

Jesse Gray Primary Mathematics Curriculum Policy



Jan 2023

Head Teacher Signature:	
Date Adopted:	
Review Date:	Jan 2024

Introduction

Mathematics is a core subject within the new National Curriculum (2014). This policy outlines the purpose, nature and management of the mathematics taught and learned in our school.

Mathematics is used to make sense of the world, to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems. In response to this, reviewing and developing our approach to mathematics at Jesse Gray is ongoing.

Aims

Our chief aim is that all our pupils will develop a positive attitude to mathematics and learn to use it with confidence, understanding and pleasure.

General aims therefore include:

- Raising standards in mathematics
- Improving student's knowledge, skills and understanding in using and applying mathematical skills.
- Developing children's skills in mental calculation
- Teaching children the skills required for problem solving and mathematical reasoning.

These aims support the National Curriculum aims of
-Fluency – Reasoning – Problem Solving

Planning

The school is organised into year group planning teams. Individual teachers plan mathematics work within each team.

- Foundation Stage 2 (2 classes)
- Year 1 (2 classes)
- Year 2 (2 classes)
- Years 3 (2 classes)
- Year 4 (2 classes)
- Year 5 (2 classes)
- Year 6 (2 classes)

All staff plan their lessons in line with the objectives in the New National Curriculum. Medium term planning for mathematics is based around the White Rose scheme. (See appendix 1) We feel that this structure allows our children to fully embed learning in a logical order. Skills are built upon and used within subsequent planning units. Each member of staff produces a short term planning grid to show the organisation of the daily maths lesson. A planning grid, as recommended by the school is available for staff to use if they wish. (See appendix 2)

Assessment

Jesse Gray is currently following the new National Curriculum teacher framework. These raised expectations for mathematics have been shared with parents. To assess we are using objectives personalized based upon the 'Focus' system which is tracked within the 'Sonar' system.

Presently, Maths assessment is based on teacher judgement of pupils performance against key objectives taken from the 'Focus' guidance. This formative assessment style allows teachers to use the vast knowledge of performance in the mathematics classroom to actualise curriculum levels for children they teach.

Teachers are encouraged to use observations, activities and questioning techniques to assess either formally or informally the achievements of children. These are then recorded using the RAG completion technique. Whilst these strategies are all considered reliable, we encourage teachers to only record assessments which are distanced from the point of teaching (e.g. two weeks). This is to allow for the possibility of 'ability to recall' in contrast to 'learnt skills' being assessed. (Appendix 3)

Additionally, at three points within the year, children are given summative assessment opportunities. These are tests using the Renaissance Star Maths system and the outcomes of these are used to inform the teachers on-going assessments and therefore level judgements. Teachers also perform a question level analysis on these tests to ensure all gaps are identified and addressed.

Jesse Gray follows National SATs testing. Where these fall in line with the JG calendar of assessment, they supersede those purchased by ourselves.

Quality of teaching and learning

This is kept at a high level by:

- High quality teaching following an AfL system.
- A 'Mastery' approach to teaching.
- Use of the Concrete, Pictorial, Abstract model for teaching.
- Provision of high quality resources to support teachers.
- Teaching a fast-moving interactive daily mathematics lesson.
- Sharing objectives and success criteria with children.
- Using a range of teaching strategies including direct teaching, questioning, demonstrating and modelling.
- Giving children opportunities to practise mental skills including counting, rapid recall, newly learned facts and calculation strategies.
- Daily practise of fluency and the development of mathematical language.
- Giving children the opportunities to solve problems, see patterns, make predictions, present information clearly and interpret data.
- Encouraging children to give oral and written explanations of their strategies.

Resources

Appropriate and age relevant resources are available in all classrooms. A checklist for each year group is available for this. More resources are available in the maths cupboard on the top corridor. (See appendix 4 for resources list)

ICT resources

Interactive teaching programmes are available on the network server. Access to the internet in all classrooms provides many opportunities to access further interactive resources along with iPads in each classroom.

Leadership and Management

Mathematics is taught daily at Jesse Gray. The length of the lesson varies between 45 min and 60 mins. The use of ICT is integrated into the daily mathematics lesson. Access is available for all classes to use ipads, to support the learning of mathematics. The school recognises that mathematics is a key skill used throughout the school curriculum and encourages its use in all areas. There are a number of different roles engaged in the management of mathematics.

The Role of the Governors

- Mathematics link governor keeps the governors well informed about standards in mathematics.
- To adopt and monitor the mathematics policy.
- To monitor the progress of mathematics in the School Development Plan.

The Role of the Head Teacher

- To establish a whole school approach and keep governors, staff and parents well informed.
- To ensure that the Mathematics Subject Leader is clear about what needs to be done and provide necessary support and resources.

The Role of the Mathematics Subject Leader

- Write the mathematics section of the School Improvement Plan
- Provide an annual report to the governors about the teaching of Mathematics in school.
- Develop an overview of the strengths and weaknesses in mathematics and identify INSET needs for the school. Analysis of data are key ways in which this is carried out.
- Provide support to teachers for planning, teaching, assessment and the use of resources.
- Work with the head teacher to monitor and evaluate progress.
- Attend regular meetings of the 'Standards' group to help lead school development in the core subjects.
- Keep up to date with subject developments.

Partnership with Parents

Parents are always informed about how Mathematics is taught in school. During the annually held, school parents evenings, a verbal mathematics report is given. This report is supported by

a written comment provided by the child's teacher. Once a year, as part of the written school report, a section is included on Mathematics. The parents are encouraged to come into school whenever they are worried about mathematics and discuss it with the relevant member of staff. Parents are also welcome to help out with mathematics activities in school. Parents are also encouraged to attend mathematics curriculum evenings and use the mathematics website to further their understanding of how they can assist their child with their mathematical development.

