Stage 6 Mathematics Life Skills

## MLS – M1 Everyday Measurement: TIME

#### Overview

| MLS- M1 Everyday Measurement | Unit Duration |
| --- | --- |
| Measurement is an important skill for life and in this topic students focus on measurement skills, terminology and strategies, and apply these to meaningful contexts. |  |

| Subtopic focus | Outcomes |
| --- | --- |
| The focus of this subtopic is developing skills in measuring time using appropriate measuring devices, levels of accuracy and units. Where appropriate, the skills developed should be applied to relevant real-life situations. The knowledge, understanding and skills and understanding in this subtopic build on Life Skills Years 7–10 outcomes and content for Measurement and Geometry | A student:* **MALS6-1** explores mathematical concepts, reasoning and language to solve problems
* **MALS6-3** engages with appropriate tools, units and levels of accuracy in measurement
* **MALS6-13** engages with mathematical skills and techniques, including technology, to investigate, explain and organise information
* **MALS6-14** communicates mathematical ideas and relationships using a variety of strategies
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| Related Mathematics Standard outcomes | ****Related Numeracy CEC outcomes**** |
| MS11-1, MS11-3, MS11-9, MS11-10, MS1-12-1, MS1-12-3, MS1-12-9, MS1-12-10, MS2-12-1, MS2-12-3, MS2-12-9, MS2-12-1 | N6-1.1, N6-1.2, N6-1.3, N6-2.2, N6-3.1, N6-3.2 |

All outcomes referred to in this unit come from the [Stage 6 Mathematics Life Skills Syllabus](https://educationstandards.nsw.edu.au/wps/portal/nesa/11-12/stage-6-learning-areas/stage-6-mathematics/mathematics-life-skills-2017)
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#### Adjustments

Examples of adjustments can be found on the NESA website under [Adjustments](https://www.educationstandards.nsw.edu.au/wps/portal/nesa/11-12/Diversity-in-learning/stage-6-special-education/adjustments).

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| Student’s name | Adjustments |
| e.g. John Smith | Requires learning material to be printed on blue paper. |
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#### Unit of learning

| ContentStudents learn to: | Suggested teaching strategies and resources | Differentiation and modifications | Date and initial |
| --- | --- | --- | --- |
| Students:* recognise language that relates to time
* first
* before
* next
* during
* after Literacy
* identify names and sequence of days of the week, months of the year and seasons Literacy
* associate events with days of the week, months and seasons
* sport training on Friday
* favourite TV show airing every evening from Monday to Friday
* no school on the weekend
* Mum’s birthday is in March
* swim at the beach in summer
* wear warm clothes in winterPersonal and social capability
 | Investigating the history of measuring time* Students watch the video [The Clock that Changed the World](https://www.youtube.com/watch?v=T-g27KS0yiY) to learn about the history of time and the development of the Harrison clock and how it was used in navigation.
* Students could research the origins of the names of the days of the week and months of the year.

Using measuring devices* Throughout this unit students should practise using language such as first, before, next, during, after whilst reading and using time measuring devices such as clocks, watches, and calendars.

Recognising and using the days of the week* Teachers should draw on students’ prior knowledge by brainstorming with students, the days of the week and their order
* Teachers should write on the board each lesson, the day of the week and the full date eg 25th November and encourage students to copy this into their books. Use these dates for follow up questions during this unit, for example “How many more days in November?” or “How many days until Christmas?”
* Students watch the [Days of the week](https://youtu.be/2IRl7kKuV9I) (video) to revise the days of the week in spoken and written form. Students recall that there are seven days in a week. Students then practise spelling the days of the week by playing [Days of the week](https://learnenglishkids.britishcouncil.org/archived-word-games/hangman/days-the-week) hangman
* Students make a planner with each day of the week. They fill in special activities they do on each day such as school, sports, work etc
* Students play Snap to practise using everyday language related to time as well as ordering and sequencing. The [nrich.org website](https://nrich.maths.org/6082/note) activity uses the days of the week, but this could be extended to months of the year or other time words
* Students independently practise identifying and ordering the days of the week using this [interactive computer Desmos activity](https://teacher.desmos.com/activitybuilder/custom/5fb5e9e79539be3b7be26829).

