**MATHEMATICS EARLY STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TERM:  | WEEK: 1(lesson 1) | STRAND: Measurement and Geometry | **SUB-STRAND:** Time | **WORKING MATHEMATICALLY:**  |
| OUTCOMES: | MAe-1WM - describes mathematical situations using everyday language, actions, materials and informal recordings MAe-13MG - sequences events, uses everyday language to describe the durations of events, and reads hour time on clocks  |
| **CONTENT:**  | **Compare and order the duration of events using the everyday language of time (ACMMG007)*** use terms such as 'daytime', 'night-time', 'yesterday', 'today', 'tomorrow', 'before', 'after',

'next', 'morning' and 'afternoon' |
| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | Ask students to draw a picture of something they did yesterday and this morning and label / scribe. |
| WARM UP / DRILL | **Before and After**: Write the numerals 1 to 10 along the bottom of the board and add matching connecting cubes sticks above. Use two pieces of card to cover all the numbers and columns except 5. Ask: *What number is this? What number comes just after 5? What number comes just before 5?* Reinforce by saying: *Yes, 4 comes before 5 and 6 comes after 5.* Repeat by showing a different number and column. |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  |  |
| QUALITY TEACHING ELEMENTS | **INTELLECTUAL QUALITY** | **QUALITY LEARNING ENVIRONMENT** | **SIGNIFICANCE** |
| * Deep knowledge
* Deep understanding
* Problematic knowledge
* Higher-order thinking
* Metalanguage
* Substantive communication
 | * Explicit quality criteria
* Engagement
* High expectations
* Social support
* Students’ self-regulation
* Student direction
 | * Background knowledge
* Cultural knowledge
* Knowledge integration
* Inclusivity
* Connectedness
* Narrative
 |
| RESOURCES | * variety of daytime and night-time pictures to be sorted,
* Yesterday/Today/Tomorrow chart
 |

 **TEACHING AND LEARNING EXPERIENCES**

|  |  |
| --- | --- |
| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| * Establish a class chart to be completed daily:

 *Yesterday was ...*  *Today is ...*  *Tomorrow will be .. .* discuss events that happen each as they occur. (This is an ongoing activity that occurs daily throughout the year)* brainstorm activities students do in the *morning/afternoon/at night*

Make a day and night chart by recording the students' own ideas from group discussion | LEARNING SEQUENCEPre Foundation Skills |  |
| LEARNING SEQUENCEES1 | * Students select a variety of daytime and night-time scenes from magazine pictures, photograph and books. Make a display and label picture.
 |
| LEARNING SEQUENCEExtension S1 |  |
| **EVALUATION & REFLECTION** | Are students using terms such as 'daytime', 'night-time', 'yesterday', 'today', 'tomorrow', 'before', 'after', 'next', 'morning' and 'afternoon' correctly? |

* All assessment tasks should be written in **red** and planning should be based around developing the skills to complete that task.
* Assessment rubrics or marking scale should be considered.

**MATHEMATICS EARLY STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TERM:  | WEEK: 1(lesson 2) | STRAND: Measurement and Geometry | **SUB-STRAND:** Time | **WORKING MATHEMATICALLY:**  |
| OUTCOMES: | MAe-1WM - describes mathematical situations using everyday language, actions, materials and informal recordings MAe-13MG - sequences events, uses everyday language to describe the durations of events, and reads hour time on clocks  |
| **CONTENT:**  | **Compare and order the duration of events using the everyday language of time (ACMMG007)*** sequence events in time
 |
| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | Ask students if they: "clean their teeth and then eat breakfast?" or "eat breakfast and then clean their teeth?" / "do they go to bed and then put on their pyjamas?" or put on their pyjamas and then go to bed?"  |
| WARM UP / DRILL | **Before and After:** repeat activity from previous lesson by revealing different numbers and columns. |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  |  |
| QUALITY TEACHING ELEMENTS | **INTELLECTUAL QUALITY** | **QUALITY LEARNING ENVIRONMENT** | **SIGNIFICANCE** |
| * Deep knowledge
* Deep understanding
* Problematic knowledge
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* Metalanguage
* Substantive communication
 | * Explicit quality criteria
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* Narrative
 |
| RESOURCES | selection of pictures showing events in a day |

**TEACHING AND LEARNING EXPERIENCES**

|  |  |
| --- | --- |
| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| **School Time*** discuss the sequence of events that happen at school, eg.

