Maths Policy 24-25

At Knights Enham Schools, we want children to enjoy mathematics and feel confident in using their skills and knowledge independently. We want our children to be the best they can be and have a can-do attitude to their learning. We want children to know that mistakes are part of the process of learning and we will priced rich opportunities for them to make sense of the maths through explaining and reasoning together.

Intent

The National Curriculum for Mathematics (2014) aims to ensure that all pupils:

1. Become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.

2. **Reason** mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language

3. Can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

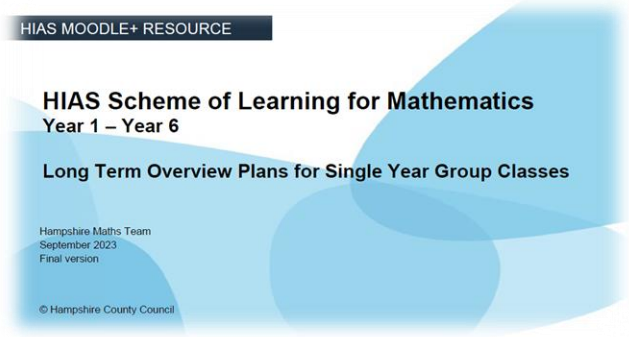
In addition to achieving the learning outcomes and statutory requirements set out in the National Curriculum, at Knights Enham Schools we also aim to:

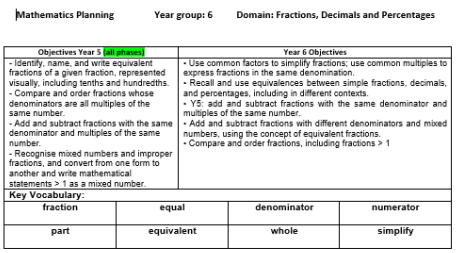
- Curriculum is based on the HIAS scheme for learning (2023) and provides full coverage of the National Curriculum,
- Deliver a mathematical curriculum using the CPA approach (concrete, pictorial and abstract),
- Provide opportunities that are linked to real life context,
- Ensure children have developed mental strategies that can be applied in all areas of problem solving and have learnt the key facts vital for Maths,
- Prioritise the teaching and learning of times tables through-out the school using Times Tables Rockstars from Years 3 to 6,
- Promote a positive attitude to Mathematics,
- Cater for a range of learning and teaching styles, giving children a wide range of experiences,
- Develop initiative and an ability to work both independently and in collaboration with others,
- Use mathematical language with confidence and ease.

Implementation

Staff

- All staff to plan weekly maths lessons in accordance with the HIAS scheme of learning, using the set planning template and following the CPA approach.
- Tasks and questions to be used from a variety of resources found in the maths shared folder, for example, 'I see reasoning' and 'White Rose' written in context with learning and topic journeys especially in KS1.



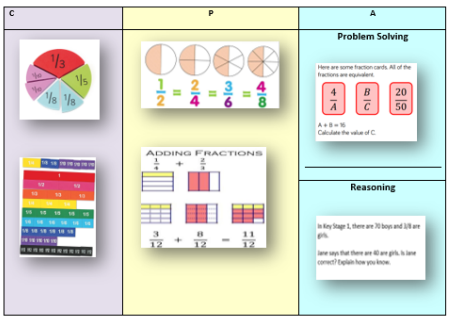


Mathematics Planning Year group: 6 Domain: Fractions, Decimals and Percentages

Objectives Year 5 (all phases)	Year 6 Objectives
- Identify, name, and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. - Compare and order fractions whose denominators are all multiples of the same number. - Add and subtract fractions with the same denominator and multiples of the same number. - Recognise mixed numbers and improper fractions, and convert from one form to another and write mathematical statements > 1 as a mixed number.	• Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. • Recall and use equivalences between simple fractions, decimals, and percentages, including in different contexts. • Y5: add and subtract fractions with the same denominator and multiples of the same number. • Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. • Compare and order fractions, including fractions > 1

