Mathematics Progression Points: Year 2 – v8.0

Independent Schools Queensland (ISQ) has developed this version of the Progression Points to support teachers in independent schools with implementation of version 8 of the Australian Curriculum. This work has been done with support from officers at ACARA.

Teachers of Prep to Year 2 will find significant changes in English from previous versions of the Australian Curriculum – particularly with the inclusion of more specific references to phonics and phonemic awareness. Changes to the curriculum have also been made in all other year levels in both English and mathematics.

A word document version of the Progression Points is available so that teachers can rearrange the sequences of learning.

Personnel in independent schools are encouraged to consider how the Progression Points could be used to:-

* diagnose through formative assessment, the capabilities, strengths and weaknesses of individual students
* plan teaching programs to meet the needs of individuals and groups of students
* formally assess the progress of individuals and groups of students
* report to parents on the achievements of their children against the Australian Curriculum.

As with previous versions of the Progression Points, the “demonstrating” column accurately reflects the expectations of version 8 of the Australian Curriculum achievement standards – however with more detail and examples included.

ISQ welcomes any suggestions for improvement from teachers working very closely with the Progression Points.

More information

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**Mathematics progression points – Year 2 – v8.0**

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| **Year 2 Achievement Standard**By the end of Year 2, students [recognise](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Recognise) increasing and decreasing number sequences involving 2s, 3s and 5s. (MKU2.1) They [represent](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Represent) multiplication and division by grouping into sets. (MKU2.2) They associate collections of Australian coins with their value. (MKU2.3) Students [identify](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Identify) the missing element in a number [sequence](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Sequence). (MKU2.4) Students [recognise](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Recognise) the features of three-dimensional objects. (MKU2.5) They [interpret](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Interpret) simple maps of familiar locations. (MKU2.6) They [explain](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Explain) the effects of one-step transformations. (MKU2.7) Students make sense of collected information. (MKU2.8)Students count to and from 1000. (MS2.1) They perform simple addition and subtraction calculations using a range of strategies. (MS2.2) They divide collections and shapes into halves, quarters and eighths. (MS2.3) Students order shapes and objects using informal units. (MS2.4) They tell time to the quarter-hour and use a calendar to [identify](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Identify) the date and the months included in seasons. (MS2.5) They [draw](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Draw) two-dimensional shapes. (MS2.6) They [describe](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Describe) outcomes for everyday events. (MS2.7) Students collect, [organise](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Organise) and [represent](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Represent) data to make simple inferences. (MS2.8) |
| **Strand**  | **Emerging**Beginning to work towards the achievement standard  | **Developing**Working towards the achievement standard | **Demonstrating**Demonstrating the achievement standard | **Advancing** Working beyond the achievement standard | **Extending**Extending with depth beyond the achievement standard |
| * *With explicit prompts (step-by-step oral scaffolding, concrete materials, reference to charts, etc)*
* *In familiar contexts*
* *Learning to follow procedures*
 | * *With prompts (oral or written questions, concrete materials, reference to charts, etc)*
* *In familiar contexts*
* *Attempts to explain / explain with support*
 | * *Independent (with access to concrete materials, charts, etc)*
* *In familiar contexts*
* *Explains basic understanding*
 | * *Independent (with access to concrete materials, charts, etc)*
* *Applying in familiar contexts*
* *Explains with detail / examples*
 | * *Independent (with access to concrete materials, charts, etc)*
* *Applying in new / different contexts*
* *Explains with connections outside the teaching context*
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| Proficiency strands*At this level:*  | * Understanding *includes connecting number calculations with counting sequences, partitioning and combining numbers flexibly, identifying and describing the relationship between addition and subtraction and between multiplication and division*
* Fluency *includes counting numbers in sequences readily, using units iteratively to compare measurements, listing possible outcomes of chance events, and describing and comparing time durations*
* Problem Solving *includes formulating problems from authentic situations, making models and using number sentences that represent problem situations, planning routes on maps, and matching transformations with their original shape*
* Reasoning *includes using known facts to derive strategies for unfamiliar calculations, comparing and contrasting related models of operations, describing connections between 2-D and 3-D representations, and creating and interpreting simple representations of data.*
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| **Relevant part of the Achievement Standard** | **Students recognise increasing and decreasing number sequences involving 2s, 3s and 5s. (MKU2.1)** |
| **Number and Algebra:** Number and place value[*ACMNA026*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA026)1 | **With explicit prompts, students:*** **Recognise** increasing and decreasing number sequences involving 2s and 5s in regular patterns to 100 e.g. say that a given pattern – 5, 10, 15, 20, 25, is a counting pattern by 5s).
 | **With prompts, students:*** **Recognise** increasing and decreasing number sequences involving 2s, 3s and 5s, in regular patterns to 1000 (e.g. describe the pattern 116, 114, 112, 110 as going down by 2s; or 3, 6, 9, 12 as going up by 3s; or 740, 735, 730, 725, 720 is going down by 5s)
* **Attempt to explain** their number sequence (e.g. identify the changes and whether the pattern in going up or down).
 | Students **independently**:* **Recognise** increasing and decreasing number sequences involving 2s, 3s, 5s and 10s from any starting point to 1000(e.g. 623, 625, 627, 629; or 954, 949, 944, 939, 934)
* **Clearly explain** how they worked out their number sequence (e.g. say that a pattern is a skip counting sequence by 10s or that a pattern begins at 120 and decreases by 5 each step).
 | Students:* **Recognise and** create increasing and decreasing number sequences involving 2s, 3s, 5s, 10s and 100s, from any starting point to 1000 (e.g. create a rule such as begin at 800 and increase by 10s and then write down the first five elements of the pattern)
* **Apply** this knowledge in everyday situations (e.g. identify and explain counting patterns in calendars).
