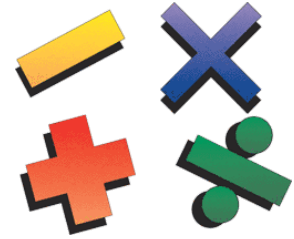


Mathematics Overview of Learning

Week 7/8 Term 2



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

Time MAe1-13MG

Compare and order the duration of events using the everyday language of time (ACMMG007)

Connect days of the week to familiar events and actions (ACMMG008)

Tell time on the hour on analog and digital clocks

Volume and Capacity MAe1-11MG

Use direct and indirect comparisons to decide which holds more, and explain their reasoning using everyday language (ACMMG006)

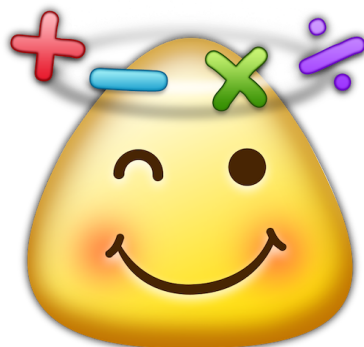
Activities to support learning at home:

(Time)

- In everyday conversation, find opportunities to use terms such as 'daytime', 'night-time', 'yesterday', 'today', 'tomorrow', 'before', 'after', 'next', 'morning' and 'afternoon'
- Compare the duration of two events using everyday language, eg 'It takes me longer to eat my lunch than it does to clean my teeth'
- Get your child to describe events that take 'a long time' and events that take 'a short time'
Discuss daily: Yesterday was ...; Today is ...; Tomorrow will be ...
- Discuss activities students do in the *morning/afternoon/at night*

(Volume and Capacity)

- When speaking with your children, find opportunities to discuss if something is 'full', 'empty' and 'about half full'.
- Model full, half or empty. Have a big glass of water in your hand and ask your child if it is full, half full or empty. Then drink half of it, and then repeat the question. Ask your child what it means to be full, half full and empty. Explain to them that the water in the full glass has a larger volume than the water in the half glass.
- Get your child to fill a glass to show you full, half full and empty.



Stage 1

Length MA1-9MG

Measure and compare the lengths of pairs of objects using uniform informal units (ACMMG019)

Compare and order several shapes and objects based on length, using appropriate uniform informal units (ACMMG037)

Recognise and use formal units to measure the lengths of objects

Area MA1-10MG

Measure and compare areas using uniform informal units

Compare and order several shapes and objects based on area using appropriate uniform informal units (ACMMG037)

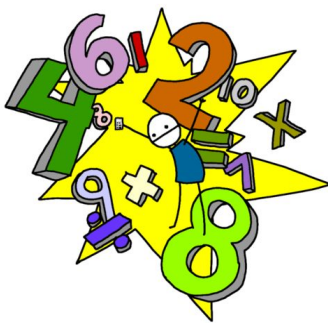
Activities to support learning at home:

(Length)

- Get your child to find something at home that is taller than them, something that is shorter than them and something that is about the same height as them.
- **How Big is Your Foot** – Draw an outline of your child's shoe and mark the length to be measured by using markers such as a green dot to start and red dot to stop. Choose an informal unit to measure the length of their shoe print (e.g. counters, toothpicks, lego blocks) and measure the length of their shoe using this unit. Repeat the process using a different informal unit and discuss why different results were obtained.
- **How to use a ruler:** Start discussing with your child how to use a ruler to draw and measure lines. Get your child to check a ruler to see where the zero is marked, and practise drawing and measuring line by starting at this point.
- Draw five lines for your child, each line to be an exact number of centimetres and a length less than 30 cm. Get your child to estimate the length of each line, record the estimate, then measure and label each line.

(Area)

- In pairs, each person draw a large shape on a piece of paper. Paint or colour the area of the shape and cut it out. Compare the size of the shapes with by superimposing. Glue the shapes onto paper and write a statement comparing the shapes eg 'Hugo's shape is bigger than Alexandra's.'
- Select one type of object to cover a given shape or area eg envelopes, lids, leaves, tiles, sheets of newspaper. Estimate, then count, the number of objects used. Possible questions include:
 - Why are some objects better than others for covering?
 - What can we do about the gaps?
 - What can we do with the part left over?
- **Tuning in:** Remind your children that area is the amount of space covered. Test which item covers the largest amount of space? Place out various items and put them in order according to the amount of space they cover - e.g. bath towel, hand towel, envelope, cardboard, A4 paper, A3 paper, Art paper, spelling book (any other objects you may have at home).



