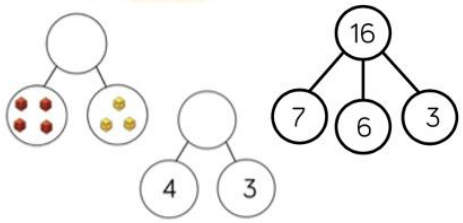
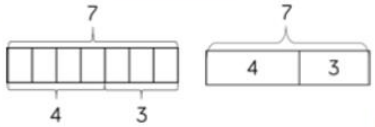
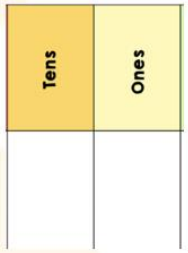
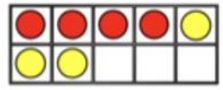
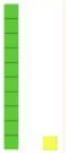
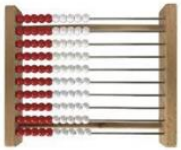
Maths in Group 3 at International School Haarlem

At International School Haarlem we aim to provide children with consistent and secure mathematical language, representations, and methods as they move up through the groups. These progress alongside their mathematical understanding and in combination with a range of concrete resources.

This document shows the National Curriculum goals alongside the mathematical language (new vocabulary in blue), representations, and methods the children are expected to have covered by *the end* of Group 3. In addition, it shows the concrete materials the children will use to support their learning and comprehension.

Place Value

National Curriculum Goals	Key Vocabulary	Representations	Concrete Resources
Group 3 • count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward • recognise the place value of each digit in a two-digit number (tens, ones) • identify, represent and estimate numbers using different representations, including the number line • compare and order numbers from 0 up to 100; use and = signs • read and write numbers to at least 100 in numerals and in words • use place value and number facts to solve problems	Group 3 *Zero* *Ones* *Tens* *Hundred* *Partition* *-teen number* *-ty number* *Place value* *Value* *Compare* *Equal to / the same as (=)* *Smaller / fewer / less / is less than (<)* *Smallest / fewest / least* *More / bigger/ larger / greater / greater than (>)* *Most / biggest / largest /greatest* *Order* *Before / 1 less / 10 less* *After / 1 more / 10 more* *Jump forwards* *Jump backwards* *Skip counting / counting by / counting in / times tables* *Number* *Amount* *Number in words* *Digit / numeral* *Symbol* *How many?*	Group 3 **Part-whole model**  **Bar model**  **Bead strings**  **Place value chart**  	Group 3 **Ten frames**  **Snapcubes**  **Counters**  **Numicon**  **Straws**  **Bead strings**  **Number lines (labelled)**  **Base ten**  **Place value cards**  **Counting rack** 

Addition & Subtraction

National Curriculum Goals

Group 3

- solve problems with addition and subtraction:
  - using concrete objects and pictorial representations, including those involving numbers, quantities and measures
  - applying their increasing knowledge of mental and written methods
- recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
  - a two-digit number and ones
  - a two-digit number and tens
  - two two-digit numbers
  - adding three one-digit numbers
- show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
- recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

Key Vocabulary

Group 3

Add / Total / Plus / Together / Altogether / Addition / Sum / More

Take away / Minus / Less / Subtract / Fewer / Difference

Is / Equal / Is equal to

 # more / counting on / how many more?
 # less / counting back / how many less?

Number sentence / Number problem / Equation

Digit

Fact family
Number bond
Number facts

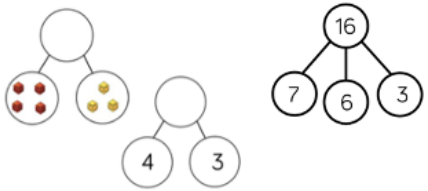
Missing number
Inverse

Crossing 10 / exchange

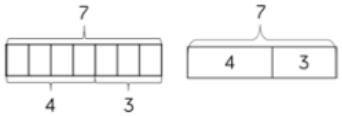
Calculation Methods / Representations

Group 3

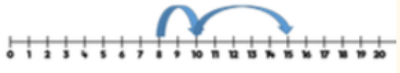
Part-whole model



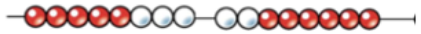
Bar model



Number line

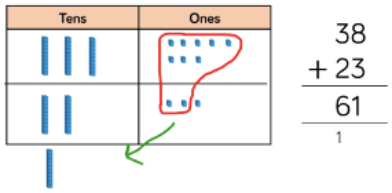


Bead strings



Hundred square

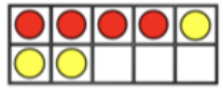
Column method



Concrete Resources

Group 3

Ten frames

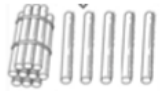


Cubes

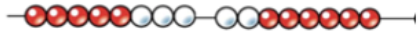
Counters

Numicon

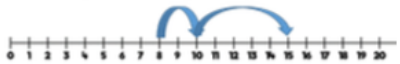
Straws



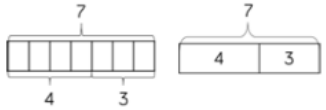
Bead strings



Number lines (labelled)

