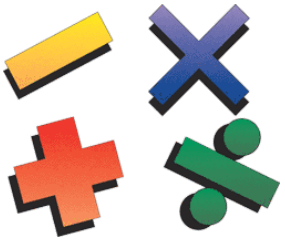
Mathematics Overview of Learning
Week 1-2 Term 4



Black indicates the content descriptor from the beginning of the continuum of learning in each stage (as stated by the Australian Curriculum).

Red indicates the content descriptor aligned with further understanding later in the continuum of learning in each stage (as stated by the Australian Curriculum).

Kindergarten

Whole Number MAe-4NA

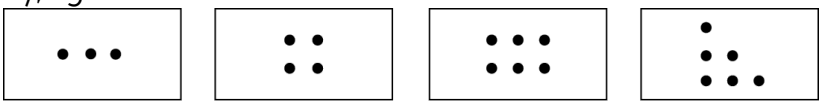
Subitise small collections of objects (ACMNA003)

Compare, order and make correspondences between collections, initially to 20, and explain reasoning (ACMNA289)

Use the language of money

Activities to support learning at home:

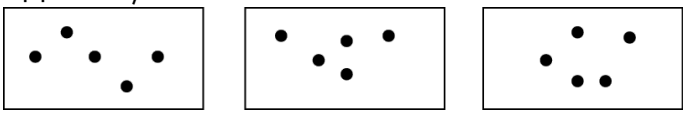
- Assist your child with recognising the number of objects or dots in a pattern of objects or dots instantly, eg



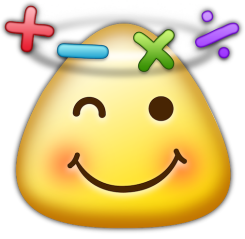
- Using dice or dominoes, assist your child with recognising common dot patterns, eg

dice dot patterns domino dot patterns

- instantly recognise (subitise) different arrangements for the same number, eg different representations of five. Try this with other numbers.



- Using collections of objects (up to 20) count the objects with your child using with one-to-one correspondence (that is, point to each object and say the number that it represents). Explain to your child that the last number name they say represents the total number in the collection when counting.
- Make correspondences between collections, eg 'I have four counters, you have seven counters. So you have more counters than me' OR use the term 'is the same as' to express when you have equal groups.
- Begin to use the language of money in everyday contexts, eg coins, notes, cents, dollars and help your child to understand and recognise that there are different coins and notes in our monetary system.
- Play “shops” and exchange money for goods in play situations.

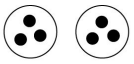


Stage 1

Mutlplication and Division MA1-6NA
Skip count by twos, fives and tens starting from zero (ACMNA012)
Model and use equal groups of objects as a strategy for multiplication
Recognise and represent multiplication as repeated addition, groups and arrays (ACMNA031

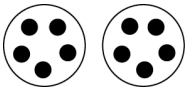
Activities to support learning at home:

- count by twos, fives and tens using rhythmic counting and skip counting from zero
- model and describe collections of objects as 'groups of', eg.

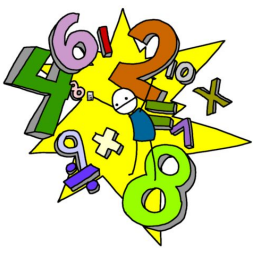


'two groups of three'

- Be sure to determine and distinguish between the 'number of groups' and the 'number in each group' when describing collections of objects
- Work on division by sharing a collection of objects equally into a given number of groups to determine how many in each group, eg ***determine the number in each group when 10 objects are shared between two people.***