 Recognising and using the months of the year* Teacher to use students’ prior knowledge to brainstorm important events and the time of the year that they occur.
* Students could then use a planner showing the months of the year to record these important dates and holidays such as Christmas, Easter, birthdays, public holidays, school terms etc

.* Teacher to introduce students to the rhyme “Thirty days has September, April, June and November. All the rest have thirty-one, except for February alone, which has twenty-eight days clear and twenty-nine in each leap year.” to help them remember how many days in each month.
* Teacher could also show students how to use the [knuckle mnemonic](https://en.wikipedia.org/wiki/Knuckle_mnemonic#:~:text=One%20form%20of%20the%20mnemonic,or%2028%2F29)%20days.) to remember how many days in each month.
* Students independently practise identifying and ordering the months of the year using [this interactive computer Desmos activity](https://teacher.desmos.com/activitybuilder/custom/5fb5ea40dd370a3e4ebf6e47)

Recognising and using the names of the seasons* Students independently use [this computer Desmos activity](https://teacher.desmos.com/activitybuilder/custom/5fb5ea6ea8a0803e4db30386) to name and order the seasons and name the months for each season; describing the environmental characteristics of each season.
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| * use units of time and their abbreviations hr, min
 | * Teacher to discuss with students the appropriate abbreviations for time. Students should be encouraged to use these throughout the activities in this unit
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| * associate activities with times of day or periods of time
* eat breakfast in the morning
* go to the bathroom at lunchtime
* catch the bus after packing my bag at the end of the lesson
* doctor’s appointment at 4 pm, call friends in the afternoon
* shower in the evening
* complete homework for tomorrow
* go on an overnight school trip
* go shopping on the weekendPersonal and social capability
* follow sequences of events
* eat breakfast/wash dishes/brush teeth/travel to school
* put hat in bag after lunch/go to the toilet/wash handsPersonal and social capability
 | Sequencing times of day* Students independently use [this computer Desmos activity](https://teacher.desmos.com/activitybuilder/custom/5fadd1b5837ca3285f3f8e2c) to sequence pictures according to the time of day they occur or the order in which they occurred. This activity is a good lead in to the introduction of timelines.

Creating and reading timelinesTeachers show the video [“What is a timeline?”](https://www.youtube.com/watch?v=xc64qurhFng) and discuss with students the features, uses and advantages of timelines. * Students then create a timeline for:
* their life
* Apple iphone releases
* Developments in technology
* Their favourite story or movie
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| * recognise the passage of time
* the lunch bell will ring in 5 minutes
* the bus is running half an hour late
* my birthday is next Thursday
* the school dance is in a fortnight
* describe and compare events using appropriate units and language to represent time
* weekly exercise
* an annual celebration
* arrive at work 10 minutes earlier than usual
* the journey takes longer on the train than in the car
* it is faster to dry my hair with the hairdryer than it is to let it drip-dryLiteracy
 | Recognising the passage of time* Teacher to lead informal discussions with students surrounding how much longer in the lesson, how long before school holidays or their birthday, how long before the weekend etc
* Students complete this [problem-solving task by nrich.org](https://nrich.maths.org/4806) either individually or in a small group. During the task students attempt to tell the time using a clock that only has an hour hand and then a clock that only has a minute hand.
* Students play [Stop the Clock card game from nrich.org](https://nrich.maths.org/6071) in pairs. The aim of the game is to be the first person to get to 12 o’clock by advancing the hands ½ hour or 1 hour at a time. This game could be extended to include movements by 15 mins or 5 mins
* Teacher to lead a discussion about how long people live for. Students could discuss whether they think this is the same in other countries. Students could also consider the life span of different animals.
* Students complete this scaffolded investigation where they look at their lifespan and the events of their life. They look at the number of changes that occur in the first few months of their life versus changes that occur later in their lives.**Resource**: A-lifetime.DOCX

Investigating leap years and leap seconds* Teacher to lead a discussion with students to determine if they know what a leap year is, how often they occur and when the last leap year was. Students could also discuss how do you know whether it is a leap year.
* As a class, students watch the videos below to investigate why we have leap years and what a leap second is.

