Mathematics Progression Points: Year 1 – 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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| **Year 1 Achievement Standard**  By the end of Year 1, students [describe](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Describe) number sequences resulting from skip counting by 2s, 5s and 10s. (MKU1.1) They [identify](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Identify) representations of one half. (MKU1.2) They [recognise](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Recognise) Australian coins according to their value. (MKU1.3) Students [explain](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Explain) time durations. (MKU1.4) They [describe](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Describe) two-dimensional shapes and three- dimensional objects. (MKU1.5) Students [describe](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Describe) data displays. (MKU1.6)  Students count to and from 100 and [locate](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Locate) numbers on a number line. (MS1.1) They carry out simple additions and subtractions using counting strategies. (MS1.2) They partition numbers using place value. (MS1.3) They continue simple patterns involving numbers and objects. (MS1.4) Students order objects based on lengths and capacities using informal units. (MS1.5) They tell time to the half-hour. (MS1.6) They use the language of direction to move from place to place. (MS1.7) Students [classify](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Classify) outcomes of simple familiar events. (MS1.8) They collect data by asking questions, [draw](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Draw) simple data displays and make simple inferences. (MS1.9) | | | | | |
| **Strand** | **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 |
| * *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* | * *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* | * *Independent (with access to concrete materials, charts, etc)* * *Applying in new contexts* * *Explains with connections outside the teaching context* |
| Proficiency strands  *At this level:* | * Understanding *includes connecting names, numerals and quantities, and partitioning numbers in various ways* * Fluency *includes counting numbers in sequences readily forward and backwards, locating numbers on a line, and naming the days of the week* * Problem Solving *includes using materials to model authentic problems, giving and receiving directions to unfamiliar places, and using familiar counting sequences to solve unfamiliar problems, and discussing the reasonableness of the answer* * Reasoning *includes explaining direct and indirect comparisons of length using uniform informal units, justifying representations of data, and explaining patterns that have been created.* | | | | |
| **Relevant part of the Achievement Standard** | * **Students describe number sequences resulting from skip counting by 2s, 5s and 10s. (MKU1.1)** * **Students** **count to and from 100 and** [**locate**](http://www.australiancurriculum.edu.au/glossary/popup?a=F10AS&t=Locate) **numbers on a number line. (MS1.1)** | | | | |
| **Number and Algebra:**   * Number and place value   [***ACMNA012***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA012)  1 | **With explicit prompts**, students:   * **say** number sequences resulting from **skip counting by 2s, 5s and 10s,** starting from zero. | **With prompts**, students:   * say number sequences resulting from skip counting by 2s, 5s and 10s * **describe the patterns** in number sequences from skip counting in **5s and 10s** from zero. | Students **independently**:   * **describe number sequences** resulting from skip counting by **2s**, 5s and 10s from zero (e.g. counting by 2’s from zero gives a pattern of even number; counting in 5s from zero gives a pattern ending in a 5 then a zero or every second number is a ten) | Students:   * **describe in several ways**, number sequences resulting from skip counting by 2s, 5s and 10s from zero * **apply this knowledge in everyday situations** (e.g. counting groups) * **explain what they’ve done.** | Students:   * describe in several ways, number sequences resulting from skip counting by 2s, 5s and 10s **from zero and then other numbers** * **apply this knowledge** in **solving problems** * **explain their reasoning.** |

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| **Number and Algebra:**   * Number and place value   [***ACMNA013***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA013)  2 | **With explicit prompts** they:   * count to and from **50** * usually **locate numbers to 50** accurately on a number line | **With prompts** they:   * count to and from **100** * **usually locate numbers to 100 accurately** on a number line * **attempt to explain** how they worked out where to locate a number | They **independently**:   * count to and from 100 * **locate numbers** to 100 on a number line * **explain how they worked out** where to locate a number   . | They:   * count to and from **100 and beyond** * **locate these numbers** on a number line (e.g. starting at 78 and finishing at 117) * **apply this knowledge in everyday situations** (e.g. measuring lengths, counting quantities) * **explain the mathematical process they used.** | They:   * count to and from 100 and beyond * locate these numberson a number line (e.g. placing numbers on a line from 70 to 150, marked in 5s) * **identify and explain patterns** in the way numerals are written and ordered * **apply this knowledge** in **solving problems** * **explain their reasoning.** |
| **Relevant part of the Achievement Standard** | * **They partition numbers using place value. (MS1.3)** | | | | |
