Using a counting stick in the 10 minute starter

These activities can be done on a standard counting stick that is marked in 10 equal intervals. There are some activities, particularly the equivalence of fractions, that can benefit from sticks marked in a variety of fractions.

You can use a broom handle or similar, plumbers pipe lagging works well as you can pin numbers onto it. If you use a solid pole then velcro tabs are an effective way of fixing labels. A 1 metre length is appropriate.

For Tables

Get pupils to count along in multiples of numbers; 4, 8, 12 …..
Get pupils to say the whole table as you move along; 1x4=4, 2x4=8, ….
Label a place with a key number e.g. 24 and get pupils to work out the value of the markings before and after.

For Negative Numbers

Use the stick vertically.

It can be useful to use a 2metre length to allow more scope in the numbers used, particularly as it will take a while before you are counting in step sizes greater than 1. If possible use a specific stick for negative numbers with zero NOT in the middle. This then allows greater flexibility in the emphasis of numbers used, ie have a majority of positive numbers as you start the concept, then invert the stick to give a majority of negative as pupils understanding improves.

Get pupils to count up and down in various steps, bridging through 0.
Add labels for start and finish and get pupils to construct a complete sentence, e.g $4 - 7 = -3$.

For Probability

This can be used for associated vocabulary work, by asking pupils for words that would correspond to a particular position along the stick. If needs be the ends can be labelled impossible and certain to create a 'sliding scale'. It is a good way of enforcing that evens only applies to an equal chance and not to a multitude of 2 state outcomes.

If the ends are labelled 0 and 1 it then allows work to progress from language to fractional outcomes

For Fractions

Count along in fractional steps, as in tables.

Focus particularly on tenths

Make a variety of sticks, subdivided into varying fractional quantities. Use 2 sticks at the same time to show equivalence. Hold up the 2 sticks so that $^2/_6$ can be seen as equal to $^1/_3$.
You can also use this to compare 2 fractions, e.g. $^2/_5$ will be greater than $^1/_3$
For equivalent fractions you can use two multiplication tables concurrently so that as each table progresses the fractions (assign one table to the top of the stick, the

other to the bottom) remain equal. [This was used by Walt in his ratio lesson in the year 7 training video].

For Decimals

Label the ends 0 and 1 and work in tenths. Extend this to multiples of tenths.

Work in multiples connected with a table, e.g. do the 15 times table then steps of 1.5

For Percentages

Label the ends 0 and 100, work along it in multiples of 10. This is easy but a precursor to the activity below.

For equivalence of F, D and %

Stress the co-existence of all 3 and link back to individual work on each. Get pupils to give all 3 possible 'value' to a particular position e.g. 0.3, 30%, $^{3}/_{10}$.