 | Students:* **Analyse** number sequences involving multiples of 2, 3, 5 and 10 from any starting point to 1000, determine the rule and continue the pattern as required (e.g. interpret the pattern...150, 175, 200, 225,....as an increase by 25s beginning at 150, and say that the next two elements are 250 and 275)
* **Apply** this knowledge in doing more complex calculations and in solving problems (e.g. describe the seating patterns that are used when seating passengers on planes).
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| **Strands and content descriptions for teaching*****Modes*** | **Emerging**Beginning to work towards the achievement standard  | **Developing**Working towards the achievement standard | **Demonstrating**Demonstrating the achievement standard | **Advancing** Working beyond the achievement standard | **Extending**Extending with depth beyond the achievement standard |
| **Relevant part of the Achievement Standard** | **Students count to and from 1000. (MS2.1)** |
| **Number and Algebra:** **Number and place value**[*ACMNA027*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA027)[*ACMNA028*](file:///C%3A%5CUsers%5CAppData%5CLocal%5CMicrosoft%5CWindows%5C_layouts%5C15%5CWopiFrame.aspx%3Fsourcedoc%3D%7B4D310361-644F-49BF-9CAB-DEE70F521FD1%7D%26file%3DMathematics%20PP%20-%20Year%202_V8.doc%26action%3Ddefaulthttp%3A%5Cwww.australiancurriculum.edu.au%5Ccurriculum%5Ccontentdescription%5CACMNA028) | **With explicit prompts, students:*** **Count forwards and backwards** between 1 and 1000 from a fixed and familiar starting point.
* **Group, partition and arrange collections** using 10s, 100s and 1000s for efficient counting.
 | **With prompts, students:*** **Count forwards and backwards** between 1 and 1000 from a fixed and familiar starting point.
* **Group, partition and arrange collections** using 10s, 100s and 1000s for efficient counting.
 | They independently:* **Count forwards and backwards** between 1 and 1000.
* **Recognise and place 0** as a number on the number line.
* **Group, partition and arrange collections** using 10s, 100s and 1000s for efficient counting.
 | They:* **Count forwards and backwards**, beginning at any starting point between 1 and 1000.
* **Explain the value of 0** as a number on the number line.
* **Group, partition and arrange collections** using 10s, 100s and 1000s for efficient counting.
* **Apply** this knowledge in everyday situations.
 | They:* **Count forwards and backwards**, beginning at any starting point between 1 and 1000.
* **Explain the value of 0** as a number on the number line.
* **Group, partition and arrange collections** using 10s, 100s and 1000s for efficient counting.
* **Apply** this knowledge in everyday situations
* **Describe** extended counting situations in everyday life where this skill would be useful.
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| **Strands and content descriptions for teaching*****Modes*** | **Emerging**Beginning to work towards the achievement standard  | **Developing**Working towards the achievement standard | **Demonstrating**Demonstrating the achievement standard | **Advancing** Working beyond the achievement standard | **Extending**Extending with depth beyond the achievement standard |
| **Relevant part of the Achievement Standard** | **They perform simple addition and subtraction calculations using a range of strategies. (MS2.2)** |
| **Number and Algebra:** Number and place value[*ACMNA029*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA029)[*ACMNA030*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA030)[*ACMNA036*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA036)3 & 4 | **With explicit prompts, students:*** **Add and subtract** numbers to 20 with and without materials
* **Select and use** different strategies, as necessary to work out addition and subtraction facts (e.g. study the fact such as 9 + 2, select the count-on strategy and work out the answer as 11)
* **Identify and describe** what happens to the size of a collection as they add or subtract (e.g. show with materials that adding whole numbers always results in a larger number, and that subtracting gives a smaller answer)
* **Identify** when a word problem involves addition or subtraction (e.g. read problems carefully and distinguish between addition or subtraction).
 | **With prompts, students:*** **Identify and describe** how basic addition facts can be extended (e.g. know that 2 + 5 = 7 and work out that 32 + 5 = 37)
* **Identify and describe** how basic subtraction facts can be extended (e.g. know that 7 – 3 = 4 and work out that 47 – 3 = 44)
* **Use** strategies such as count-on or count back to work out addition and subtraction facts
* **Create and solve** number sentences and match them with simple addition and subtraction problems (e.g. given the addition situation 3 + 4, write a problem to match).
 | They independently:* **Perform** simple addition calculations (e.g. 50+ 8= 58; 120 + 10 = 130)
* **Perform** simple subtraction calculations (to 99) (e.g. 69 - 6 = 63)
* **Select and use** a range of strategies when the answers to given addition of subtraction facts cannot be automatically recalled (e.g. when shown 8 + 6, decide that double 6 and add 2 more will give the answer)
* **Recall** known basic facts to explain the connection between addition and subtraction (e.g. recall a related addition fact to describe a method for solving an unknown subtraction fact)
* **Partition** numbers to assist with adding and subtracting (e.g. when trying to subtract 8 from 135 use MAB materials to show that 135 can be represented as 120 + 15)
* **Solve** simple addition and subtraction problems by writing number sentences that match them (e.g. identify the operation and the numbers that are relevant in a problem and write the matching number sentence)
* **Writes** word problems that match given addition and subtraction number sentences (e.g. given 21 – 12, write a word problem to match).
 | They:* **Create and solve** simple addition and subtraction problems in real-life situations
* **Use** a range of efficient mental and written strategies to solve addition and subtraction situations
* **Explain** the connections between addition and subtraction and support reasoning with examples
* **Partition** numbers to assist with the solution of addition and subtraction situations (e.g. show that 300 can be separated into 200 + 10 tens to solve the subtraction problem 300 – 40)
* **Solve** word problems that involve two steps by writing the matching number sentences (e.g. read problems such as: if Tom has 12 player cards, buys another 8 then gives 5 to his friend, how many does he have now? and writes the number sentence 12 + 8 – 5 = ◊)
* **Identify** problems and number sentences that are matched pairs (e.g. reads and interprets a list of problems and then matches them up with the correct number sentence from another list).
 | They:* **Recall** all or most addition and subtraction facts and have efficient strategies for working out unknown facts
* **Demonstrate** efficient written methods for recording addition and subtraction calculations
* **Recognise** and **describe** word problems that involve operations other than addition and subtraction (e.g. read the problem: If Shannon saved $1.50 every week for 12 weeks, how much would she have altogether? and say that it could be solved by addition, but it is a multiplication problem.)
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| **Relevant part of the Achievement Standard** | **They represent multiplication and division by grouping into sets. (MKU2.2)** |
| **Number and Algebra:** * Number and place value