- Show your child how to describe the part left over when a collection cannot be shared equally into a given number of groups.
- Model division by sharing a collection of objects into groups of a given size to determine the number of groups, eg ***determine the number of groups when 20 objects are shared into groups of four.***
- Grouping worksheet (division) https://www.mathworksheets4kids.com/division/grouping-1.pdf
- Grouping with leftovers https://www.mathworksheets4kids.com/division/group-remainder-1.pdf
- Describe groups of objects at home as 'groups of', 'rows of' and 'columns of'
- Present 12 objects (e.g. eggs). Discuss the easiest way to display the objects so that they can be counted easily, ie repeated addition, skip counting
- **Commutative Law-** model using egg carton to show that 6 x 2 = 2 x 6 = 12. Represent using seedling trays, muffin trays etc
- Multiplication as repeated addition worksheet http://cdn.worksheetfun.com/wp-content/uploads/2016/02/wfun16_repeated_addition_3.pdf **AND** http://www.worksheetfun.com/Addition/wordprob_each_3%20.pdf
- Multiplication using arrays worksheet https://www.mathworksheets4kids.com/multiplication/models/write-level1-array1.pdf
- Division using arrays worksheet https://www.mathworksheets4kids.com/division/group-table1.pdf



Stage 2

Addition and Subtraction MA2-5NA

Recall addition facts for single-digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation (ACMNA055)

Apply place value to partition, rearrange and regroup numbers to at least tens of thousands to assist calculations and solve problems (ACMNA073

Recognise and explain the connection between addition and subtraction (ACMNA054)

solve problems involving purchases and the calculation of change to the nearest five cents, with and without the use of digital technologies (ACMNA080)

Activities to support learning at home:

- Model and apply the associative property of addition to aid mental computation, eg 2 + 3 + 8 = 2 + 8 + 3 = 10 + 3 = 13
- Commutative property of addition worksheet https://www.mathworksheets4kids.com/properties/addition/commutative-statement1.pdf
- Demonstrate how addition and subtraction are inverse operations
- Addition/subtraction inverse operations worksheet https://www.math-drills.com/algebra/alg_inverse_addsub_0109_001.php
- Use a formal written algorithm to record addition and subtraction calculations involving two-, three-, four- and five-digit numbers, eg

134 + 235	2459 + 138	568 − 322	1352 + 168	37049 − 9285

Stage 3

Fractions and Decimals MA3-7NA

Recognise that the place value system can be extended beyond hundredths (ACMNA104)
Compare, order and represent decimals (ACMNA105)
Add and subtract decimals... (ACMNA128)
Multiply decimals by whole numbers and perform divisions by non-zero whole numbers where the results are terminating decimals... (ACMNA129)
Multiply and divide decimals by powers of 10 (ACMNA130)
Make connections between equivalent fractions, decimals and percentages (ACMNA131)
Investigate and calculate percentage discounts of 10%, 25% and 50% on sale items.... (ACMNA132)

Activities to support learning at home:

Fractions and Decimals

- This specific content focuses on students being able to express thousandths as decimals as well as state the place value of digits in decimal numbers up to three decimal points. Whilst the following worksheet may be challenging, it is good practice to assist students with being able to "say" decimal numbers
  https://www.mathworksheets4kids.com/number-names/decimals/words-thousandths-1.pdf
- Comparing decimals up to thousandths worksheet
  https://www.math-drills.com/decimal/comparing_decimals_thousandths_001.php
- Addition, subtraction and multiplication of decimals covers a lot of explicit instruction. Have your child try some of these worksheets at home to consolidate their work in the mathematics classroom:
- Adding decimals tutorial
  https://www.khanacademy.org/math/arithmetic/arith-decimals/arith-review-add-decimals/v/adding-decimals-example-1
- Adding decimals worksheet
  https://www.mathsisfun.com/worksheets/ws-dec.html?op=add&n=20&amin=11&amax=99&bmin=11&bmax=99&dec=3
- Subtracting decimals worksheet
  https://www.mathsisfun.com/worksheets/ws-dec.html?op=sub&n=20&amin=11&amax=99&bmin=11&bmax=99&dec=3&negans=n
- Multiplying decimals worksheet
  https://www.mathworksheets4kids.com/decimals/multiplication/tenths1.pdf
- Pecentage discounts worksheet
  https://www.worksheetworks.com/pdf/_02/ukzs/WorksheetWorks_Calculating_Prices_1.pdf

Websites to further develop times tables recall:
http://tablestest.com/
http://www.topmarks.co.uk/maths-games/7-11-years/times-tables