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| STRAND: Number + Measurement SUBSTRAND: Whole Number (A) + Time (A) STAGE: 3 |
| TERM: | 1 | 2 | 3 | 4 | WEEK: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| AHC-ICON-Aboriginal Torres Strait Islander histories-300dpiAboriginal and Torres Strait Islander histories and cultures | A-ICON-Asia Australias engagement with Asia-300dpiAsia and Australia’s engagement with Asia | S-ICON-Sustainability-300dpiSustainability | CCT-ICON-critical creative thinking-300dpiCritical and creative thinking | EU-ICON-ethical understanding-300dpiEthical understanding | ICT-ICON-300dpiInformation and communication technology capability | IU-ICON-intercultural understanding-300dpiIntercultural understanding | L-ICON-literacy 300dpiLiteracy | N-ICON-numeracy-300dpiNumeracy\* | PSC-ICON-personal social capability-300dpiPersonal and social capability | WE-work and enterprise-300dpiWork and enterprise |
| ***What are we learning to do (WALT):*** Read, write and order numbers of any size.State the place value of digits in numbers of any size.Determine and compare duration of events.Interpret and use timetables. |
| ***Adjustment:*** | **Post Assessment Highlighted**  |
| **TEACHING AND LEARNING ACTIVITIES** | **REG** |
| **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| ***What I’m Looking For (WILF):*** ***To state the place value for numbers of any size*** | ***What I’m Looking For (WILF):*** ***To state the place value for numbers of any size*** | ***What I’m Looking For (WILF):*** ***To state the place value for numbers of any size*** | ***What I’m Looking For (WILF):*** ***To determine the duration of different events***  | ***What I’m Looking For (WILF):*** ***To read and use timetables***  |
| **Lesson Breakers****Secret number** | **Lesson Breakers****Smartboard place value** | **Lesson Breakers****Make the smallest/largest number** | **Lesson Breakers** | **Lesson Breakers** |
| **Introduction*** Display a four-digit number using a place value flip chart. Ask students to name each place value column.
* Use the flip chart to guide counting on, then counting back, of four-digit numbers by tens, hundreds then thousands on and off the decade.
* Display 9 999 on the place value flip chart. Ask students to identify real-life situations where numbers larger than this are used and how the place value flip chart will need to be changed to show a number in the tens of thousands and hundreds of thousands?'
* Use the place value flip chart to guide the counting on, then counting back, of ten thousands and hundred thousands on and off the decade.
 | **Introduction**

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| **Mental calculation**. Begin with a number. Ask students to calculate a series of tasks in their head e.g. begin with 15, add 10, add 10, add 100, subtract 10, add 100, what is the number?  |

 | **Introduction**

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| **Maths Tipping.** Students stand around the room. Make a set of five/six digit number cards. Ask questions such as: how many tens altogether in 50000? What number is 100 more than 60002? The student who answers correctly may take one step towards another student. If that student is tipped they sit down.  |

 | **Introduction**Each child takes a turn doingsomething for one minute (draw a picture, jump, write their name over and over etc.) and the other child times by watching the second hand do a full revolution.**Investigation**Students time activities in class thatmight take 60 seconds (1 minute) 2 minutes, 5 minutes, etc. thenpractise estimating how long a task has taken. During the activity watch the second hand, minute hand and hour hand make revolutionsChildren record : 60 minutes = 1hour (long hand 1 revolution) 60seconds = 1 minute (second hand 1 revolution) | **Introduction**Three trains travel from City Station to Farmland Station on the same morning. The Express leaves City 10 minutes after the All Stations train, but arrives at Farmland 10 minutes before it.The All Stations takes 50 minutes to reach Farmland and arrives at 10:30.The Goods train leaves 20 minutes before the All Stations and arrives at Farmland 20 minutes after the Express. Work out the timetable. That is; what time does each train leave City Station and what time does each train arrive at Farmland Station? |
| **Body*** Using an 'empty clothes line,' demonstrate how to make the largest number possible by rearranging five digit cards-1, 3, 5, 7, 9-hung on string (BLM1.1)
* Working in pairs, students order sets of five digit cards to make the largest number possible and discuss their results with the class
* Play game called *Highest Number*. (BLM1.2) Students play in pairs. Players take turns to roll a ten-sided die (0-9) to try and make the largest five digit number they can. Once a number has been placed in a place value column its position cannot be changed. The player who makes the highest number wins that game. Several rounds can be played before determining the overall winner.
 | **Body****Count –Off Activities** Roll three ten-sided (decahedron) die. Have the students start counting from the number rolled, adding ten, hundred, thousand to the count each time. Then count backwards by tens, hundreds, thousands. Have one student select a number and call out the number. Once the student calls out the selected number, the rest of the class continue counting by adding ten or hundred, thousand each time. Pupils count forward or back within an appropriate number range. Ask them to stop straight away when they counted a certain number of steps. For instance they count back 5000 from 8750 in steps of 1000. What number did they end up with? Give pupils the starting and finishing numbers and size of steps. They count within these numbers then hold up fingers to show how many steps have been counted eg Count on from 256 to 286 in tens? How many tens? Count back from 2654 to 2054. How many hundreds?  | **Body****Nudge** ‘We are learning how a number containing nines “rolls” over to leave zeros when 1, 10, 100 ... is added to the number, and how zeros “roll” back to nines with subtraction by 1, 10 ,100 ... **Activity** The students use the numeral cards to recreate counting sequences in a way that’s similar to the action of a car odometer. They can wear hats marked with the place values involved, for example, ones, tens, hundreds, thousands ... 9 9 9 9 Have a student as the ones counter, counting in ones. Stop them at nine. Ask, “What will happen when one is added?” Discuss how adding one rolls nine over to 10 and that another counting place (tens) is needed. Count in ones from 95 until 99 rolls over to 100. Start with 93 and add 10 to it. Discuss how the nine rolls over. Repeat by adding 10 to 94, 99, 90 ... Add 1, 10, then 100 to 99. Add 1, 10, 100 to 899. Add 1, 10, 100 to 998.  | **Body**Take all students to an outdoor area where there is a clearly defined distance eg basketball court.Teacher, with a student as a partner model how to time with a stop watch while a student runs the length of the basketball court. Make sure teacher shows how to stop, start and clear the stop-watch display. Also explain what needs to be recorded on the provided record sheet, and how to use it. Record sheet – How fast am I?Children complete set activities from Record sheet with one partner performing set activity with the other partner timing. Swap roles.Once all partners have both timed and been timed, students return to the classroomBack in the classroom, students calculate the difference between time taken and the estimated time.Students then need to complete question component of the “How fast am I?” worksheet (**see attachment 1.0**). | **Body**