[*ACMNA031*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA031)[*ACMNA032*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA032)5 | **With explicit prompts, students:*** **Represent** [multiplication using arrays and](http://www.australiancurriculum.edu.au/Glossary?a=M&t=multiplication+) by grouping materials into equal sets (e.g. show a 4 by 3 array of counters and work out that there are 12)
* **Represent** division by sharing small numbers of objects equally and by (e.g. share out 6 blocks to 3 students and say that they have 2 each).
 | **With prompts, students:*** **Represent and describe** [multiplication](http://www.australiancurriculum.edu.au/Glossary?a=M&t=multiplication+) as repeated addition (e.g. show with materials and arrays that 3 × 5 can be represented as 5 + 5 + 5 to make 15)
* **Represent and describe** division as repeated subtraction (e.g. assemble a collection of 10 bottle tops and take out groups of 2 until none remain and say that there are 5 equal groups of 2).
 | They **independently**: * **Represent** [multiplication](http://www.australiancurriculum.edu.au/Glossary?a=M&t=multiplication+) by grouping into sets (e.g. draw a multiplication situation that shows 3 lots of 4 and say that there are 12 altogether)
* **Represent** division as grouping into equal sets (e.g. show a collection of 24 counters and share them equally into 3 containers; say that each of the 3 containers has 8 counters).
 | They:* **Solve** simple multiplication problems from everyday life (e.g. identify that a calendar shows group of seven days and work out how many days in 4 weeks)
* **Solve** simple division situations from everyday life (e.g. divide the class into 3 or 4 equal teams and decide what to do if there are students left over).
 | They:* **Investigate and describe** more complex multiplication problems either by using calculators or by using another efficient method (e.g. work out how much money could be saved over one year if a student saved the $1.50 received each week for pocket money)
* **Investigate and describe** more complex division problems either by using calculators or by using another efficient method (e.g. work how much each student in the class would have to pay if they share equally the cost of an excursion to a factory).
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| **Strands and content descriptions for teaching*****Modes*** | **Emerging** | **Developing** | **Demonstrating** | **Advancing**  | **Extending** |
| Beginning to work towards the achievement standard  | Working towards the achievement standard | Demonstrating the achievement standard | Working beyond the achievement standard | Extending with depth beyond the achievement standard |
| **Relevant part of the Achievement Standard** | **They divide collections and shapes into halves, quarters and eighths. (MS2.3)** |
| **Number and Algebra:** * Fractions and decimals

