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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   Or   1. 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(Quiz).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(Yr3)/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  |  |  | | --- | --- | | **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(Yr5)/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) | | |
| **Independent Activity** |  | **ABOVE**  **Activities (Completing the pattern)**   1. Create 1 24 hour time line in one column  |  |  |  | | --- | --- | --- | | **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.pptx  Activities   1. [ACMMG110 - Time - 12 and 24 Hour Time - Convert Written Time - Activity.docx](Above%20(Yr5)/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(Yr5)/ACMMG110%20-%20Time%20-%2012%20and%2024%20Hour%20Time%20-%20Convert%20Between%20Analogue%20&%20Digital%20-%20Activity.pptx) | | **BELOW**  Group plays What’s The Time, Mr Wolf?  With their clocks for 5 mins  Time – 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(Yr3)/ACMMG062%20-%20Time%20-%20Relationship%20between%20Units%20of%20Time%20-%20Lesson%20(Review).pptx) * Place classroom posters around the classroom from [ACMMG062 - Time - Relationship between Units of Time - Time Conversion Posters.pptx](Below%20(Yr3)/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(Yr%204)/ACMMG086%20-%20Time%20-%20Solving%20Simple%20Problems%20-%20Duration%20-%20Strategies%20-%20Adding%201%20hour%20or%2030%20mins%20(Easy)%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(Yr%204)/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(Yr5)/ACMMG110%20-%20Time%20-%2024%20Hour%20Time%20-%20Analogue%20&%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(Yr3)/ACMMG062%20-%20Time%20-%20Digital%20Clocks%20-%20Reading%20&%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) |