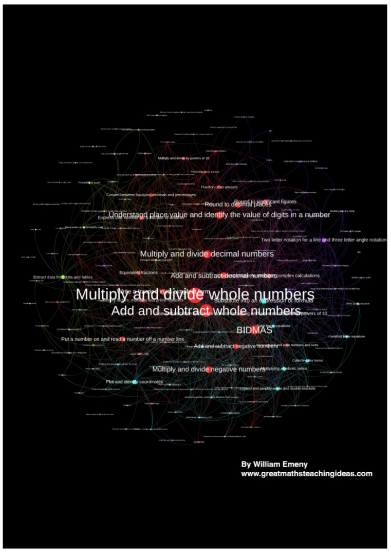
Learning and Teaching Mathematics!

"What you're looking at is the GCSE Mathematics curriculum. Each node represents a topic, e.g. transformations, ordering decimal numbers, frequency polygons etc. There are 164 nodes in the diagram representing all topics on both the foundation and higher tier curriculum. The nodes are connected by 935 links. Each link represents a connection between two topics whereby one is the prior learning required to be able to access the other. For example, equivalent fractions is linked to adding fractions because you need to be able to do the former before you can learn how to do the later." http://www.greatmathsteachingideas.com/2014/01/05/youve-never-seen-the-gcse-maths-curriculum-like-this-before/

The New GCSE:

http://www.resourceaholic.com/2016/01/newcontent1.html

http://justmaths.co.uk/wp-content/uploads/2014/11/Introducing-the-new-maths-GCSE.pdf



Flipped Learning:

This is a term being used fairly frequently in education circles now. If you would like examples of how it can work in practice then I would recommend looking at Bruno Reddy's website to see how he uses flipped learning with his year 7 class: http://www.mrreddy.com/project24/autumn2week1.htm

There are a handful of videos designed for flipped learning in this link http://www.mathspad.co.uk/flipped.php and Mr Corbett has lots of videos that could be useful (https://www.youtube.com/playlist?list=PLCkAjxP1zN67tTQxacen-m5wKtBviefmm)

TED talk (20 mins long) on Flipped Learning: https://www.youtube.com/watch?v=nTFEUsudhfs&feature=youtu.be

AfL activities:

http://mediandonsteward.blogspot.co.uk/search/label/practice%20grades%20A%20%26%20A* has questions on a variety of topics. If you open the file and go towards the end you will find printable copies. This could be completed towards the end of the lesson as an "exit ticket" exercise, or as a mini plenary to transition between episodes of a lesson.

If you would like a template for exit tickets then have a look at this blog here: http://ictevangelist.com/exit-tickets-keep-grow-change-templates/ Templates are at the bottom of the page.

I am attaching the 100 plenaries powerpoint. Not all suggestions are applicable in maths but it is worth a look

Mixed Resources:

Some maths fail pictures that could be on the board as a settling activity at the start of the lesson: http://saravanderwerf.com/2016/01/03/math-wall-of-shame-80-printable-pics/

Starting with quick questions can be a great way to keep prior knowledge fresh. There are some questions here that you can display as an early episode of a lesson, including a settling activity. http://www.accessmaths.co.uk/9-1-starters.html

Real life graphs: a useful demo linking graphs to their real life source: http://www.emaths.co.uk/images/tutorials/FillingFlasks_Graphs.swf