[*ACMNA033*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA033)6 | **With explicit prompts, students:*** **Share collections** into two or four equal parts and discuss the parts as being halves or quarters of the whole collection
* **Partition shapes** into two or four equal parts (e.g. use rectangles or circles and divide them into four equal parts and say that they are all quarters)
* **Describe** the results of sharing collections or partitioning shapes using the fraction names half and quarter.
 | **With prompts, students:*** **Divide** collections and **partition** shapes into halves, quarters and eighths and **describe** the results (e.g. say that a circle partitioned into eight equal parts shows eighths)
* **Identify** the need for equal parts or equal groups when representing fractions.
 | They **independently**:* **Divide** collections and shapes into halves, quarters and eighths
* **Identify** examplesof halves, quarters and eighths in collections and shapes
* **Explain** why part of a group represents a particular fraction (e.g. say that if there are four equal parts, then each one is a quarter of the original group)
* **Explain** why some partitions do not represent fractions (e.g. say that if the partitions are unequal, then the parts cannot have the same fraction name).
 | They:* **Apply** knowledge about halves, quarters and eighths in real-life situations (e.g. say that if someone has 1 eighth of the cakes on the table then they will have 1 cake for every eight that are available)
* **Describe** the relationship between halves, quarters and eighths (e.g. one-half is the same as two-quarters).
 | They:* **Describe** other fractions using suitable materials or shapes (e.g. explore thirds, fifths and sixths using collections and relate the fraction name to the number of equal parts).
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| **Relevant part of the Achievement Standard** | **They associate collections of Australian coins with their value. (MKU2.3)** |
| **Number and Algebra:** * Money and financial mathematics

[*ACMNA034*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA034)*7* | **With explicit prompts, students:*** **Identify and describe** all Australian coins (e.g. identify the coins by sight and also by their size and colour)
* **Count** small collections ofAustralian coins to determine the value of the collection.
 | **With prompts, students:*** **Identify and describe** all Australian notes (e.g. identify the notes by their numbers, colours and also by their size)
* **Count and order** small collections of Australian coins according to their value (e.g. say that the first collection is worth 95c and the second is worth 80c, so the first one has the greater value)
* **Describe** the process of ordering collections according to total value.
 | They **independently**:* **Count** collections of coins and **exchange** them for coins of equivalent value(e.g. count a collection of ten 5c coins, say it is worth 50c and exchange them for a 50c coin; or replace a $2 coin with the equivalent number of 10c coins)
* **Explain** the concept of equal value (e.g. say that the exchange of coins for others is based on them being worth the same amount of money; say that a $1 coin can be exchanged for two 50c coins, for five 20c coins, ten 10c coins or for twenty 5c coins; say also that the exchange can be made of a collection of different coins, as long as the value is the same)
* **Create** collections of coins or notes that match a given value (e.g. make up a collection of coins worth $1 and include a 50c coin, two 20c coins and one 10c coin).
 | They:* **Combine** groups of coinsto make a particular value (e.g. to make $4 you could use ten 20c coins and two 50c coins and one $1 coin).
 | They:* **Solve** problems that involve coins and notes of different values **(**e.g. if you have five $2 coins and four 20c coins could you buy something that costs $11?).
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| **Relevant part of the Achievement Standard** | **Students identify the missing element in a number sequence. (MKU2.4)** |
| **Number and Algebra:** Patterns and algebra[*ACMNA035*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA035) | **With explicit prompts, students:*** **Identify and describe** patterns with numbers such as counting patterns (e.g. count by 2s from zero and notice that the numbers end in 0, 2, 4, 6 and 8).
 | **With prompts, students:*** **Identify and describe** methods for working outmissing elementsin number patterns (e.g. identify the rule for the pattern based on the given numbers and use it to work out the missing elements).
 | They **independently**:* **Identify** the missing elementin a number pattern (e.g. study the pattern: 12, 15, 18, ..., 24,...and say that the numbers increase by 3 each step; work out that the missing number is 21)
* **Interpret** skip counting patterns and **relate** them to movements along number lines (e.g. see that the pattern 3, 6, 9, 12, 15,...is the same as making jumps of 3 along a number line)
* **Describe** the effects of patterns resulting from adding 2s, 5s and 10s (e.g. say that all of the numbers in a 5s skip counting pattern starting at zero all end in 0 or 5).
 | They:* **Create and describe** patterns based around adding or subtracting the same number repeatedly (e.g. say that a 5s counting pattern that begins at 3 has numbers that end only in 3 or 8)
* **Interpret and solve** patterns that involve missing elements (e.g. study the pattern: 25, \_, \_, 13, 9, 5, 1: and say that the pattern is – 4 so the missing numbers are 21 and 17).
 | They * **Create** more complex patterns involving addition or subtraction **(**e.g. study the pattern: 2, 3, 5, 8, 12, \_, \_: and say that the rule is add1, add 2, add 3, add 4, and so the next elements are found by adding 5 and then adding 6; the next two elements are 17 and 23).
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| Beginning to work towards the achievement standard  | Working towards the achievement standard | Demonstrating the achievement standard | Working beyond the achievement standard | Extending with depth beyond the achievement standard |
| **Relevant part of the Achievement Standard** | **Students order shapes and objects using informal units. (MS2.4)** |
| **Measurement and Geometry:** Using units of measurement[*ACMMG037*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG037)[*ACMMG038*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG038)9 | **With explicit prompts, students:*** **Compare and order** two or three shapes and objects using informal units of
	+ length
	+ capacity
	+ mass

