Incorporating NUMBERGYM into daily planning

Years 3 & 4 *(8 -9 year olds)*	**Blocks A, D, E** **Counting, Partitioning, Calculating**

Short activities (e.g. Starters)

		User Guide page
Guess my Number	*Two main ways of using this activity:* • *On IWB, dividing class into 2 groups – one pupil to perform on board with group support* • *As a longer activity, pupils in pairs focusing on a particular number line.* *Select the decimals option.*	*NG 18*
Place Value 2	*Set challenges at the appropriate level for pupils to discuss.*	*NG 20*

Longer activities (e.g. Main)

Flats, Rods, Cubes 1	*Model 2 and 3-digit numbers as quantities.*	*NG 4*
Flats, Rods, Cubes 2	*Challenge pupils to estimate quantities, including the need for exchange between columns – could be a Starter.*	*NG 7*
Flats, Rods, Cubes 4	*More intensive consolidation for those who need it in reading and recording 2 and 2-digit numbers.*	*NG 9*
Gattegno Chart 1	*Invite pupils to IWB to demonstrate multiplying and dividing 2 and 3-digit nos. by 10.*	*NG 14*
Gattegno Chart 2	*Provides consolidation of the above – pupils working on laptops, independently of teacher.*	*NG 17*
Place Value 1 & 2	*Creative use of place value knowledge to combine operations to make a target number. Pairs working together independently or also suitable as short class activity.*	*NG 19*
Giving Change	*Apply the principle of finding difference using the empty number line as a whole class interactive teaching session or as independent work on laptops.*	*NG 65*
Exploring Fractions	*Use as a teaching aid and to set challenges, e.g. hide the numbers and ask them to re-create the pie shown on the left.*	*NG 21*
Equivalent Fractions	*Use as an interactive teaching aid, extending the challenge by hiding the pies.*	*NG 23/4*
Same Difference	*An interactive teaching aid – for demonstrating and setting challenges.*	*NG 67*
TableTrainer: Tables Extender	*Two main ways of using these activities:* • *On IWB, with a pupil performing with support from rest of group, or* • *Individual or paired activity on laptops.*	*BB & TT*
Mental Maths Challenge: Bronze 3,4,5, 6,7; Silver 8	*Two main ways of using these activities:* • *On IWB, with a pupil performing with support from rest of group, or* *Individual or paired activity on laptops.*	*MMC*

Note

The above are intended to be ideas for supplementing the planning of a Unit of work. We believe that pupils' engagement with images and models of mathematical ideas through the medium of software can enhance their understanding as well as their motivation and love of the subject.

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Years 3 & 4 *(8-9year olds)*	Blocks B, E, Securing number facts and relationships

Short activities (e.g. Starters)

		User Guide page
BondBuilder	*Vary the level so that different groups are catered for. Invite pupil to come to IWB and encourage rest of class (or group) to support them by calling out. How quickly can they complete the level?*	*BB*
Mental Maths Challenge: Copper 1 and 3	*Invite pupil to IWB to tackle the Doubles and Halves activities, supported by others. Can they do them correctly?*	*MMC*
Great Turtle Race	*Games 1 or 2. Play, as above, or in pairs in computer suite or laptops – with each pair starting on the word ,Go!*	*NG 37*

Longer activities (e.g. Main)