"Did we have sport before or after morning tea?""What did we do between Reading Groups and morning tea?"**My Day*** as a class, discuss and order a series of pictures showing different events that occur during the day,

eg. breakfast, getting dressed, going to school, lunchtime, playtime at school, playing outside, eating dinner, going to bed . | LEARNING SEQUENCEPre Foundation Skills |  |
| LEARNING SEQUENCEES1 | * students cut out and order a series of pictures that show events in a day
 |
| LEARNING SEQUENCEExtension S1 |  |
| **EVALUATION & REFLECTION** | Are students using terms such as 'daytime', 'night-time', 'yesterday', 'today', 'tomorrow', 'before', 'after', 'next', 'morning' and 'afternoon' correctly? |

* All assessment tasks should be written in **red** and planning should be based around developing the skills to complete that task.
* Assessment rubrics or marking scale should be considered.

**MATHEMATICS EARLY STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TERM:  | WEEK: 2(lesson 1) | STRAND: Measurement and Geometry | **SUB-STRAND:** Time | **WORKING MATHEMATICALLY:**  |
| OUTCOMES: | MAe-1WM - describes mathematical situations using everyday language, actions, materials and informal recordings MAe-13MG - sequences events, uses everyday language to describe the durations of events, and reads hour time on clocks  |
| **CONTENT:**  | **Compare and order the duration of events using the everyday language of time (ACMMG007)*** compare the duration of two events using everyday language, eg 'It takes me longer to eat

my lunch than it does to clean my teeth'* describe events that take 'a long time' and events that take 'a short time' (Communicating)
 |
| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | Ask the students to predict and then test how many times they can write their name while you count to 100. |
| WARM UP / DRILL | In a container place cubes with the numbers 0 -10 written on them. Ask a student to select a cube, read the number and state the number that comes before and after. Repeat. |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  |  |
| QUALITY TEACHING ELEMENTS | **INTELLECTUAL QUALITY** | **QUALITY LEARNING ENVIRONMENT** | **SIGNIFICANCE** |
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 | * Background knowledge
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* Connectedness
* Narrative
 |
| RESOURCES | collection of pictures showing various events of different time durationworksheet to cut, sort and glue various activities |

**TEACHING AND LEARNING EXPERIENCES**

|  |  |
| --- | --- |
| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| * Present the class with a number of scenarios, verbally or pictorially, and ask them which takes longer to complete,

eg. getting dressed, eating a biscuit, cleaning their teeth, having a shower, eating an icecream, riding a bike, blowing up a balloon.* Ask students to tell about all the things they can think of that take a long time.
* Repeat for things that take a short time.
 | LEARNING SEQUENCEPre Foundation Skills |  |
| LEARNING SEQUENCEES1 | Students sort and glue a series of pictures into those that take a **long time** to do and those that take a **short time** to do. |
| LEARNING SEQUENCEExtension S1 |  |
| **EVALUATION & REFLECTION** | Did I encourage students language through careful questioning?Have the problems been part of the students' real life experiences? |

* All assessment tasks should be written in **red** and planning should be based around developing the skills to complete that task.
* Assessment rubrics or marking scale should be considered.