 (e.g. use paper clips to measure the length of three objects and say which is longest). | **With prompts, students:*** **Measure and compare** areas of surfaces using provided units (e.g. use sheets of A4 paper to cover the surfaces of two tables and say which has the larger area)
* **Compare and order** shapes and objects using informal units of
	+ length
	+ capacity
	+ mass

(e.g. use nails of the same size to measure the mass of two objects using balance scales and say which weighs more)* **Describe** why they have placed the shapes and objects in the particular order (e.g. say which attribute has been measured when objects have been placed in order).
 | They **independently**:* **Compare and order shapes and objects using informal units**
	+ length
	+ area
	+ volume
	+ capacity
	+ mass

(e.g. use sheets of paper to cover the surfaces of desks and tables and say which has the largest area)* **Select and use** the informal units of measurementfrom a small, provided collection to match the objects and attributes to be measured (e.g. select a cup as the unit to measure the capacity of two containers because a thimble would be too small and the bucket would be too large).
 | They:* **Make** suggestions about appropriate items to useas informal units of measurement (e.g. say that golf balls and marbles could both be used for measuring mass – the golf balls for heavier items and the marbles for others)
* **Explain** why particular units are better suited in some situations (e.g. explain that more exact and accurate measures are needed, smaller units will be preferable).