**Resources:*** [Leap second](https://education.abc.net.au/home#!/media/1957451/leap-second)
* [What is a leap year?](https://www.youtube.com/watch?v=fonVc2zMMs8)
* [Leap years: we can do better](https://www.youtube.com/watch?v=qkt_wmRKYNQ)
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| * order units of time
* seconds, hours, months, centuries
 | Ordering time* In these problem-solving activities, students work independently to practise putting analogue clocks in order. The first resource shows times to the nearest 5 minutes, while the second resource shows times to the nearest minute**Resources:**
* [What Is the Time?](https://nrich.maths.org/7377)
* [The Time Is...](https://nrich.maths.org/7384)
* Students work independently to place television programs in order of their correct viewing time. Viewing times can then be converted into 24-hour time and the duration of each program calculated.**Resource:** TV-Schedule.DOCX
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| * read and relate times on digital and analogue clocks and watches
* watching a favourite TV show that airs at 7.00 pm
* catching the bus that leaves at 3.30 pmLiteracy Personal and social capability
 | * Teachers may like to refer to the strategies on these sites for ideas on teaching time**Resources:**
* [Numeracy - Stage 1 clock](https://education.nsw.gov.au/teaching-and-learning/student-assessment/smart-teaching-strategies/numeracy/measurement-geometry/time/clock)
* [Numeracy - Stage 2 analogue and digital](https://education.nsw.gov.au/teaching-and-learning/student-assessment/smart-teaching-strategies/numeracy/measurement-geometry/time/stage-2-analog-digital-time)

Reading a clock* Teachers should look for opportunities during class for students to read the time. It would be beneficial for teachers to have an analogue clock in their classroom that is clearly visible to all students.
* Students could play the interactive [Desmos Polygraph: Clocks](https://teacher.desmos.com/polygraph/custom/5fb7254303501c3827ff17a0) game as an introduction to reading time. Students play in pairs and try to guess the time on their partner’s clock by asking questions.
* Teachers can use this [interactive analogue clock from topmarks.co.uk](https://www.topmarks.co.uk/time/teaching-clock) to teach students how to read analogue and digital clocks to the nearest hour, half hour, 15 minutes, 10 minutes, 5 minutes or 1 minute. The clock displays analogue, digital and 24-hour times
* Students independently use the Desmos computer activity to match the time on an analogue clock with its digital equivalent. Only o’clock and half-hour times are given. Teachers could also play o’clock bingo with students to further practise reading times. **Resources:**
* Desmos activity: [O’clock](https://teacher.desmos.com/activitybuilder/custom/5fb5eb59a8a0803e4db303e0)
* Desmos activity: [Half-past](https://teacher.desmos.com/activitybuilder/custom/5fb5eba43e8cd33c0c27ce7b)
* [O’clock bingo](https://www.tes.com/teaching-resource/o-clock-analogue-digital-bingo-game-6020003)
* Teachers could play [Quarter hour bingo](https://www.tes.com/teaching-resource/quarter-intervals-analogue-digital-time-bingo-6020053) with the students to allow them to practise reading and recording quarter past and quarter to time on D and digital clocks.
* Students can play this interactive [Talking Time](https://teacher.desmos.com/activitybuilder/custom/5fb724afcdaf040d584079d0) Desmos activity where they need to move the hands on the clock to represent the given time (in 15 minute intervals)
* Teachers could play this [bingo activity from tes.com](https://www.tes.com/teaching-resource/5-minute-intervals-digital-analogue-time-bingo-6020052) with the students to allow them to practise reading and recording times in 5 minute intervals.
* This is a collection of [12 interactive computer matching games from education.abc.net.au](https://education.abc.net.au/home?sf121288285=1#!/resources/%22time%20tools%22/mathematics/F-1-2-3-4-5-6) for reading times, that students could play independently to further practise reading time. Analogue and digital activities are divided and labelled according to different stage requirements (hour and half-hour, minutes,12 and 24 hour).
* Students independently complete this [worksheet from tes.com](https://www.tes.com/en-au/teaching-resource/what-s-the-time-write-the-times-on-the-clocks-6326426) to practise drawing hands on clock faces to represent the given time. There is a sheet for o'clock, half past, quarter past and quarter to plus an editable Word version for creating your own sheets with mixed times.
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| * use calendars and planners to identify and relate times, dates, months and special occasions
* I start my new job in 3 weeks
* I will go on holidays for a fortnight
* my lunchbreak starts at 12.00 pm and finishes at 1.00 pm
* Boxing Day is the day after Christmas Day
* Australia Day is in JanuaryPersonal and social capability Civics and citizenship
 | * Teachers may like to refer to the strategies outlined on the [Numeracy - Stage 1 calendar](https://education.nsw.gov.au/teaching-and-learning/student-assessment/smart-teaching-strategies/numeracy/measurement-geometry/time/stage-1-calendar) website to assist them in teaching students about calendars