User-defined Spinners: Bingo:	*Each player has board consisting of a blank 3 by 3 grid. Ask them to fill in each of the squares with a number that might be the answer when the spinner is spun. [You can easily change what is on those spinners using the keyboard]. Now start the game……..* • *who is the first to get a line of 3? Finish the board?* • *What combination would give them the number they are waiting for? Any other combination?* • *Can they devise their own Bingo Game?*	*NG 39*
Exploring Venn diagrams 1	*Drag three counters onto the diagram (e.g. 2, 3, 4). What is the total in the Circle? In the Square? Click on the small shapes in the top left hand corner to hide the solutions. Click again to reveal them.* *Vary the trio of numbers, then increase to four counters.*	*NG 32*
Exploring Venn diagrams 2	*Set a pair of target totals (e.g. 4,5). Ask pupils to come to the board to find a new way of getting that shown above each diagram. Can they find ways using 2 counters? 3? 4? etc. Introduce the triangle.* *Print off the template sheet in the User Guide Appendix for pupil recording.*	*NG 33*
The Vennster Challenge	*A whole class activity or one to work at in pairs – with the level of challenge set appropriately.*	*NG 34*
Fuzzles	*Focus on a single operation – e.g. just division, or just subtraction before advancing to either/or.* *A higher level challenge is to set it to 3 number cards then to hide them. Press GO and ask them to predict what the number cards might be. They could score a point for each one that is correct.*	*NG 36*
Estimating Money	*Set the time to be not long enough to allow counting – they are forced to estimate or just long enough to allow quick counting.* *Can be a shorter activity too.*	*NG 45*

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Years 3 & 4 *(8-9 year olds)*	Blocks C, D Measures	

Short activities (e.g. Starters)

		User Guide page
About Time!	*Ask your own questions using the analogue/digital clocks and the Hide option.*	*NG 34*

Longer activities (e.g. Main)

Ordering Data Length; Weight; Time	*Each set of cards can be used as a basis for discussing the relationship of units.*	*NG 31*
Liquid Measures	*Provides intensive practice for pupils, working independently. Progression is built-in.*	*NG 75*
Reading Number Lines	*Provides intensive practice for pupils, working independently. Settings can be used to offer a differentiated challenge.*	*NG 76*
Area & Perimeter of Rectangles	*Interactive teaching tool to focus on the two units of measure.*	*NG 78*
Mental Maths Challenge Gold 3	*Use the cards in Practice Mode to discuss the meaning of the alternatives.*	*MMC*

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Years 3 & 4 *(8-9 year olds)*	**Blocks B, D** **Understanding Shape**

Short activities (e.g. Starters)

		User Guide page
Last Block Down	*Set up a 2-player game, representing 2 teams. Encourage rest of team to reason about the best move strategically and offer advice. Relate strategy to the relative areas of the blocks.*	*EM 20*
Angle Challenge	*Invite pupils to the board to have a go. How accurate are their first estimates?*	*NG 71*

Longer activities (e.g. Main)

Blocks in Boxes	*Invite someone to fill the shape with blocks of just one colour. 2 colours? Only symmetrical arrangements? All 4 colours?*	*EM 21*
Shape Builder 1	*Create as many different triangles as possible on a 3by3 dotty grid. Discuss and record how they are different.*	*NG 82*
Shape Builder 2	*Create different pictures using exactly 5 vertices. Describe each one and classify them.*	*NG 83*
Turtle tracks 1	*Copy a picture from the collection (p.85)*	*NG 85*
Turtle tracks 2	*Create regular polygons of different sizes and make a pattern with them. Discuss tessellating properties.*	*NG 87*
Exploring Angles	*Look at angles around the Compass or the clock face. Hide the angle and ask them to calculate it.*	*NG 69*
Route Tile Challenge	*Pupils work independently to solve spatial awareness puzzles.*	*N92*
Track Tiles: Pattern Maker	*Create a 2by2 tile unit and reflect it in a horizontal and a vertical axis. Translate the new tile unit (16 tiles) across the screen. Admire the pattern.*	*NG 96*
MathsArt: KaleidoDrawing	*With the lines of reflection set to 1, pupils can create letters of the alphabet with a single line of symmetry – horizontally and vertically.*	
MathsArt: Pattern Blocks	*Pupils create their own tessellations using properties of common polygons.*	
MathsArt: Mosaics	*Pupils can work in 2 or 4 quadrants to build up mosaic patterns with one or 2 lines of symmetry.*	

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