| **Number and Algebra:**   * Number and place value   [***ACMNA014***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA014)  3 | **With explicit prompts**, they:   * **partition numbers to 50** using place value. | **With prompts**, they:   * **partition numbers to 100** using place value * **attempt to explain** what they have done. | They **independently**:   * partition numbers using place value * **explain** what they have done. | They:   * **compare** collections to 100 **and confirm** their comparisons by using place value to partition numbers * **explain their reasoning.** | They:   * compare and **order** collections to 100 and confirm their comparisons by using place value to partition numbers * **explain** their reasoning and the **reasonableness of their answers**. |
| **Relevant part of the Achievement Standard** | * **They carry out simple additions and subtractions using counting strategies. (MS1.2)** | | | | |
| **Number and Algebra:**   * Number and place value   [***ACMNA015***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA015)  4 | **With explicit prompts**, they:   * carry out simple additions **in real-life situations**, using counting strategies. * carry out simple subtractions **in real-life situations**, using counting strategies. | **With prompts**, they:   * carry out simple additions **with materials**, using counting strategies. * carry out simple subtractions **with materials**, using counting strategies. * **attempt to explain** what they have done. | They **independently**:   * carry out simple additions using counting strategies. * carry out simple subtractions using counting strategies. * **explain** what they have done. | They:   * work out **addition problems** in real-life situations, using a **range of counting strategies** * work out **subtraction problems** in real-life situations, using a range of counting strategies * **explain the process and their reasoning**. | They:   * solve **unfamiliar** addition and subtraction **problems** using a **range of strategies** including counting on, partitioning and rearranging * **explain** their reasoning and the **reasonableness of their answers**. |

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| **Relevant part of the Achievement Standard** | * **They identify representations of one half. (MKU1.2)** | | | | |
| **Number and Algebra:**   * Fractions and decimals   [***ACMNA016***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA016)  6 | **With explicit prompts**, they:   * **share groups** into two equal parts and **divide shapes** into two equal parts * **talk about** what they have done using the term, ‘half’’. | **With prompts**, they:   * **identify representations** of one half (e.g. they select one piece of an apple cut into two equal pieces or a rectangle cut into two equal pieces; given a box of four buttons, they can recognise when half have been taken out) * **refer to** the selected piece or group as **‘a half’’.** | They **independently**:   * **identify representations** of one half (e.g. they select half an apple or rectangle when there is a choice of two equal pieces or two unequal pieces; they select half of a group when it has been divided equally but not when it has been divided unequally) * **explain** why the selected piece or group is ‘a half’’. | They:   * **apply their understanding** of one-half as being one of two equal parts of a whole in real-life situations * **explain** their reasoning. | They:   * **solve problems** involving halves their understanding of one-half as being one of two equal parts of a whole in real-life situations * **explain** their reasoning and the **reasonableness of their answers**. |
| **Relevant part of the Achievement Standard** | * **They recognise Australian coins according to their value. (MKU1.3)** | | | | |
| **Number and Algebra:**   * Money and financial mathematics   [***ACMNA017***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA017)  *7* | **With explicit prompts**, they:   * **recognise most** Australian coins according to their value. | **With prompts**, they:   * recognise most Australian coins according to their value * **describe most** Australian coins according to their value | They **independently**:   * recognise **(all)** Australian coins according to their value. | They:   * **order** Australian coins according to their value * **substitute** several similar coins for one coin to make the same value (e.g. two 5c coins for one 10c coin) * **explain** their reasoning. | They:   * solve problems that involve substituting several similar coins for one coin to make the same value * **explain** their reasoning and the **reasonableness of their answers**. |
| **Relevant part of the Achievement Standard** | * **They continue simple patterns involving numbers and objects. (MS1.4)** | | | | |
| **Number and Algebra:**   * Patterns and algebra   [***ACMNA018***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMNA018)  8 | **With explicit prompts**, they:   * continue simple patterns involving numbers (e.g. sequences from skip counting by **5’s and 10’s**) * **copy and continue** simple patterns with objects and drawings. | **With prompts**, they:   * continue simple patterns involving numbers (e.g. sequences from skip counting by **2’s,** 5’s and 10’s) * **continue** simple patterns with objects and drawings * **describe** their patterns. | They **independently**:   * continue simple patterns involving numbers (e.g. sequences from skip counting by 2’s, 5’s and 10’s) * continue simple patterns involving objects * **explain** how they worked out the continuation of the pattern. | They:   * **investigate and describe** number patterns formed by skip counting in new sequences (e.g. 3s) * **create** and continue patterns with objects, sounds and movements. * **give detailed explanations** of what they find and look for ways to use this knowledge in everyday situations. | They:   * use their pattern finding ability to **solve problems** in practical situations * **explain their reasoning and the processes** they used. |

