**MATHEMATICS WEEKLY/UNIT PLANNER**

**Level:** Gr 3/4     **Term:**3 **2017       Weeks: 7/8-8/9**

**Teachers:** Sinead, Kellie and Marg

**Dimension:** Measurement and Geometry

**Specific Focus for Unit:** Measurement - Time

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| **Victorian Curriculum Content Descriptions**  [**http://victoriancurriculum.vcaa.vic.edu.au/mathematics/introduction/rationale-and-aims**](http://victoriancurriculum.vcaa.vic.edu.au/mathematics/introduction/rationale-and-aims) | **Key Concepts**  [**https://drive.google.com/file/d/0B3ydL4IWBSAbbk5laWtLOEprYXc/edit**](https://drive.google.com/file/d/0B3ydL4IWBSAbbk5laWtLOEprYXc/edit) |
| **Yr 2:**  Tell time to the quarter-hour, using the language of 'past' and 'to' [(VCMMG117)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMMG117)  Name and order months and seasons [(VCMMG118)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMMG118)  Use a calendar to identify the date and determine the number of days in each month [(VCMMG119)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMMG119)  **Yr 3:**  Tell time to the minute and investigate the relationship between units of time [(VCMMG141)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMMG141)  **Yr 4:**  Convert between units of time [(VCMMG167)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMMG167)  Use am and pm notation and solve simple time problems [(VCMMG168)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMMG168)  **Yr 5:**  Compare 12- and 24-hour time systems and convert between them [(VCMMG197)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCMMG197) | **Duration of time**  Sensing the extent of a period of time, e.g. a minute.  **Time Telling**  Using an instrument to measure time:  • analogue  • digital.  **Time Elapsed**  Calculating time from a starting point to an end point.  **Time Span**  • daily events – morning/afternoon/evening  • tools – calendar, timetable  • social/cultural phenomena, e.g. Easter, Christmas  • time cycles – millennia, centuries, decades, years, seasons, months, weeks, days  • AD & BC / CE & BCE. |

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| **Pre-Assessment** | **Insights** | **Learning Intentions & Success Criteria** |
| **Task:** | All o’clocks correct  Most half pasts correct  Times were sequenced in order  Many students didn’t discriminate length of hands  Lots of difficulty with 3.20 in hands  Not matching big hand with multiples of 5  Most students matched correct digital with analogue  Most students kept to ‘safe’ times | **We are learning how to use a calendar.**  Success Criteria:   I will be successful if…  I can name and order months (and seasons).  I can work out the number of days in any month.  **We are learning to tell the time in hours and minutes with both analogue and digital clocks.**  Success Criteria:   I will be successful if…  I can identify the different parts of a clock and what they do (analogue and digital).  I can tell the time accurately.  I can explain how hours, minutes and seconds connect to each other.  **We are learning to solve problems involving time (calendar and clocks).**  Success Criteria: I will be successful if…  I am able to calculate the time between dates using a calendar.  I am able to use a clock to calculate the time between events. |

