**Year 1**

The rubrics have been developed in three columns. The column ‘beginning’ aligns with the year level below and ‘exceeds expectations’ aligns with the year level above. The middle column combines ‘consolidating’ and ‘meets expectations’ which are both indicators of year level expectations. ‘Consolidating’ indicates that student learning is at year level expectations but is not fully consistent or independently achieved.

The outcomes are written in bold text. The indicators listed under each outcome are there to support understanding of the outcome. These are not in place as an exhaustive list, or exclusively the only indicators. Staff are strongly encouraged to use these indicators as a starting point for discussion and clarification.

|  |
| --- |
| Key for Levels of Achievement |

|  |  |  |  |
| --- | --- | --- | --- |
| B = Beginning | C = Consolidating | ME = Meets Expectations | EE = Exceeds Expectation |
| The student has begun to demonstrate some evidence of achieving learning outcomes; however applies limited knowledge, skills and understandings. The student’s learning is below year level expectations at this time. | The student has demonstrated evidence of the learning outcomes. The student is practising skills and is developing knowledge and understandings. Learning is at year level expectations but is not fully consistent or independent | The student has demonstrated knowledge of the learning outcomes and is applying knowledge, skills and understandings consistently and independently. Learning is at year level expectations. | The student has demonstrated evidence exceeding the learning outcomes in a variety of ways and applies higher level knowledge, skills and understandings consistently. Learning exceeds year level expectations. |

| Beginning | Consolidating / Meets Expectations | Exceeds Expectations |
| --- | --- | --- |
|  | Estimate, compare, describe and measure the length, mass, capacity and temperature of objects using nonstandard units.Length* Can estimate and describe the order of lengths of objects for example: line up one end of things in order to make a direct comparison of length.
* Use indirect methods to arrange by length objects that can’t be directly compared; e.g. fit tape along curved paths and order the paper tapes to decide which path is longest
* Describe the length of real objects using simple vocabulary (long, short, tall, high, short, low, small, big etc.)
* Measure lengths of objects using non-standard units (hand spans, cubes etc)

Mass* Estimate and compare the mass of objects by hefting (heavier / lighter).
* Describe the mass of real objects (heavy and light).
* Measure mass of objects with non-standard units using balance scales.

Capacity* Describe the capacity of containers (full and empty)
* Estimate and compare the capacity of containers using other containers as the non-standard measure.
* Estimate and order the capacity of containers when the containers are roughly the same size.

Temperature* Identify and compare the temperature of real objects or situations (hot, cold, warm).
 | Estimate, compare and measure length with standard unitsLength* Estimate and order the length of real objects using centimetres as a reference.
* Estimate, measure and compare lengths of objects using centimetres with some accuracy.
* Use rulers, metre rulers, tape measures and measuring wheels to measure real objects.
* Explain the difference between standard and non-standard units.
* Recognise objects that are longer/shorter than a metre.
* Use body parts (e.g. hand spans, foot lengths, strides) and familiar objects (e.g. leaves, pop-sticks) repeatedly to match the length of things and say how many fit.
 |
| Estimate, compare and measure the mass, capacity, volume and temperature of objects using nonstandard units* Begin to make sensible estimates using familiar units as a reference.
* Select or reject units according to the attribute to be measured e.g. cupfuls of rice to measure capacity.
* Understand the necessity of selecting the same unit when comparing two things; e.g. the room is 5-and-a-bit of my strides long but just under 5 of Kaye’s strides long.
* Find objects that are heavier/lighter than 500 grams, hold more/less than 1 litre.

Mass* Use both balance scales and weighing scales to measure and compare mass of real objects.
* Choose objects of the same size to use for measuring and count the units to balance an object; e.g. same-sized pebbles to say how heavy something is in pebbles.
* Heft or use a balance beam to say which is heavier of two visually similar-sized objects; e.g. tins filled with different materials.

Capacity* Use measuring jugs to measure and compare liquids.
* Understand that if different attributes are used to order objects, the order may be different; e.g. explain that the tallest glass may not hold the most because it isn’t as wide as the others
* Count informal units of capacity (e.g. spoonfuls, cups) to say how many will fill the container
* Estimate, with a Litre cylinder / jug available for comparison, which containers have capacity of about, less than, more than a litre

Temperature* Has experience of using a thermometer to measure temperature; e.g. how hot or cold the classroom is.
 |
|  | TimeRead and write the time to an hour.Name and order the days of the week.Compare and order the duration of events using the everyday language of time.Connect days of the week to familiar events and actions.* Begin to build a concept of time and how long a minute is compared to 10 seconds or 10 minutes.
* Order events with respect to time and how long they take.
* Use terms such as ‘this takes more time/less time.
* Estimate a minute with reasonable accuracy.
* Estimate the time of day/week using natural or artificial phenomena; e.g. position of the sun, how full the school car park is or when assembly is.
 | TimeRead and write the time to the hour and half hour. Identify and record dates of events on a calendar.Name and order the months of the year and seasons.Describe duration using months, weeks, days hours and minutes.* Use a calendar to count and record days, weeks and months.
* Order events with respect to time and how long they take using terms like “this takes more/less time than.
* Use a time line to order daily events.
* Beginning to match the time between analogue and digital clocks.
* Recognise ‘key times’ on an analogue clock and tell the time of day on digital and analogue clocks in hours and half hours.
 |

**Year 2**

The rubrics have been developed in three columns. The column ‘beginning’ aligns with the year level below and ‘exceeds expectations’ aligns with the year level above. The middle column combines ‘consolidating’ and ‘meets expectations’ which are both indicators of year level expectations. ‘Consolidating’ indicates that student learning is at year level expectations but is not fully consistent or independently achieved.

