**MATHEMATICS STAGE 1**

**TEACHING AND LEARNING OVERVIEW**

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| TERM:  | WEEK: **3** | STRAND: Statistics & Probability | **SUB-STRAND:** **Chance 2** | **WORKING MATHEMATICALLY:** **MA1-1WM** |
| OUTCOMES:**MA1-18SP** | **Recognises and describes the element of chance in everyday events**  |
| **CONTENT:**  | **Identify practical activities and everyday [events](http://syllabus.bos.nsw.edu.au/glossary/mat/event/?ajax" \t "_blank" \o "Click for more information about 'events') that involve [chance](http://syllabus.bos.nsw.edu.au/glossary/mat/probability/?ajax" \t "_blank" \o "Click for more information about 'chance') (ACMSP047)*** Recognise and describe the element of chance in familiar activities and events, eg 'I might play with my friend after school' http://syllabus.bos.nsw.edu.au/wsimages/cca/l.png
* Predict what might occur during the next lesson or in the near future, eg 'How many people might come to your party?', 'How likely is it to rain if there are no clouds in the sky?' (Communicating, Reasoning) CT
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| ASSESSMENT FOR LEARNING(PRE-ASSESSMENT) | * Students are asked in a Circle Time formation to tell the class about an activity that they ‘might do’ this week at school.
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| WARM UP / DRILL | * Class discussion of future events. Students are asked to predict an event in their future (eg 'I might play with my friend after school'). Ideas are recorded for later sorting into categories (‘always’, ‘likely’, ‘unlikely’ and ‘never’).
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| TENS ACTIVITYNEWMAN’S PROBLEMINVESTIGATION  | Match Weather to Event -Weather Picture CardsIf it rains I can… jump in the puddles.If it is sunny and hot I will…go to the beach for a swim. |
| 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
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| RESOURCES | Work Samples Mathematics K-6- Chance S1 p. 58/59<http://www-k6.thinkcentral.com/content/hsp/math/hspmath/ca/common/itools_int_9780153616334_/probability.html> <http://www.slideshare.net/fullscreen/jessrose1989/chance-year-1-7950956/1>  |

**TEACHING AND LEARNING EXPERIENCES**

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| WHOLE CLASS INSTRUCTION MODELLED ACTIVITIES | GUIDED & INDEPENDENT ACTIVITIES |
| * **Word Clarification**

As a class, look up the following chance terms- chance, possible, likely, event- in a dictionary (or use google to search). Record findings on paper and use these as a class to form definitions.* **Is it fair?**

Students write their names on a small sheet of paper. The names are placed in a hat to choose who will be the leader of the line. The teacher draws out one name and the students are asked to discuss if “this is fair” and whether everyone has the “same chance”. Names are put back after each draw. This activity is continued over a week and students test predictions, record and discuss.* **Dice Rolls- Circle Game**

Students are asked:- which number is the hardest to get when a dice is rolled?- how could you find out if you are right?- what is the chance of getting a 6?As a class test the theory, and then record the findings for a given number of rolls eg 20. | LEARNING SEQUENCERemediationES1 | * **Sorting Discussion Cards**

Students sort discussion cards into ‘possible’ and ‘impossible’ events. |
| LEARNING SEQUENCES1 | **Group Work or Independent Learning Tasks*** **Is the Game Fair?**

In pairs, each student rolls a dice in turn and moves a marker along a number line marked from 1 to 50. One student follows the rule ‘Double the number shown on the dice’. The other student follows the rule ‘Add 4 to the number shown on the dice’. The winner is the first student to reach 50. Students discuss the fairness of the game.* **Class Display**

Make a class display to reflect: events that will, might or won’t happen * **Likely or not?**

The teacher prepares cards with ‘always’, ‘likely’, ‘unlikely’ and ‘never’ on them and orders them on the floor. They pose the question:‘How likely is it that someone in another class has a vegemite sandwich today?’Students stand behind the chance card that they think is the best answer to the question and explain their reasons. Students survey one or more classes and find out whether their prediction was accurate.* Investigation: **Dice Game with a Partner**

Follow-up to class work-Students are asked:- which number is the hardest to get when a dice is rolled?- how could you find out if you are right?- what is the chance of getting a 6?Students are given a die to test their theory, and then record their findings for a given number of rolls eg 30.Individual “will’, ‘might’, ‘won’t happen’ charts. Students draw events to reflect terms. |
| LEARNING SEQUENCEExtension Early S2 | * **Pegs**

In groups, students are given a bucket of pegs. The bucket could have 10 blue and 10 yellow pegs. Students are asked to sort and count the pegs and then return them to the bucket. Students are asked to predict all possible combinations of pegs if two pegs are randomly taken from the bucket. They select one possible combination and, without looking, take two pegsout of the bucket. They see if the actual result matches their predicted result and discuss. Students repeat the selection several times returning the pegs to the bucket after recording their selection. They write a description of the activity explaining their observations. |
| EVALUATION & REFLECTION | Student Engagement: Resources:Achievement of Outcomes: Follow-up: |

* 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.