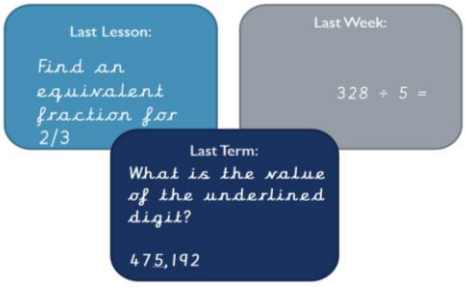
Key Vocabulary:

fraction	equal	denominator	numerator
part	equivalent	whole	simplify

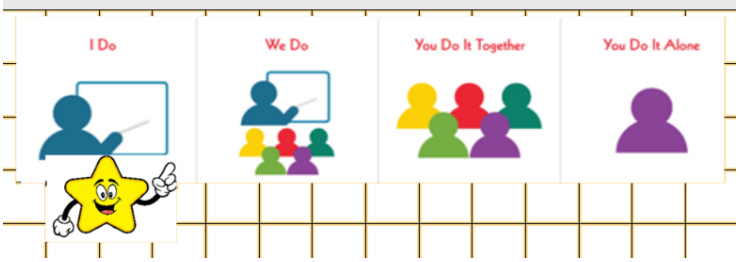


Maths	Monday 30th Oct	Tuesday 31st Oct	Wednesday 1st Nov	Thursday 2nd Nov	Friday 3rd Nov
Starter:	L POWER				
Objective	INSET	I can represent fractions.	I can compare and order fractions.	I can add and subtract fractions with the same denominator.	I can add and subtract fractions with different denominators
I do		Introduce that a fraction is an equal part of a whole. Model with foam fractions ½. Discuss what the numerator and denominator represent. Explain difference between unit/non-unit fraction. Model with foam fractions and bar models how to find equivalent fractions/simplify fractions.	Explain that denominators need to be the same when ordering/comparing. Model finding common denominator/simplifying in order (3/8 and 2/4, 10/16). Model comparing two fractions using inequality symbols.	Model adding and subtracting where the denominator is the same. Show representation on a bar model to represent this.	Model adding and subtracting where the denominator is different. Re-cap equivalent fractions to support this. Show representation on a bar model to represent this.
We do		Show Chn a fraction on the board 3/9. Chn to represent it on a bar model. Chn to find 2 equivalent fractions for 3/9 as a class with CT.	As a class, Chn to order 3 fractions on board. (Model representations on a bar model)	Chn to use bar model representations on their tables to show adding/subtraction of fractions.	
You do (AFL)		Chn to represent 4/5 using a bar model. Chn to find 2 equivalent fractions and also represent on bar model.	Chn to order 3 fractions on board And compare 2 given fractions.	Chn to solve an addition and subtraction question (1st time in pair, 2nd independently).	
SEND Support WHEN REQUIRED	INSET	I can represent fractions. Children to use foam fractions to show representations. Chn to also create equivalents from this.	I can compare and order fractions. Using foam fraction representations to support comparisons.	I can add and subtract fractions with the same denominator. Focus upon fluency.	I can add and subtract fractions with the same denominator. Greater opportunities for problem solving.
ARE		Fluency, reasoning and problem solving questions, using concrete example to show understanding.		Fluency and reasoning style questions to establish understanding.	Problem solving style question to broaden depth/breadth of understanding.
GD		Build conceptual links from multiplication & division unit. *If I know 6 is my denominator, what other multiples do I know to find equivalent fractions?*	Chn to explain the steps they would have to follow when ordering fractions with different denominators.	*Always, sometimes, never? You can never add two fractions together that would result in the numerator being larger than the denominator.*	Chn to write their own problem-solving question for a peer to solve.

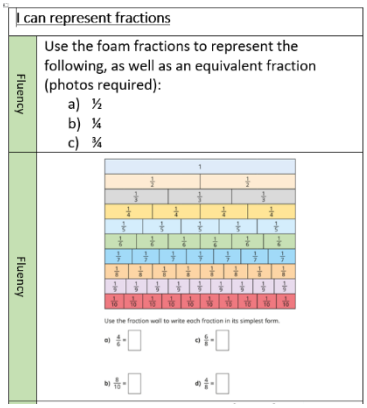
- All staff to use and refer to the calculation policy when planning and delivering lessons,
- Lessons in KS2 to start with 'L Power' to activate prior learning, KS1 lessons to begin with mental and oral starters through a range of counting, problem-solving,

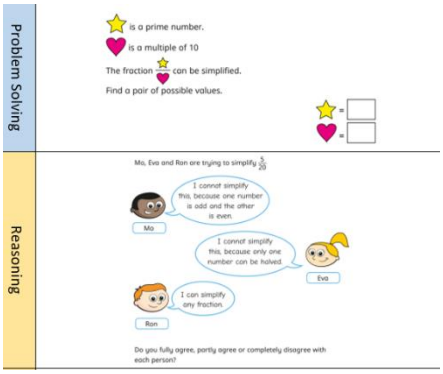


- All lessons to run through 'I do, we do, you do' stages, clearly displayed at the top of each page of the Maths flip along with Learning Objective for that lesson.