**MATHEMATICS EARLY STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TERM:  | WEEK: 2(lesson 2) | STRAND: Measurement and Geometry | **SUB-STRAND:** Time | **WORKING MATHEMATICALLY:**  |
| OUTCOMES: | MAe-1WM - describes mathematical situations using everyday language, actions, materials and informal recordings MAe-13MG - sequences events, uses everyday language to describe the durations of events, and reads hour time on clocks  |
| **CONTENT:**  | **Compare and order the duration of events using the everyday language of time (ACMMG007)*** describe events that take 'a long time' and events that take 'a short time' (Communicating)
 |
| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) |  |
| WARM UP / DRILL |  |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  |  |
| QUALITY TEACHING ELEMENTS | **INTELLECTUAL QUALITY** | **QUALITY LEARNING ENVIRONMENT** | **SIGNIFICANCE** |
| * Deep knowledge
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* High expectations
* Social support
* Students’ self-regulation
* Student direction
 | * Background knowledge
* Cultural knowledge
* Knowledge integration
* Inclusivity
* Connectedness
* Narrative
 |
| RESOURCES |  |

**TEACHING AND LEARNING EXPERIENCES**

|  |  |
| --- | --- |
| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
|  | LEARNING SEQUENCEPre Foundation Skills |  |
| LEARNING SEQUENCEES1 |  |
| LEARNING SEQUENCEExtension S1 |  |
| **EVALUATION & REFLECTION** |  |

* All assessment tasks should be written in **red** and planning should be based around developing the skills to complete that task.
* Assessment rubrics or marking scale should be considered.

**MATHEMATICS EARLY STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TERM:  | WEEK: 3(lesson 1) | STRAND: Measurement and Geometry | **SUB-STRAND:** Time | **WORKING MATHEMATICALLY:**  |
| OUTCOMES: | MAe-1WM - describes mathematical situations using everyday language, actions, materials and informal recordings MAe-13MG - sequences events, uses everyday language to describe the durations of events, and reads hour time on clocks  |
| **CONTENT:**  | **Connect days of the week to familiar events and actions (ACMMG008)*** recall that there are seven days in a week
* name and order the days of the week
* classify weekdays and weekend days
 |
| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | Say: Today is ......., what do we usually do today? What did we do yesterday?Ask a number of students for a response. |
| WARM UP / DRILL | Sing **Addams Family Days of the Week** song. |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  |  |
| QUALITY TEACHING ELEMENTS | **INTELLECTUAL QUALITY** | **QUALITY LEARNING ENVIRONMENT** | **SIGNIFICANCE** |
| * Deep knowledge
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* Problematic knowledge
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* Substantive communication
 | * Explicit quality criteria
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* High expectations
* Social support
* Students’ self-regulation
* Student direction
 | * Background knowledge
* Cultural knowledge
* Knowledge integration
* Inclusivity
* Connectedness
* Narrative
 |
| RESOURCES | Addams Family Days of the Week song**Days of the Week** written on cards and IWB. Sets of cards for individual or pair work. |

**TEACHING AND LEARNING EXPERIENCES**

|  |  |
| --- | --- |
| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| * Show each day name individually. Read the name together.
* Have names of each day on cards or IWB and ask students to order the days.
* Have names of the days on cards for 7 students to hold, they must order themselves, beginning with different days, repeat.
* Repeat, allowing a number of students to have a turn, reading the days each time.
* Vary by starting with a different day, to reinforce the cyclic pattern. Name of days could be displayed in a circle/oval to show this.
* Identify school days and weekend days.
 | LEARNING SEQUENCEPre Foundation Skills |  |
| LEARNING SEQUENCEES1 | In pairs or individually students order day of the week cards. |
| LEARNING SEQUENCEExtension S1 |  |
| **EVALUATION & REFLECTION** | Are students able to recite the Days of the Week commencing at any day? |

* All assessment tasks should be written in **red** and planning should be based around developing the skills to complete that task.
* Assessment rubrics or marking scale should be considered.

