

# Booragul Public School NSW Syllabus for the Australian Curriculum – Measurement and Geometry

<b>Sub Strand – Time 1</b>			
Outcome	Teaching and Learning Activities	Notes/ Future Directions/Evaluation	Date
<b>Stage 2</b> A student: <ul style="list-style-type: none"> <li>› uses appropriate terminology to describe, and symbols to represent, mathematical ideas MA2-1WM</li> <li>› reads and records time in one-minute intervals and converts between hours, minutes and seconds MA2-13M</li> </ul>	<b>Language</b> Students should be able to communicate using the following language: time, clock, analog, digital, hour hand, minute hand, <b>second hand, revolution</b> , numeral, hour, minute, second, o'clock, <b>(minutes) past, (minutes) to.</b>		
<b><u>Ignition Activities</u></b> <b>Time Bingo</b> <b>Part A</b> Students are given a page of blank analog clocks. They record their own times on the clocks. The teacher calls out various times. A counter is placed on a clock with the matching time. When all clocks are covered the student calls out 'Bingo.' <b>Part B</b> Students are given a page of blank digital clocks. Students record their own times on the clocks. The teacher calls out various times. A counter is placed on a clock with the matching time. When all clocks are covered the student calls out 'Bingo.' <i>Extension:</i> Students are given a page with both analog and digital clocks. They record various times in both forms. The teacher calls out a time eg a quarter past 12. Students place a counter on the corresponding time, analog or digital ie a quarter past 12 or 12:15. When all the times are covered the student calls out 'Bingo'.			Literacy
<b>How Long Is A Minute?</b> Children are asked to estimate how long a minute is. The teachers says Start and when a child thinks a minute has passed they stand up or raise their hand. Child that is closest to the minute timer going off is the winner.			
<b>Barrier Game</b> Students form pairs. Student A is provided with a series of digital times recorded on cards. Student B is provided with an analog clock. Student A selects a card and explains to Student B where to position the hands on their clock to make a matching time. Student B records the time they have made both in analog notation and in digital notation eg twenty to eleven and 10:40. Student A checks the digital time with their card. Students swap roles and repeat the game.			
<b><u>Explicit Mathematical Teaching</u></b> Tell time to the minute and investigate the relationship between units of time (ACMMG062) <ul style="list-style-type: none"> <li>• recognise the coordinated movements of the hands on an analog clock, including:</li> </ul> <div style="text-align: right; margin-right: 50px;">~ 1 ~</div>			

- the number of minutes it takes for the minute hand to move from one numeral to the next
- the number of minutes it takes for the minute hand to complete one revolution
- the number of minutes it takes for the hour hand to move from one numeral to the next
- the number of minutes it takes for the minute hand to move from the 12 to any other numeral
- the number of seconds it takes for the second hand to complete one revolution
- read analog and digital clocks to the minute, including using the terms 'past' and 'to', eg 7:35 is read as 'seven thirty-five' or 'twenty-five to eight'
- record in words various times shown on analog and digital clocks

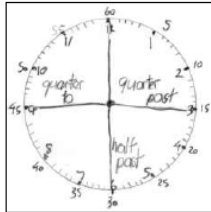
## Whole Class Teaching Activities

### **Construct a Clock**

Students construct an analog clock, label its parts and include any markings they already know. Students then compare their clock with a real analog clock and describe how the clocks are alike and different. They are given the opportunity to include any additional features on their clock. Have children look at a variety of timetables and list the information they provide. Discuss how time is presented in the timetables.

### **Patterns in Time**

Students write the minutes around an analog clock and describe the number patterns created eg 5, 10, 15, .... Students divide the clock into quarters and highlight numbers related to 'half past', 'quarter to' and 'quarter past'.



- the number of minutes it takes for the minute hand to move from one numeral to the next
- the number of minutes it takes for the minute hand to complete one revolution
- the number of minutes it takes for the hour hand to move from one numeral to the next
- the number of minutes it takes for the minute hand to move from the 12 to any other numeral
- the number of seconds it takes for the second hand to complete one revolution

### **Reading Analog Clocks**

The teacher presents the following scenario:

'Madeline is very good at reading digital clocks. All of the clocks in her house are digital. For Madeline's birthday her grandparents bought her an analog wristwatch but she is having trouble reading the time.'

Students are asked to write to Madeline, helping her to tell the time with her new watch. They are encouraged to use diagrams as part of their response.

read analog and digital clocks to the minute, including using the terms 'past' and 'to', eg 7:35 is read as 'seven thirty-five' or 'twenty-five to eight'

## Group/Independent Activities

### **The Minute and Hour Hands**

Students observe and discuss the position of the hour hand at half past, quarter past and quarter to the hour, and on the hour. Students construct an analog clock with an hour hand only. In pairs, students position the hour hand anywhere on their clock and swap clocks with their partner. Students are then asked to identify the time represented on their partner's clock and give reasons. Students are asked to display and name as many different times as possible using the minute and hour hands.

**NAPLAN Questions-2008-** Work through these using problem solving skills with children (Newman's Analysis if known)

NAPLAN 2008-Yr 3 Questions

**22** A bus took some students to camp.  
It left the school at 10:00 am.



The bus trip took one and a quarter hours.  
What time did the bus get to the camp?

10:30 am      10:45 am      11:15 am      11:30 am

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27 This photo was taken at 5:15 pm.



Shade one bubble.

Which clock shows when the photo was taken?



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## Computer Learning Objects

### Tell The time –ES1 –Stage 3

Tell the time is an interactive teaching program (ITP) on the [Standards Site](#) in the UK. It displays on-screen analogue and digital clocks separately or together. The clocks can be moved around the screen and their sizes altered. Times can be adjusted in different intervals of time. The 'set' option on the digital clock is used to set the time shown on the clocks. Once you have selected your options click on 'set' again to restart the clocks. The clocks can run in real time or from a set time and over any interval. The clock can be stopped and started.



## Planned assessment

Pre Assessment

<p>Give children a sheet with 2 blank clockfaces on it. Have kids label clock and show 27 minutes past 2 on one clock and record in digital beneath, and 8 minutes past nine on second clock, recording in digital time beneath.</p>		
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Swiss clock from Maths Assessment for learning Rich Tasks p125

Give each child a timetable and ask them to pose three questions about their timetable and answer them.