The outcomes are written in bold text. The indicators listed under each outcome are there to support understanding of the outcome. These are not in place as an exhaustive list, or exclusively the only indicators. Staff are strongly encouraged to use these indicators as a starting point for discussion and clarification.

|  |
| --- |
| Key for Levels of Achievement |

|  |  |  |  |
| --- | --- | --- | --- |
| B = Beginning | C = Consolidating | ME = Meets Expectations | EE = Exceeds Expectation |
| The student has begun to demonstrate some evidence of achieving learning outcomes; however applies limited knowledge, skills and understandings. The student’s learning is below year level expectations at this time. | The student has demonstrated evidence of the learning outcomes. The student is practising skills and is developing knowledge and understandings. Learning is at year level expectations but is not fully consistent or independent | The student has demonstrated knowledge of the learning outcomes and is applying knowledge, skills and understandings consistently and independently. Learning is at year level expectations. | The student has demonstrated evidence exceeding the learning outcomes in a variety of ways and applies higher level knowledge, skills and understandings consistently. Learning exceeds year level expectations. |

| Beginning | Consolidating / Meets Expectations | Exceeds Expectations |
| --- | --- | --- |
| **Estimate, compare, describe and measure the length, mass, capacity and temperature of objects using nonstandard units.****Length*** Can estimate and describe the order of lengths of objects for example: line up one end of things in order to make a direct comparison of length.
* Use indirect methods to arrange by length objects that can’t be directly compared; e.g. fit tape along curved paths and order the paper tapes to decide which path is longest
* Describe the length of real objects using simple vocabulary (long, short, tall, high, short, low, small, big etc.)
* Measure lengths of objects using non-standard units (hand spans, cubes etc)

**Mass*** Estimate and compare the mass of objects by hefting (heavier / lighter).
* Describe the mass of real objects (heavy and light).
* Measure mass of objects with non-standard units using balance scales.

**Capacity*** Describe the capacity of containers (full and empty)
* Estimate and compare the capacity of containers using other containers as the non-standard measure.
* Estimate and order the capacity of containers when the containers are roughly the same size.

**Temperature*** Identify and compare the temperature of real objects or situations (hot, cold, warm).
 | Estimate, compare and measure length with standard units.Length* Estimate and order the length of real objects using centimetres as a reference.
* Estimate, measure and compare lengths of objects using centimetres with some accuracy.
* Use rulers, metre rulers, tape measures and measuring wheels to measure real objects.
* Explain the difference between standard and non-standard units.
* Recognise objects that are longer/shorter than a metre.
* Use body parts (e.g. hand spans, foot lengths, strides) and familiar objects (e.g. leaves, pop-sticks) repeatedly to match the length of things and say how many fit.
 | Estimate, compare and measure objects using standard units of measurement: length, mass, volume, capacity and temperature.Length* Estimate and compare the lengths of objects in relation to a metre (more/less than a metre).
* Read measurements to the nearest cm.
* Use a ruler or tape measure and make things to the nearest centimetre.
* Use a uniform unit of length carefully to make their own graduated scale; that is, a ruler or tape measure.
* Use body parts and movements as a unit to help estimate length; e.g. know body parts and movements that are about 1 centimetre, 10 centimetres and 1 metre long.

Mass* Measure the mass of objects to Kilograms and half kilograms with some accuracy.
* Compare mass of real objects using kg and grams.
* Estimate by hefting with a kilogram weight for comparison, which objects have a mass of about, less than, more than 1 kilogram.

Capacity* Estimate, Measure and compare capacity in litres and half litres with some accuracy.
* Estimate the capacity of containers using other containers as a non-standard measure.
* Use a unit consistently and carefully to measure and compare containers; e.g. carefully count how many level cupful’s of beans fill each.

Temperature* Use a thermometer to measure temperature.
* Associate the temperature of environments with seasons.
 |
| Estimate, compare and measure the mass, capacity, volume and temperature of objects using nonstandard units* Begin to make sensible estimates using familiar units as a reference.
* Select or reject units according to the attribute to be measured e.g. cupfuls of rice to measure capacity.
* Understand the necessity of selecting the same unit when comparing two things; e.g. the room is 5-and-a-bit of my strides long but just under 5 of Kaye’s strides long.
* Find objects that are heavier/lighter than 500 grams, hold more/less than 1 litre.

Mass* Use both balance scales and weighing scales to measure and compare mass of real objects.
* Choose objects of the same size to use for measuring and count the units to balance an object; e.g. same-sized pebbles to say how heavy something is in pebbles.
* Heft or use a balance beam to say which is heavier of two visually similar-sized objects; e.g. tins filled with different materials.