Stage 2

Fractions and Decimals MA2-7NA

Model and represent unit fractions, including $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$ and $\frac{1}{5}$ and their multiples, to a complete whole (ACMNA058)

Investigate equivalent fractions used in contexts (ACMNA077)

Recognise that the place value system can be extended to tenths and hundredths, and make connections between fractions and decimal notation (ACMNA079)

Time MA2-13MG

Tell time to the minute and investigate the relationship between units of time (ACMMG062)

Convert between units of time (ACMMG085)

Use am and pm notation and solve simple time problems (ACMMG086)

Read and interpret simple timetables, timelines and calendars

Activities to support learning at home:

(Fractions and Decimals)

- Continue with activities from Week 5/6 Term 2 overview

(Time)

- Discuss the following concepts with your children using an analogue clock by recognise the coordinated movements of the hands on an analog clock, including:
 - the number of minutes it takes for the minute hand to move from one numeral to the next
 - the number of minutes it takes for the minute hand to complete one revolution
 - the number of minutes it takes for the hour hand to move from one numeral to the next
 - the number of minutes it takes for the minute hand to move from the 12 to any other numeral
 - the number of seconds it takes for the second hand to complete one revolution
- Reinforce : 60 minutes = 1 hour (long hand 1 revolution) 60 seconds = 1 minute (second hand 1 revolution)
- Interactive games: <http://primaryhomeworkhelp.co.uk/maths/measures.htm#Time>
- Reinforce equivalent units of time with the the following challenge: A boy ran for 1 minute, another ran for 60 seconds and the last one skipped for 10 lots of 6 seconds. Who was active for the longest?
- Brainstorm activities that students regularly do in their day ie breakfast, lunch, sport, homework, dinner, TV etc. Students choose 6 activities to illustrate, noting digital/analog time of activity and am/pm. Students are encouraged to move beyond only o'clock times.
- Challenge: Pose the problem 'How many days have you attended school this term/year?' Students calculate a solution. Ask your child 'How many other ways can you show this information?' e.g. in hours, in minutes.



Stage 3

Area MA3-10MG

Choose appropriate units of measurement for area (ACMMG108)

Calculate the areas of rectangles using familiar metric units (ACMMG109)

Solve problems involving the comparison of areas using appropriate units (ACMMG137)

Volume and Capacity MA3-11MG

Choose appropriate units of measurement for volume and capacity (ACMMG108)

Connect volume and capacity and their units of measurement (ACMMG138)

Connect decimal representations to the metric system (ACMMG135)

Convert between common metric units of capacity (ACMMG136)

Activities to support learning at home:

(Area)

- Area (and perimeter) worksheets (focus on area of rectangle sheets)
<https://www.mathworksheets4kids.com/rectangle.php#area>
- Key discussion point: Revise the hectare and square kilometre as units of area measure. Explain that the hectare is 10 000 square metres and a square kilometre is 100 hectares.
- Get your child to try different shapes to make 10000 square metres. Eg 100m x100m, 200m x 50m
- Area (and perimeter) worksheets (focus on area of triangle sheets)
<https://www.mathworksheets4kids.com/rectangle.php#area>
- To assist with the above worksheets, compare the area of a triangle with the area of a rectangle with the same dimensions (length and width).
- Reinforce: 'Area of triangle = $\frac{1}{2} \times \text{base} \times \text{perpendicular height}$ '

(Volume and Capacity)

- **I wonder?** Estimate how many millilitres (mL) of water a variety of containers will hold. Check estimates with a measuring jug.
- **Investigation:** Set up a table with a variety of containers (with measurements in mL down the side) and fill each container with a different amount of liquid (liquid can be coloured with food dye to help differentiate one from another). Measure the capacities of each container.
- Reinforce: How many millilitres would we need to make a litre?
- Reinforce the equivalence of whole-number and decimal representations of measurements of capacities, eg 375 mL is the same as 0.375 L
- interpret decimal notation for volumes and capacities, eg 8.7 L is the same as 8 litres and 700 millilitres
- **Worksheets:** <https://www.mathworksheets4kids.com/metric.php> (focus on millilitre and litre worksheets).

Websites to further develop times tables recall:

<http://tablestest.com/>

<http://www.topmarks.co.uk/maths-games/7-11-years/times-tables>