

Data Handling

Supplementary materials

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Data Handling - Snacks chart

Write a letter for your snack.



F = Fruit



S = Sandwich



C = Cake
(Sweet snack)



O = 'Other?



N = Nothing

Name	Day 1 Monday	Day 2 Tuesday	Day 3 Wednes.	Day 4 Thurs.	Day 5 Friday	Day 6 Monday	Day 7 Tuesday	Day 8 Wednes.	Day 9 Thurs.	Day 10 Friday
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

Role cards

Secretary

Write down or type the group agreements or tasks.



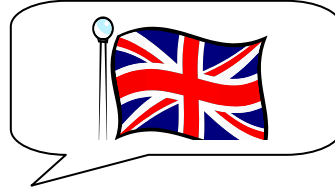
Speaker

Share with the rest of the class the ideas, opinions or agreements of the group.



Language monitor

Check that communication takes place in English.



Volume monitor

Keep the volume of the group low.

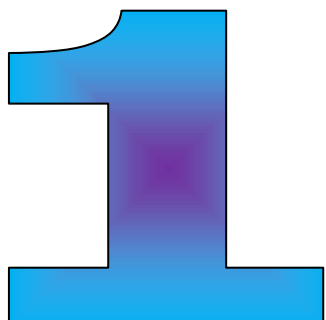


Material monitor

Take care of the material – hand out, gather, switch on/off, tables, chairs.



Number cards



Sample questionnaire chart

Questions	Name 1	Name 2	Name 3	Name 4	Name 5	Total
Question 1 (closed)	Always	Always	Always	Always	Always	Always
	Often	Often	Often	Often	Often	Often
	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely
	Never	Never	Never	Never	Never	Never
Question 2 (open-number)						
Question 3 (open-number)						
Question 4 (open-number)						
Question 5 (open-number)						

Relative frequency – Process to order

The fraction is the relative frequency.

Write the absolute frequency as the numerator and the total number of events as the denominator.

Round the result up or down to the nearest hundredth.

Next, count the total number of events.

This is the absolute frequency.

The result of the fraction is also the relative frequency.

Now, write a fraction for each piece of data.

First of all, count the number of times that each piece of data is repeated.

Then, divide the numerator by the denominator. Use a calculator.

Date: _____ Class: _____ Number: _____ Name: _____

Data Handling – Frequency

Maths File



Words, Words, Words

level **2**



Take two newspapers with different writing styles and select 50 sentences from an article in each newspaper. Count the number of words in each sentence and fill in the tables below.

Numbers of words in sentences in 1st newspaper									

Numbers of words in sentences in 2nd newspaper									

Grouped results for 1st newspaper		
Number of words	Tally	Frequency
Less than 5		
5 but less than 10		
10 but less than 15		
More than 15		
Total		50

Grouped results for 2nd newspaper		
Number of words	Tally	Frequency
Less than 5		
5 but less than 10		
10 but less than 15		
More than 15		
Total		50

Draw two histograms to compare the newspapers and complete the sentence below.

"The paper which had most sentences over 10 words long was-----.
The longest sentence in either newspaper had ----- words."

Sentence length is only one aspect of writing style. You could continue your investigation by looking at the number of words in each sentence, the proportion of paper used for pictures or the space allocated to advertisements.

Date: _____ Class: _____ Number: _____ Name: _____

Data Handling – Frequency

Maths File



Words, Words, Words

level **3**



Words are made from vowels and consonants. There are five vowels in the alphabet. These are a, e, i, o and u. The remaining letters are consonants.

Some words have lots of vowels. For example, 'acute' has 3 out of 5 letters but 'right' only has 1 out of 5. The proportion of vowels in "acute" is 60% and in "right" is 20%.

Using the words below, calculate the proportion of vowels in each word and record these as percentages to 2 significant figures.

unit	number	prime	total	repeated
ten	sequence	fraction	score	array
hundred	continue	mixed	double	share
digit	predict	whole	leave	remainder
place	pattern	half	difference	calculator
least	relationship	proportion	how	jotting
last	formula	decimal	same	sentence
exact	divisible	percentage	boundary	sign
round	square	add	times	operation
integer	part	subtract	multiple	expensive

Fill in the tally table.

Proportion of vowels(%)	Tally	Frequency
0 to 9		
10 to 19		
20 to 29		
30 to 39		
40 to 49		
50 to 59		
60 to 69		
69 to 70		

Draw a histogram to show your results and complete the sentence below.