Capacity* Use measuring jugs to measure and compare liquids.
* Understand that if different attributes are used to order objects, the order may be different; e.g.
* explain that the tallest glass may not hold the
* most because it isn’t as wide as the others
* Count informal units of capacity (e.g. spoonful’s, cups) to say how many will fill the container
* Estimate, with a Litre cylinder / jug available for comparison, which containers have capacity of about, less than, more than a litre

Temperature* Has experience of using a thermometer to measure temperature; e.g. how hot or cold the classroom is.
 |
| Estimate, compare and measure area of objects with nonstandard units. |
| Identify and describe relationships between units of measure (e.g. 10mm is the same as 1cm). |
| Time**Can read and write the time to an hour.****Name and order the days of the week.****Compare and order the duration of events using the every-day language of time.****Connect days of the week to familiar events and actions.*** Begin to build a concept of time and how long a minute is compared to 10 seconds or 10 minutes.
* Order events with respect to time and how long they take.
* Use terms such as ‘this takes more time/less time.
* Estimate a minute with reasonable accuracy.
* Estimate the time of day/week using natural or artificial phenomena; e.g. position of the sun, how full the school car park is or when assembly is.
 | **Time**Read and write the time to the hour and half hour. Identify and record dates of events on a calendar.Name and order the months of the year and seasons.Describe duration using months, weeks, days hours and minutes.* Use a calendar to count and record days, weeks and months.
* Order events with respect to time and how long they take using terms like “this takes more/less time than.
* Use a time line to order daily events.
* Beginning to match the time between analogue and digital clocks.
* Recognise ‘key times’ on an analogue clock and tell the time of day on digital and analogue clocks in hours and half hours.
 | TimeRead and write the time to the quarter-hour and 5 minute intervals (past, to).Estimate and compare lengths of time: second, minute, hour, day, week, months and years.Connect times to events in a day.* Recognise ‘key times’ on an analogue clock and tell the time of day on digital and analogue clocks in hours and 5 minute intervals.
* Classify events into those that take more than, less than, about one half hour or 5 minutes
 |
|  |  | **Angles**Identify angles as measures of turn and compare angle sizes in everyday situations.* Order angles by direct comparison of the ‘amount of turn’ and by using units such as a quarter turn or an angle of their own.
* Make and use a ‘right angle checker’.
* Recognise right angles in turns.
 |

**Year 3**

The rubrics have been developed in three columns. The column ‘beginning’ aligns with the year level below and ‘exceeds expectations’ aligns with the year level above. The middle column combines ‘consolidating’ and ‘meets expectations’ which are both indicators of year level expectations. ‘Consolidating’ indicates that student learning is at year level expectations but is not fully consistent or independently achieved.

The outcomes are written in bold text. The indicators listed under each outcome are there to support understanding of the outcome. These are not in place as an exhaustive list, or exclusively the only indicators. Staff are strongly encouraged to use these indicators as a starting point for discussion and clarification.

|  |
| --- |
| Key for Levels of Achievement |

|  |  |  |  |
| --- | --- | --- | --- |
| B = Beginning | C = Consolidating | ME = Meets Expectations | EE = Exceeds Expectation |
| The student has begun to demonstrate some evidence of achieving learning outcomes; however applies limited knowledge, skills and understandings. The student’s learning is below year level expectations at this time. | The student has demonstrated evidence of the learning outcomes. The student is practising skills and is developing knowledge and understandings. Learning is at year level expectations but is not fully consistent or independent. | The student has demonstrated knowledge of the learning outcomes and is applying knowledge, skills and understandings consistently and independently. Learning is at year level expectations. | The student has demonstrated evidence exceeding the learning outcomes in a variety of ways and applies higher level knowledge, skills and understandings consistently. Learning exceeds year level expectations. |

| Beginning | Consolidating / Meets Expectations | Exceeds Expectations |
| --- | --- | --- |
| **Estimate, compare and measure length with standard units*** Estimate and order the length of real objects using centimetres as a reference.
* Estimate, measure and compare lengths of objects using centimetres with some accuracy.
* Use rulers, metre rulers, tape measures and measuring wheels to measure real objects.
* Explain the difference between standard and non-standard units.
* Recognise objects that are longer/shorter than a metre.
* Use body parts (e.g. hand spans, foot lengths, strides) and familiar objects (e.g. leaves, pop-sticks) repeatedly to match the length of things and say how many fit.

**Estimate, compare and measure the mass, capacity, volume and temperature of objects using nonstandard units*** Begin to make sensible estimates using familiar units as a reference.
* Select or reject units according to the attribute to be measured e.g. cupfuls of rice to measure capacity.
* Understand the necessity of selecting the same unit when comparing two things; e.g. the room is 5-and-a-bit of my strides long but just under 5 of Kaye’s strides long.
* Find objects that are heavier/lighter than 500 grams, hold more/less than 1 litre.

**Mass*** Use both balance scales and weighing scales to measure and compare mass of real objects.
* Choose objects of the same size to use for measuring and count the units to balance an object; e.g. same-sized pebbles to say how heavy something is in pebbles.
* Heft or use a balance beam to say which is heavier of two visually similar-sized objects; e.g. tins filled with different materials.

