Reasoning and Problem Solving Step 2: Draw Pictograms (1-1)

National Curriculum Objectives:

Mathematics Year 2: (2S1) <u>Interpret and construct simple pictograms, tally charts, block</u> <u>diagrams and simple tables</u>

Differentiation:

Questions 1, 4 and 7 (Problem Solving)

Developing Use the clues and the partially completed table to work out how many images could be missing from the pictogram. Up to 10 images.

Expected Use the clues and the partially completed tally chart to work out how many images could be missing from the pictogram. Up to 15 images.

Greater Depth Combine the values from two tally charts to draw a vertical pictogram. Up to 15 images.

Questions 2, 5 and 8 (Problem Solving)

Developing Draw a pictogram from the given statements. Three clues and up to 10 images.

Expected Draw a pictogram from the given statements. Four clues and up to 15 images.

Greater Depth Draw a pictogram from the given statements. Four clues with some two-step problems and up to 15 images.

Questions 3, 6 and 9 (Reasoning)

Developing Find, correct and explain one mistake in a pictogram which has been created from a table. Up to 10 images.

Expected Find, correct and explain mistakes in a pictogram which has been created from a table. Up to 15 images.

Greater Depth Find, correct and explain mistakes in a pictogram which has been created from two tally charts.

More Year 2 Statistics resources.

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Draw Pictograms (1-1)

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1b. Kim draws a pictogram from the

following table.

Horse

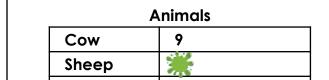
Chicken

1a. Ted draws a pictogram from the following table.

Food		
Burger	6	
Pizza	8	
Sandwich	5	
Salad	Salar.	

He knows there are more salads than sandwiches, but fewer salads than pizzas.

How many salads could he draw on his pictogram?



4

10

She knows there are more sheep than horses, but fewer sheep than cows.

How many sheep could she draw on her pictogram?



2a. A class collected information about the traffic passing their school.



I counted 6 trucks.

There were 2 more cars than trucks.





I only saw 5 buses.

Use the statements to draw a pictogram.



3a. Find and correct the mistake in Sam's pictogram.

Reading	00000
Swimming	
Running	•••••

= 1 person

Reading	6
Swimming	2
Running	9

Explain what Sam did wrong.



2b. A class collected information about school dinners.



5 children like pizza.

3 fewer children like pasta then pizza.





4 children like beans.

Use the statements to draw a pictogram.



3b. Find and correct the mistake in Ben's pictogram.

TV	
Games	
Music	

= 1 person

TV	5
Games	8
Music	1

Explain what Ben did wrong.





Draw Pictograms (1-1)

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4a. Kelly is drawing a pictogram from the following chart.

Mini beast	
Bees N	
Ladybirds	וו אוו או
Butterflies	M
Spiders	M III

She knows there are more bees than spiders, but fewer bees than ladybirds.

How many bees could she draw on her pictogram?



Flowers	
Rose NII	
Daffodil	M M III
Sunflower	NJ 🌉
Tulip	

He knows there are fewer sunflowers than daffodils, but more sunflowers than roses.

How many sunflowers could he draw on his pictogram?



5a. A class collected information about the trees in their school grounds.



There were 3 more oak trees than elm trees.

> I only saw 3 beech trees.





I counted 9 elm trees.

There were 2 more ash trees than beech trees.



Use the statements to draw a pictogram.



5b. A class collected information about their favourite drinks.



4 fewer children like cola than juice.

9 children like water.





8 children like juice.

3 more children like milk than water.



Use the statements to draw a pictogram.



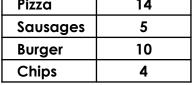
6a. Find and correct the mistakes in Reece's pictogram.

Pizza	••••••
Sausages	
Burger	••••••

= 1 person

Pizza	14
Sausages	5
Burger	10
Chips	4

Explain what Reece did wrong.



6b. Find and correct the mistakes in Alina's pictogram.