- KS2 - All children to be provided with problem solving and reasoning opportunities, irrespective of ability, presented in the following format.





- KS1 – Lessons to follow a CPA approach with opportunities for problem solving and reasoning through the journey, challenging the children at their own level.

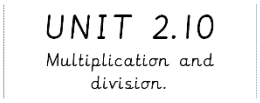
- Children's progress to be continually assessed using: daily and weekly assessment, Insight tool and end of phase data drops.
- High impact teaching to be employed to ensure gaps are closed in children's learning, where ALL children have access to teaching by the Class Teacher.
- Times Table Rockstars used by Years 3 – 6 to support learning and retention of Times Tables.
- Class teachers to work with SENDCo and use diagnostic tools to identify and deliver focused interventions in KS2.
- Staff to mark in accordance with school's marking policy.

Weekly Lesson Expectations

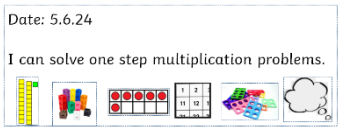
- Maths to be taught daily.
- 'L Power' to be used as a daily starter in KS2.
- KS1 mental and oral starters to vary between counting, subitising practice and recapping.
- In KS2, at least one **practical** lesson to be taught each week, using Teach Active, providing the children with an opportunity to explore concepts and concrete resources.
- In KS1, Concrete lessons and practical lessons to be taught where needed through the plan.
- Lessons to be delivered in accordance with the progress of the pupils – informed via Insight.

KS1 Book Expectations

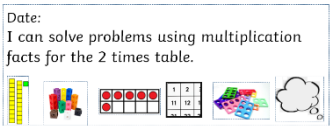
Each unit starts with the new unit sticky - single 14 size- saying Unit Number and quick brief what it is...



EVERY DAY needs a LO sticky -
Year 1 - these will be dated.
Year 2 - Children to write date.



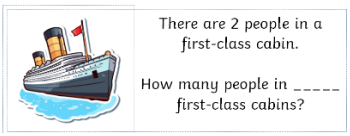
Year 1

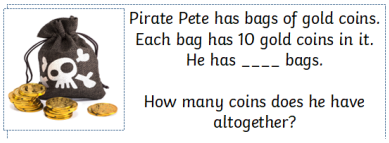


Year 2

These need to go on the left-hand side of the page.

