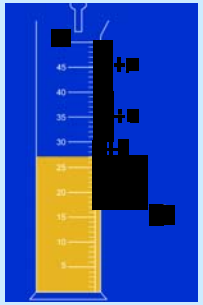
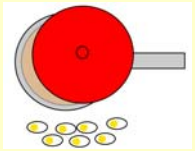
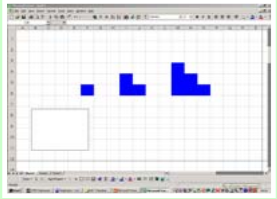
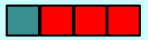
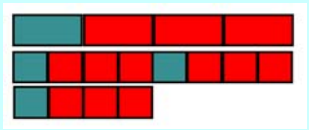
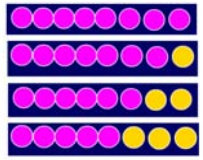
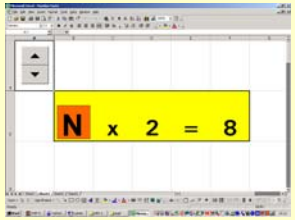
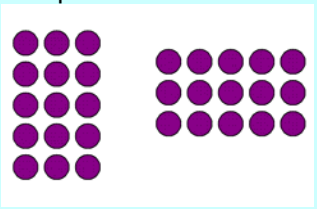
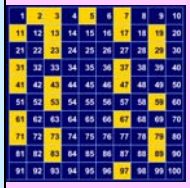
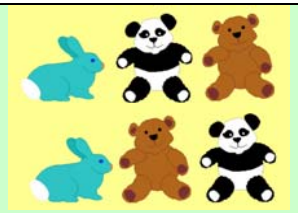
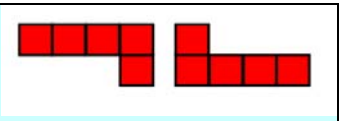
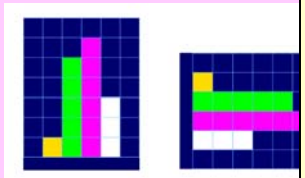
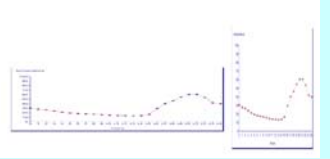
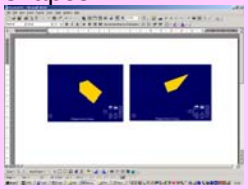
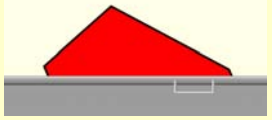
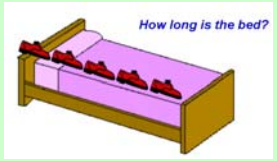
Exploiting your interactive whiteboard in mathematics

	Highlight/annotate	Screen capture	Hide and reveal, spotlight	Copy, group, paste	Rotate, stretch
Numbers and the number system	Use the Measuring Cylinder ITP to help children to round to the nearest 10 or 100 within a context.  Annotate the ITP to show the jumps to the nearest multiple of 10 or 100.	Using the Decimal Number Line ITP, help children to round numbers with decimal places to the nearest integer or tenth. Screen capture their annotations and let the children use them to support their explanations.	Reveal different numbers of objects then hide again using the blind – develop children's estimation skills and ability to subitise.  Count objects, then add 1 more while they are hidden. Help children to visualise 'one more'.	Build up the steps in a sequence by copying and pasting each pattern and then adding new elements.  Use this approach to develop understanding of what is changing in the image each time.	Create a simple pattern of different coloured squares.  Copy the images, paste it alongside the original, then stretch to explore equivalent ratios and proportions and how they can be simplified. 
Calculations	Use the Grouping ITP to explore different remainders when dividing by different amounts. Use the draw tools on your interactive whiteboard to annotate the groups onto the ITP.	Use the number facts ITP to capture patterns of similar calculations. Reorder and manipulate in IWB software. 	Hide one number in a number sentence in a spreadsheet. Use the spinner to change the hidden number. Ask the children what it could be. 	Group and manipulate images of counters to explore number bonds up to 10 and the fact that addition can be done in any order. 	Represent an array using on-screen counters or the multiplication facts ITP.  Rotate the array to explore corresponding multiplication facts.
Solving problems	Highlight key information in a word problem. Pull out and organise together key facts, eliminate redundant information.	 Use an ITP to test hypoth eses about mathe matical puzzles.	Hide particular parts of a problem. Analyse the available information and what might be missing. Substitute information into the problem and discuss the effect on the solution.	Model working systematically by copying one solution, pasting and then changing one thing at a time.	Make different pentominoes using squares of different colours. Rotate the pentominoes to make sure all the solutions are unique.

		Screen capture children's work as a record of the problem solving process and a prompt for them to explain their reasoning. 			
Handling data	Demonstrate the process of annotating graphs and charts to help interpret the data: - mark mid points on scales - circle maximum or minimum points on the graph	Use an ITP to represent information, eg on the Area ITP. Screen capture the graphs into your whiteboard software. Rotate the graphs to help children interpret information presented in unusual orientations. 	Hide particular parts of a graph or chart, for example by colouring over them using the same colour ink as the background. Encourage children to tell you the 'story' of the graph – what it could represent, what the possible units might be.	Collect and record information quickly and easily using copied images. Group objects together systematically and represent in a pictogram.	Paste the same graph several times into a document. Manipulate the graph by stretching different axes and compare the results. Discuss which graph you would use to persuade someone to agree with you. 
Measures, shape and space	Annotate over compound shapes made from rectangles to show: - how to find the perimeter - different ways they could be split into rectangles	Encourage children to record key steps in explaining their reasoning about shapes.  Get them to print screen an ITP into a word document when working independently and record their explanations.	Use the spotlight or blind facility to focus on different parts of a shape or image. 	Explore uniform and non-uniform measures by measuring the length of an image using different pictures of objects, then the same object copied and pasted several times. 	Draw a simple shape on your whiteboard, eg a pentagon. Copy and paste the shape several times. Rotate the copies through different degrees. Stretch some of them along one or more than one axis. Discuss what the different shapes now have in common and what is different.