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| **Relevant part of the Achievement Standard** | * **Students order objects based on lengths and capacities using informal units. (MS1.5)** | | | | |
| **Measurement and Geometry:**   * Using units of measurement   [***ACMMG019***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG019)  9 | **With explicit prompts**, they:   * measure and compare the **lengths of pairs** of objects using informal units * measure and compare the capacities of pairs of objects using informal units | **With prompts**, they:   * measure and compare the lengths of pairs of objects using informal units * measure and compare the **capacities of pairs** of objects using informal units * **attempt to describe** what the have done, using measurement terms (e.g. full, longer, shorter). | They **independently**:   * **order (up to 3)** objects based on **lengths** using informal units * **order (up to 3)** objects based on **capacities** using informal units. * **describe** their ordering using measurement terms. | They:   * **suggest appropriate items to measure** the lengths of three objects * **suggest appropriate measurement items** to decide which of three objects holds more * **explain their choices** * **compare and order** lengths and capacities using appropriate terms. | They:   * use their ability to measure and compare to **solve real-life problems** involving length ad capacity * **explain the processes they used**. |
| **Relevant part of the Achievement Standard** | * **They tell time to the half-hour. (MS1.6)** | | | | |
| **Measurement and Geometry:**   * Using units of measurement   [***ACMMG020***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG020)  10 | **With explicit prompts**, they:   * refer to a clock and **tell the time in hours** * **use the term ‘o’clock’** when describing the order of events through the day. | They:   * **tell time to the hour** on analogue and digital clocks).   **With prompts**, they:   * **tell time to the half-hour** on analogue and digital clocks. | They **independently**:   * **tell time to the half-hour** (e.g. on analogue and digital clocks). | They:   * **identify events** in their daily routine **that occur on the hour and half-hour** * **match analogue and digital clock faces to daily events.** | They:   * **refer to hour and half hour times when describing the sequence** of eventsin their daily routine * **can tell what event will be happening next**, when reading an analogue or digital clock. |
| **Relevant part of the Achievement Standard** | * **Students explain time durations. (MKU1.4)** | | | | |
| **Measurement and Geometry:**   * Using units of measurement   [***ACMMG021***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG021)  11 | **With explicit prompts**, they:   * **recite the days of the week** in sequence * **connect personally significant events** to months, days of the week and hours. | **With prompts**, they:   * recite the days of the week * **recite the months of the year** * **describe duration** using months, weeks, days and hours to refer to events in their lives. | They **independently**:   * **explain time duration**   For example they   * + use months, weeks, days and hours to refer to events in their lives   + compare durations – a day is shorter than a week. | They:   * confidently **refer to calendars to explain time duration** * **describe the length of time to significant events, choosing an appropriate unit of duration** (It’s three weeks to my birthday; I’m going to the footie in three hours) * **explain the comparative duration** of events. | They:   * **fluently sequence** days of the week and months of the year in describing time duration * **describe the length of time** to significant events **in multiple ways** (We’re going to the museum next Friday. That’s a week away. It’s seven days.) * **explain the reasoning behind their descriptions** of time duration. |

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| **Relevant part of the Achievement Standard** | * **They describe two-dimensional shapes and three-dimensional objects. (MKU1.5)** | | | | |
| **Measurement and Geometry:**   * Shape   [***ACMMG022***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG022)  12 | **With explicit prompts,** they   * **sort, name and describe a feature of familiar two-dimensional shapes** (squares, circles, triangles, rectangles) * **sort, name and describe a feature of familiar three dimensional** objects (spheres, cubes and cones). | They:   * identify familiar two-dimensional shapes * **with prompts, describe** the obvious features using terms such as line, corner, straight, curved * identify familiar three-dimensional objects (spheres, cubes, cylinders and cones) * **with prompts, describe** the obvious features using terms such as side, edge, face, line, curved, straight. | They **independently**:   * **describe two-dimensional shapes** (e.g. using terms such as line, corner, straight, curved) * **describe three-dimensional objects** (spheres, cubes, cylinders, and cones). (e.g. using terms such as side, edge, face, line, curved, straight.**.** | They:   * recognise and classify familiar **two-dimensional shapes of different sizes and dimensions** * recognise and classify familiar **three-dimensional objects of different sizes** * **explain their reasoning** using appropriate terms for obvious features. | They:   * solve simple problems involving **finding two-dimensional shapes within other two-dimensional shapes** * solve simple problems involving **finding two-dimensional shapes on three-dimensional objects** * **explain their reasoning in detail** using appropriate terms for features. |
