

# Maths at Kingsway Infant School

2<sup>nd</sup> March 2023

# Our Curriculum Aims

- ▶ To develop **mastery and fluency** in mathematics so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- ▶ To **reason** mathematically by following a line of enquiry, finding relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- ▶ To **solve problems** by applying 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.
- ▶ To **develop positive attitudes** to all areas of mathematics through active learning and **promote life-long learning skills**.
- ▶ To **encourage questioning, reasoning and logical thinking skills** through challenges and problem solving.
- ▶ To develop the child's **mathematical vocabulary** and enable each child to develop **confidence** and **competence** in all aspects of mathematical study.
- ▶ To follow/use the National Curriculum to ensure coverage of all aspects of mathematics.

# How has maths changed?

- ▶ Focus on using manipulatives
- ▶ Focus on the understanding of mathematical processes
- ▶ Focus on key vocabulary
- ▶ Focus on fluency and mastery
- ▶ Children being able to answer word problems and problem solving questions

# Our Curriculum

- ▶ ESSENTIALmaths sequences are designed by Herts for Learning experts. They support the delivery of a spiral curriculum, in which learning is built upon step by step, sequence by sequence and year on year. The materials are aspirational and ensure progression and coverage throughout Early Years and Years 1-6.
- ▶ Concrete, pictorial, abstract approach

# The strands of our curriculum

- ▶ Number and place value
- ▶ Number- addition and subtraction
- ▶ Number- multiplication and division
- ▶ Number -fractions
- ▶ Measurement
- ▶ Geometry
- ▶ Statistics

# What does this look like?

- ▶ Learning sequences are designed to cover National Curriculum statements and key concepts, through **small learning steps with a mastery approach**.
- ▶ They aim to develop **conceptual understanding and procedural fluency in parallel**, including speaking frames, practice examples, games and problem solving opportunities for the children to build upon their prior learning.
- ▶ Teachers deliver **careful modelling with concrete resources and pictorial representations** to develop the children's understanding of structures and connections in mathematics. Pupils actively participate through purposeful questioning, whole class discussions, talk partners, and by using their own resources to demonstrate their thinking.
- ▶ Regular recording opportunities encourage pupils to represent and internalise their learning, and the children are encouraged to use **models, drawings, symbols and concrete resources**.
- ▶ Opportunities are built-in for children to think deeply and develop **explicit reasoning and problem-solving skills**, so that they can confidently apply their learning to new contexts.

# Resources to aid understanding

- ▶ Cherry model
- ▶ Dienes
- ▶ Tens frame
- ▶ Counters
- ▶ Cubes
- ▶ Bead strings
- ▶ Cuisenaire rods
- ▶ Numicon
- ▶ Number lines
- ▶ Digit cards/arrow cards

# Key Vocabulary

## Year 1

### Number

#### Number: Counting and number properties

number  
count / counting  
forwards  
backwards  
count on  
countback  
zero

twenty-one  
twenty-two  
twenty-three  
twenty-four  
*up to*  
ninety-nine  
odd

even  
pattern  
steps of  
multiple  
subitise

## Year 2

### Number

#### Number: Counting and number properties

numeral  
hundreds

step counting  
count in multiples

# Assessment

- ▶ Assessment takes place throughout lessons, when marking and during discussions with children.
- ▶ Planning caters for the needs of all children and adaptations can be made during lessons or after lessons to support children.

## Formal Assessment:

- ▶ Arithmetic and reasoning.
- ▶ In Key Stage 1, at the end of each term, more formal assessments take place so that we can see whether children have retained knowledge and to see if there are whole class or group gaps to address.
- ▶ At the end of Early Years, children are assessed against the Early Learning Goals. The attainment of your child will be reported to you in their end of year report.
- ▶ At the end of Key Stage 1, children complete statutory, formal assessments (SATs). These help to inform teacher assessment and will be reported to parents in their end of year report.

# Taken from 2019 KS1 SATS Paper

## Arithmetic

$$5 + 10 + 5 = \boxed{\phantom{000}}$$

$$68 + 20 = \boxed{\phantom{000}}$$

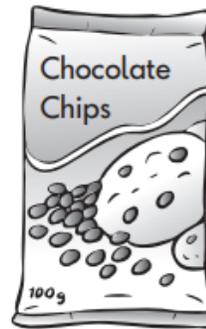
## Reasoning

There are **100g** of chocolate chips in the bag.

Sita uses **25g**.

Ben uses **35g**.

How many grams of chocolate chips are **left** in the bag?



Ben has **63** beads.

He gives **37** beads away.

How many beads does Ben have **left**?

# How you can help at home

- ▶ Play board games, card games
- ▶ Go on number hunts
- ▶ Counting- steps, items, getting children to lay the table and count the correct number, cars, houses, animals etc.
- ▶ Read stories
- ▶ Shape hunt
- ▶ Open a shop
- ▶ Practise telling the time
- ▶ Year 2 - times tables practise 2, 5, 10s
- ▶ Useful links: TopMarks, Purple Mash, Marvellous Me, Education City