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| **GRADE 4 MATHEMATICS PLANNER** |
| **Unit 25:** Time | **Strand:** Measurement and Geometry | **Term 3 Week 7** | **2014** |
| **Vocabulary:** am, analogue, days, digital, hours, measure, minutes, months, pm, seconds, time, weeks, years |
| **Resources:** Websites, teacher-made lesson content, worksheets |
| **YEAR LEVEL****INDICATORS** | **Content Descriptors & Standards:** | **Elaborations:** |
| **Level 3** | * Tell time to **the minute** and investigate the relationship between**units of time** (ACMMG062)
* They tell time to the **nearest minute**.
 | \* Recognising there are 60 minutes in an hour and 60 seconds in a minute |
| **Level 4** | * **Convert between** units of time (ACMMG085)
* They convert between units of time.
* Use **am and pm notation and solve simple time problems** (ACMMG086)
* They solve problems involving time **duration**.
 | \* Identifying and using the correct operation for converting units of time\* Calculating the time spent at school during a normal school day\* Calculating the time required to travel between two locations\* Determining arrival time given departure time |
| **Level 5** | * Compare **12 and 24 hour time systems and convert between them** (ACMMG110)
* They convert between 12 and 24 hour time.
 | \* Investigating the ways time was and is measured in different Aboriginal Country, such as using tidal change\* Using units hours, minutes and seconds |
| **Pre -Assessment** | Have students sketch an analogue clock, and show 7:45 ( a quarter to 8 ) on the clock. Have students write three time facts, e.g. 1 minute = 60 seconds. |
|  | **Lesson 1** | **Lesson 2** | **Lesson 3** | **Lesson 4** |
| **Whole Class Introduction** | **Pre-test:**1. Conduct above pre-test to determine groups

Or1. Distribute Time Capacity Matrix

<http://effectivecurriculumideas.weebly.com/uploads/2/5/2/5/25254303/time_acv_-_progressive_capacity_matrix_-_year_levels_identified.pdf> | **Tuning in:**[ACMMG085 - Time - Converting Between Units - Wow Intro - Seasons of Love (Video from the movie Rent)](http://www.youtube.com/watch?v=UvyHuse6buY) * What is special about 525,600 minutes?
* What other ways did they measure a year in? (love, cups of coffee?
* What other ways at school can we measure a year in (terms, weeks, days, months)
* Complete the chain: 1 year = days, weeks, months, terms)
 | **Tuning in:**[ACMMG062 & 85- Time - Relationship between Units of Time - Conversion - Millionaire - Lesson (Quiz).pptx](Intro%20-%20Day%202%20-%20ACMMG062%20-%20Time%20-%20Relationship%20between%20Units%20of%20Time%20-%20Conversion%20-%20Millionaire%20-%20Lesson%20%28Quiz%29.pptx)  | **Tuning in:**???  |
| **Teacher Focus Group** |  | **BELOW** **1. Lesson:**Review analogue * Teacher uses classroom clock or interactive clock @ <http://www.amblesideprimary.com/ambleweb/mentalmaths/clock.html>
* Students use their own analogue clocks with hands – (i) students labels all 59 minutes they label every fifth minute with a black marker

<http://www.learnalberta.ca/content/me5l/html/math5.html?goLesson=15> – Sections 1-3* 1 minute increments
* Quicker: 5 minute increments
* Inros AM PM

**2. Activities:*** [ACMMG062 - Time - Analogue Clocks - Time to the nearest 5 minutes - Activity.pdf](Below%20%28Yr3%29/ACMMG062%20-%20Time%20-%20Analogue%20Clocks%20-%20Time%20to%20the%20nearest%205%20minutes%20-%20Activity.pdf)

3. **Fast Finishers:*** Reading analogue watches: Refresher course <http://studyjams.scholastic.com/studyjams/jams/math/measurement/tell-time.htm>
* Home
* Watch Out
* Try
 | **AT****1. Lesson**12-24 hours time* <http://www.learnalberta.ca/content/me5l/html/math5.html?goLesson=15> – Section 4

**2. Activities*** Create an AM/PM hour time line in one column

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| **AM/PM** | **Activity** |
| 1am | Sleeping |
| 2am | Sleeping |
| 3am | Sleeping |
| 11am | Recess |
| 12pm | Maths |
| 1pm | Lunchtime |

1. **Fast Finishers**
* 12 Hour To The Minute: Time Match (Nelson 4 TB pg. 118)
* 12-24 hours interactive activity <http://www.turtlediary.com/kindergarten-games/math-games/tick-tock-time.html>
 | **ABOVE** **1. Lesson*** [ACMMG110 - Time - 24 Hour Time - Using a Time Line to Solve Time Problems - Lesson.pptx](Above%20%28Yr5%29/ACMMG110%20-%20Time%20-%2024%20Hour%20Time%20-%20Using%20a%20Time%20Line%20to%20Solve%20Time%20Problems%20-%20Lesson.pptx)

**2. Activities*** Complete 24-Hour Time (Nelson 5 SB pg. 102)
* Ordering Times (Nelson 5 TB pg. 118)
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| **Independent Activity** |  | **ABOVE** **Activities (Completing the pattern)**1. Create 1 24 hour time line in one column