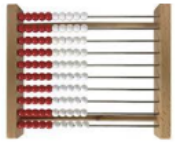


Bar model

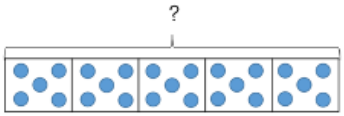
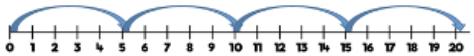
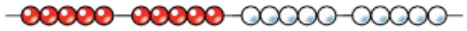
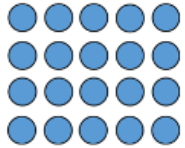
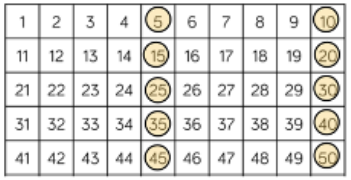
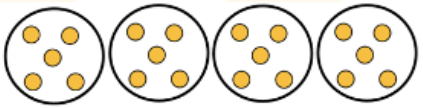
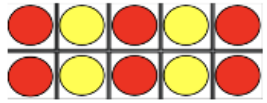
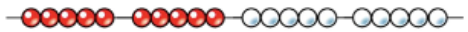
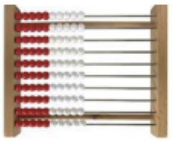


Base ten

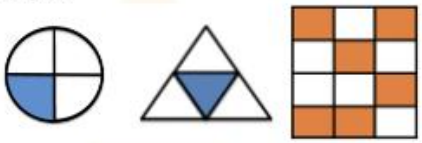
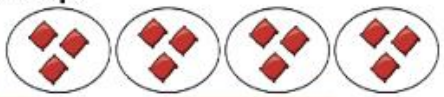
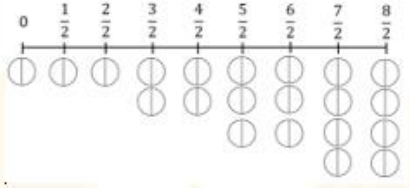
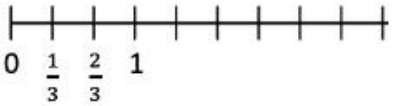
Counting rack



Multiplication & Division

National Curriculum Goals	Key Vocabulary	Calculation Methods / Representations	Concrete Resources
Group 3 • recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	Group 3 *Doubling* *Halving* *Repeated addition* *Multiplication* *Multiply* *Multiplied by / times / groups of* *Multiple* *Array(s) – Row and Column* *Division* *Dividing / divide by / divide into* *Grouping / equal groups of* *Sharing / share equally* *Number sentence / Number problem / equation* *Fact family* *Multiplication fact* *Division fact* *Inverse* *Number pattern*	Group 3 **Bar model**  **Number line**  **Bead strings**  **Arrays**  5 + 5 + 5 + 5 = 20 4 × 5 = 20 5 × 4 = 20 **Hundred square**  **Groups** 	Group 3 **Counters**  **Numicon**  **Bead strings**  **Counting rack** 

Fractions

National Curriculum Goals	Key Vocabulary	Representations	Concrete Resources
Group 3 • recognise, find, name, and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, and $\frac{3}{4}$ of a length, shape, set of objects, or quantity • write simple fractions, for example: $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	Group 3 *Whole* *Fraction* *Half* / $\frac{1}{2}$ *Quarter* / $\frac{1}{4}$ *Third* / $\frac{1}{3}$ *Two quarters* $\frac{2}{4}$ *Three quarters* / $\frac{3}{4}$ *Numerator* *Denominator* *Unit fractions* *Non-unit fractions* *Divide* *Parts* *Split* *Equal / Equally* *Non-equal* *Equivalent / equivalence* *Shaded* *Amount* *Groups* *Share*	Group 3 **Shapes**  **Bar model**  **Groups**  **Number lines**   	Group 3 **Paper shapes**  **Snapcubes**  **Counters**  **Hoops**