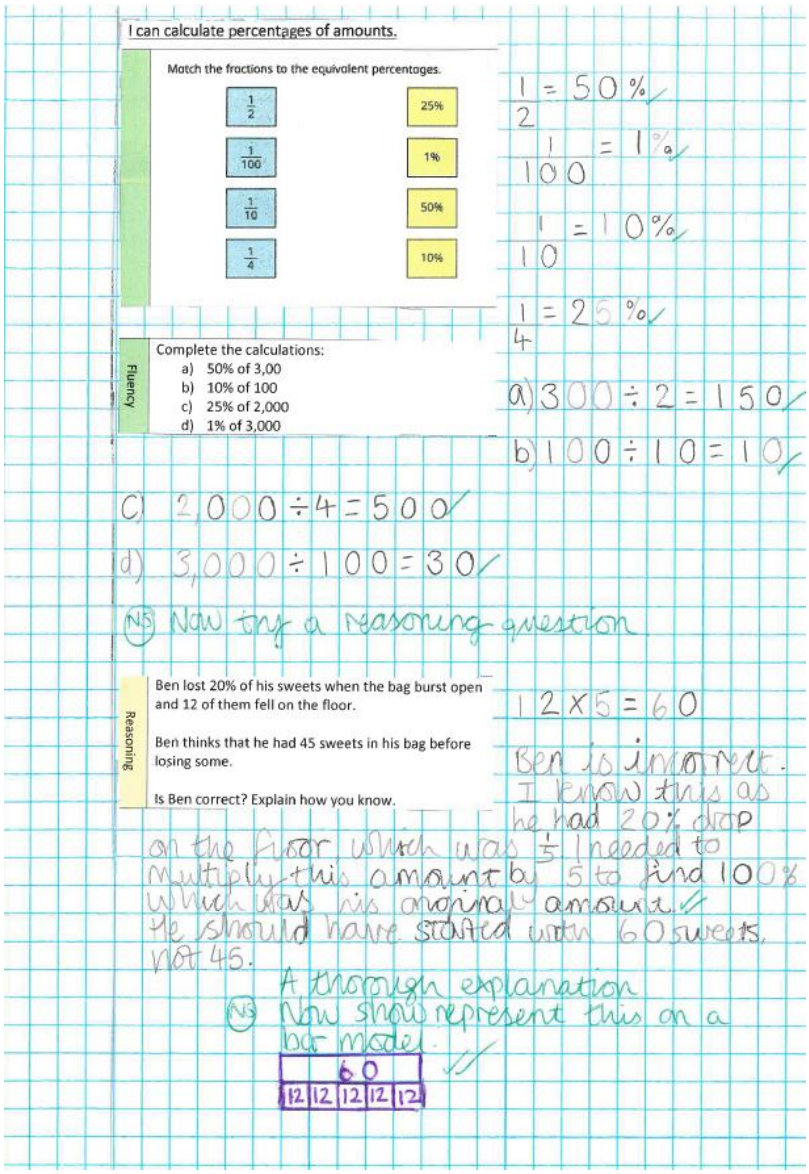
For lessons including word problems - the main body of the text needs to be on a context sticky - This can go beside your LO sticky.





Then the problems follow underneath on smaller stickies.
These are to be labelled with a line to show what differentiation level-
Yellow/Orange - ARE
Green- GDS
Red- PKS.
These follow on the left-hand side of page down the side.

KS2 Book Expectations



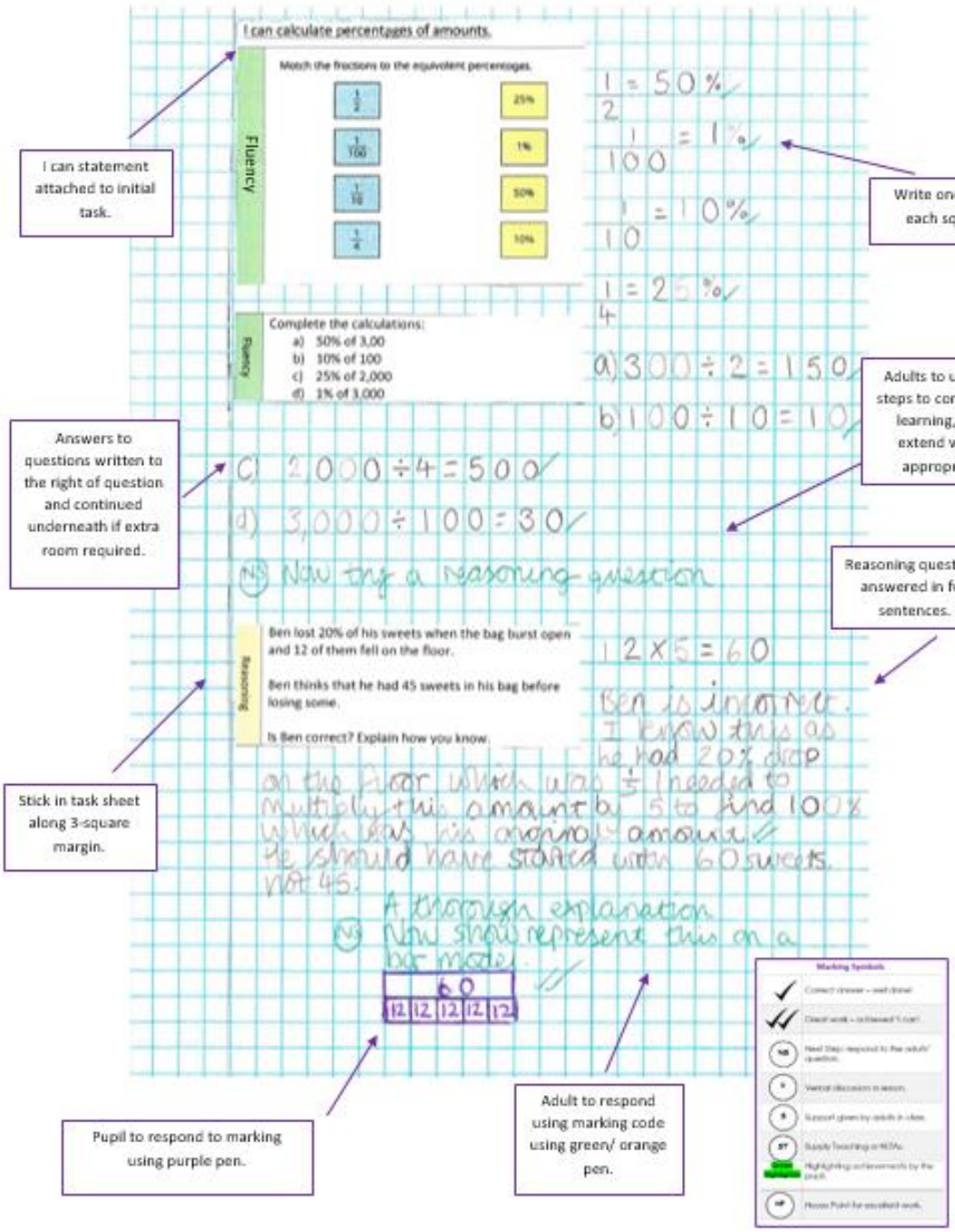
- All books in years 4,5 and 6 to have margins on each page (3 squares wide)
- Each lesson to have a date and 'I can' written (or on printed sheet) and underlined
- Children to cut and stick in each question <u>individually</u> then show the working out beside before advancing to another question.
- Questions to be individually marked
- Next steps used to consolidate and to challenge.
- Expectation sheet in the front of each book (see below).