**Capacity*** Use measuring jugs to measure and compare liquids.
* Understand that if different attributes are used to order objects, the order may be different; e.g. explain that the tallest glass may not hold the most because it isn’t as wide as the others
* Count informal units of capacity (e.g. spoonfuls, cups) to say how many will fill the container
* Estimate, with a Litre cylinder / jug available for comparison, which containers have capacity of about, less than, more than a litre.

**Temperature*** Has experience of using a thermometer to measure temperature; e.g. how hot or cold the classroom is.
 | Estimate, compare and measure objects using standard units of measurement: length, mass, volume, capacity and temperature.Length* Estimate and compare the lengths of objects in relation to a metre (more/less than a metre).
* Read measurements to the nearest cm.
* Use a ruler or tape measure and make things to the nearest centimetre.
* Use a uniform unit of length carefully to make their own graduated scale; that is, a ruler or tape measure.
* Use body parts and movements as a unit to help estimate length; e.g. know body parts and movements that are about 1 centimetre, 10 centimetres and 1 metre long.

Mass* Measure the mass of objects to Kilograms and half kilograms with some accuracy.
* Compare mass of real objects using kg and grams.
* Estimate by hefting with a kilogram weight for comparison, which objects have a mass of about, less than, more than 1 kilogram.

Capacity* Estimate, Measure and compare capacity in litres and half litres with some accuracy.
* Estimate the capacity of containers using other containers as a non-standard measure.
* Use a unit consistently and carefully to measure and compare containers; e.g. carefully count how many level cupfuls of beans fill each.

Temperature* Use a thermometer to measure temperature.
* Associate the temperature of environments with seasons.
 | Estimate, compare and measure objects using standard units of measurement: length, perimeter, area, mass, capacity, volume and temperature.Length, Perimeter and Area* Estimate, measure, label, compare and order length of objects using standard units (m, cm, mm)
* Estimate, construct, measure, label and compare perimeter and area of objects using standard unit: cm & cm² by counting squares.
* Use the known length of body parts to help estimate length; e.g. know their average stride is 90cm and use to estimate the length of the classroom.
* Make things to a specified length to the nearest cm and Measure a length to the nearest 1/2 cm.
* Show that a unit of area can be cut and rearranged and still be the same unit; e.g. a square metre is a size but does not need to be square.

Mass, Volume and Capacity* Estimate, measure, label, compare and order mass of objects using standard units (g, Kg).
* Estimate, measure, label, compare and order capacity of containers using standard units (ml, L).
* Read scales to the nearest labelled gradation.
* Know the size of some familiar things to use as benchmarks for estimating mass; e.g. 1 Litre of milk weighs about 1 Kg.

Temperature* Estimate and measure temperature in Celsius.
* Begin to develop temperature landmarks.
 |
| Estimate, compare and measure area of objects with nonstandard units. |
| Identify and describe relationships between units of measure (e.g. 10mm is the same as 1cm). | Convert between units using whole numbers (e.g. 1 metre to 100 centimetres.* Begin to convert length units e.g. Show that a 1400 metre walk is further than a 1Km walk.
 |
| **Time****Read and write the time to the hour and half hour.****Identify and record dates of events on a calendar.****Name and order the months of the year and seasons.****Describe duration using months, weeks, days hours and minutes.*** Use a calendar to count and record days, weeks and months.
* Order events with respect to time on a timeline and say how long they take using terms like “this takes more/less time than.
* Beginning to match the time between analogue and digital clocks.
* Recognise ‘key times’ on an analogue clock and tell the time of day on digital and analogue clocks in hours and half hours.
 | TimeRead and write the time to the quarter-hour and 5 minute intervals (past, to).Estimate and compare lengths of time: second, minute, hour, day, week, months and years.Connect times to events in a day.* Recognise ‘key times’ on an analogue clock and tell the time of day on digital and analogue clocks in hours and 5 minute intervals.
* Classify events into those that take more than, less than, about one half hour or 5 minutes
 | TimeRead and write the time to the minute and investigate the relationship between units of time.Convert between units of time.Describe time and duration using am and pm.* Develop a sense of time in real context.
* Convert number of minutes to hours and vice versa.
* Investigate time in terms of chronological order of daily events and own life time events or periods.
 |
|  | AnglesIdentify angles as measures of turn and compare angle sizes in everyday situations.* Order angles by direct comparison of the ‘amount of turn’ and by using units such as a quarter turn or an angle of their own.
* Make and use a ‘right angle checker’.
* Recognise right angles in turns.
 | AnglesCompare and classify angles using the language of right angle, acute and obtuse.* Show if an angle is larger (obtuse) or smaller (acute) than a right angle.
 |

**Year 4**

The rubrics have been developed in three columns. The column ‘beginning’ aligns with the year level below and ‘exceeds expectations’ aligns with the year level above. The middle column combines ‘consolidating’ and ‘meets expectations’ which are both indicators of year level expectations. ‘Consolidating’ indicates that student learning is at year level expectations but is not fully consistent or independently achieved.