| **Relevant part of the Achievement Standard** | * **They use the language of direction to move from place to place. (MS1.7)** | | | | |
| **Measurement and Geometry:**   * Location and transformation   [***ACMMG023***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMMG023)  13 | With explicit prompts, they:   * **give and follow directions within a small area** (e.g. classroom, play equipment area). * **use appropriate terms** (e.g. in, out, on, under). | With prompts, they:   * give and follow directions **to familiar locations within their line of sight** * use appropriate terms (e.g. in front of, on top of, beside). | They **independently**:   * **use the language of direction to move from place to place**. (e.g. they give and follow **directions to familiar locations or on a model or map,** using terms such as in front of, on top of, beside). | They:   * **explain from memory** how to get from one location to another in the school * **use terms such as underneath, behind, forwards, backwards, clockwise and anticlockwise** * **follow similar directions.** | They:   * explain from memory and **with detail** how to get from one location to another in the school * use appropriate terms of direction and movement * **specify key points and number of steps** * **evaluate the accuracy** of their directions * follow similar directions and **provide feedback to the person giving the directions.** |

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| **Relevant part of the Achievement Standard** | * **Students describe data displays. (MKU1.6)** * **Students classify outcomes of simple familiar events. (MS1.8)** * **They collect data by asking questions, draw simple data displays and make simple inferences. (MS1.9)** | | | | |
| **Statistics and Probability:**   * Chance   [***ACMSP024***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMSP024)  14 | **With explicit prompts**, they;   * describe the likelihood of familiar events using everyday language such as **‘will happen’, ‘won’t happen’** * **attempt to explain** why they think something will or won’t happen. | **With prompts**, they:   * describe the likelihood of familiar events using everyday language such as ‘will happen’, ‘won’t happen’ or **‘might happen’** * **attempt to explain** their reasoning based on personal experience. | They **independently**:   * **classify outcomes of simple familiar events** (e.g. they describe the likelihood of events using everyday language such as ‘will happen’, ‘won’t happen’ or ‘might happen’ * **give a basic reason** for their opinion based on personal experience. | They:   * **apply their ability to predict outcomes** in other subject areas (predicting if materials will sink or float) * **give detailed explanations of their reasoning based on personal experience.** | They:   * apply their ability to predict outcomes in other subject areas (predicting if materials will sink or float) * **give detailed explanations of their reasoning based on** personal experience and **subject area knowledge.** |
| **Statistics and Probability:**   * Data representation and interpretation   [***ACMSP262***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMSP262)  15 | **With explicit prompts**, they:   * **choose simple questions** to investigate that have **yes/no answers** * **gather responses** * **make simple inferences**. * **identify specific** aspects of data shown in displays | **With prompts**, they:   * **choose simple questions to investigate** (How many children in our class like pizza? or What is the favourite thing of children in our class to do on holidays?) * gather responses * **make simple inferences** * **locate** aspects of data shown in displays | They **independently**:   * **collect data by asking questions (**e.g. they suggest questions of personal interest and gather responses or data) * **make simple inferences** * **identify and locate** data shown in displays. | They:   * formulate simple **questions** for investigations **related to other subject areas** * **explain how they will collect appropriate data** * collect data * **make inferences linking aspects of the data**. | They:   * formulate simple questions for investigations related to other subject areas * **explain why they are appropriate questions** * plan data collection and collect data * **evaluate whether the data has answered the question** * **make inferences explaining aspects of the data.** |
| **Statistics and Probability:**   * Data representation and interpretation   [***ACMSP263***](http://www.australiancurriculum.edu.au/curriculum/contentdescription/ACMSP263)  16 | **With explicit prompts,** they:   * **represent data** (responses to yes/no questions) with objects and drawings where one object or drawing represents one data value * **describe** the displays * **answer** the investigated question. | **With prompts**, they:   * represent data with objects and drawings where one object or drawing represents one data value * describe the displays * answer the investigated question. | They **independently**:   * **draw simple data displays** (e.g. where one object or drawing represents one data value) * **describe the displays** * **explain how it answers the investigated question.** | They:   * represent data with objects and drawings where one object or drawing represents one data value * describe the display, **clearly explain**ing the data * **clearly explain** how the data answers the investigated question. | They:   * represent data with objects, drawings or **tally marks on a grid** where one object or drawing represents one data value * describe the display, **explaining the data in detail** * **provide an extended answer to the investigated question**. (Handball was the most popular game our parents played at school and hopscotch was the second most popular. Only one parent liked climbing.) |