



Time

The concept of 'time' is embedded in students' daily lives and experiences. The ability to understand time is a relatively abstract concept, and differs from other mathematical concepts as it does not follow the base-10 model, instead uses base 12, 24 and 60. As part of the Australian Curriculum, students should be able to understand time duration, recognise the sequence of time (days of week, months of year, etc), and read and understand a given point in time by reading a clock face.

Keywords: *time, measurement, problem solving, language*

Language Disorder and Understanding Time

Time can be a complicated concept for students with Language Disorder. To read time, students must have foundational skills within number and understand the different formats for reading a single unit of time. The language of time is complex and may lead to confusion. The following are just a few examples on the varying language choices used when reading and understanding time:

- "ten past two" → presented on an analogue clock as 2:10
- "twenty-five to six" → presented on a digital clock as 5:35
- "quarter past four pm" → presented as 16:15 in 24hr time

Because of these complexities, educational research suggests that the concepts relating to time should be taught explicitly and sequentially.

Sequencing teaching of time

The following table shows how to apply a well-established and researched sequence for teaching measurement topics, focused specifically on the concept of time:


<p>Identify and perceive the attribute to be measured</p>	<ul style="list-style-type: none"> • Look at a concept that has multiple measurement attributes and focus on the time element (e.g., when measuring a running race, it could be distance or time and compare these attributes)
<p>Compare and order</p>	<ul style="list-style-type: none"> • Look at activities and compare and order these based on time (e.g., brushing hair - 2 minutes, driving to school - 15 minutes, lunchtime play - 30 minutes)
<p>Measure using non-standard units</p>	<ul style="list-style-type: none"> • Understand and judge 'duration' using non-standard units (e.g., Tim took 10 hand claps to walk across the room, however, Penny only took 8 hand claps)

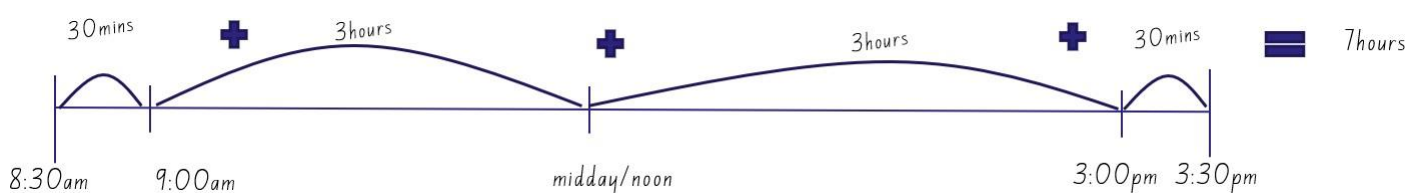


Measure using standard units	<ul style="list-style-type: none"> Introduce relevant terminology such as seconds, minutes, hours, days, weeks, years etc
Application of measurement	<ul style="list-style-type: none"> Knowledge of time is applied to problem-based activities (e.g., time differences around the world)

Strategies to assist students' understanding of time

The strategies below may be helpful for students who are struggling with the complexities of language associated with time and are having difficulty learning and understanding the concept of time.

- **Make time matter in the classroom:** When using time in the classroom, make it real and accountable. For example, when telling students, "Lunch will be in 10 minutes", set a timer to show this duration of time.
- **Use calendars and schedules:** Students in the early years can build on their understanding of time duration, days of the week etc, through the continual use of calendars and visual schedules in the classroom. Students begin by focusing on sequencing the day, moving towards accumulating an understanding of the duration of a day or task, by including an analogue clock representing the time of the day that the activity occurs.
- **Encourage students to think about time throughout the day:** Students need to be exposed to the concept of duration regularly. For example, "It's 10:15am now. Will we have enough time to complete this 20-minute activity before first break?"
- **Make time relatable:** When teaching time, make the examples and scenarios relevant for the students. For example, each day ask students how long until the next transition, use characters and stories to talk about duration, and teach time in other subjects such as Science to strengthen understanding.
- **Use tactile instructional activities:** Students may benefit from using materials when learning time. For example, create clocks to manipulate using paper plates, create a 'human clock' using the students' bodies, create matching time games (e.g., write times on Lego/Duplo pieces for student to match such as '1:45pm' joins with 'a quarter to  two' and/or use model clocks when solving problems.
- **Use timelines to encourage thinking:** Timelines may help students visualise duration and help to solve problem-based activities. For example, if asked, "If you got to school at 8:30am and were picked up at 3:30pm, how long would you be at school?" could be displayed as:





Want to learn more?

To learn more about Language Disorder and how to support children and young people for whom language is their primary disorder, please **contact us**. Language Disorder Australia provides holistic, innovative and effective therapy, education and support services and has a transdisciplinary team of speech pathologists, occupational therapists, educators, psychologists and physiotherapists.

Contact: 1300 881 763 or hello@languagedisorder.org.au

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