Booragul Public School NSW Syllabus for the Australian Curriculum — Statistics and Probability

<table>
<tr><td colspan="4" align="center">Chance 1</td></tr>
<tr><th>Outcome</th><th>Teaching and Learning Activities</th><th>Notes/ Future Directions/Evaluation</th><th>Language / Date</th></tr>
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A student:

› describes mathematical situations and methods using everyday and some mathematical language, actions, materials, diagrams and symbols **MA1-1WM**

› supports conclusions by explaining or demonstrating how answers were obtained **MA1-3WM**

› recognises and describes the element of chance in everyday events **MA1-18SP**

Syllabus Content Note:
Identify outcomes of familiar events involving chance and describe them using everyday language, such as **'will happen'**,' **won't happen'** or **'might happen'**

Syllabus reference:
Hardcopy page: 122
Digital: 127

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Background information
Students should be encouraged to recognise that, because of the element of chance, their predictions will not always be proven true.
When discussing certainty, there are two extremes: events that are certain to happen and those that are certain not to happen. Words such as 'might', 'may' and 'possible' are used to describe events between these two extremes.

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- **will happen**,
- **might**
- **happen**,
- **won't happen,**
- **probably**.

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Activities		
Explicit Mathematical Teaching Students should be encouraged to recognise that, because of the element of chance, their predictions will not always be proven true. When discussing certainty, there are two extremes: events that are certain to happen and those that are certain not to happen. Words such as 'might', 'may', 'possible' are between these two extremes. Use familiar language to describe chance (vocab cline of language of chance) Recognise and describe the element of chance in familiar activity *Present scenarios that require chance word answers. Discuss* *Have students draw/write scenarios depicting possible and impossible events* *Using the scenarios from above have students compare and describe the likelihood of events. Discuss the difference in chance between students.*		
Ignition Activity * game of 'heads or tails' * dice game similar to heads or tails - go to a place in the room representing 1-6. Roll die, if you are in that place, sit down - you're out		
Whole Class Teaching/Activities - **Sample Units of Work** pp 59 **Open Ended Questions** • If two coins are tossed, what could happen? • I overheard my mum telling our neighbour that on the weekend we would definitely do something but I could not hear what it was. What might it be? • Someone asked the teacher a question and he replied 'maybe'. What might the question be? • A family has three children. We know that at least one of the children is a girl.		

Draw what the family might look like.
- Our class wrote down some things that we felt were 'impossible'. What might we have written?

Possible/Impossible - Sample Units of Work pp 59
Students discuss and record things that they consider:
❙ possible eg being cloudy the next day
❙ impossible eg raining cows.
Students share their ideas, discuss any differences in opinion and form a display under the headings 'possible' and 'impossible'.

Questions - pose and discuss questions such as:
What is the chance that it will rain today?
What is the chance that you will find a dollar in the school playground?
What will the weather be like tomorrow?

What might happen? - Sample Units of Work pp 59
The teacher reads a picture book to the class and stops before the end of the book. Students are asked to predict what might happen next in the story. Students discuss how likely or unlikely their predictions are eg
'Do you think she will fall onto a haystack?'
Extension: Each student draws and writes a statement about their prediction.

Never-ever Book - Sample Units of Work pp 59
Students are asked to contribute a page to a book about the things that never ever happen eg 'It never ever rains cats and dogs.' Students share their page with a friend.

Lucky Dip. Organise a class lucky dip with a variety of prizes e.g. a soft toy, a pencil, a piece of chalk, one sock. Students discuss the chance of getting a prize that they like.

Knock Knock - Sample Units of Work pp 59
Students brainstorm a list of possible people who could knock at the classroom door eg the principal, a teacher, a primary child, an infants child, a mother, a father, a grandmother, a grandfather.
Students write the names on cards. As a class, students discuss and rate people from 'least likely to knock' to 'most likely to knock'. During the day the students record who

comes to the
door. At the end of the day, students discuss the findings.
Variation: In small groups, students discuss and rate the people from 'least likely to knock' to 'most likely to knock'. The students report back to the class, justifying their choices.

Chance Cards
Display a variety of chance cards eg always, likely, fifty-fifty, unlikely, never. Pose a question e.g. boys have more pets than girls. Students select a card and justify their choice.

Ask: *If I put three red counters and three blue counters into an empty bag, could I pull out a green counter? What could I pull out?*

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.
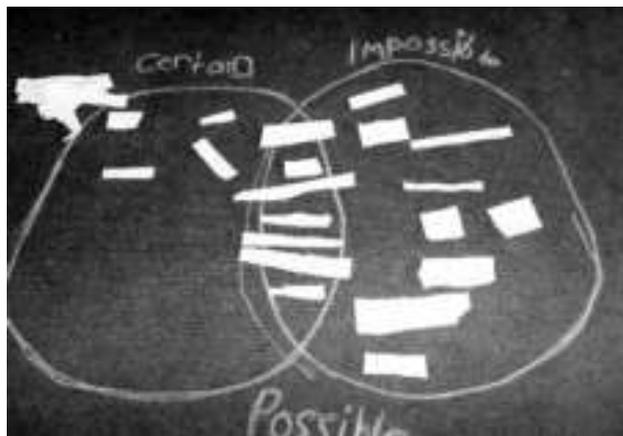
Guided Group and Independent Activities - Sample Units of Work pg 59
Dice Games
Students are asked:
▌ which number is the hardest to get when a die is rolled?
▌ how could you find out if you are right?
▌ what is the chance of getting a 6?
Students are given a die to test their theory, and then record their findings for a given number of rolls eg 30.
Variation: The teacher poses the scenario: 'If I put 6 number cards in a hat and picked them out one at a time, recorded the number and put it back in the hat, would there be an equal chance of each number being picked?'
Students discuss their predictions and then test by doing the activity.

Is the Game Fair?
In pairs, each student rolls a die 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 die'. The
other student follows the rule 'Add 4 to the number shown on the die'. The winner is the first student to reach 50.
Students discuss the fairness of the game.

Two Coloured Counters
Place 2 two coloured counters in a cup. If we shake the cup and tip them out what are the possible outcomes? In groups children take turns and record 10 tallies.

2 red	1 red 1 yellow	2 yellow

Go Maths Stage 1B
Lesson 64.2 Recording Outcomes With Tallies

| See attached spinner. Children colour each section of spinner a different colour. Spin 10 times and record colours landed on.
Numbers can be written on sections, spin 10 times, record which numbers have been landed on.
What Chance? – sheet

Integrating Literacy and Numeracy

Read **'Emily's Rapunzel Hair' by Cecily Matthews and Freya Blackwood (shortlisted book 2006)**
What are the likelihood of Chook laying another egg?
What is the likelihood of Jacob walking soon?
What is the likelihood of the kindy having another pet show?
What is the likelihood of you having a pet chicken? | | |