key: = 3 children

- A. 9 fewer children walk to school than come by car.
- B. Double the number of children who cycle take the bus.
- C. 3 times as many children take the taxi than cycle.



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# Pictograms

3b. Complete the missing sections of the pictogram using the information below.

Club	Number of Children
Karate	
Art	
Singing	
Puzzles	
Sewing	

Key: = 4 children

- A. 6 fewer children go to art club than karate club.
- B. 4 more children go to puzzles club than singing club.
- C. Half the number of children that go to karate club go to sewing club.



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4a. Answer the questions about the number of cereal boxes sold.

Cereal	Number of Cereal Boxes
Coco Chips	
Sugar Flakes	
Crunchies	
Wheat Bites	
Bran Hoops	

Key: = 8 cereal boxes sold

- A. How many boxes of Sugar Flakes were sold?
- B. How many more boxes of Coco Chips were sold than Crunchies?
- C. How many boxes of Bran Hoops and Sugar Flakes were sold?
- D. How many fewer boxes of Wheat Bites were sold compared to Crunchies?



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4b. Answer the questions about the number of cupcakes sold in a cafe.

Cupcake	Number of Cupcakes Sold
Carrot	
Lemon	
Chocolate	
Vanilla	
Red velvet	

Key: = 10 cupcakes sold

- A. How many chocolate cupcakes were sold?
- B. How many fewer carrot cupcakes were sold than lemon cupcakes?
- C. How many red velvet and vanilla cupcakes were sold in total?
- D. How many more chocolate cupcakes were sold than carrot cupcakes?



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# Pictograms

5a. Complete the missing sections of the pictogram using the information below.

Snack	Number of People
Cherries	
Cookie	
Strawberry	
Chocolate	
Orange	

Key: = 12 people

- 6 more than the total of oranges chose strawberry.
- 9 fewer than the total of chocolate chose oranges.
- 6 more than the total of cherries chose a cookie.



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# Pictograms

5b. Complete the missing sections of the pictogram using the information below.

Food	Number of People
Egg	
Waffle	
Porridge	
Toast	
Doughnut	

Key: = 9 people

- 18 more people chose toast than a waffle.
- 9 fewer people than the total of doughnut chose a waffle.
- 9 more people chose an egg than porridge.



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6a. Answer the questions about the ice cream treats sold at a tuck shop.

Ice Cream	Number of Items Sold
Sundae	
Bowl	
Sugar cone	
Sandwich	
Wafer cone	

Key: = 8 sold

- How many sugar cones were sold?
- Which two items were equally sold?
- How many fewer bowls were sold than wafer cones?
- Which items have a difference of 20?



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6b. Answer the questions about the stationery sold at a shop.

Stationery	Number of Items Sold
Rubber	
Pencil	
Sticky tape	
Sharpener	
Scissors	

Key: = 12 sold

- How many sharpeners were sold?
- Which item was sold the most?
- Which items have a difference of 30?
- How many more scissors were sold compared to sticky tape?



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## Varied Fluency Pictograms

### Developing

1a. The pictogram should be completed as follows:

Month	Number of Children
January	
February	
March	
April	
May	

2a. A. 25; B. 35; C. Class 1A; D. Class 3A and Class 4A.

### Expected

3a. The pictogram should be completed as follows:

Transport	Number of Children
Walk	
Bicycle	
Car	
Bus	
Taxi	

4a. A. 36; B. 12; C. 56; D. 20

### Greater Depth

5a. The pictogram should be completed as follows:

Snack	Number of People
Cherries	
Cookie	
Strawberry	
Chocolate	
Orange	

6a. A. 32; B. Bowl and sandwich; C. 28; D. Sundae and sugar cone

## Varied Fluency Pictograms

### Developing

1b. The pictogram should be completed as follows:

Crisp Flavour	Number of Children
Cheese	
Slightly salted	
Chilli	
Pickled onion	
Beef	

2b. A. 50; B. 100; C. 40; D. Water and milk

### Expected

3b. The pictogram should be completed as follows:

Club	Number of Children
Karate	
Art	
Singing	
Puzzles	
Sewing	

4b. A. 65; B. 35; C. 105; D. 30

### Greater Depth

5b. The pictogram should be completed as follows:

Food	Number of People
Egg	
Waffle	
Porridge	
Toast	
Doughnut	

6b. A. 42; B. Scissors; C. Pencil and rubber; D. 15