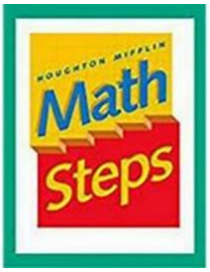
Rationale for Maths at Curnow School.

School Context

Curnow school is a 2-19 specialist provision for students with special educational needs. We have two learning pathways within school. Our curriculum is divided in to the Learning to Learn and Ready to Learn strands, the EYFS curriculum and the Post 16 curriculum. Our Learning to Learn pupils are assessed using annual outcomes broken down into termly targets. The engagement model looks at how the children learn. Our ready to learn pupils follow a curriculum based on the national curriculum, split into the core subjects (including Maths), the creative curriculum and understanding the world. At Curnow we are proud of the levels of engagement in the classroom which is supported by teacher's knowledge of how to plan a highly individualised timetable which takes into account pupil's interests and learning styles.

Intent

At Curnow School we believe that all pupils should experience every aspect of maths but with a more in depth focus within the areas of number, measure and money. We believe that theses areas of maths will have the biggest impact on their lives post education. Our Maths offer will enable all pupils to develop their maths skills which further prepares them well for their next step/ stage becoming more fluid in the fundamentals of mathematics. Our curriculum will encourage pupils to use their skills to reason mathematically, use the key vocabulary obtained appropriately which encourages them to apply their maths skills to solve problems within their everyday lives with greater confidence.



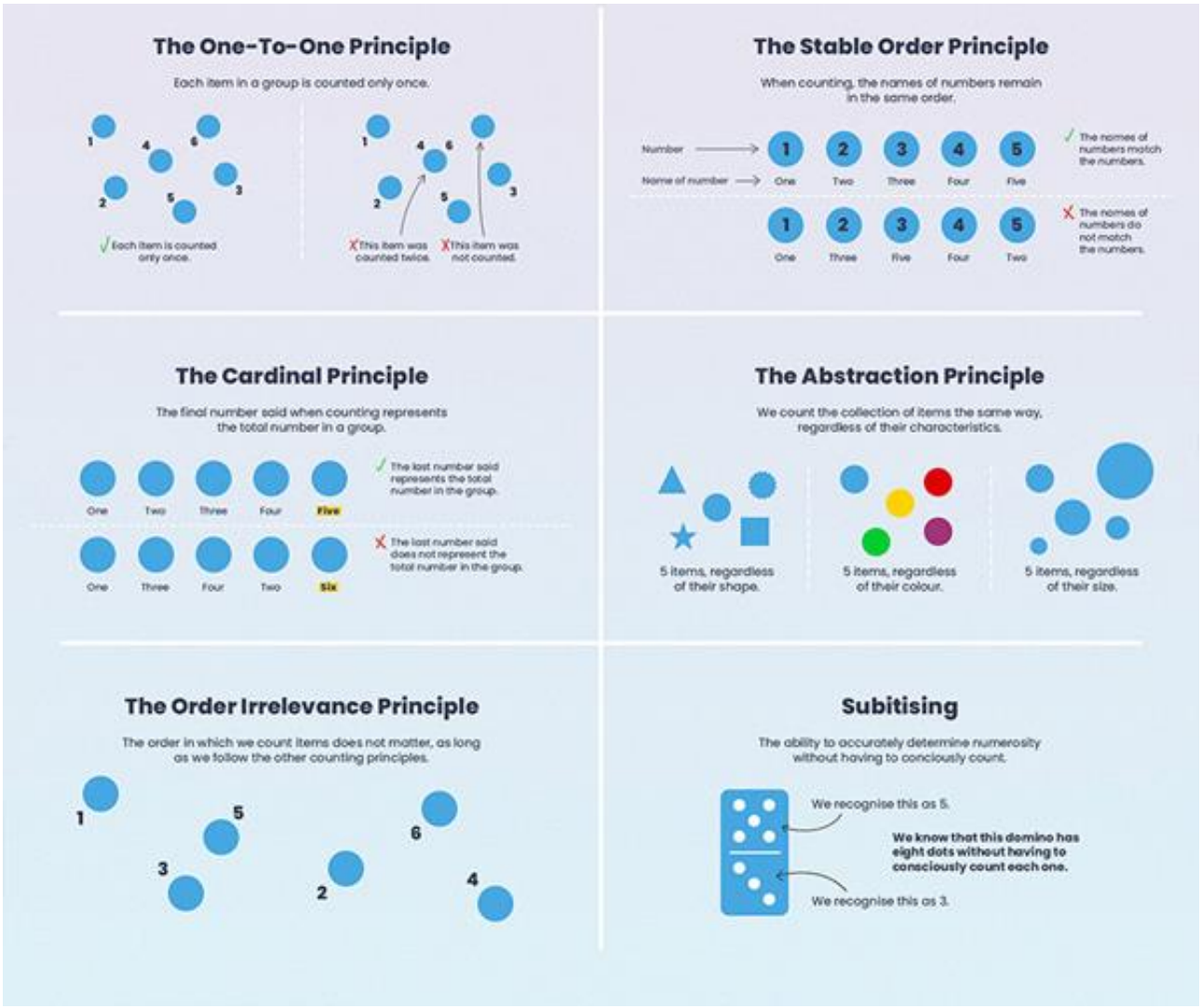
With pupil's individual pathways in mind, our intent is that pupils will:

- develop fluency in the pre-requisite skills found within the engagement model (in the fundamentals of early mathematics)
- learn, use, extend & apply a wider range of mathematical language
- develop their skills to problem-solve by beginning to apply their knowledge rapidly and accurately to problems
- break down problems into a series of simpler steps & persevere in seeking solutions
- reason mathematically by following a line of enquiry
- generalise learned skills within wider settings/contexts/ real life environm

Implementation

Scheme of Learning

Pre-Reception and Reception working through the Development Matters Early Learning Goals, monitored, evidenced and assessed using the Cherry Garden assessment and Evidence for Learning. The 5 counting principles and subitising are introduced.



R2L Key Stage 1 to 2 pupils all working within similar topic areas regardless of age and ability, following the adapted White Rose scheme, to allow for mixed ability and age class groups. We do have an increased focus to ensure mastery of maths number and the continued development of the 5 counting principles and the importance of subitising, measure and money as we believe these are the areas of maths that our pupils will support their lives post school.

Maths Scheme of Work – Year 2 – Year 6

**pupil/ class assessment outcomes will determine duration (depth) of study within each maths aspect, breadth of study will be achieved across each academic year*

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value (within 10)				Measure: weight and volume		Number: Addition and Subtraction (within 10)		Geometry: Shape		Number: Place value (within 20)	
Spring	Number: Addition and Subtraction (within 20)			Measurement: Temperature	Number: Place value (within 50) (Multiples of 2, 5 and 10 to be included)		Geometry: Shape		Measurement: Length and height		Number: Place value	
Summer	Number: Multiplication and Division			Measurement: Money	Number: Fractions				Geometry: Position and Direction	Number: Place Value	Measurement: Time	

R2L, Key Stage 3 continue to work within similar topic areas, again to allow for differentiation within mixed age and ability groups. The scheme is adapted from the White Rose maths scheme at year 7, year 8 and year 9.

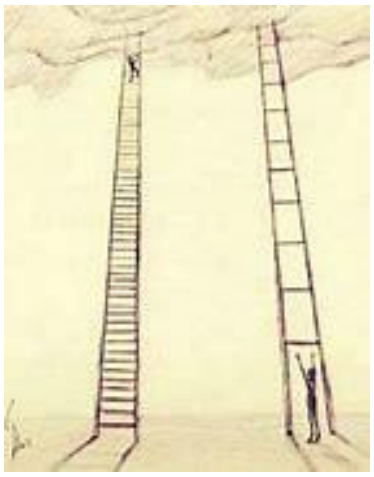
Maths Scheme of Work – Year 7 - Year 9

**pupil/ class assessment outcomes will determine duration (depth) of study within each maths aspect, breadth of study will be achieved across each academic year*

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Geometry: Shape		Number: Addition and Subtraction			Measurement: Money		Number: Place value & Statistics	
Spring	Number: Addition and Subtraction			Measurement: Length and Height		Number: Place value		Measurement: Temperature	Geometry: Shape		Measurement: Weight and Volume	
Summer	Number: Multiplication and Division			Measurement: Money		Number: Fractions		Geometry: Position and Direction		Number: Place Value/Statistics	Measurement: Time	

Maths Progress ladders – Teaching the curriculum not teaching to tick

We are further developing teacher subject knowledge by using the White Rose Maths schemes and small steps and our own progress ladders which focus on the sequence of learning in maths and ensuring that we build on previous learning



Early Steps

	Early Maths Skill Development These skills to be developed through the curriculum and through functional activities and resources to prepare pupils with the skills necessary to be able to start to use the maths areas of number, measure and geometry and handling data. These skills will; start to feed into the areas below and the 5 counting principles	Assessment	Context Post 16
	Hold Grasp Look Notice Pass Pick up Stack Select Join in number songs/chants/actions Match Point Start to count/say numbers	Stage 1-4	Number in the home Number in the Community Number within leisure Number for work

These early Maths skills will lead into more formal maths through modelling and coaching delivered via activities and experiences so that pupils can start to understand number.

	Number			
	Cardinality and Counting	Understands that the cardinal value of a number refers to the quantity, or	Stage 4-5	Number in the home Number in

R2L, Key Stage 4 and Post 16 will continue to develop maths skills and knowledge but with an increasingly greater emphasis on using and applying skills within different situations and environments with a focus on generalising skills, ensuring that they are truly mastered. Pupils will learn skills within the areas of:

- context for number
- measure, shape and space
- handling data.