Exploring calendars* Students watch the video [How many calendars?](https://www.youtube.com/watch?v=mrgN-tvg53I) to investigate how many different calendars there are and why you can use an old calendar rather than buying a new one each year ie 14 options rotated around
* Students could make their own calendars. The resources below contain templates for making 3D calendars that are suitable to stand on a desk.**Resources:**
* [Calendars made out of solids](http://www.cleavebooks.co.uk/trol/trolqc.htm)
* [Dodecahedron](http://www.ss42.com/pt/calendar/dodecahedron.html)
* Teacher to lead a discussion of the different view of calendars – ie weekly, monthly, yearly.
* Students collect or create calendars to explore the different ways calendars are presented and record classroom, school and cultural events and celebrations to construct their own calendars.
* Students examine the zodiac years and zodiac signs to place themselves according to their birthdays in the Chinese zodiac. This [resource from asiaeducation.edu.au](https://www.asiaeducation.edu.au/curriculum/mathematics/details/calendar-capers) also contains investigations of number patterns, calculations, conjectures and proofs that can performed using calendars and their patterns.
* Students independently complete the worksheet to answer a set of questions relating to a given calendar. Students write dates on the calendar and consider how many days until a given event.**Resource**: Calendars.DOCX
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| * measure the time taken for various events
 | Measuring event duration* Teacher to lead a discussion about how long it would take students to complete different events. Teacher to review what those times would look like if we wrote them down.
* Students look at real life timetables, such as those listed below, and use the terms ‘hours’, ‘minutes’ and ‘seconds’ to determine and compare the duration of activities or events. Students can look at:
* [Television programs](https://www.ontvtonight.com/au/guide/)
* [Bus/train timetables](https://transportnsw.info/routes/train)
* Teacher to read the article [This is why there is so many ties in swimming](https://deadspin.com/this-is-why-there-are-so-many-ties-in-swimming-1785234795) to students and discuss why swimming is timed to only one-hundredth of a second.
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| * plan personal events or schedules, taking into account the best time to do them and how long they will take
* planning a party (sending invitations, buying a present, ordering a cake, buying party supplies)
* meeting a friend for lunch before going to the movies
* taking the dog for a walk before preparing dinner
* submitting a job application, paying bills on timeCritical and creative thinking Personal and social capability
 | Planning events* In this scaffolded activity, students plan their 18th birthday party by considering on what day of the week their birthday occurs and then when they will have the party, when they will need to send out invitations, when they will need to buy food and decorations, how long the food will take to prepare etc. This could be an assessment task incorporating financial maths by considering the cost of the party.**Resource:** party-planning.DOCX
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| * estimate time of the day
* it is nearly time to go home
* it is time to feed the cat
* it will soon be dark outside
* the shops will be closing soonPersonal and social capability
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| * estimate and measure passage of time
* how long it takes to get ready to leave the house in the morning, to travel to work, to pack your bag at the end of the day, to travel home from schoolPersonal and social capability
* estimate and measure passage of time using a range of devices including stopwatches and personal devices
* how long it takes to cook a meal, play a sport, complete a task at workInformation and communication technology capability Personal and social capability
 | Estimating time and distance * Teacher to ask students to estimate how long it takes them to perform certain activities. Students could then use a stop watch to measure the exact time for each and compare it to their estimate.
* Get ready for school
* Travel to school
* Travel to sport etc
* Students use [this interactive clock from nrich.org](https://nrich.maths.org/10629) and ask their classmates to estimate how long 10 seconds is. Students record their attempts and use these to investigate whether people are better at estimating short (10 or 15 seconds) or longer time intervals (30 or 60 seconds).
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| * calculate elapsed time
* getting on the train at 3.00 pm and disembarking at 3.45 pm
* the number of hours between start and finish work times
* the number of holiday days between Christmas and New Year
 | Measuring elapsed time * Students complete the tarsia jigsaw puzzle to match the elapsed time between two given clock faces (a mixture of 12-hour and 24-hour clocks). Students could complete this activity either independently or in pairs or small groups.**Resources:**
* [Time intervals tarsia puzzle](https://www.tes.com/en-au/teaching-resource/time-intervals-tarsia-6291076)
* [Tarsia software (necessary to print the puzzle)](http://www.mmlsoft.com/index.php/products/tarsia)
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| * convert units of time
* 60 minutes = 1 hour
* 90 minutes = 1½ hours
* 1 day = 24 hours
* 7 days = 1 week
 | Matching Time* Students independently play this interactive matching game to help them recognise different ways of saying the same time interval. A printable version is available as an alternative**Resources:** [Matching Time](https://nrich.maths.org/10332) and [Matching Time Printable](https://nrich.maths.org/10332/note)
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| * read and relate time in different formats
* Roman numerals on a clockface
 | Investigating ante meridiem and post meridiem* This resource is a booklet containing a variety of activities where students learn to record digital time using the correct notation, including am and pm, and read and interpret simple timetables. If teachers choose to use this resource, they should remove any reference to Stage 2.**Resource:** [Ante Meridiem and Post Meridiem](https://schoolsnsw.sharepoint.com/sites/DistanceEdResources2/Final%20documents/Forms/AllItems.aspx?FolderCTID=0x012000FC7392CDE7E4144FB0737936165EA4F6&id=%2Fsites%2FDistanceEdResources2%2FFinal%20documents%2FStage%202%2FMathematics%2FTime%20%2D%20Year%204%20%2D%20Unit%201%2FTime%20%2D%20Year%204%20%2D%20Unit%201%20v1%2E3%2Epdf&parent=%2Fsites%2FDistanceEdResources2%2FFinal%20documents%2FStage%202%2FMathematics%2FTime%20%2D%20Year%204%20%2D%20Unit%201)
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| * recognise 24-hour times using four digits (eg 0900, 2315)
 | Introducing 24-hour time* Teacher to lead a discussion about places and appliances that use 24-hour time. Students can then watch the [video by education.abc.net.au](https://education.abc.net.au/home#!/media/1566174/late-again-) to learn why 24-hour time was introduced and its advantages/disadvantages.
* Students can complete [this problem-solving activity by nrich.org](https://nrich.maths.org/1981) either individually or in small groups. “On a digital clock showing 24-hour time, over a whole day, how many times does a 5 appear? Is it the same number for a 12-hour clock over a whole day?”
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| * relate 24-hour times to their equivalent am or pm times
* explore conversions between 12-hour and 24-hour times
 | Converting between 12- and 24-hour time* This resource is a booklet of activities that students can use to learn the differences between am and pm, and 24-hour time. If teachers wish to use this resource, they should remove any reference to Stage 3 before printing.**Resource**: [24-hour time](https://schoolsnsw.sharepoint.com/sites/DistanceEdResources2/Final%20documents/Forms/AllItems.aspx?FolderCTID=0x012000FC7392CDE7E4144FB0737936165EA4F6&id=%2Fsites%2FDistanceEdResources2%2FFinal%20documents%2FStage%203%2FMathematics%2FTime%20%2D%20Year%205%20%2D%20Unit%201%2FTime%20%2D%20Unit%201%20%2D%20Year%205%20v1%2E5%2Epdf&parent=%2Fsites%2FDistanceEdResources2%2FFinal%20documents%2FStage%203%2FMathematics%2FTime%20%2D%20Year%205%20%2D%20Unit%201)
* Students complete the tarsia puzzle, either individually or working in pairs, to match the 12-hour time with its matching 24-hour time**Resource:**
* [24-hour time tarsia puzzle](https://www.tes.com/en-au/teaching-resource/12-and-24hr-time-tarsia-puzzle-6291084)
* [Tarsia software (necessary to print the puzzle)](http://www.mmlsoft.com/index.php/products/tarsia)
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| * explore times in different time zones within and beyond Australia
* when it is 11.00 am in Sydney, what time is it in Shanghai?Asia and Australia’s engagement with Asia Personal and social capability Civics and citizenship
* demonstrate knowledge of the effect of daylight saving on local time
* if I fly from Sydney to Brisbane in summer I will leave at 1.00 pm local time and arrive at 1.00 pm local time
* if I am in Sydney and telephone Cairns at 5.00 pm, the business may already be closed for the dayPersonal and social capability
 | Introducing time zones* Teachers to show students the video [How did trains standardise time?](https://ed.ted.com/lessons/how-did-trains-standardize-time-in-the-united-states-william-heuisler) to open the discussion that time zones have not always been around and that they were brought about by train schedules
* Teacher to ask students if they have friends or family overseas. Discuss good times to call people who live overseas. Teacher to test students’ knowledge of Australian time zones by asking the same question
* Teacher to show students the video [How many time zones are there in Australia?](https://education.abc.net.au/home#!/media/1950553/how-many-time-zones-are-there-in-australia-) to determine how many time zones there are in Australia and why they are needed.