**MATHEMATICS EARLY STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TERM:  | WEEK: 3(lesson 2) | STRAND: Measurement and Geometry | **SUB-STRAND:** Time | **WORKING MATHEMATICALLY:**  |
| OUTCOMES: | MAe-1WM - describes mathematical situations using everyday language, actions, materials and informal recordings MAe-13MG - sequences events, uses everyday language to describe the durations of events, and reads hour time on clocks  |
| **CONTENT:**  | **Connect days of the week to familiar events and actions (ACMMG008)*** relate events to a particular day or time of day, eg 'Assembly is on Tuesday', 'We come to

school in the morning'* Identify events that occur every day, eg 'We have news every day' (Communicating)
 |
| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | Say: Today is ......., what do we usually do today? What did we do yesterday?Ask a number of students for a response. |
| WARM UP / DRILL | Sing **Addams Family Days of the Week** song. |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  |  |
| QUALITY TEACHING ELEMENTS | **INTELLECTUAL QUALITY** | **QUALITY LEARNING ENVIRONMENT** | **SIGNIFICANCE** |
| * Deep knowledge
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* Students’ self-regulation
* Student direction
 | * Background knowledge
* Cultural knowledge
* Knowledge integration
* Inclusivity
* Connectedness
* Narrative
 |
| RESOURCES | Addams Family Days of the Week song**Days of the Week** written on cards and IWB. Sets of cards for individual or pair work.Pictures showing events that occur throughout the school week, and activities students may encounter on the weekend. |

**TEACHING AND LEARNING EXPERIENCES**

|  |  |
| --- | --- |
| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| * Show each day name individually. Read the name together. For each day, discuss events that normally occur on that day at in the classroom or school.
* Repeat and discuss events that occur outside of school on each day.
* Using IWB, create a table where students can drag pictures of various activities under the correct day of the week. Discuss activities that occur every day, eg, Recess , Lunch
 | LEARNING SEQUENCEPre Foundation Skills |  |
| LEARNING SEQUENCEES1 | Provide each student with a table and pictures as used on the IWB for Whole Class lesson. Student cut, sort and glue according to the day each activity is done. Include events like News that may change for different students as well as those that occur daily like Lunch, Recess. |
| LEARNING SEQUENCEExtension S1 |  |
| **EVALUATION & REFLECTION** | Were students given enough opportunity to discuss their ideas?Could students relate activities that they participate in on weekends? |

* All assessment tasks should be written in **red** and planning should be based around developing the skills to complete that task.
* Assessment rubrics or marking scale should be considered.

**MATHEMATICS EARLY STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TERM:  | WEEK: 4(lesson 1) | STRAND: Measurement and Geometry | **SUB-STRAND:** Time | **WORKING MATHEMATICALLY:**  |
| OUTCOMES: | MAe-1WM - describes mathematical situations using everyday language, actions, materials and informal recordings MAe-13MG - sequences events, uses everyday language to describe the durations of events, and reads hour time on clocks  |
| **CONTENT:**  | **Tell time on the hour on analog and digital clocks**• read **analog** and digital clocks to the hour using the term 'o'clock'• describe the position of the hands on an analog clock when reading hour time |
| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | Show the class the Teaching Clock, ask a series of questions: What is this? What is it used for? Where have you seen other clocks? Does anyone know how to read the time? |
| WARM UP / DRILL | Have students estimate how many time they can jump in 1 minute, using a sand timer or stop watch, time the class as they jump, discuss results. |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  |  |
| QUALITY TEACHING ELEMENTS | **INTELLECTUAL QUALITY** | **QUALITY LEARNING ENVIRONMENT** | **SIGNIFICANCE** |
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* Inclusivity
* Connectedness
* Narrative
 |
| RESOURCES | Teaching Clock, individual clocks, IWB clock - analog, sand timer, stop watch, K-3 Teacher Resources has Telling Time Puzzles, Sparklebox has a number of o'clock resources. |