The modal group for the proportion of vowels in the sample of words was found to be _____ % to _____ %.

Data Handling – Median to order

Number of hours watching TV per week								

Mary	Peter	David	John	Susan	Mark	Claire	Jane	Paul
21	15	9	15	14	11	22	12	18

Date: _____ Class: _____ Number: _____ Name: _____

Data Handling – Average

Maths File



School Sports Day



level **1**

There are four teams in each Year group: Red, Yellow, Blue and Green.
The teams compete for trophies and need to have the best competitors entered for each field event. Find the median and range for each student.
Then circle the best competitor for each team for a particular event.

Javelin						
Team	Student	Previous performance (1) (metres)	Previous performance (2) (metres)	Previous performance (3) (metres)	Median (Metres)	Range (Metres)
Red	A	17	18	16		
	B	15	17	18		
Yellow	C	18	16	20		
	D	15	17	20		
Blue	E	13	16	12		
	F	21	20	15		
Green	G	16	17	20		
	H	15	15	23		

Shot						
Team	Student	Previous performance (1) (metres)	Previous performance (2) (metres)	Previous performance (3) (metres)	Median (Metres)	Range (Metres)
Red	A	6	7	8		
	B	7	8	7		
Yellow	C	5	7	8		
	D	9	8	7		
Blue	E	4	9	5		
	F	9	9	2		
Green	G	3	4	8		
	H	7	6	6		

High Jump						
Team	Student	Previous performance (1) (metres)	Previous performance (2) (metres)	Previous performance (3) (metres)	Median (Metres)	Range (Metres)
Red	A	1.35	1.43	1.23		
	B	1.34	1.23	1.16		
Yellow	C	1.09	1.34	1.35		
	D	1.23	1.23	1.24		
Blue	E	1.34	1.24	1.25		
	F	1.25	1.26	1.24		
Green	G	1.35	1.23	1.37		
	H	1.45	1.23	1.24		

Long Jump						
Team	Student	Previous performance (1) (metres)	Previous performance (2) (metres)	Previous performance (3) (metres)	Mean (Sec)	Range (sec)
Red	A	4.42	4.43	4.02		
	B	4.22	4.33	4.32		
Yellow	C	5.08	5.09	4.99		
	D	5.29	5.12	4.78		
Blue	E	4.43	5.09	4.78		
	F	4.50	5.78	3.56		
Green	G	4.78	4.96	5.03		
	H	4.56	4.78	5.06		

Date: _____ Class: _____ Number: _____ Name: _____

Data Handling – Average

Maths File



School Sports Day

level **2**



There are four teams in each Year group: Red, Yellow, Blue and Green. The teams compete for trophies and need to have the best competitors entered for each track event.

Fill in the table of results with the mean and range for each student in each event and select the best competitor from each team. Then, decided which team is likely to win the race.

100 m Sprint						
Team	Student	Previous performance (1) (sec)	Previous performance (2) (sec)	Previous performance (3) (sec)	Mean (Sec)	Range (sec)
Red	A	13.1	13.4	13.2		
	B	13.9	13.5	13.1		
Yellow	C	13.5	13.7	13.6		
	D	13.3	13.07	13.45		
Blue	E	13.4	13.3	13.8		
	F	14.2	13.01	13.9		
Green	G	13.23	13.65	13.56		
	H	13.56	13.78	13.58		

200 m Sprint						
Team	Student	Previous performance (1) (sec)	Previous performance (2) (sec)	Previous performance (3) (sec)	Median (Metres)	Range (Metres)
Red	A	26.3	26.4	26.3		
	B	27.1	26.5	26.2		
Yellow	C	26.7	26.7	26.7		
	D	26.5	26.07	26.55		
Blue	E	26.6	26.3	26.9		
	F	27.4	27.01	27		
Green	G	26.63	26.65	26.66		
	H	26.76	26.78	26.68		

400 m						
Team	Student	Previous performance (1) (sec)	Previous performance (2) (sec)	Previous performance (3) (sec)	Mean (Sec)	Range (sec)
Red	A	64	65	67		
	B	63	62	70		
Yellow	C	65	66	62		
	D	63	65	61		
Blue	E	67	64	68		
	F	65	67	66		
Green	G	63	67	66		
	H	62	67	75		

Event	100 m Sprint			200 m Sprint			400 m Sprint		
	Mean (sec)	Range (sec)	Student	Mean (sec)	Range (sec)	Student	Mean (sec)	Range (sec)	Student
Red									
Yellow									
Blue									
Green									
Likely winner									

Date: _____ Class: _____ Number: _____ Name: _____

Data Handling – Average

Maths File



School Sports Day

level **3**



There are four teams in each Year group: Red, Yellow, Blue and Green. The teams compete for trophies and need to have the best competitors entered for each track event.

