

9-11 YEAR OLDS CATEGORIES & DATA HANDLING

Here are some notes on the data handling skills we practised in today's lesson. You will also find an extension activity which you can complete in your own time.

MEAN, MEDIAN & MODE

There are three main types of average which we discussed in our lesson today:

Mean: This is what most people mean when they say 'average'. Add up all the numbers, then divide how many numbers there are.

Median: This is the 'middle' number in a data set. Write the numbers in ascending order then find the middle number. If there is an even number of items, find the number half way between the two middle numbers.

Mode: This is the number which appears the most. Simply find the number which appears most often in the data set. If there are multiple numbers which appear the 'most', list them all. If no number is repeated, then there is no mode.

As well as being able to calculate these averages, it's important to understand what they can each demonstrate, as well as any possible shortcomings.

Number of items bought by ten shoppers on different days:

Tuesday 4.00pm

3, 4, 2, 10, 65, 3, 16, 3, 32, 2

Mean = 14

Median = 3.5

Mode = 3

Saturday 10.00am

12, 40, 5, 38, 75, 2, 42, 18, 2, 56

Mean = 29

Median = 28

Mode = 2

- The mean can be affected by outliers. The '65' on Tuesday makes it a lot larger.
- The mode isn't really representative of the data on Saturday: just because two people bought 2 items doesn't mean this matches what most others bought.

TAKEAWAY CHALLENGE

Find Your Own Averages

Averages can be calculated from almost any data around us. Have a go at collecting your own data, then calculate the mean, median and mode. Once you have made your calculations, see if you can establish which average you think is best for that kind of data. Here are some ideas for data you could collect:

measurements of family & friends, cars driving down the street, make your own survey

Parents - We would love it if you could share your child's work with us on Twitter, Facebook and Instagram using #exploreathome