Tractor	
Lorry	
Digger	

= 1 person

Tractor	3
Lorry	13
Digger	2
Van	15

Explain what Alina did wrong.







Draw Pictograms (1-1)

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7a. Maisy was drawing a pictogram to show the favourite colours in Year 2.

7b. Jordan was drawing a pictogram to show the favourite pets in Year 2.

Class 2a Class 2b		Class 2b	
Blue	MI IIII	Red	IN II
Green	M M II	Blue	IN I
Red	LM.	Yellow	M III

Class 2a		Class 2b	
Dog	III MI MI	Cat	וו איז איז
Cat	m m m	Bird	MI III
Bird	MI I	Snake	IIII

Use Maisy's information to draw one vertical pictogram to show both sets of information.

Use Jordan's information to draw one vertical pictogram to show both sets of information.

8b. A class collected information about

creatures they saw on the way to school.

There were half as

many cats as birds.

I saw 7 slugs and the

same number of cats.

I saw 31 creatures

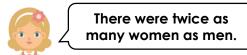
altogether.

There were 4 fewer squirrels than slugs.





8a. A class collected information about visitors to their school.





I saw 2 dogs and 14 women.

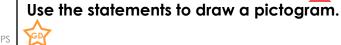


I saw 36 visitors altogether.

There were 6 more children than men.



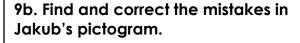
Use the statements to draw a pictogram.



9a. Find and correct the mistakes in Mandip's pictogram.

Fiction	•••••
Non-fiction	••••••
Poetry	•••••

= 1 person



Swimming	••••••
Running	••••••
Cycling	••••••

= 1 person

Running	M M M
Cycling	MI I
Swimming	IN II

Cycling	M M I
Skipping	LM LM
Swimming	IIII IM

PS

Fiction I WI WI **Poetry** III LM Comic

Non-fiction | N N | M M M **Poetry** IIII IM **Fiction**

Explain what Mandip did wrong.



Explain what Jakub did wrong.





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Reasoning and Problem Solving Draw Pictograms (1-1)

Developing

1a. Ted could draw 6 or 7 salads on his pictogram.

2a. Accept any pictogram that shows 6 trucks, 8 cars and 5 buses.

3a. Sam should have drawn two symbols for swimming in his pictogram, not three.

Expected

4a. Kelly could draw 9, 10 or 11 bees on her pictogram.

5a. Accept any pictogram that shows 12 oak trees, 9 elm trees, 5 ash trees and 3 beech trees.

6a. Reece should have drawn a row for 4 chips in the pictogram, along with symbols for 3 more pizzas and 1 more burger.

Greater Depth

7a. Accept any vertical pictogram that shows 15 blue, 12 green, 12 red and 8 yellow.

8a. Accept any pictogram that shows 14 women, 7 men, 2 dogs and 13 children. 9a. Mandip should have drawn a row for 8 comics, added another 9 symbols for fiction, only 11 symbols for non-fiction and another 16 symbols for poetry.

Reasoning and Problem Solving Draw Pictograms (1-1)

<u>Developing</u>

1b. Kim could draw 5, 6, 7 or 8 sheep on her pictogram.

2b. Accept any pictogram that shows 5 pizzas, 2 pasta and 4 beans.

3b. Ben should have drawn eight symbols for games, not seven.

Expected

4b. Stan could draw 8, 9, 10, 11 or 12 sunflowers on his pictogram.

5b. Accept any pictogram that shows 4 cola, 9 water, 8 juice and 12 milk.

6b. Alina should have drawn a row for 15 vans in the pictogram, along with symbols for 3 more lorries and there should only be two symbols for diggers.

Greater Depth

7b. Accept any vertical pictogram that shows 13 dogs, 27 cats, 14 birds and 4 snakes.

8b. Accept any pictogram that shows 7 slugs, 3 squirrels, 7 cats and 14 birds.
9b. Jakub should have drawn a row for 10 people skipping, added another 2 symbols for swimming, 2 more symbols for running and another 7 symbols for cycling.