  | They:* **Explain** reasoning when solving measurement problems (e.g. make the necessary measurements to work if a new cabinet will fit through the door of the room and where there is enough space for it to be positioned).
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| **Relevant part of the Achievement Standard** | **They tell time to the quarter-hour…. (MS2.5)** |
| **Measurement and Geometry:** Using units of measurement[*ACMMG039*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG039)10 | **With explicit prompts, students:*** **Say** the time in hours and half hours using a digital clock or an analogue clock
* **Use** the terms *o’clock* and *half past* when describing the time or when referring to the events through the day (e.g. say that we will be going to the pool for our swimming lesson at 10 o’clock).
 | **With prompts, students:*** **Identify and describe** quarter hours and half hours in relation to various clocks (e.g. identify the traditional four quarter hours on the clock face, but say that any 15 minute period is a quarter hour).
 | They **independently**:* **Say** the time to the quarter-hour using an analogue clock and on digital clocks
* **Say** the time on all kinds of clocks and watches as minutes past the hour (e.g. say that the time is 3:45 in the afternoon and that the time could be said as quarter to four but also as three forty-five)
* **Use** the terms a quarter past, a quarter to and half past when discussing times
* **Draw and label** the hands on an analogue clock face when given the time as minutes past the hour.
 | They:* **Identify and describe** the times ofevents in their daily routine that occur on the hour, half-hour and quarter hour (e.g. say that school begins at 9:00 but by quarter past nine, we need to be seated in the library for our lesson)
* **Match** analogue and digital clock faces to the times of events (e.g. say that a quarter past 2 is the same time as 2:15).
 | They:* **Interpret and use** hour, half hour and quarter hour times when describing the sequence of events in their daily routine (e.g. say that morning tea begins at 10:45, goes for 15 minutes, so finishes at 11:00)
* **Read and draw** times on analogue and digital clocks
* **Investigate** the duration of different events (e.g. work out how many minutes it will be to the next event, how long that event will last or what is happening in 15 minutes time).
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| **Relevant part of the Achievement Standard** | **…..and use a calendar to identify the date and the months included in seasons. (MS2.5)** |
| **Measurement and Geometry:** Using units of measurement[*ACMMG040*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG040)[*ACMMG041*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG041)11 | **With explicit prompts, students:*** **Recall and say** the names of the months of the year in order
* **Identify and** name the traditional seasons in the correct order
* **Read** a calendar and locate the day and date.
 | **With prompts, students:*** **Name and order** the months and seasons and say which months are linked to each season (e.g. say that our summer here in Queensland runs through the hottest months from December to February)
* **Use** a calendar to identify the day associated with date any during the current year (e.g. say that the 5th July in 2013 is a Friday)
* **Count** the [number](http://www.australiancurriculum.edu.au/Glossary?a=M&t=number) of days in each of the months (e.g. say that seven of the twelve months have 31 days).
 | They **independently**:* **Use** a calendar to identify key information including:
	+ the date - the current day or the date of a future event;
	+ the names of the months in order
	+ linking the months with the four seasons
* **Determine** the [number](http://www.australiancurriculum.edu.au/Glossary?a=M&t=number) of days in each month and describe the ways that different calendars display information (e.g. say that some calendars list the days starting with Sunday, while others begin with the Monday).
 | They:* **Identify** seasons from the months and explore the seasons identified by other cultures such as the Australian Aborigines (e.g. say that the Aboriginal seasons vary depending where they live and the seasons may be related to the kinds of activities that take place)
* **Use** calendars confidently to find the current day of the week and work out the number of days to significant events
* **Describe** the length of time to an event, choosing an appropriate unit of duration such as days, weeks, months.
 | They:* **Fluently sequence** days of the week and months of the year and identify the months that do not have 31 days
* **Solve** real-life problems related to calendars (e.g. use a calendar to identify the 20th week of the year or to say which date and day is the last day of summer)
* **Explain** ways they used a calendar to solve duration problems (e.g. say that they needed a current calendar to work out the dates of the Tuesdays during Term 1).
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| **Strands and content descriptions for teaching*****Modes*** | **Emerging** | **Developing** | **Demonstrating** | **Advancing**  | **Extending** |
| Beginning to work towards the achievement standard  | Working towards the achievement standard | Demonstrating the achievement standard | Working beyond the achievement standard | Extending with depth beyond the achievement standard |
| **Relevant part of the Achievement Standard** | **Students recognise the features of three-dimensional objects. (MKU2.5)** **They draw two-dimensional shapes. (MS2.6)** |
| **Measurement and Geometry:** Shape[*ACMMG042*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG042)[*ACMMG043*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG043)12 | **With explicit prompts, students:*** **Describe and draw** two-dimensional shapes including squares and rectangles (e.g. say that a square must have all four sides the same length and the corners must be square)
* **Recognise and name**  other common 2D shapes including triangles and circles (e.g. say that many shapes can be triangles but they all have three straight sides and three angles)
* **Recognise and describe** some of the obvious featuressuch as corners and edges, of common three-dimensional objects (e.g. say that the cube has eight corners but a sphere has none).
 | **With prompts, students:*** **Draw** all of the common two-dimensional shapes including squares, rectangles, triangles, circles and diamonds and **describe** the most obvious features (e.g. say that all circles are round and look the same shape, but they can be different sizes)
* **Recognise and describe** many of the features of the common three-dimensional objects including, edges, vertices and faces (e.g. say that prisms such as boxes have six faces and twelve edges).
 | They **independently**:* **Draw** two-dimensional shapesincluding squares, rectangles, triangles, circles and rhombuses with and without digital technologies.
* **Identify and describe** the features that distinguish members of the family of two-dimensional shapes with four straight sides (e.g. say that rhombuses and squares both have four identical sides, but the square has square corners)
* **Recognise** the features of three-dimensional objects **and describe** which features make each type different from other 3D shapes (e.g. say that both cones and pyramids have a flat base and a point at the top, but only the pyramid has side faces that are triangles).