**TEACHING AND LEARNING EXPERIENCES**

|  |  |
| --- | --- |
| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| Explain that today we will learn how to read the time on the clock: * Explain: *When the long hand (minute hand) is pointing to the twelve, it means that time is 'on the hour'. The short hand (hour hand) tells us the time of the hour.* Move the hands to show 4 o'clock. Ask: *What is the time on the hour? Look at the short hand. It is pointing to number 4 on the clock. That means it is 4 o'clock.*
* Repeat for other times.
* Explain that the long hand moves around 24 times.
 | LEARNING SEQUENCEPre Foundation Skills |  |
| LEARNING SEQUENCEES1 | * Distribute individual clocks, explain how to move the hands on the clocks to change times.
* Ask the students to make a given o'clock time, wandering around to help where needed.
* Repeat for different times.
* As different times are made discuss what students might be doing at that time, eg. at 8 o'clock in the morning they might be getting ready for school, at 8 o'clock at night they should be in bed.
* **Clock Bingo- Hours**

Children have a Bingo Board each and listen to times on the hour being read out. If one of the times matches a time on their Bingo Board they place a counter on it.  |
| LEARNING SEQUENCEExtension S1 |  |
| **EVALUATION & REFLECTION** | * Were student's different experiences with clocks taken into account?
* Did the students enjoy the activities in this lesson?
 |

* All assessment tasks should be written in **red** and planning should be based around developing the skills to complete that task.

Assessment rubrics or marking scale should be considered

**MATHEMATICS EARLY STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| TERM:  | WEEK: 4(lesson 2) | STRAND: Measurement and Geometry | **SUB-STRAND:** Time | **WORKING MATHEMATICALLY:**  |
| OUTCOMES: | MAe-1WM - describes mathematical situations using everyday language, actions, materials and informal recordings MAe-13MG - sequences events, uses everyday language to describe the durations of events, and reads hour time on clocks  |
| **CONTENT:**  | **Tell time on the hour on analog and digital clocks**• read analog and **digital** clocks to the hour using the term 'o'clock'• describe the position of the hands on an analog clock when reading hour time |
| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | Using a Teaching Clock, have students give the o'clock time shown, repeating to ensure all students have a turn. |
| WARM UP / DRILL | Using a Teaching Clock, have students give the o'clock time shown, repeating to ensure all students have a turn. |
| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  |  |
| QUALITY TEACHING ELEMENTS | **INTELLECTUAL QUALITY** | **QUALITY LEARNING ENVIRONMENT** | **SIGNIFICANCE** |
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 | * Background knowledge
* Cultural knowledge
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* Inclusivity
* Connectedness
* Narrative
 |
| RESOURCES | Teaching clock, IWB clocks - analog and digital, picture or real digital clock, classroom display clock that can be changed daily and shows analog and digital times. |

**TEACHING AND LEARNING EXPERIENCES**

|  |  |
| --- | --- |
| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| Explain that today we will look at another type of clock.* Ask the students if they have seen others clocks besides the analog that we have already looked at?
* Show a digital clock, on the IWB or picture, and ask who has seen one and where.
* Explain how the digital clock works compared to an analog clock. Make a time on an analog clock and show on the digital clock.
* set up a class clock, that shows both times, and can be changed daily, along with the days of the week. When the time is changed each day, ask what students would be doing, both am and pm.
 | LEARNING SEQUENCEPre Foundation Skills |  |
| LEARNING SEQUENCEES1 | * distribute individual analog clocks, ask students to make a given time, repeat.
* display a digital time and ask the students to make the same time on their clocks, repeat. Select different students to read the times.
* As different times are made, using both clocks, discuss what students might be doing at that time, eg. at 8 o'clock in the morning they might be getting ready for school, at 8 o'clock at night they should be in bed.
 |
| LEARNING SEQUENCEExtension S1 |  |
| **EVALUATION & REFLECTION** | * Were student's different experiences with clocks taken into account?
* Did the students enjoy the activities in this lesson?
 |

* All assessment tasks should be written in **red** and planning should be based around developing the skills to complete that task.
* Assessment rubrics or marking scale should be considered.