Fill in the table of results with the mean and range for each student in each event and select the best competitor from each team. Then, decided which team is likely to win the race.

800 m						
Team	Student	Previous performance (1)	Previous performance (2)	Previous performance (3)	Mean	Range (sec)
Red	A	2 min 33 sec	2 min 51 sec	2 min 43 sec		
	B	2 min 4 sec	2 min 45 sec	2 min 43 sec		
Yellow	C	2 min 52 sec	2 min 56 sec	2 min 53 sec		
	D	2 min 43 sec	2 min 17 sec	2 min 57 sec		
Blue	E	2 min 37 sec	2 min 57 sec	2 min 48 sec		
	F	2 min 37 sec	2 min 57 sec	2 min 46 sec		
Green	G	2 min 57 sec	2 min 54 sec	2 min 36 sec		
	H	2 min 56 sec	2 min 34 sec	2 min 56 sec		




1500 m						
Team	Student	Previous performance (1)	Previous performance (2)	Previous performance (3)	Mean	Range (sec)
Red	A	5 min 46 sec	5 min 48 sec	5 min 36 sec		
	B	5 min 45 sec	5 min 35 sec	5 min 27 sec		
Yellow	C	5 min 34 sec	5 min 57 sec	5 min 47 sec		
	D	5 min 57 sec	5 min 34 sec	5 min 57 sec		
Blue	E	5 min 36 sec	5 min 48 sec	5 min 56 sec		
	F	5 min 13 sec	5 min 43 sec	5 min 59 sec		
Green	G	5 min 47 sec	5 min 56 sec	5 min 5 sec		
	H	5 min 28 sec	5 min 46 sec	5 min 56 sec		

2000 m						
Team	Student	Previous performance (1)	Previous performance (2)	Previous performance (3)	Mean	Range (sec)
Red	A	7 min 41 sec	7 min 38 sec	7 min 46 sec		
	B	7 min 45 sec	7 min 35 sec	7 min 57 sec		
Yellow	C	7 min 44 sec	7 min 47 sec	7 min 37 sec		
	D	7 min 47 sec	7 min 34 sec	7 min 57 sec		
Blue	E	7 min 46 sec	7 min 58 sec	7 min 46 sec		
	F	7 min 33 sec	7 min 33 sec	7 min 59 sec		
Green	G	7 min 47 sec	7 min 36 sec	7 min 52 sec		
	H	7 min 58 sec	7 min 26 sec	7 min 46 sec		

Event	800 m			1500 m			2000 m		
	Mean	Range (sec)	Student	Mean	Range (sec)	Student	Mean	Range (sec)	Student
Red	min sec			min sec			min sec		
Yellow	min sec			min sec			min sec		
Blue	min sec			min sec			min sec		
Green	min sec			min sec			min sec		
Likely winner									

Date: _____ Class: _____ Number: _____ Name: _____




Self-assessment: A survey

I can speak in English to work in groups	0 1 2 3 4 5 6 7 8 9 10	2 stars and 1 wish 
I can follow rules	0 1 2 3 4 5 6 7 8 9 10	
I can form questions and answers about good and bad habits	0 1 2 3 4 5 6 7 8 9 10	
I can conduct a survey	0 1 2 3 4 5 6 7 8 9 10	
I can gather and organize data	0 1 2 3 4 5 6 7 8 9 10	Comments
I can respect others	0 1 2 3 4 5 6 7 8 9 10	
I can perform roles	0 1 2 3 4 5 6 7 8 9 10	
I like ...		I don't like ...