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| **SESSION NUMBER**  **KEY IDEA**  **LEARNING INTENTION** | **TOOL SESSION**  A short, sharp task relating to fluency in mental computation or the focus of the lesson.  **WHOLE CLASS FOCUS**  Sets the scene/context for what students do in the independent session. | **INVESTIGATION SESSION**  Extended opportunity for students to work in pairs, small groups or individually. A time for teacher to probe children’s thinking or work a small group for part of the time. | **WHOLE CLASS REFLECTION**  Focused teacher questions and summary to draw out the mathematics and assist students to make links. At end, or 20 mins before end | **TEACHER ASSESSMENT**  We are looking for... |
| **Session 1**  **LEARNING INTENTION**  We are learning how to use a calendar.  **SUCCESS CRITERIA**  I will be successful if…  I can name and order months (and seasons).  I can work out the number of days in any month. | **TOOL SESSION**  **Tables at Tables** (number fact practise)  **WHOLE CLASS FOCUS**  Introduction of topic and guidance through the learning intentions on the cover sheet.  **Video** – You Tube  <https://www.youtube.com/watch?v=HtQcnZ2JWsY>  Days of the week to the tune of the Addams Family.  <https://www.youtube.com/watch?v=CiYIya36vLM> Instrumental version  **Poem –** Thirty Days Has September  Read through the poem several times to learn together. Have students colour code the months by their number of days. | **INVESTIGATION**  **Task:  Months and Seasons Wheel**  Students create a seasons wheel labelling the pictures, using appropriate colours for the trees and writing in the months (in order) in the surrounding ring.    **Task:  Flash Card Sequencing**  Students create a personal batch of month and season flash cards. Students work in pairs to time each other sequencing cards:  sequence the months  sequence the seasons  match the seasons to the months  sort by number of days  Write down your times to see if you can improve.  **Extending Prompts**:  Can you do it starting in the middle of the year? Can you do it backwards? How fast can you get?  **Enabling Prompts:**  Have the months worksheet and seasons wheel nearby so you can use it for help. | **REFLECTION**  What are some of the tricks and tips to learning these?  How have you been successful?  What might someone else find hard? How would you help them?  Are your times getting faster?  Revisit success criteria  **Study Ladder:** ‘Calendar Time’ pod | **ASSESSMENT**  Check the months and seasons wheels are correct  Set up two extra ‘Brag Tags’ kids can earn:  reciting months in sequence.  reciting ‘30 days’ poem. |

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| **Session 2**  **LEARNING INTENTION**  We are learning to solve problems involving time (calendar).  **SUCCESS CRITERIA**  I will be successful if…  I am able to calculate the time between dates using a calendar. | **TOOL SESSION**  **Tables at Tables** (number fact practise) Extra brag tags for months  **WHOLE CLASS FOCUS**  **Game:** ‘What Date Am I?”  Put a large copy of any month on the screen. Teacher has a secret date in their head. Students must work out the date by asking ‘yes’ or ‘no’ questions. As questions are asked dates can be eliminated from the large calendar. First time, model this by a student having secret date and teacher asking questions  Sample questions:  Does your date have a 1 in the tens column? Does your date fall on a Monday? Is your date even? Is your date odd? Is your date a single digit? Does your date have a 0 in the ones column? Does your day fall on the weekend? Is your date in the 2nd week of the month? Is your date after the 15th? Is your date before the 16th?  Variations   1. Use a calendar for several months. 2. Give each child a copy of a month and everyone marks a different date. Teacher asks the questions and the last person to have their date identified is the winner. | **INVESTIGATION**  **Task: Investigating the Year with a Calendar**  Using A3 calendar of the year (maybe 1 for each table) students answer questions on worksheet    **Task: Investigating September**  Students answer questions about the specifics of the month of September    **Extending Prompts**:  Use the classroom calendar to make up questions for October  **Enabling Prompts:**  Make sure you read the questions carefully and you’re using the calendar to find the answers. Check with others. | **REFLECTION**  (20 mins before lesson end)  How have you been successful?  What might someone find difficult?  How does this help us in our everyday lives?  How do our Mums and Dads use calendar time?  Who’d like a study buddy to help them finish?  Revisit success criteria and use the ‘Where Am I At with My Learning?’ poster:    Keep working for 10 more minutes then we’ll correct together  **Study Ladder:** ‘Calendar Time’ pod | **ASSESSMENT**  Correct as a class and collect sheets for assessment |