These skills will then be used and applied in the wider Key Stage 4 and Post 16 curriculum.

We have 3 pathways within our Post 16 provision:

- Pathway – L2L Health and Engagement (HE)
- Pathway – L2L Social, Communication and Engagement (SCE)
- Pathway – R2L

Our L2L maths curriculum has been based on the framework by Les Staves, which supports the development of skills for pupils with PMLD. The curriculum is divided into 6 areas, which will be delivered over a half term across the academic year. This provides our pupils with the time to learn, rehearse, use and apply their, mathematical learning at a pace that is right for them. Within each of the areas there is a clear link to the Numeracy strategy and this ensures that all strands of maths are covered, ensuring equity in provision for our learning pathways.

Within their learning pupils will focus on their personal maths skills (a greater awareness of self and their immediate environment), social maths skills (awareness of themselves and others, change and communication of

change), the tools for learning, the processes that use the skills and finally the content of the learning experience (Appendix A). We further ensure that there is clear progression as the pupils move through the school, building upon learning but also widening and changing the experiences and environments in which they learn between the lower and upper school. There will be a focus on 'engagement for play' and play based activities at lower whilst at upper the focus will be on 'engagement for leisure' through more functional activities within their learning.

L2L – Maths long-term plan

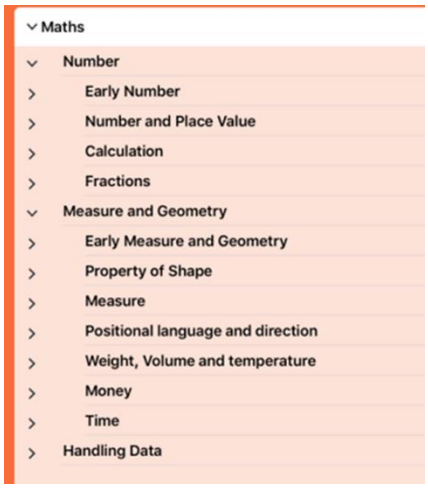
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
L2L	Sense and experience of rhythm and sequence	Sense and experience of shape, space and possession	Sense and experience of quantity	Sense and experience of time	Sense and experience of difference	Sense and experience of difference
Numeracy Strategy R2L	Counting and understanding number Using and applying mathematics	Shape, position and movement Using and applying mathematics	Counting and understanding number Using and applying mathematics	Measure Using and applying mathematics	Handling data Using and applying mathematics	Shape, position and movement Using and applying mathematics
Stands	Number and fractions	Geometry Property of shape Number	Calculation Volume, weight and money	Measure and time	Handling data Number and place value Temperatures/opposites	Positional language and direction
Examples of learning	Patterns – what comes next Number lines Counting/number songs Clapping patterns Sharing Turn taking	Exploring/ Matching/sorting shapes Environmental shapes Object permanence Choices Mine/not mine	Full/empty 1 more/1 less Higher/lower Capacity Place value Shopping	Now and next Instructions Sequence of daily activities, teeth brushing, handwashing etc	Opposites e.g. heavy/light, more/less, hot/cold etc Sorting Categories e.g. choices, pictograms	Positional language e.g. up/down, left/right Speed – slow/fast

Impact - Assessment of outcomes

Assessment

EYFS will use the Cherry Garden assessment and Evidence for Learning to assess progress and evidence pupils progress within maths

Key Stage 1 to 3 will use the SPT Maths assessment and Evidence for Learning to assess progress and evidence pupils progress within maths.
We are using a personal learning Goals (PLG) format on EFL to set longer term targets for pupils to master e.g., place value within 10 and then using the SPT maths framework for the short-term targets. In this way we can show progress towards the short-term targets over a term and progress towards longer term maths mastery targets over a year.
E.g., LT Target: Place value within 10
ST Target: To understand cardinality 'howmanyness' of a group)



Accreditation
We are focused on ensuring that accreditation is in place to celebrate learning that has been achieved through our curriculum and that it does not drive our curriculum, currently pupils do not need a qualification to be able to access their next step in education, therefore accreditation needs to be meaningful for the pupils and enhance their learning and evidence the progress they are making.
We currently offer maths units for Post 16 and Key Stage 4 pupils within:
ASDAN Personal Progress – Qualification

Impact
Pupils make progress in lessons through a sequenced lesson structure:

- Practice to support fluency with number skills, arithmetic proficiency and basic/life skills
- Curiosity through practical real-life problems solving
- Use of manipulative resources to develop a range of methods to tackle problems
- Modelling of problems to develop independent skills
- Reflection to check deeper understanding and misconceptions

Pupils make progress over time through a highly structured curriculum with well sequenced units of learning and teaching for mastery at each level

Depending on the pathway, pupils use their mathematical skills to support their ability to be more independent, access and be part of society and their local community in more meaningful ways and where appropriate to access voluntary or paid employment supporting ambitions beyond school.