Date: _____ Class: _____ Number: _____ Name: _____




Self-assessment: Charts

I can speak in English to work with different types of charts	0 1 2 3 4 5 6 7 8 9 10	2 stars and 1 wish 
I can read and create different types of charts	0 1 2 3 4 5 6 7 8 9 10	
I can represent gathered data	0 1 2 3 4 5 6 7 8 9 10	
I can create a pie chart about my snacks using percentages	0 1 2 3 4 5 6 7 8 9 10	
I can choose the most appropriate chart	0 1 2 3 4 5 6 7 8 9 10	Comments
I can respect others	0 1 2 3 4 5 6 7 8 9 10	
I can perform roles	0 1 2 3 4 5 6 7 8 9 10	
I like ...		I don't like ...



Date: _____ Class: _____ Number: _____ Name: _____




Self-assessment: Frequency and average

I can speak in English to calculate frequency and average	0 1 2 3 4 5 6 7 8 9 10	2 stars and 1 wish 
I can calculate absolute and relative frequency	0 1 2 3 4 5 6 7 8 9 10	
I can calculate range, median, mode and mean	0 1 2 3 4 5 6 7 8 9 10	
I can calculate frequency and average for the data my group has gathered	0 1 2 3 4 5 6 7 8 9 10	
I can respect others	0 1 2 3 4 5 6 7 8 9 10	Comments
I can perform roles	0 1 2 3 4 5 6 7 8 9 10	
I like ...		I don't like ...



Date: _____ Class: _____ Number: _____ Name: _____



















Self-assessment: Our class

I can speak in English to present results	0 1 2 3 4 5 6 7 8 9 10	2 stars and 1 wish 
I can analyse data and draw conclusions	0 1 2 3 4 5 6 7 8 9 10	
I can write a report	0 1 2 3 4 5 6 7 8 9 10	
I can give advice	0 1 2 3 4 5 6 7 8 9 10	
I can present conclusions	0 1 2 3 4 5 6 7 8 9 10	
I can respect others	0 1 2 3 4 5 6 7 8 9 10	Comments
I can perform roles	0 1 2 3 4 5 6 7 8 9 10	
I like ...		I don't like ...



Date: _____ Class: _____ Number: _____ Names: _____

Peer-assessment: criteria for assessing presentations

	Pupil 1			Pupil 2			Pupil 3			Pupil 4			Pupil 5			Group		
																		
Key points: Report Giving advice Charts & graphs Frequency & average																		
Clear																		
Attractive																		
Smile and eye-contact																		
Read or explain																		
Global																		
Comments																		



= Could be better! Try harder next time.




= Satisfactory. Well done!



= Very good. Excellent!

Date: _____ Class: _____ Number: _____ Names: _____

Group-assessment

We liked working in groups	0 1 2 3 4 5 6 7 8 9 10	2 stars and 1 wish 
It was easy to organize ourselves	0 1 2 3 4 5 6 7 8 9 10	
We all worked	0 1 2 3 4 5 6 7 8 9 10	
We respected each other	0 1 2 3 4 5 6 7 8 9 10	
We tried to help	0 1 2 3 4 5 6 7 8 9 10	
We tried to speak in English	0 1 2 3 4 5 6 7 8 9 10	Comments
We performed our roles	0 1 2 3 4 5 6 7 8 9 10	
We liked ...		We didn't like ...



Discussion and agreement language frame

I	agree	with	you	(because...).
	don't agree		him her them <i>Name</i>	

I think that	...		right wrong	(because...).
	you are			
	he she <i>Name</i>	is		

I think	this	is	right	(because...).
	...		wrong	
			the right answer	
			...	

I think the right answer is ... (because...).

I think that a	bar chart	is better because	it shows	the trend.
	frequency chart			percentages.
	pie chart			...
	line graph		it compares the results.	
	

I think we	can	...	(because...).
	should		

Do you agree?

Do you agree with me/him/her/*name*/them?

What do you think?

I don't think so.

What number/topic do you like?

I like	number	...
	the topic of	

I would like to	have number	...
	work with the topic of	

What's your favourite number/topic?

My favourite number/topic is ...

Can I have number ..., please?

Can we choose the topic of ..., please?

Yes, you/we can.

Yes, of course.

Would you mind changing your number / the topic, please?

Forming questions language frame

LEISURE TIME AND DOING EXERCISE

How many	hours/ minutes	a week	do you	watch TV		?
		a month		read books		
				ride a bike		
				surf the net		
	go			to the cinema		
				to the theatre		
				shopping		
	times	a day		do exercise or walk		
				practice sports		
		play		football		
basketball						
		...				