 | They:* **Draw, describe and classify** familiar two-dimensional shapes of different sizes and dimensions (e.g. identify and draw the whole family of 4-sided shapes and say what features are common and which are unique to a shape)
* **Describe and classify** familiar three-dimensional shapes and objects using appropriate geometric terms (e.g. describe the corners of a rectangular prism as vertices and identify that vertices are formed when three edges meet).
 | They:* **Solve problems** involving finding two-dimensional shapes within other two-dimensional shapes and on three-dimensional objects (e.g. draw a line across a rectangle and say which new shapes have been formed within that shape)
* **Support** reasoning about 2D and 3D shapes and objects with appropriate drawings and sketches
* **Describe** and distinguish the families of 3D shapes according to known geometric properties (e.g. list the properties of prisms and explain how the various prisms within that family are named).
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| **Strand**  | **Emerging**Beginning to work towards the achievement standard  | **Developing**Working towards the achievement standard | **Demonstrating**Demonstrating the achievement standard | **Advancing** Working beyond the achievement standard | **Extending**Extending with depth beyond the achievement standard |
| **Relevant part of the Achievement Standard** | **They interpret simple maps of familiar locations. (MKU2.6)** |
| **Measurement and Geometry:** Location and transformation[*ACMMG044*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG044)13 | **With explicit prompts, students:*** **Identify** some of the significant features on simple maps of a familiar location such as their classroom (e.g. identify the position of the blackboard and the teacher’s table and find the approximate position of their own desk).
 | **With prompts, students:*** **Recognise** simple maps of familiar locations (e.g. say that a map is showing their school grounds)
* **Identify and describe** the relative position of key features (e.g. say that the office is the building closest to the main road at the front of the school).
 | They **independently**:* **Interpret** simple maps of familiar locations and **give** directions based on the position of key features on the map (e.g. use a simple map of the school to create a set of directions that show how to reach their classroom from the main school gate)
* **Arrange** the placement of objects on a map or other situation based on a set of clear directions.
 | They:* **Construct and interpret** simple maps of familiar locations and include the use of icons to represent key features (e.g. create a simple map of the classroom with a legend that displays the meaning of all icons used to identify the placement of key features)
* **Explain** the location of particular features with reference to other features (e.g. explain the position of a bench seat on a map by referring its closeness to a tree and a concrete pathway)
* **Create** sets of directions that arrange the placement of objects on maps based on proximity to, and the position of, key features.
 | They:* **Create and follow** directions about movements around simple maps of familiar locations (e.g. read and interpret maps that use icons to represent key features, and create sets of directions that assist movement from one point to another)
* **Create** directions for alternative ways of reaching a location on a map or within a familiar environment
* **Evaluate** alternative pathways to a chosen feature in relation to anticipated times to reach destinations and ease of following the directions (e.g. decide that a longer route would be the best set of directions because it involves far fewer turns and is more straightforward).
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| **Strand**  | **Emerging**Beginning to work towards the achievement standard  | **Developing**Working towards the achievement standard | **Demonstrating**Demonstrating the achievement standard | **Advancing** Working beyond the achievement standard | **Extending**Extending with depth beyond the achievement standard |
| **Relevant part of the Achievement Standard** | **They explain the effects of one-step transformations. (MKU2.7)** |
| **Measurement and Geometry:** Location and transformation[*ACMMG045*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG045)[*ACMMG046*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG046)13 | **With explicit prompts, students:*** **Demonstrate** the effect of single transformations involving slides (e.g. show that sliding a rectangle on grid paper does not change the appearance of the shape)
* **Use** drawings and digital technologiesto demonstrate simple transformations (e.g. use grid paper to draw the translation of a simple shape such as a right-angled triangle).
 | **With prompts, students:*** **Demonstrate and describe** single transformations involving slides and flips (e.g. use models of common shapes such as triangles to show the effect of sliding or flipping the shape)
* **Use** drawings and digital technologies to demonstrate simple transformations (e.g. use grid paper to draw the effect of flipping a shape such as a rectangle).
 | They **independently**:* **Explain** the effects of single transformations involving slides, flips and half and quarter turns (e.g. explain that every time a half-turns is used with a triangle, the shapes ends up being upside down from where it started; or explain that when I do a quarter turn of a circle, there appears to be no difference)
* **Use** drawings and digital technologies to demonstrate transformations (e.g. explain that changing position using flips and slides does not change the size or shape of an object).
 | They:* **Explain** in detailthe effects of single transformations involving slides flips and half and quarter turns *(e.g. explain that rotating a drawing through a half turn does not change its size or shape but it will be upside down)*
* **Identify** transformations in images and environmental objects (e.g. observe that banks of windows often look like the result of sliding the first window).
 | They:* **Explain** in detailthe effects of two transformations involving slides, flips or half and quarter turns (e.g. explain that rotating a drawing through a half turn and then sliding it does not change its size or shape but it will be upside down, and if it is rotated another half-turn, the original drawing will be seen again)
* **Use and describe** transformations to create patterns.
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| **Strands and content descriptions for teaching*****Modes*** | **Emerging** | **Developing** | **Demonstrating** | **Advancing**  | **Extending** |
| Beginning to work towards the achievement standard  | Working towards the achievement standard | Demonstrating the achievement standard | Working beyond the achievement standard | Extending with depth beyond the achievement standard |
| **Relevant part of the Achievement Standard** | **They describe outcomes for everyday events. (MS2.7)** |
| **Statistics and Probability:** Chance[*ACMSP047*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMSP047)14 | **With explicit prompts, students:*** **Identify** and describe activities and everyday events that are likely or unlikely (e.g. say that when there are dark clouds it is likely to rain).
 | **With prompts, students:*** **Identify** and **describe** activities and everyday events that are very likely or very unlikely (e.g. say that when there are no clouds in the sky it is very unlikely to rain).

