



## Intent – Our guiding principles

- We follow the national curriculum for primary mathematics.
- At the end of key stage 2, children should be at ARE for mathematics at least in line with national figures. Children should acquire GDS for mathematics at least in line with national figures. Where children aren't at ARE, they will have been supported to make at least expected progress from their starting point at Chesswood.
- Additionally, Chesswood mathematicians by the end of KS2 will:

*Be confident with compact written methods for all 4 operations.*

*Have secure knowledge and fluent recall of times table knowledge and division facts.*

*Be confident to talk about their mathematical understanding – those who struggle to talk may use diagrams or jottings to reflect this. Children will be fluent in using knowledge of related facts.*

*Be familiar with key mathematical language and visual representations.*

*Have a range of problem-solving strategies to help solve problems.*

- Maths coverage at Chesswood follows White Rose Schemes of Learning. This allows for mastery within topics. To ensure topics are regularly visited within lessons, Turbo Maths sessions are used to revisit the breadth of curriculum topics.
- Frequent assessment opportunities enable staff to identify priorities for coverage and adapt coverage as necessary – these include Nasty Maths assessments within lessons, end of unit assessments based on White Rose materials and termly PUMA assessments. A detailed question level analysis is carried out on the Autumn PUMA assessment.

## Implementation – What Maths looks like at Chesswood

5 core lessons of 1 hour (5 hours)

4 morning starter boards based on written methods (28 minutes)

At least 2 Turbo Maths sessions per week (1 hour in total – suggested 2 x 30 mins but can be 3 x 20, 4 x 15)

Additional 30 minutes coverage to support accelerated progress in

- Coverage – follow White Rose Scheme of Learning. Supplement White Rose resources with CGP, Target Maths (for extra fluency) and I See Reasoning and I See Problem Solving (for extra reasoning and problem solving). When identifying success criteria within lesson – I know that (declarative), I know how (procedural) and I know when (conditional) statements may be used to support differentiation.
- Most Maths lessons begin with Nasty Maths assessment. This is to establish the starting point in learning. Where possible, this question should include planning for error – including common misconceptions as possible answers which can then efficiently be addressed during the feedback to the Nasty Maths. Planners should follow the REACT model to misconceptions (Research-Explore-Address-Consider-Tasks). Most of the class should attempt the Mega Challenge, which is pitched at ARE for the current year group. A small group of children who are working significantly below may need to access the Challenge, which would be aimed below ARE but on related content – it may also be a more heavily scaffolded version of the Mega Challenge depending on coverage intentions for the lesson. On occasions, a lesson may not need a Nasty Maths assessment – for example if the starting point for an objective was already established in the previous lesson. This should then give rise to identifying which children require further input and support and which children can be moved on to work independently and tackle richer questions.
- Maths planners should use planning guidance provided by both White Rose and the non-statutory June 2020 guidance to help ensure appropriate visual representations and key vocabulary are embedded within lessons. These are key to developing understanding and equipping children with tools for reasoning. These include but are not limited to bar models, part-whole models, Dienes, counters in place value columns.
- Metacognition should be used to train children how to solve questions using their knowledge. Children should be taught problem solving strategies when they have the knowledge to attempt solving the problem.
- Where possible, children should be exposed to current year group coverage and scaffolded to access it where needed. Extra fluency can be used to help support the overlearning of skills and build confidence before trying problems.
- Within 2 weeks of completing a unit as identified on White Rose, children should complete the online assessment – these can be found here:

<https://www.chesswood.w-sussex.sch.uk/page/?title=In+School+Maths+White+Rose+Blocks+Assessments&pid=1363>

HOME > LEARNING > CURRICULUM > MATHS > IN SCHOOL MATHS WHITE ROSE BLOCKS ASSESSMENTS

- Starter Boards follow Trivium model of novice to expert - I do, We do, You do – depending on need in year group and confidence with the methods being used.
- Turbo Maths – ensure variation of coverage – blank template saved here Y:\Teaching & Learning\Subjects\Mathematics\2021-22
- Problem Solving – this is not a generic skill – there will be overlaps but children need training how to solve topic-specific problems once they have the requisite prior knowledge to access it.
- Classroom environment – this should support current learning. Each class should have a Maths working wall which would include supportive vocabulary and pictorial representations. This may take the form of a modelled method or solved question. This may also include scaffolding for learning such as key vocab/times table grids.

## Other supporting guidance/resources

Resource(s)	Where is it?	What will it help with?
<b>Numbots</b>	App installed on children's iPads <a href="https://numbots.com/">https://numbots.com/</a>	Children's place value knowledge and mental calculations – typically KS1 knowledge but useful for LKS2.
<b>TT Rock Stars</b>	App installed on children's iPads <a href="https://trockstars.com/">https://trockstars.com/</a>	Children's times table and division facts knowledge.
<b>IXL</b>	App installed on children's iPads <a href="https://uk.ixl.com/math">https://uk.ixl.com/math</a>	Targeted skills practice related to all areas of Maths curriculum. Best used either to reactive prior learning or consolidate current learning as it doesn't offer prior teaching.