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| **Session 3**  **LEARNING INTENTION**  We are learning to tell the time in hours and minutes with both analogue and digital clocks.  **SUCCESS CRITERIA**  I will be successful if…  I can identify the different parts of a clock and what they do (analogue and digital).  I can tell the time accurately.  I can explain how hours, minutes and seconds connect to each other. | **TOOL SESSION**  **Tables at Tables** (number fact practise) Extra brag tags for months  **WHOLE CLASS FOCUS**  **Videos** – You Tube  <https://www.youtube.com/watch?v=74I0M0RKNIE&list=PLDQlSh98XAywTatIwQKMAyPa4rtMl6Ft5&index=1>  ‘History of Keeping Time’  <https://www.youtube.com/watch?v=8RJzoyIVzV8&list=PLDQlSh98XAywTatIwQKMAyPa4rtMl6Ft5&index=2>  ‘Learn How to Tell Time on a Clock’  Stop at 4:34 (irrelevant stuff after)  Watch, then watch again and have students write key vocab words on whiteboards. Add these to maths wall  <https://www.youtube.com/watch?v=ENOYemdWU08&t=115s>  ‘Digital Clock Song for Kids Jack Hartmann’ – very corny – prob’ly just watch half!  **Interactive:** ‘Teaching Clock’  <http://www.visnos.com/demos/clock>  Use this clock to teach time concepts.  Broken clock activity – students must work out the time using only the hour hand (minute hand is ‘broken off’) see Marg for how to ‘break’ the Teaching Clock. | **INVESTIGATION**  **Task: Broken Clocks**  Students identify the time to the quarter hours and write beneath the clocks.    **Extending Prompts**:  Write both digital and clock face time.  **Enabling Prompts:**  Look carefully at the hand and remember the cookie from the video (rewatch). | **REFLECTION**  (20 mins before lesson end)  How have you been successful?  How do you know when you’ve got this?  Who’d like a study buddy to help them finish?  What’s the tricky bit we have to watch for? (¼ to)  Keep working for 10 more minutes then we’ll correct together  **Study Ladder:** ‘Time’ and ‘Time for Champions’ pods | **ASSESSMENT**  Correct as a class and collect sheets for assessment |

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| **Session 4**  **LEARNING INTENTION**  We are learning to tell the time in hours and minutes with both analogue and digital clocks.  **SUCCESS CRITERIA**  I will be successful if…  I can identify the different parts of a clock and what they do (analogue and digital).  I can tell the time accurately.  I can explain how hours, minutes and seconds connect to each other. | **TOOL SESSION**  **Tables at Tables** (number fact practise) Extra brag tags for months  **WHOLE CLASS FOCUS**  **Videos** – You Tube  <https://www.youtube.com/watch?v=gEStq1e1Qrc>  ‘Seconds, Minutes and Hours by StoryBots’ – quick fun song  <https://www.youtube.com/watch?v=njpsJUFX-Vk>  ‘Telling Time to the Minute’  **Interactive:** ‘Teaching Clock’  <http://www.visnos.com/demos/clock>  Use this clock to teach time to the minute. Have students use personal white boards to draw and write several examples.  (Can also use the miniature clocks) | **INVESTIGATION**  **Task: Reading the Time Accurately**  Students identify the time and write beneath the clocks    **Extending Prompts**:  Write both digital and clock face time.  **Enabling Prompts:**  Look at the hour hand first then use the minute hand to count by fives. | **REFLECTION**  (20 mins before lesson end)  Finish the sentence: I’ve learnt that…  Who’s got questions?  Revisit success criteria and use the ‘Where Am I At with My Learning?’ poster:    Keep working for 10 more minutes then we’ll correct together  **Study Ladder:** ‘Time’ and ‘Time for Champions’ pods | **ASSESSMENT**  Correct as a class and collect sheets for assessment |

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| **Session 5**  **LEARNING INTENTION**  We are learning to solve problems involving time (calendars and clocks).  **SUCCESS CRITERIA**  I will be successful if…  I am able to use a clock to calculate the time between events. | **TOOL SESSION**  **Tables at Tables** (number fact practise) Extra brag tags for months  **WHOLE CLASS FOCUS**  **Interactive:** ‘Teaching Clock’  <http://www.visnos.com/demos/clock>  **Problem Solving Time Cards**  Use the clock to work through several problems from the cards. | **INVESTIGATION**  **Task: Problem Solving Time!**  Students work through the problems on the cards, self correcting with the answer cards.  **Extending Prompts**:  Write some time problems of your own for others to do.  **Enabling Prompts:**  What could you use to help work out the problem? (re-reading, drawing, a mini clock or the teaching clock) | **REFLECTION**  (20 mins before lesson end)  What tricky questions would you like to talk about together?  What parts of time do you think we might need to do more of?  Which bits are you confident of?  **Study Ladder:** ‘Time’ and ‘Time for Champions’ pods | **ASSESSMENT**  Are students able to work out what the problem is asking?  What areas are students still having difficulty with?  Are students able to use play clocks and other equipment to help them? |