At Knights Enham Schools we provide…

Inclusive and ambitious learning experiences where our school community feels safe and motivated to achieve their best.

'Together We Achieve'

Presentation Expectations



I can statement attached to initial task.

Write one digit in each square. .

Adults to use next steps to consolidate learning, or to extend where appropriate.

Answers to questions written to the right of question and continued underneath if extra room required.

Reasoning questions answered in full sentences.

Stick in task sheet along 3-square margin.

Pupil to respond to marking using purple pen.

Adult to respond using marking code using green/ orange pen.

Subject Leader

- Ensure progression in attainment from all year groups
- Monitor planning, teaching and assessment
- Teach demonstration lessons when appropriate
- Ensure teachers are familiar with the framework and help them to plan lessons
- Lead by example in the way they teach in their own classroom
- Prepare, organise and lead INSET, with the support of the Headteacher
- Work co-operatively with the SENCO
- Observe colleagues, when appropriate, with a view to identifying the support they need
- Purchase mathematical equipment that will raise attainment;
- Attend INSET provided by LA mathematics consultants and feedback important information to staff
- Analyse children's test results to measure attainment and improve mathematics within the school
- Conduct an annual review of mathematics and the production of a report for the governors

Impact

- Teaching and learning is consistent across all years and classes,
- High standards and quality of teaching and learning across the school in Maths,
- Improved outcomes for all pupils,
- Improved SEND and GD outcomes through appropriate scaffolding and challenge,
- A variety of tasks that are in accordance with the 3 National Curriculum aims of Mathematics,
- Lessons and teaching that show real life context,
- Children can be seen to use a variety of problem-solving strategies including the CPA approach.

School Values

Resilience – '**mathematical resilience**' is how pupils in our school approach Mathematics with confidence, persistence in the face of difficulty and a willingness to discuss, reflect and apply.

Collaboration – Children are regularly provided with opportunities to work with others to complete mathematical challenges.

Nurture – All children are provided with work at their level so that they can achieve and have a sense of success in their learning.

Respect – Children understand and respect each other's opinions, mathematical thinking and strategies. Children accept that there is more than one way to solve a problem.

Independence – Children have the skills and knowledge to feel confident to tackle problems independently, using the mathematical tools and equipment provided.