  | They **independently**:* **Identify** chance outcomes for everyday events and **describe** outcomes as likely or unlikely very likely or very unlikely and some events as certain or impossible (e.g. say that the chances of Thursday coming after Friday are impossible, while the chances of Sunday following Saturday are certain).
 | They:* **Make predictions** about the outcomes of everyday events and rank them as likely, unlikely, very likely, very unlikely, certain or impossible *(e.g. say that it is very unlikely that the principal will visit the classroom during the next lesson because she just* *drove out of the school gate in her car).*
 | They:* **Identify and describe** personal experiences related to chance events (e.g. say that when playing games like Snakes and Ladders it seems certain that you will land on at least one snake each game – and then play several games to test the theory out)
* **Interpret** data from chance experiments and adjust predictions if necessary (e.g. say that you did not land on a snake in every game of Snakes and Ladders, so change the prediction from certain to very likely).
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| **Strand**  | **Emerging**Beginning to work towards the achievement standard  | **Developing**Working towards the achievement standard | **Demonstrating**Demonstrating the achievement standard | **Advancing** Working beyond the achievement standard | **Extending**Extending with depth beyond the achievement standard |
| **Relevant part of the Achievement Standard** | **Students make sense of collected information. (MKU2.8)****Students collect, organise and represent data to make simple inferences. (MS2.8)** |
| **Statistics and Probability:** Data representation and interpretation[*ACMSP048*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMSP048)[*ACMSP049*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMSP049)[*ACMSP050*](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMSP050)15 & 16 | **With explicit prompts, students:*** **Choose** simple questions to investigate that have one categorical variable, (e.g. decide to find out more about the most popular pet of children in our class?)
* **Collect and sort** data that is relevant to the question into groups (e.g. sort all of the data about dogs as the favourite pet into the same group)
* **Create** simple displays of available data into lists and attempt to answer the question being investigated (e.g. make a simple list of the data collected about the favourite pet within the class and say which one was most favoured).
 | **With prompts, students:*** **Identify** questions of interest to the class based around one [categorical variable](http://www.australiancurriculum.edu.au/Glossary?a=M&t=categorical+variable) (e.g. create a question about favourite songs for the class to resolve)
* **Identify and describe** a source of data and decide how to gather [data](http://www.australiancurriculum.edu.au/Glossary?a=M&t=data) that is relevant to the question (e.g. decide that all of the Year 1 and 2 classes could contribute data and work out that pairs of students should visit each class to ask them)
* **Create** lists and tables to display the available data and **interpret** the displays to answer the investigated question (e.g. make a table that shows each of the categories relevant to the question and the data and describe what the data shows about the question).
 | They **independently**:* **Identify** relevant questionsof personal interest or which relate to school issues (e.g. create a question relating to the lives of Australian families in the 1900s)
* **Identify and describe** different sources of data and decide which would provide the best information (e.g. decide whether data can be gathered from local sources or whether data needs to be found elsewhere such as in the library)
* **Classify and sort** data into relevant groups or categories and use tally marks to record each piece of data (e.g. when sorting data about the sizes of families, use a table and tally marks to organise and record data as it is collected)
* **Create** lists, tables and picture graphs to represent the categories of data and **interpret** thedata displays (e.g. say that a display of data about family size shows that in the early 1900s, families of 8, 10 and12 were very common).
 | They:* **Formulate** simple questions based on one categorical variable for investigations related to other subject areas (e.g. identify pocket money as a topic of interest about family values and create questions about that topic)
* **Gather, check and classify** data relevant to the question and **explain** how they will collect appropriate data (e.g. decide that data from different age groups might show different information, and work out how many people from each group should be interviewed)
* **Explain** interpretations of the data especially in relation to whether the original question has been answered.
 | They:* **Compare** the usefulness of the different data displays and **comment** whether one would be most suitable for representing the data from a particular investigation (e.g. say that a table with data organised into categories might be easier to interpret than a picture graph)
* **Decide** whether additional data needs to be collected to provide a clearer result (e.g. read and interpret data about favourite songs from another source and decide that data needs to be collected from local students and compared with the other set).
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