***Maths Unit Planner***

***Time***

***Grade 2 Term III Week 7 - 9 2015***

***AusVELS***

Tell time to the quarter-hour, using the language of 'past' and 'to'

1. describing the characteristics of quarter-past times on an analogue clock, and identifying that the small hand is pointing just past the number and the big hand is pointing to the three
2. identifying key features of squares, rectangles, triangles, kites, rhombuses and circles, such as straight lines or curved lines, and counting the edges and corners

***Key Ideas for Concept Development in Maths***

Time is different from most other attributes that are commonly measured because it cannot be seen or felt. The standard unit of time is the second.

Duration of Time

Sensing the extent of a period of time – eg. a minute

Time Telling

Using an instrument to measure time:

1. analogue
2. digital

Time Elapsed

Calculating time from a starting point to an end point.

Time Span

1. daily events – morning/afternoon/evening
2. tools – calendar, timetable
3. social/cultural phenomena – eg. Christmas, Easter
4. time cycles – millennia, centuries, decades, years, seasons, months, weeks, days

***Pre Assessment***

***3 part pre assessment***

1. Draw a clock like the one in our classroom (Have this one covered). You have one minute. Can you draw a way to show the time in any other different ways?
2. I want you to guess how long a minute goes for. We’ll all start by standing up and ring the chimes. When you think you’ve been standing for one minute sit down.
3. I’m going to read you some writing I did yesterday. I’d like you to listen and using the sheet of clocks, make me a timetable with clocks to show all the time events in my story.

This is my plan for Friday.

My day starts at 6 o’clock in the morning when the alarm goes off. I get up, feed the cat, have a shower, have breakfast, tidy my bedroom and get ready for school. I get to school at half past 7, prepare work for the day and said hello to the other teachers. At 9 o’clock I go into the Grade 1 room to do a Read-a-rama session with them. Then I go to Grade 2. I’m on yard duty at playtime. At a ¼ to 12, I will do a maths assessment with Grade 2. I will go home and have lunch at ¼ past 1. I’m going to ring my sister and have a chat about half past 2, then I might have a little sleep. On Friday night I will have tea at about 6 o’clock. Leigh gets home about 8 o’clock so together we can stay up a little late so I can watch the cricket. By half past 11 I’ll be in bed asleep

Can you mark which clocks are am and which are pm? Have a go at showing the times underneath in a different way. You could use digital time or you could write the time.

***Notes from the assessment task***

***Task 1 Draw a clock***

Most kids know there are 12 numbers on a clock

Most kids know the 12 comes at the top

Most kids were unable to correctly place the numbers on the clock

Lucia, Tayla, Xavier,Griffyn, Scarlett able to correctly place numbers

Olivia, Felicity and Aleisha’s clock numbering a concern

Most kids know a clock has two hands. Baxter only had one

Some kids put in the second hand

Oscar and Sinead were able to indicate 5 minutes between the numbers. Felicity marked in random minutes between the numbers

Some children had short and long hands

***Task 2 How long is a minute?***

Most children seemed to have no idea and just ‘followed along’. First children to go down, went at about 30 seconds and were quickly followed by most. A few kids held out for long past 1 minute.

***Task 3 Time story***

Most kids okay with o’clock times

A few children have half past, but not consistently

No children have quarter to or past

Very few children knew how to use the short and long hands correctly

Some children had an idea of am and pm – L, B, S, N, S, G, M

Follow up to the assessment

Present children with teacher findings from the assessment.

|  |  |  |
| --- | --- | --- |
| ***Most of the class...*** | ***A few of the class...*** | ***So...*** |
| ***Task 1 – Draw a clock*** |
| Knows there are 12 numbers on a clock |  | We don’t need to work on this |
|  | Were not sure about clock numbers | A few kids will be working on this |
| Knows the 12 comes at the top |  | We don’t need to work on this |
| Were not able to place the numbers on the clock correctly |  | We need to work on this |
|  | Were able to correctly place the numbers | They’ll be able to use some of the time kits and computers |
| Know a clock has 2 hands | Also put in the seconds hand | We won’t worry about the seconds hand for this unit |
|  | Know clocks have short and long hands | We need to work on this |
| ***Task 2 How long is a minute?*** |
| Seemed to have no idea and just ‘followed along’. | A few kids held out for long past 1 minute. | We’ll do some activities to help us understand how long a minute is. |
| ***Task 3 Time story*** |
| Know how to do o’clock times |  | We don’t need to work on this |
|  | Know half past, but not consistently | We need to work on this |
|  |  | No children know quarter past or quarter to so we’ll work on this |
|  | Know how to use the short and long hands correctly | We need to work on this |
|  | Had an idea of what am and pm meant | We’ll get them to share what they know with the rest of us |

***So what else do we need to learn about time?***

***Grade 2s should be about to read the o’clock, half past, quarter past and quarter to times.***

***Grade 2s should know the link between digital and analogue (face) clocks***

***Grade 2s should be able to work out how many minutes until playtime, lunchtime, the end of the day***

***Grade 2s should have an idea about how long a minute is, how long an hour is***

***Grade 2s should know about why time is important***

***Grade 2s should be able to say the days of the week and the months of the year***

***Learning Activities***

* Powercord clock

Using a powercord outstretched as a number line, talk about how there are 24 hours in a day. People thought this would make a clock too crowded so they halved that to 12 and let the clock go around twice each day. Place the numbers 1 to 12 across the number line, using the half point for the 6 and the quarter points for the 3 and 9. Note how all the numbers are spaced out evenly. Now join the plug points together and form a circle with the cord. Note the positions of the numbers and relate to the clock. Talk about the 6 being half way around the clock and the 3 and 9 being at the quarter points.