The outcomes are written in bold text. The indicators listed under each outcome are there to support understanding of the outcome. These are not in place as an exhaustive list, or exclusively the only indicators. Staff are strongly encouraged to use these indicators as a starting point for discussion and clarification.

|  |
| --- |
| Key for Levels of Achievement |

|  |  |  |  |
| --- | --- | --- | --- |
| B = Beginning | C = Consolidating | ME = Meets Expectations | EE = Exceeds Expectation |
| The student has begun to demonstrate some evidence of achieving learning outcomes; however applies limited knowledge, skills and understandings. The student’s learning is below year level expectations at this time. | The student has demonstrated evidence of the learning outcomes. The student is practising skills and is developing knowledge and understandings. Learning is at year level expectations but is not fully consistent or independent | The student has demonstrated knowledge of the learning outcomes and is applying knowledge, skills and understandings consistently and independently. Learning is at year level expectations. | The student has demonstrated evidence exceeding the learning outcomes in a variety of ways and applies higher level knowledge, skills and understandings consistently. Learning exceeds year level expectations. |

| Beginning | Consolidating / Meets Expectations | Exceeds Expectations |
| --- | --- | --- |
| **Estimate, compare and measure objects using standard units of measurement: length, mass, volume and capacity****Length*** Estimate and compare the lengths of objects in relation to a metre (more/less than a metre).
* Read measurements to the nearest cm.
* Use a ruler or tape measure and make things to the nearest centimetre.
* Use a uniform unit of length carefully to make their own graduated scale; that is, a ruler or tape measure.
* Use body parts and movements as a unit to help estimate length; e.g. know body parts and movements that are about 1 centimetre, 10 centimetres and 1 metre long.

**Mass*** Measure the mass of objects to Kilograms and half kilograms with some accuracy.
* Compare mass of real objects using kg and grams.
* Estimate by hefting with a kilogram weight for comparison, which objects have a mass of about, less than, more than 1 kilogram.

**Capacity*** Estimate, Measure and compare capacity in litres and half litres with some accuracy.
* Estimate the capacity of containers using other containers as a non-standard measure.
* Use a unit consistently and carefully to measure and compare containers; e.g. carefully count how many level cupfuls of beans fill each.

**Temperature*** Use a thermometer to measure temperature.
* Associate the temperature of environments with seasons
 | Estimate, compare and measure objects using standard units of measurement: length, perimeter, area, mass, capacity, volume and temperature.Length, Perimeter and Area* Estimate, measure, label, compare and order length of objects using standard units (m, cm, mm)
* Estimate, construct, measure, label and compare perimeter and area of objects using standard unit: cm & cm² by counting squares.
* Use the known length of body parts to help estimate length; e.g. know their average stride is 90cm and use to estimate the length of the classroom.
* Make things to a specified length to the nearest cm and Measure a length to the nearest 1/2 cm.
* Show that a unit of area can be cut and rearranged and still be the same unit; e.g. a square metre is a size but does not need to be square.

Mass, Volume and Capacity* Estimate, measure, label, compare and order mass of objects using standard units (g, Kg).
* Estimate, measure, label, compare and order capacity of containers using standard units (ml, L).
* Read scales to the nearest labelled gradation.
* Know the size of some familiar things to use as benchmarks for estimating mass; e.g. 1Litre of milk weighs about 1 Kg.

Temperature* Estimate and measure temperature in Celsius.
* Begin to develop temperature landmarks.
 | Estimate, compare and measure objects using standard units of measurement: length, perimeter, mass, capacity, area, volume and temperature.Length, Mass, Capacity and Volume* Using various tools and appropriate units to measure:

(For length: mm, cm, m, Km)(For mass: g, Kg)(For volume: cm³)(For capacity: ml, L)* Understand the difference between capacity and volume.
* Read scales where there are sections marked between labelled gradations with accuracy e.g. the 5 intervals between 0-100g.

Temperature* Estimate and measure the temperature in Celsius above and below zero.
* Develop “temperature landmarks” 0°C = freezing 100°C = boiling point.
 |
| Calculate and develop rules for determining area and perimeter of rectangles* Through investigation, develop rules to find the perimeter and area of rectangles e.g. l x 2 + w x 2 = perimeter and l x w = area.
* Extension: Use rules to determine the perimeter and area of compound shapes composed of 2-3 rectangles.
 |
| Identify and describe the relationships between area and perimeter* Understand that perimeter can change while the area remains the same and vice versa
* Investigate patterns of change in perimeter and area as length and width of a rectangle increases.
 |
| **Estimate, compare and measure area of objects with nonstandard units.** |
| **Identify and describe relationships between units of measure (e.g. 10mm is the same as 1cm).** | Convert between units using whole numbers (e.g. 1 metre to 100 centimetres.* Begin to convert length units e.g. Show that a 1400 metre walk is further than a 1Km walk.
 | Convert between units using decimals to at least one place (e.g. convert 2.6Kg to 2600g)?* Convert length units (520 cm = 5.2 m)
* Convert capacity units (3500 ml = 3.5 L)
* Convert mass units (6 kg to 2600g)
 |
| **Time****Read and write the time to the quarter-hour and 5 minute intervals (past, to).****Estimate and compare lengths of time: second, minute, hour, day, week, months and years.****Connect times to events in a day.*** Recognise ‘key times’ on an analogue clock and tell the time of day on digital and analogue clocks in hours and 5 minute intervals.
* Classify events into those that take more than, less than, about one half hour or 5 minutes
 | TimeRead and write the time to the minute and investigate the relationship between units of time.Convert between units of time.Describe time and duration using am and pm.* Develop a sense of time in real context.
* Convert number of minutes to hours and vice versa.
* Investigate time in terms of chronological order of daily events and own life time events or periods.
 | TimeRead, write and compare 12 and 24 hour time systems and convert between them.* Estimate, measure, compare and order length of time using various tools (analogue, digital, 24H clock) and units (seconds, minutes, hours).
* Convert time units (seconds to minutes to hours to days, 18:00 = 6 PM)

Connect 12 and 24 hour time to timetables* Investigate and solve problems on bus and flight schedules (Departures listed in 24 hour times).