Investigating time zones and daylight saving* Students learn about time zones in Australia and daylight saving. Teachers will need to be careful to remove any reference to Stage 3 if they choose to use this resource.**Resource**: [Time zones and Daylight Saving](https://schoolsnsw.sharepoint.com/sites/DistanceEdResources2/Final%20documents/Forms/AllItems.aspx?FolderCTID=0x012000FC7392CDE7E4144FB0737936165EA4F6&id=%2Fsites%2FDistanceEdResources2%2FFinal%20documents%2FStage%203%2FMathematics%2FTime%20%2D%20Year%205%20%2D%20Unit%201%2FTime%20%2D%20Unit%201%20%2D%20Year%205%20v1%2E5%2Epdf&parent=%2Fsites%2FDistanceEdResources2%2FFinal%20documents%2FStage%203%2FMathematics%2FTime%20%2D%20Year%205%20%2D%20Unit%201)
* Time zones help enable modern communication and commerce, but they mess with a lot more than just your TV schedule. In this [youtube video by Verge Science](https://www.youtube.com/watch?v=tzvUGDaG62I&ab_channel=VergeScience) we take a look at the ways we draw time zones and the surprising effects that time zones have on your health, your economic outlook, and even your identity
* Teacher to show students a time zone map and explain its features and how to read it to determine which countries are ahead or behind Australia. Students can then complete this [time zone clocks activity from tes.com](https://www.tes.com/en-au/teaching-resource/time-zones-6419756) to practise calculating the time in other countries. They could use a world clock on their phones or computers to check their answers.