Monitoring and Evaluating

Mathematics is monitored in line with the school's monitoring map and the School Improvement Plan. The focus for the monitoring to be carried out is decided upon at the annual meeting between the subject co-ordinator and the head teacher. The mathematics subject leader receives termly non-contact time in order to ensure that this takes place.

Appendices

Appendix One : Examples of Medium Term Planning

Appendix Two : Examples of Short Term Planning

Appendix Three : Examples of Assessment Grids

Appendix Four : Maths marking policy

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Appendix One







Year 3 – Autumn Term



Lesson by lesson overview 2020/21

Week	Day	Topic	
1 07/09/2020	Monday	Represent numbers to 100	NPV-2
	Tuesday	Tens and ones using addition	NPV-2
	Wednesday	Hundreds	NPV-1 NPV-2
	Thursday	Numbers to 1,000	NPV-2
	Friday	Numbers to 1,000 on a place value grid activity	NPV-2
2 14/09/2020	Monday	100s, 10s and 1s (1)	NPV-2
	Tuesday	100s, 10s and 1s (2)	NPV-2
	Wednesday	Number line to 100	NPV-4
	Thursday	Number line to 1,000	NPV-4
	Friday	Find 1, 10, 100 more or less	NPV-3
3 21/09/2020	Monday	Compare objects	NPV-3
	Tuesday	Compare numbers	NPV-3
	Wednesday	Ordering numbers	NPV-3
	Thursday	Count in 50s	NPV-4
	Friday	Mini-assessment	
	Monday	Add and subtract multiples of 100	AS-2

Appendix Two

Fluency Activity		Main teaching		Independent MASTERY Activities (including Differentiated Progression Activities and Adult Support) Plenary where relevant		Skills Used
WAL:		WALT:	Recognise a fraction of a set of objects	WALT:		
STS:		STS:	Know what unit and non-unit fractions are	STS:		
STS:		STS:	Understand that a fraction is an equal part of a whole	STS:		
STS:		STS:	Identify what fraction of a diagram is shaded	STS:		
Mathematical talk Recap understanding of unit and non-unit fractions from Year 1 Q: what is a fraction? Elicit: it is an equal part of a whole Q: What is a unit fraction? What is a non-unit fraction? Discuss ideas and tell children they are going to find out together		Varied fluency Go through 'master the curriculum slides' on unit and non-unit fractions Complete the sentences to describe the images.  2 out of 6 equal parts are shaded.  3 of the shape is shaded. Shade $\frac{1}{5}$ of the circle.  Shade $\frac{3}{5}$ of the circle.  Ask chn what $\frac{1}{5}$ and $\frac{3}{5}$ actually means (1 out of 5) Circle $\frac{1}{5}$ of the beanbags.  Circle $\frac{3}{5}$ of the beanbags.  equal parts and 3 out of 5 equal parts) Complete the sentences. <div style="border: 1px solid green; padding: 5px; background-color: #e0f0e0;"> A unit fraction always has a numerator of ____ A non-unit fraction has a numerator that is ____ than ____ An example of a unit fraction is ____ An example of a non-unit fraction is ____ </div> Can you draw a unit fraction and a non-unit fraction with the same denominator?		Reasoning and problem solving Unit and Non-Unit Fractions All – fluency on fractions – 'master the curriculum' Harder – first of activity 1 and 2 DD – second activity 1 and 2 All – challenge Harder – classroom secrets secure reasoning DD – classroom secrets mastery reasoning		Inspire Achieve Challenge Enjoy

Appendix Three

Year 6	6E	Autumn End of Term	At expectations
	Florence Alexander Year 6 . 6E	Roshan Ataulloh Year 6 . 6E	George Barratt Year 6 . 6E
POS 6 KPI The pupil can calculate using fractions, ... 15% of 60; $1\frac{1}{2}+3/4$; $7/9$ of 108; 0.8×70)			
POS 6 KPI The pupil can calculate mentally, using ... = 18; $20 \times 7 \times 5 = 20 \times 5 \times 7 = 100 \times 7 =$			
POS 6 KPI The pupil can calculate with measures (e.g. ... convert 0.05km into m and then into cm).			
POS 6 KPI The pupil can demonstrate an understanding ... that can be made from using three digits; 8.			

Appendix Four

Mathematics Marking Policy

- If an answer is correct, tick it.
- If an answer is incorrect, dot it.
- If a greater percentage of work appears to be wrong in a section then stop putting 'incorrect' dots and write an instruction to the child.
- If the digits are reversed write them out correctly and point out the mistake to the child. Ask them to practise the digit.
- Where possible verbal feedback will be given to children as they work.
- Teachers should ensure that pupils understand how to make the next steps in their learning. This may be through verbal feedback or a comment which may be directive or may move the child's mathematical understanding further with a more challenging question type. (See school marking policy for further direction)
- Teachers should use a pen to mark with and it should be a colour which shows up clearly against the pencil. (Preferably this will be green)
- Where a teacher leaves a comment or question in a work book, children should be given time to respond and leave a response where appropriate.

Presentation of work

- If a book has squares then only one digit should be in each square.
- Any child who can, should use a ruler for all straight lines.
- Use a sharp pencil, not a pen of any sort.
- Rubbings out are not encouraged.
- Write the date each time work is started.
- In KS2, write the maths target, or learning objective for the day as a title for the piece of work.
- KS1 will use plain exercise books. Year 3 will use large squared maths books. Year,4,5 and 6 lower target groups will use squared books