**3.4.4 Statistical Skills**

**Averages**

* There are three; mean, median and mode.
* When calculating the mean, pupils sometimes forget to press = on their calcs and so they end up calculating the wrong mean. You will probably need to remind them to either ‘press =’ or use the bracket keys on their calcs.
* When calculating the median a few pupils will forget to put them in order first.
* You can have one mode, two modes (bimodal) and no mode. Pupils know what mode means but do struggle when the see the were modal. You will need to remind them that it means the same thing!
* The averages all serve a purpose with the right set of data. E.g. when finding the average height, the median is best used as the mean could be distorted by someone particularly tall (or short) and there could well be no mode (for obvious reasons I hope)
* I’ve hyperlinked some posters [here](file:///T:\NUMERACY%20ACROSS%20THE%20CURRICULUM\Science\averages%20poster.pptx) for you to print out and display around your classroom.

**Cumulative frequency**

* I’ve hyperlinked a [ppt](file:///T:\Staff%20Resources\Maths\All%20Powerpoint%20materials\Powerpoint%20maths.com%20materials\4.%20Data%20Handling\Cumulative%20Frequency%20Curves.ppt) for you to have a look at. It tells you everything you need to know.
* Ask the maths dept for support if you need it when the time comes.

**Calculating percentage increase and decrease**

**To calculate the percentage increase:**

**First:** *work out the difference (increase) between the two numbers you are comparing.*

**Increase = New Number - Original Number**

**Then:**  *divide the increase by the original number and multiply the answer by 100.*

**% increase = Increase ÷ Original Number × 100**.

**If your answer is a negative number then this is a percentage decrease.**

### To calculate percentage decrease:

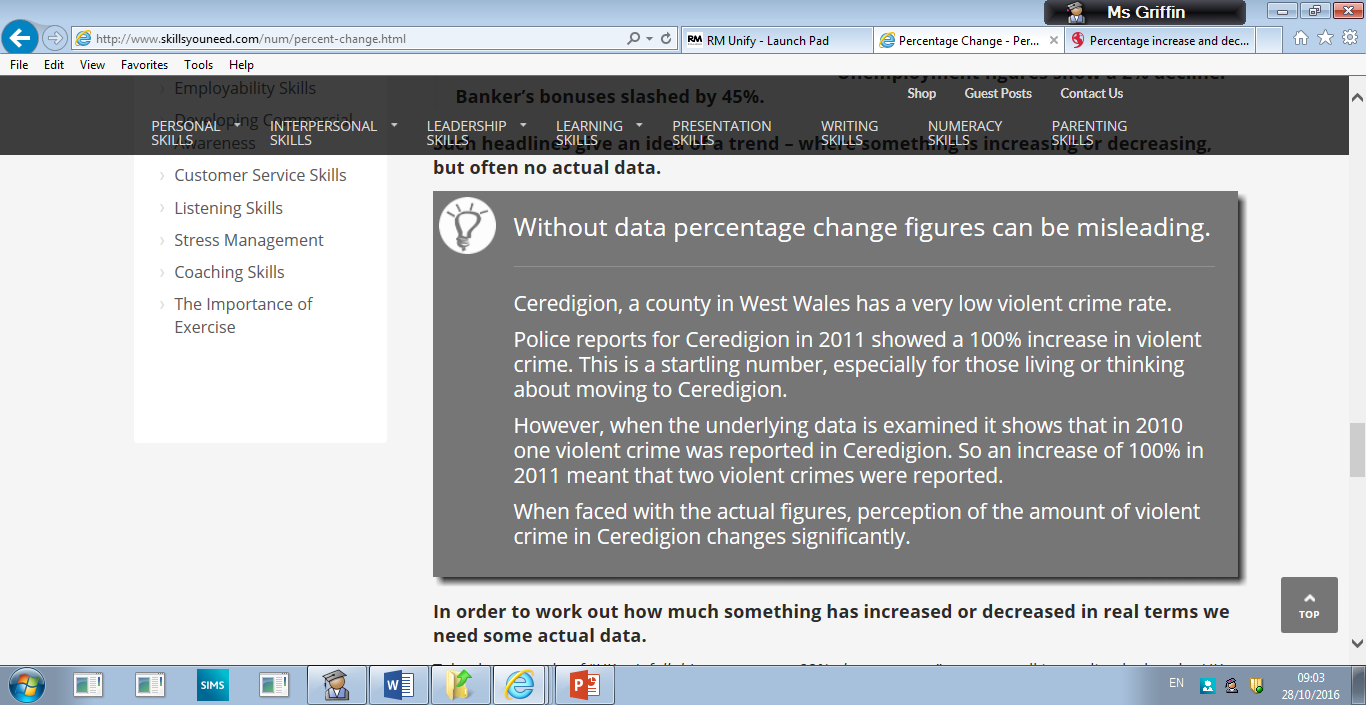
**First:** work out the difference (decrease) between the two numbers you are comparing.