Solve problems involving difference in time.* Solve duration of time problems e.g. (I began lunch at 12:10 and finished 25 minutes later. At what time did I finish lunch?)
 |
| **Angles****Identify angles as measures of turn and compare angle sizes in everyday situations.*** Order angles by direct comparison of the ‘amount of turn’ and by using units such as a quarter turn or an angle of their own.
* Make and use a ‘right angle checker’.
* Recognise right angles in turns.
 | AnglesCompare and classify angles using the language of right angle, acute and obtuse.* Show if an angle is larger (obtuse) or smaller (acute) than a right angle.
 | AnglesEstimate, compare, classify measure and construct angles.* Understands that an angle is a measurement of rotation and that a full rotation is 360°
* Recognise common angles 90°, 180°, 270°, 360°
* Classify acute, right, obtuse, straight, reflex angles.
* Measure and construct angles with circle and half circle protractors within 5 degrees of error.
 |

**Year 5**

The rubrics have been developed in three columns. The column ‘beginning’ aligns with the year level below and ‘exceeds expectations’ aligns with the year level above. The middle column combines ‘consolidating’ and ‘meets expectations’ which are both indicators of year level expectations. ‘Consolidating’ indicates that student learning is at year level expectations but is not fully consistent or independently achieved.

The outcomes are written in bold text. The indicators listed under each outcome are there to support understanding of the outcome. These are not in place as an exhaustive list, or exclusively the only indicators. Staff are strongly encouraged to use these indicators as a starting point for discussion and clarification.

|  |
| --- |
| Key for Levels of Achievement |

|  |  |  |  |
| --- | --- | --- | --- |
| B = Beginning | C = Consolidating | ME = Meets Expectations | EE = Exceeds Expectation |
| The student has begun to demonstrate some evidence of achieving learning outcomes; however applies limited knowledge, skills and understandings. The student’s learning is below year level expectations at this time. | The student has demonstrated evidence of the learning outcomes. The student is practising skills and is developing knowledge and understandings. Learning is at year level expectations but is not fully consistent or independent. | The student has demonstrated knowledge of the learning outcomes and is applying knowledge, skills and understandings consistently and independently. Learning is at year level expectations. | The student has demonstrated evidence exceeding the learning outcomes in a variety of ways and applies higher level knowledge, skills and understandings consistently. Learning exceeds year level expectations. |

| Beginning | Consolidating / Meets Expectations | Exceeds Expectations |
| --- | --- | --- |
| **Estimate, compare and measure objects using standard units of measurement: length, perimeter, area, mass, capacity, volume and temperature.****Length, Perimeter and Area*** Estimate, measure, label, compare and order length of objects using standard units (m, cm, mm)
* Estimate, construct, measure, label and compare perimeter and area of objects using standard unit: cm & cm² by counting squares.
* Use the known length of body parts to help estimate length; e.g. know their average stride is 90cm and use to estimate the length of the classroom.
* Make things to a specified length to the nearest cm and Measure a length to the nearest 1/2 cm.
* Show that a unit of area can be cut and rearranged and still be the same unit; e.g. a square metre is a size but does not need to be square.
* Mass, Volume and Capacity
* Estimate, measure, label, compare and order mass of objects using standard units (g, Kg).
* Estimate, measure, label, compare and order capacity of containers using standard units (ml, L).
* Read scales to the nearest labelled gradation.
* Know the size of some familiar things to use as benchmarks for estimating mass; e.g. 1 Litre of milk weighs about 1 Kg.

**Temperature*** Estimate and measure temperature in Celsius.
* Begin to develop temperature landmarks.
 | Estimate, compare and measure objects using standard units of measurement: length, perimeter, mass, capacity, area, volume and temperature.Length / mass / capacity / volume* Using various tools and appropriate units to measure:

(For length: mm, cm, m, Km)(For mass: g, Kg)(For volume: cm³)(For capacity: ml, L)* Understand the difference between capacity and volume.
* Read scales where there are sections marked between labelled gradations with accuracy e.g. the 5 intervals between 0-100g.