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| **Timetables** Students access timetables on the Internet or the teacher provides students with a variety of timetables eg bus, plane, train, ferry, theme parks, movies. Students describe any visible patterns eg ‘Buses leave every 15 minutes on weekday mornings.’ Students calculate the duration of different journeys or events using start and finish times. They develop an itinerary for a given time-frame eg 4 hours. Students plan their ‘ultimate’ 24-hour itinerary. Students record their itinerary in 12-hour time using am and pm notation, and 24-hour time. Students discuss which timetables use 24-hour time and why it is important. Students to investigate online timetables to prepare simple travel itineraries. Students use timetable to create their own problems. Swap with a partner and complete.  |

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| **Conclusion****Wishball Challenge ; Whole Numbers** <http://splash.abc.net.au/home#!/media/>32507/wishball-challenge-whole-numbersThe Wishball series of learning objects encourages thinking about place value. It also provides opportunities for mental addition and subtraction. Students work with whole numbers up to thousands.  | **Conclusion****Mystery Numbers** <http://www.starrmatica.com/stand>alone/starrMaticaplaveValueMysteryNumbers.swf  | **Conclusion****Place Value** <http://www.bbc.co.uk/bitesize/ks2>/maths/number/place\_value\_headings/play/  | **Conclusion****Study ladder Time** | **Conclusion****Reading a timetable** <https://www/studyladder.com.au/>games/activity/reading-a-timetable-4637?lc\_set |
| **Resources*** Place value flip charts
* Empty clothes line
* Number cards
* Ten sided dice
* Highest number proforma
* Wishball challenge

website | **Resources*** Mystery numbers website
* Ten sided dice
 | **Resources*** Place value website
* Five/six digit number cards.
* Numeral cards
 | **Resources*** Recording sheet
* Stopwatches
* How fast am I? worksheet
 | **Resources**<https://www/studyladder.com.au/>games/activity/reading-a-timetable-4637?lc\_set* Online timetables
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| **Reflection/Check In** | **Reflection/Check In** | **Reflection/Check In** | **Reflection/Check In** | **Reflection/Check In** |

*Digit Cards*

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| *1* | *2* | *3* |
| *4* | *5* | *6* |
| *7* | *8* | *9* |
| *0* |  |  |

*BLM1.1*

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| Highest Number |
| Player's name: | Player's name: |
| Game |  | Game |  |
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*BLM 1.2*

MS3.5 Lesson 3 Attachment 1.0

**How fast am I?**

With your partner work out how fast you are after you estimate what you would be. Find the difference between the two.

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| Activity | Estimated Time (mins:secs) | Actual Time (mins:secs) | DifferenceEstimate – Actual = |
| Run |  |  |  |
| Skip |  |  |  |
| Hop |  |  |  |
| Jump |  |  |  |
| Dolly steps  |  |  |  |

Questions:

1. Which activity did you think was fun?
2. Which activity was the fastest? (use your actual time)
3. Which activity did you think was the fastest? (use your estimated time)
4. Which activity was the slowest? (use your actual time)
5. Which activity did you think was the slowest? (use your estimated time)
6. Rank the activities from quickest to slowest using your estimated times.
7. Rank the activities from quickest to slowest using your actual time.
8. Was there a difference in ranks? Can you think of a reason?