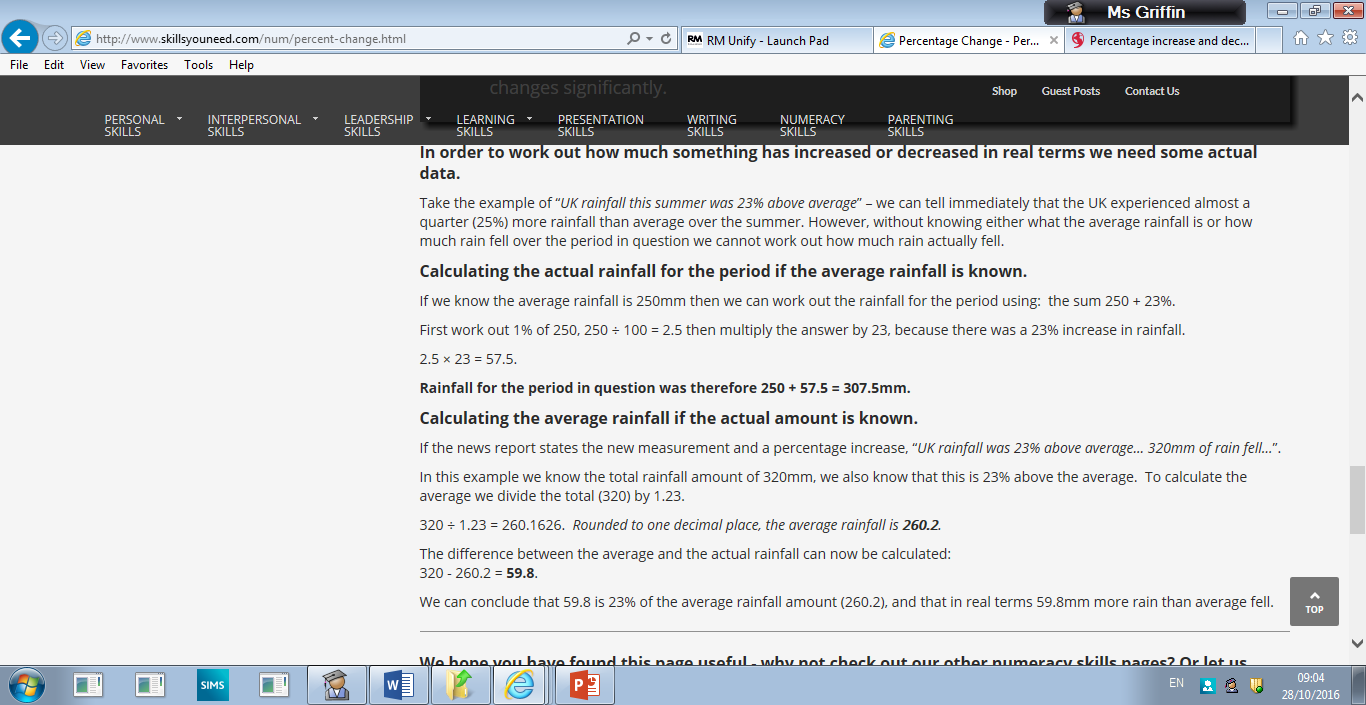
**Decrease = Original Number - New Number**

**Then:** divide the decrease by the original number and multiply the answer by 100.

**% Decrease = Decrease ÷ Original Number × 100**

**If your answer is a negative number then this is a percentage increase.**





**Bivariate data, trend lines, interpolation/extrapolation**

* These are all covered in GCSE statistics which the maths dept no longer do. You are welcome to have a statistics textbook if it helps. I’m also happy to help plan for and/or deliver