Temperature* Estimate and measure the temperature in Celsius above and below zero.
* Develop “temperature landmarks” 0°C = freezing 100°C = boiling point.
 | Estimate, compare and measure objects using standard units of measurement: length, perimeter, mass, capacity, area, volume and temperature.* Using various tools and appropriate units

(For length: mm, cm, m, Km) (For mass: mg, g, Kg, tonne) (For volume: cm³, m³)(For capacity: ml, L)* Choose the most appropriate measurement tool, unit of measurement and level of accuracy for different contexts.
* Estimate, measure and calculate temperature variation in Celsius (Observe and record temperatures taken in different locations)
* Further develop “temperature landmarks” (37°C = body temperature + or - 0.6°C )
 |
| **Calculate and develop rules for determining area and perimeter of rectangles*** Through investigation, develop rules to find the perimeter and area of rectangles e.g. I x 2 + w x 2 = perimeter and *l* x w = area.
* Extension: Use rules to determine the perimeter and area of compound shapes composed of 2-3 rectangles.
 | Calculate and develop rules for determining area and perimeter of triangles.* Calculate the perimeter and area of triangles (Explore a variety of formulas including a+b+c = perimeter and b x h / 2 = area; begin with the relationship of rectangles with right angle triangles, extend to Pythagorean theorem)
* Extension: isosceles / scalene triangles, or triangles within a trapezoid)

Calculate and develop rules for determining volume of cubes and cuboids.* Through investigation, develop rules to find the volume of cuboids (V= L x W x H)
 |
| Identify and describe the relationships between area and perimeter* Understand that perimeter can change while the area remains the same and vice versa
* Investigate patterns of change in perimeter and area as length and width of a rectangle increases.
 | Identify and describe the relationships between area and volume, and between volume and capacity.* Calculate the surface area of 3D shapes or objects (rectangular prism, triangular prism - extend to cylinder) using nets.
* Use liquid displacement (capacity) to measure and order objects by their volume; i.e. 1mL = 1cm³.
 |
| **Convert between units using whole numbers (e.g. 1 metre to 100 centimetres.*** Begin to convert length units e.g. Show that a 1400 metre walk is further than a 1Km walk.
 | Convert between units using decimals to at least one place (e.g. convert 2.6Kg to 2600g)?* Convert length units (520 cm = 5.2 m)
* Convert capacity units (3500 ml = 3.5 L)
* Convert mass units (6 kg to 2600g)
 | Convert between units using decimals to at least two places.* Can convert length units (155 mm = 0.155 m)
* Can convert capacity units (35 ml = 0.035 L)
* Can convert volume units (10 cm³ = 1 dm³)
* Can convert capacity units ( 2.75 litres to 2750 ml)
 |
| **Time****Read and write the time to the minute and investigate the relationship between units of time.****Convert between units of time.****Describe time and duration using am and pm.*** Develop a sense of time in real context.
* Convert number of minutes to hours and vice versa.
* Investigate time in terms of chronological order of daily events and own life time events or periods.
 | TimeRead, write and compare 12 and 24 hour time systems and convert between them.* Estimate, measure, compare and order length of time using various tools (analogue, digital, 24H clock) and units (seconds, minutes, hours).
* Convert time units (seconds to minutes to hours to days, 18:00 = 6 PM)

**Connect 12 and 24 hour time to timetables*** Investigate and solve problems on bus and flight schedules (Departures listed in 24 hour times).
 | TimeCalculate time across time zones* Using a world timer (If it is 8:54 in Hong Kong, what is the time in a +4 hour time zone?)
 |
| Solve problems involving difference in time.* Solve duration of time problems e.g. (I began lunch at 12:10 and finished 25 minutes later. At what time did I finish lunch?)
 | Solve problems involving difference in time* Problems involving differences of up to 5 hours.
 |
| **Angles****Compare and classify angles using the language of right angle, acute and obtuse.*** Show if an angle is larger (obtuse) or smaller (acute) than a right angle.
 | AnglesEstimate, compare, classify measure and construct angles.* Understands that an angle is a measurement of rotation and that a full rotation is 360°
* Recognise common angles 90°, 180°, 270°, 360°
* Classify acute, right, obtuse, straight, reflex angles.
* Measure and construct angles with circle and half circle protractors within 5 degrees of error.
 | AnglesEstimate, compare, measure and construct angles within shapes* Classify acute, right, obtuse angles within shapes.
* Construct polygons with given interior angles using a half circle protractor within 2 degrees of error.

Calculate and develop rules to find unknown angles within shapes, around a point and on a straight line* Calculate the sum of the interior angles in a quadrilateral (360°) or triangle (180°) and determine a missing angle’s measurement using other known measurements.
* Find rules for the sum of interior angles in other polygons.
* (Ext) Find the sum of the exterior angles in a quadrilateral or triangle.
 |

**Year 6**

The rubrics have been developed in three columns. The column ‘beginning’ aligns with the year level below and ‘exceeds expectations’ aligns with the year level above. The middle column combines ‘consolidating’ and ‘meets expectations’ which are both indicators of year level expectations. ‘Consolidating’ indicates that student learning is at year level expectations but is not fully consistent or independently achieved.