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| **AM/PM** | **24H** | **Activity** |
| 1am | 01:00 | Sleeping |
| 2am | 02:00 | Sleeping |
| 3am | 03:00 | Sleeping |
| 11am | 11:00 | Recess |
| 12pm | 12:00 | Maths |
| 1pm | 13:00 | Lunchtime |

Lesson:1. ACMMG110 - Time - 12 and 24 Hour Time - Intro To - Lesson.pptxActivities1. [ACMMG110 - Time - 12 and 24 Hour Time - Convert Written Time - Activity.docx](Above%20%28Yr5%29/ACMMG110%20-%20Time%20-%2012%20and%2024%20Hour%20Time%20-%20Convert%20Written%20Time%20-%20Activity.docx)
2. Complete 12-Hour Time (Nelson 5 SB pg. 101)
3. [ACMMG110 - Time - 12 and 24 Hour Time - Convert Between Analogue & Digital - Activity.pptx](Above%20%28Yr5%29/ACMMG110%20-%20Time%20-%2012%20and%2024%20Hour%20Time%20-%20Convert%20Between%20Analogue%20%26%20Digital%20-%20Activity.pptx)
 | **BELOW**Group plays What’s The Time, Mr Wolf?With their clocks for 5 minsTime – Investigating – Work in pairs to (and seek assistance from peers when needed to)* Order days of the week
* Order months of the year
* Order time periods (millisecond, second, hour, day, week, fortnight, month, year, decade, century, millennium)

Extension:Time Conversions* ? secs = 1 min
* ? mins = 1 hour
* ? hours = 1 day
* ? days = 1 week
* ? weeks = 1 fornight
* ? weeks = 1 year
* ?days = 1 year
* Any more?

**Fast finishers:*** Check answers using [ACMMG062 - Time - Relationship between Units of Time - Lesson (Review).pptx](Below%20%28Yr3%29/ACMMG062%20-%20Time%20-%20Relationship%20between%20Units%20of%20Time%20-%20Lesson%20%28Review%29.pptx)
* Place classroom posters around the classroom from [ACMMG062 - Time - Relationship between Units of Time - Time Conversion Posters.pptx](Below%20%28Yr3%29/ACMMG062%20-%20Time%20-%20Relationship%20between%20Units%20of%20Time%20-%20Time%20Conversion%20Posters.pptx)
 | **AT**In pairs:1. Time to life* I brush my teeth for ?
* I spend ? hours at school (prove)
* Etc..
* 5 sentences using different time units

Individually:2. Time Conversions* ? secs = 1 min
* ? mins = 1 hour
* ? hours = 1 day
* ? days = 1 week
* ? weeks = 1 fornight
* ? weeks = 1 year
* ?days = 1 year
* Any more?

And reverse order* ? mins = 60 secs
* ? hours = 60 mins
* ? days = 24 hours
* ?weeks = 7 days
* ? fornights = 2 weeks
* ? years = 52 weeks
* ? years = 365 days
* Any more?

3. Complete Converting Between Units Of Time (Nelson 4 SB pg. 101)EXTENSION:4. Complete Am and Pm Time(Nelson 4 SB pg. 102) |

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| **Computer Activity**  |  | **AT****Assessment (Gauge current understanding)****Paper**1. Duration – Add 1 hour or 3o mins
* [ACMMG086 - Time - Solving Simple Problems - Duration - Strategies - Adding 1 hour or 30 mins (Easy) - Lesson 1.pptx](At%20%28Yr%204%29/ACMMG086%20-%20Time%20-%20Solving%20Simple%20Problems%20-%20Duration%20-%20Strategies%20-%20Adding%201%20hour%20or%2030%20mins%20%28Easy%29%20-%20Lesson%201.pptx) on paper )give work to teacher)

**Computer**1. Convert between Units Of Time
* Convert between Units Of Time Studyladder (All three activities)
* Use am or pm (2 x activities) Studyladder
1. Duration problems (ask teacher first)
* [ACMMG086 - Time - Solving Simple Problems - Duration - Strategies - Using a Number Line - Lesson.pptx](At%20%28Yr%204%29/ACMMG086%20-%20Time%20-%20Solving%20Simple%20Problems%20-%20Duration%20-%20Strategies%20-%20Using%20a%20Number%20Line%20-%20Lesson.pptx) – Lesson with book for work
* Online activity <http://www.bgfl.org/bgfl/custom/resources_ftp/client_ftp/ks2/maths/timetables/index.htm>
 | **ABOVE**ASSESSMENT:1. 24 Hour Time (First four activities) - Studyladder – Grade 5

Fast Finishers:* Put up classroom posters on 24hour times: [ACMMG110 - Time - 24 Hour Time - Analogue & Digital Time - Classroom Posters.pdf](Above%20%28Yr5%29/ACMMG110%20-%20Time%20-%2024%20Hour%20Time%20-%20Analogue%20%26%20Digital%20Time%20-%20Classroom%20Posters.pdf)
 | **BELOW** Self-paced lesson (in pairs) writing answers in books* [ACMMG062 - Time - Digital Clocks - Reading & Writing Time to the Minute - Lesson.pptx](Below%20%28Yr3%29/ACMMG062%20-%20Time%20-%20Digital%20Clocks%20-%20Reading%20%26%20Writing%20Time%20to%20the%20Minute%20-%20Lesson.pptx)

Next Unit Assessment: (Gauge readiness for next step)* Studyladder – Grade 4
1. Convert between Units Of Time (All three activities)
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