Investigating the international dateline * Students watch [this video from bbc.com](https://www.bbc.com/news/world-asia-16351377) to explore why the international dateline is not straight. Teacher to refer back to the time zone map to see which countries are close to the international date line.
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| * explore simple rates related to time
* speeds measured in kilometres per hour
 | Exploring rates* Teachers could link this content to wages and payment per hour.
* Students could explore different rates such as:
* Heart rate (beats per minute)
* Electricity usage (kilowatts per hour)
* Rainfall (mm per year)
* Speed of different vehicles (kilometres per hour)
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| * investigate travel times using digital technology
* public transport planning websites or appsInformation and communication technology capability
* use and interpret time to plan travel
* use calendars to consider travel datesCritical and creative thinking Personal and social capability
* identify the typical features of each season and use this to make decisions about clothing required for travelAsia and Australia’s engagement with Asia Difference and diversity
* read and interpret timetables in a range of formats and contexts, including timetables that use 24- hour time
* everyday timetables, eg school, cinema, local fitness centre, TV guidePersonal and social capability
* travel timetables, eg bus, train, ferry, connecting servicesPersonal and social capability
* event timetables, eg a sporting competition, a festival programPersonal and social capability
 | * Teachers may like to refer to the strategies outlined on the [Numeracy - Stage 2 calendar](https://education.nsw.gov.au/teaching-and-learning/student-assessment/smart-teaching-strategies/numeracy/measurement-geometry/time/stage-2-calendar) website to assist them in teaching students about timetables