The outcomes are written in bold text. The indicators listed under each outcome are there to support understanding of the outcome. These are not in place as an exhaustive list, or exclusively the only indicators. Staff are strongly encouraged to use these indicators as a starting point for discussion and clarification.

|  |
| --- |
| Key for Levels of Achievement |

|  |  |  |  |
| --- | --- | --- | --- |
| B = Beginning | C = Consolidating | ME = Meets Expectations | EE = Exceeds Expectation |
| The student has begun to demonstrate some evidence of achieving learning outcomes; however applies limited knowledge, skills and understandings. The student’s learning is below year level expectations at this time. | The student has demonstrated evidence of the learning outcomes. The student is practising skills and is developing knowledge and understandings. Learning is at year level expectations but is not fully consistent or independent. | The student has demonstrated knowledge of the learning outcomes and is applying knowledge, skills and understandings consistently and independently. Learning is at year level expectations. | The student has demonstrated evidence exceeding the learning outcomes in a variety of ways and applies higher level knowledge, skills and understandings consistently. Learning exceeds year level expectations. |

| Beginning | Consolidating / Meets Expectations | Exceeds Expectations |
| --- | --- | --- |
| **Estimate, compare and measure objects using standard units of measurement: length, perimeter, mass, capacity, area, volume and temperature.****Length / mass / capacity / volume*** Using various tools and appropriate units to measure:

(For length: mm, cm, m, Km)(For mass: g, Kg)(For volume: cm³)(For capacity: ml, L)* Understand the difference between capacity and volume.
* Read scales where there are sections marked between labelled gradations with accuracy e.g. the 5 intervals between 0-100g.

**Temperature*** Estimate and measure the temperature in Celsius above and below zero.
* Develop “temperature landmarks” 0°C = freezing 100°C = boiling point.
 | Estimate, compare and measure objects using standard units of measurement: length, perimeter, mass, capacity, area, volume and temperature.* Using various tools and appropriate units

(For length: mm, cm, m, Km)(For mass: mg, g, Kg, tonne)(For volume: cm³, m³)(For capacity: ml, L)* Choose the most appropriate measurement tool, unit of measurement and level of accuracy for different contexts.
* Estimate, measure and calculate temperature variation in Celsius (Observe and record temperatures taken in different locations)
* Further develop “temperature landmarks” (37°C = body temperature + or - 0.6°C )
 |  |
| **Calculate and develop rules for determining area and perimeter of rectangles.*** Through investigation, develop rules to find the perimeter and area of rectangles e.g. l x 2 + w x 2 = perimeter and l x w = area.
* Extension: Use rules to determine the perimeter and area of compound shapes composed of 2-3 rectangles.
 | Calculate and develop rules for determining area and perimeter of triangles.* Calculate the perimeter and area of triangles (Explore a variety of formulas including a+b+c = perimeter and b x h / 2 = area; begin with the relationship of rectangles with right angle triangles, extend to Pythagorean theorem)
* Extension: isosceles / scalene triangles, or triangles within a trapezoid)

Calculate and develop rules for 0determining volume of cubes and cuboids.* Through investigation, develop rules to find the volume of cuboids (V= L x W x H)
 |  |
| **Identify and describe the relationships between area and perimeter*** Understand that perimeter can change while the area remains the same and vice versa
* Investigate patterns of change in perimeter and area as length and width of a rectangle increases.
 | Identify and describe the relationships between area and volume, and between volume and capacity.* Calculate the surface area of 3D shapes or objects (rectangular prism, triangular prism - extend to cylinder) using nets.
* Use liquid displacement (capacity) to measure and order objects by their volume; i.e. 1mL = 1cm³.
 |  |
| **Convert between units using decimals to at least one place (e.g. convert 2.6Kg to 2600g)?*** Convert length units (520 cm = 5.2 m)
* Convert capacity units (3500 ml = 3.5 L)
* Convert mass units (6 kg to 2600g)
 | Convert between units using decimals to at least two places.* Can convert length units (155 mm = 0.155 m)
* Can convert capacity units (35 ml = 0.035 L)
* Can convert volume units (10 cm3 = 1 dm3 )
* Can convert capacity units ( 2.75 litres to 2750 ml)
 |
| **Time****Read, write and compare 12 and 24 hour time systems and convert between them.*** Estimate, measure, compare and order length of time using various tools (analogue, digital, 24H clock) and units (seconds, minutes, hours).
* Convert time units (seconds to minutes to hours to days, 18:00 = 6 PM)

**Connect 12 and 24 hour time to timetables*** Investigate and solve problems on bus and flight schedules (Departures listed in 24 hour times).
 | TimeCalculate time across time zones* Using a world timer (If it is 8:54 in Hong Kong, what is the time in a +4 hour time zone?)
 |  |
| **Solve problems involving difference in time.*** Solve duration of time problems e.g. (I began lunch at 12:10 and finished 25 minutes later. At what time did I finish lunch?)
 | Solve problems involving difference in time* Problems involving differences of up to 5 hours.
 |
| **Angles****Estimate, compare, classify measure and construct angles.*** Understands that an angle is a measurement of rotation and that a full rotation is 360°
* Recognise common angles 90°, 180°, 270°, 360°
* Classify acute, right, obtuse, straight, reflex angles.
* Measure and construct angles with circle and half circle protractors within 5 degrees of error.
 | AnglesEstimate, compare, measure and construct angles within shapes* Classify acute, right, obtuse angles within shapes.
* Construct polygons with given interior angles using a half circle protractor within 2 degrees of error.

Calculate and develop rules to find unknown angles within shapes, around a point and on a straight line* Calculate the sum of the interior angles in a quadrilateral (360°) or triangle (180°) and determine a missing angle’s measurement using other known measurements.
* Find rules for the sum of interior angles in other polygons.
* (Ext) Find the sum of the exterior angles in a quadrilateral or triangle.
 |  |