## Mathematics – Two Page Policy 2022



White Rose 1-Minute Maths	App installed on children's iPads	Subitising, Addition and Subtraction mentally. Most useful in LKS2 or with significant SEN.
Multiplication Tables Check (MTC)	<a href="https://www.chesswood.w-sussex.sch.uk/page/?title=Multiplication+Tables+Check&amp;pid=1332">https://www.chesswood.w-sussex.sch.uk/page/?title=Multiplication+Tables+Check&amp;pid=1332</a>	Guidance for parents and staff ahead of the MTC including supporting resources.
End of Unit White Rose Assessments	<a href="https://www.chesswood.w-sussex.sch.uk/page/?title=In+School+Maths+White+Rose+Blocks+Assessments&amp;pid=1363">https://www.chesswood.w-sussex.sch.uk/page/?title=In+School+Maths+White+Rose+Blocks+Assessments&amp;pid=1363</a>	Low-stake end of unit assessments to help capture children's attainment at the end of a unit and inform Teacher Assessment. This can also help to identify objectives to focus on during interventions or Turbo Maths..
White Rose Maths	<a href="https://resources.whiterosemaths.com/resources/">https://resources.whiterosemaths.com/resources/</a> Log in details - Username: dlycett@chesswood.w-sussex.sch.uk Password: Geqw1m1\$\$AS3  Y:\Teaching & Learning\Subjects\Mathematics\2020-21\White Rose Updated Schemes <a href="https://www.chesswood.w-sussex.sch.uk/page/?title=Maths+Curriculum+Content+and+Sequence&amp;pid=1073">https://www.chesswood.w-sussex.sch.uk/page/?title=Maths+Curriculum+Content+and+Sequence&amp;pid=1073</a>	Planning – Scheme of Learning. Within the premium resources, each lesson has a teacher flipchart and resources provided. There are also guide videos (used for home learning) which can help demonstrate ways to explain concepts to the children.  The latest Schemes of Learning are downloaded in the file path shown on the left.
Target Your Maths Y1/2/3/4/5/6 CGP Maths Y3/4/5/6	PPA/3HG	Extra Fluency needed - Based on feedback and experiences.
Planning Documents	Y:\Teaching & Learning\Subjects\Mathematics\2021-22\Planning Masters	Planning Masters to support the planning of core lessons and Turbo Maths coverage.
I See Problem Solving (LKS2 and UKS2)	Y:\Teaching & Learning\Subjects\Mathematics\2021-22\I See Problem Solving	Lesson Resources - Ready-to-use problem solving tasks from across the curriculum which could be used within core lessons if needed.
I See Reasoning (Y3, Y4, Y5, Y6, LKS2 and UKS2)	Y:\Teaching & Learning\Subjects\Mathematics\2021-22\I See Reasoning	Turbo Maths/Lesson Resources - Great source of ready-to-use reasoning questions from across the curriculum which could be used for Turbo Maths questions or as extra rich resources within core lessons if needed.
Mathematics guidance: key stages 1 and 2 June 2020	Y:\Teaching & Learning\Subjects\Mathematics\2021-22\Government Guidance	Planning – this has teacher guidance for teaching various aspects of the curriculum, including pictorial representations and key vocab/phrases. The ready-to-progress criteria (key objectives in this document) are referenced on the White Rose SOL – assessments for most of these are on the Chesswood website here: <a href="https://www.chesswood.w-sussex.sch.uk/page/?title=In+School+Maths+Assessments&amp;pid=1104">https://www.chesswood.w-sussex.sch.uk/page/?title=In+School+Maths+Assessments&amp;pid=1104</a>
NCETM Primary Video Lessons	<a href="https://www.ncetm.org.uk/in-the-classroom/teaching-maths-through-the-pandemic/primary-video-lessons/">https://www.ncetm.org.uk/in-the-classroom/teaching-maths-through-the-pandemic/primary-video-lessons/</a>	Support resources provided for certain aspects of the curriculum which may support consolidation lessons.
Oracy Resources	Y:\Teaching & Learning\Subjects\Mathematics\2021-22\Oracy	Supporting the use of key vocabulary and sentence stems within lessons.
Calculation Policy	Y:\Teaching & Learning\Subjects\Mathematics\2021-22\Calculation Policy	To support Starter Boards and progression of methods throughout the school.

### Whole School celebrations

Numbots – All children begin using Numbots when they join the school in Year 3. The expectation is that the number of children using Numbots will reduce as the years go up. At the end of the Autumn term, children who are at least securely meeting in Y3 will no longer be expected to use Numbots routinely. Badges are awarded for children that reach the Gold, Platinum and Diamond badges. Children in older year groups will still use Numbots as appropriate if they are below ARE.

TT Rock Stars – All children begin using TT Rock Stars when they join the school in Year 3 – however this only becomes the main focus of homework for those that are securely meeting or above from the end of the Autumn term. Children set a baseline speed during test week in Autumn 1. In some cases children are unable to set a baseline speed due to lack of times table knowledge and so will revisit this termly. All children should attempt Studio 10 times as a minimum termly. Planning time from Maths sessions during test week should be allocated to this. Badges are awarded for children who earn Rock Star, Rock Legend and Rock Hero status with 80% accuracy. It is expected that the bulk of children who earn badges will do so when in Year 4, but there will be exceptions to this.

Weekly top 10s – Coins Earned and Studio Speed for all year groups.

Display – In Computing Suite and on the TT Rock Stars Hall of Fame in Y4 corridor.

Competitions - Make £5 Grow. Young Enterprise opportunity which provides Y6 children with the opportunity to earn the funding for end of year enrichment tasks.