Reading travel timetables* This resource is a booklet of activities where students learn about the features of timetables and how to use a timetable to plan ahead. If teachers plan to use this resource, they should be careful to remove any references to Stage 3**Resource:** [Timetables](https://schoolsnsw.sharepoint.com/sites/DistanceEdResources2/Final%20documents/Forms/AllItems.aspx?FolderCTID=0x012000FC7392CDE7E4144FB0737936165EA4F6&id=%2Fsites%2FDistanceEdResources2%2FFinal%20documents%2FStage%203%2FMathematics%2FTime%20%2D%20Year%206%20%2D%20Unit%201%2FTime%20%2D%20Unit%201%20%2D%20Year%206%20v1%2E4%2Epdf&parent=%2Fsites%2FDistanceEdResources2%2FFinal%20documents%2FStage%203%2FMathematics%2FTime%20%2D%20Year%206%20%2D%20Unit%201)
* Teachers can either work through this Powerpoint presentation as a class, or it could be printed for students to work through. Students read timetables to answer questions about appropriate trains and flights to get Mario to his destination in time.**Resource:** [Mario’s travel](https://schoolsnsw.sharepoint.com/sites/MathematicsLifeSkillswritingteam/Shared%20Documents/General/M1%20Everyday%20measurement/Mario%27s%20travel.pptx)
* Students independently complete this worksheet where they interpret a bus timetable to determine the best bus to catch to reach their destination on time.**Resource:** Bus-Timetable.DOCX
* Students use the NSW Government [Trip Planner](https://transportnsw.info/trip#/) website to assist them in planning journeys. It covers buses, trains and ferries to travel from any destination in NSW to another.
* This website could provide the information for the teacher to set an investigation relevant to the students.
* Alternatively, students could set each other challenges of the shortest or longest time to get from one destination to another.
* Students work independently to complete this worksheet where they use a bus timetable from Blackmore School to Donnerton Bus Station to answer the questions about their journey.**Resource:** Planning a simple journey.DOCX
* Students work independently to complete this worksheet where they need to read and interpret a train timetable in 24-hour time. **Resource:** A question of time.DOCX
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| * recognise how days of the week (including weekends and public holidays) affect timetables
 | Varying times* Teacher to use a restaurant brochure or website with opening days and times, to ask students questions about the days and times they could go to the restaurant to buy the food.
* How do opening hours on a weekend compare to mid-week?
* Is this the same for all businesses?
* Teacher to show students a transport timetable for weekends and public holidays vs during the week. Teacher to lead discussion as to why these differences may occur
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| * solve everyday problems involving time
* is there enough time to get to the shops and buy the groceries before they close?Critical and creative thinking Literacy Personal and social capability
* identify what time to leave home to arrive somewhere by a given time if using public transport, or calculate how long a bus trip will takeCritical and creative thinking Personal and social capability
 | Solving problems with time* In this [ReSolve problem solving activity](https://www.resolve.edu.au/time-mission-control-iss), students manage scheduling problems and problems involving elapsed time. They construct a 24-hour program and a timeline, when given a number of tasks and constraints.
* Students complete, either individually or in pairs, this [problem-solving activity from nrich.org](https://nrich.maths.org/1002) where two watches do not show the correct time.
* Students to show students the first part of this [episode of the Curiosity Show](https://www.youtube.com/watch?v=qVUXn-iM6uI), where Rob introduces a problem involving a broken watch. Students should attempt to solve the problem before the teacher shows the rest of the problem which demonstrates the solution.
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|  | TRADING HOURSMONDAY–FRIDAY9.00 am – 5.00 pmSATURDAY9.00 am – 11.30 am* Teachers could use the above sign (or similar) as a discussion point. Students could discuss questions such as:
* What do you think ‘Trading hours’ means?
* What does ‘am’ mean? What does ‘pm’ mean?
* List the days the shop is open.
* How many days a week does the shop open? How many hours is the shop open for the week?
* What time does the shop open on Tuesday?
* Is the shop open on Sunday?
* How many hours is the shop open on Monday? Explain how you worked this out?
* If you went to the shop at 12 o’clock on Saturday would the shop be open?
* If you went to the shop at 3.00 am on Wednesday, would the shop be open?
* How many hours would the shop be open on Monday if:
	+ the shop was closed for 1/2 hour for lunch?
	+ the shop closed at 4.30 pm? the shop opened at 10.00 am?
	+ the shop opened at 9.30 am and closed at 3.00 pm?
* Students can follow the instructions on this website to set up a simple timesheet in Excel. They could then play around with entering different start, finish and break times to see their effect on the overall time worked.**Resource:** [Timesheet](https://www.excel-easy.com/examples/time-sheet.html)
* Teachers could link this content to Wages in Financial Maths
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#### Evaluation

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#### Glossary

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| Term | Description |
| estimate | An approximate judgment or calculation of an amount of something |

#### Supplementary resources

[Time Teacher Information](http://amsi.org.au/teacher_modules/time.html)