Students use pipe cleaners and stickers to make their own clock in a similar way.

* Hands on the clock

Talk about the specific purposes for the hands on the clock.

Lesson on the hour hand – the short one – (hour is a short word) What is its job? How does it work?

Lesson on the minute hand – the long one (minute is a long word) what is its job? How does it work?

Make the connection between the long and short hand – moving one moves the other

Use the power cord again, but relabel with numbers to 60 – for 60 minutes in an hour

* O’clock and Half Past

Quickly revise o’clocks - Definition of o’clock – of the clock/on the clock. Using mini clocks to practise o’clock times with a partner

Teaching about Half Past. – related to cord again and also related to fractions work. Using mini clocks to practise half past times with a partner

* Digital time

Use examples – pictures and real – of digital clocks. Children brainstorm where there are digital clocks. Use interactive clock to match digital and analogue times. Children make a day’s timetable using digital clock pictures. – A3 sheet – could be made into mini books

* How long is a minute?

Use interactive clock to demonstrate. 3 rotational activities: How many times can I write my name in 1 minute? How high can I count in 1 minute? How many times can my group throw round a ball in 1 minute? Make charts in small groups – things we can do in 1 minute / things we can do in five minutes / things we can do in 20 minutes.

* My Time Book - children fill in and trace writing.

Time Discovery Activities

Ipad app

Websites ***<http://www.k5learning.com/learning-clock>*** [***https://ca.ixl.com/math/grade-2***](https://ca.ixl.com/math/grade-2)

Youtube clips

3D time puzzle

Time dominoes

Individual Mini Clocks

***Learning Wall***

What do Grade 2s need to learn about Time?

Grade 2s should be about to read the o’clock, half past, quarter past and quarter to times.

Grade 2s should know how the long and short hands work

Grade 2s should know the link between digital and analogue (face) clocks

Grade 2s should be able to read some digital clock times

Grade 2s should be able to work out how many minutes until playtime, lunchtime, the end of the day

Grade 2s should have an idea about how long a minute is, how long an hour is

Grade 2s should know about why time is important

Grade 2s should be able to say the days of the week and the months of the year

These are the words I need to know and use for measuring and reading time:

clock, hand, hour, second, analogue, digital, timer, half, quarter, calendar, months, weeks, days, am, pm

***Lesson Timetable***

Week 7

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Monday | Tuesday | Wednesday | Thursday | Friday |
| Time unit intro – present pre assessment informationMoving activities set to timePower cord activity | Specialist Day | Using power cord activity to make our own clocks with pipe cleaners and stickers | Short session before PENumber kits and games  | Hands on the clock teaching lesson and activityTime Discovery activities – ipad app “ “ , websites,  |

Week 8

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Monday | Tuesday | Wednesday | Thursday | Friday |
| My Time Book - children fill in and trace writing. | Specialist Day | Hands on the clock activity follow upStudents cut up a worksheet of clocks, sort and label into o’clock, half past, quarter to. | Short session before PENumber kits and games |  |

Week 9

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Monday | Tuesday | Wednesday | Thursday | Friday |
|  | Specialist Day |  | Short session before PENumber kits and games |  |

***Resources***

[***http://www.k5learning.com/learning-clock***](http://www.k5learning.com/learning-clock)

[***https://ca.ixl.com/math/grade-2***](https://ca.ixl.com/math/grade-2)

**Time**

[**P.1**Days of the week](https://ca.ixl.com/math/grade-2/days-of-the-week)

[**P.2**Reading clocks](https://ca.ixl.com/math/grade-2/reading-clocks)

[**P.3**Time words: o'clock, half, quarter](https://ca.ixl.com/math/grade-2/time-words-oclock-half-quarter)

[**P.4**Match clocks and times](https://ca.ixl.com/math/grade-2/match-clocks-and-times)

[**P.5**Match analog and digital clocks](https://ca.ixl.com/math/grade-2/match-analog-and-digital-clocks)

[**P.6**Seasons](https://ca.ixl.com/math/grade-2/seasons)

[**P.7**A.M. and P.M.](https://ca.ixl.com/math/grade-2/am-and-pm)

[**P.8**Compare clocks](https://ca.ixl.com/math/grade-2/compare-clocks)

[**P.9**Elapsed time I](https://ca.ixl.com/math/grade-2/elapsed-time)

[**P.10**Elapsed time II](https://ca.ixl.com/math/grade-2/elapsed-time-ii)

[**P.11**Choose the appropriate time units](https://ca.ixl.com/math/grade-2/choose-the-appropriate-time-units)

[**P.12**Read a calendar](https://ca.ixl.com/math/grade-2/read-a-calendar)

[**P.13**Months of the year](https://ca.ixl.com/math/grade-2/months-of-the-year)

[**P.14**Number of days in each month](https://ca.ixl.com/math/grade-2/number-of-days-in-each-month)

[**P.15**Relate time units](https://ca.ixl.com/math/grade-2/relate-time-units)

[**P.16**Time patterns](https://ca.ixl.com/math/grade-2/time-patterns)

[***http://www.time-for-time.com/interactive.htm***](http://www.time-for-time.com/interactive.htm)

[***http://www.time-for-time.com/swf/myclox.swf***](http://www.time-for-time.com/swf/myclox.swf)