I ... X hours/minutes/times a week/month/day.

What do you do in your free time?

MEDIA

How many	times	a day	do you	watch TV	?
	hours			read a book	
	minutes				

How many minutes do you watch TV	in the	morning	?
		afternoon	
		evening	
	at night		

How many TV's/books have you got at home?

Have you got a TV in your bedroom?

How many books did you read last month?

HYGIENE AND HOUSEWORK

How many times	a day	do you	brush your teeth	?
			have a shower	
			wash your hands	
			comb your hair	
			help cooking	
			set the table	
	a week		make your bed	
			clear the table	
			wash the dishes	
			fold the clothes	
			sweep the floor	
			...	

How often do you wash your hands	before	having	breakfast	?
			lunch	
			dinner	
			snacks	
	after	going to the toilet		

I always/often/rarely/never wash my hands before/after having lunch.

How many hours do you sleep?

What time do you get up/go to bed?

HEALTHY DIET

What do you eat for breakfast? Fruit, a sandwich, a cake (sweet snack), 'other', nothing

What did you have for	breakfast	yesterday	?
	lunch		
	dinner		

Yesterday, I had
milk/vegetables/pasta/meat/fish/fruit/eggs/yoghurt/pulses for
breakfast/lunch/dinner.

How many glasses of water do you drink in a day?

How many pieces of fruit and vegetables do you eat in a day?

How many times a week do you have	pasta	?
	pizza	
	vegetables	
	chocolate	
	sugary things	
	fatty things	
	fish	
	meat	
	eggs	
	pulses	
	cakes (sweet snacks)	
	soft drinks	
	soup	
...		

ECOLOGY

How many times a week do you have a bath/shower?

How many minutes does your bath or shower take?

How many recycling bins have you got at home?

How many times a week do you go to school	by	bus	?
		bike	
		car	
		foot	

How often do you	turn the tap off while you	wash your hands	?
		have a shower	
		brush your teeth	
	switch off the lights when you leave a room		
	use the correct bin		
	pick up litter when you see it on the floor		
	drop litter on the floor		

I always/often/rarely/never ...

Do you recycle?

Do you recycle paper/glass/plastic?

Do you turn the tap off when you wash your hands / have a shower / brush your teeth?

Do you switch off the lights when you leave a room?

Comparing language frame

More/Fewer pupils had fruit/a sandwich/cake/'other'/nothing on day X.

X pupils had fruit/a sandwich/cake/'other'/nothing on day X.

The difference between the highest and the lowest number is ...

On day X, more/fewer pupils had ... than ...

On day X there is a higher difference between ...

X per cent of the pupils had ...

The percentage of pupils who had ... is higher/lower than...

Reporting language frame

Most of the pupils...

X per cent of the pupils...

Nobody...

We noticed that...

One example of this is...

For example/instance...

However/But...

On the one hand... On the other hand...

In addition...

Moreover/Furthermore...

To sum up...

We concluded from this that...

We/One can conclude that...

Giving advice language frame

...is good/bad for...

... is good/bad because...

You should...

If you want to..., you should...

So,...

For this reason...

That's why...

...is because...

The reason for this is that...

This is due to...

If ... [happens], (then) ... will ... [happen].

If ... [happened], (then) ... would ... [happen].

If you ... [did], (then) ... would ... [happen].

Teacher assessment criteria: Lessons 1, 2 and 3 - A survey

Name	can organize themselves into groups	can assume the functions of a specific role	can form questions and answers about good and bad habits	can answer questions	can prepare a questionnaire	can conduct a survey	can gather and organize data	can use English for communication	can participate in the tasks

Teacher assessment criteria: Lessons 0, 4, 5 and 6 – Charts

Name	can assume the functions of a specific role	can read charts, specially line graphs and pie charts	can create charts, specially line graphs and pie charts using percentages	can use English for communication	can participate in the tasks

Teacher assessment criteria: Lessons 7, 8 and 9 - Frequency and average

Name	can assume the functions of a specific role	can calculate absolute and relative frequency	can calculate range, median, mode and mean	can use English for communication	can participate in the tasks

Teacher assessment criteria: Lessons 10, 11 and 12 - Our class

Name	can assume the functions of a specific role	can analyse data and draw conclusions	can write a report	can point out advantages and disadvantages	can give advice	can present conclusions to the classmates	can use English for communication	can participate in the tasks