A year of probability at school (Years 1-3) could be

When planning a mathematics and statistics programme for the year it is important to plan for recurring opportunities for probability investigations and for key language to be utilised.

Year One	Term 1	Term 2	Term 3	Term 4
Longitudinal	**What's the Weather?** (CensusAtSchool) This lesson explores chance through the context of the daily weather in calendar maths. Skills and concepts are developed and built on as the year progresses and more data is collected.			
Focus lessons	**Lucky Dip** (CensusAtSchool) Ākonga will take turns playing a chance-based game that incorporates key vocabulary while anticipating outcomes.	**Spin a Winner** (CensusAtSchool) This lesson explores chance through creating and using spinners with different sectors.	**Te hē ika** (CensusAtSchool) This lesson draws from a practical fishing game to explore chance in an interactive way.	**No way Jose** In this unit we develop the language of probability by considering events which are likely or unlikely. We do this using the context of children's stories. (Created by NZMaths)
Suggested picture books to support oral language and vocabulary development.	**The Slushy Sludger** - use this online tool. It has questions prompts on it. **Hairy McClary from Donaldson's Dairy** - What is the chance that the dogs will be scared of Scarface Claw? **The Hungry Caterpillar** - What is the chance of the caterpillar eating through different foods? / Becoming a butterfly? **Pete the Cat I love my White Shoes** - Once children recognise the pattern in the story, ask what is the chance of Pete's shoes being blue? red? etc **Greedy Cat is Hungry** By Joy Cowley (Greedy Cat series) - What is the chance of Katie feeding Greedy Cat? Mum? Dad? **Rātā & the tree** - What is the chance of them returning in the morning to find the tree has been remade? **Who sank the boat?** - What is the chance of the boat sinking when the pig gets in? Mouse gets in? etc **Mr Archimedes Bath** - What is the chance of the bath overflowing as each character gets into it?			
Vocab	**Probability Investigations** | Investigative question, categories, anticipate, data, categorical data, frequency **Words to Describe Probability** | Chance, certain/possible/impossible, will happen/won't happen/might happen **Critical Thinking in Probability** | Agree or disagree with statements			

Year Two	Term 1	Term 2	Term 3	Term 4
Longitudinal	**Calendar maths** (CensusAtSchool) This lesson is for daily use throughout the year, with ideas for how to teach probability through using these questions and prompts.			
Focus lessons	**Gumball machine** (CensusAtSchool) Ākonga will explore a chance-based investigation that emphasises the role of data organisation and clarifies ākonga understandings of key vocabulary.	**Rock, paper, scissors** (CensusAtSchool) This lesson explores that idea of 'chance' in a practical way that is motivating for ākonga. The game based lesson invites fun connected to mathematical learning.	**Tricky Trickster** (CensusAtSchool) Ākonga will take turns playing a chance-based game that incorporates key vocabulary while anticipating outcomes.	**What's next?**(Created by NZMaths) The purpose of this activity is to engage students in identifying possible outcomes in a given situation and describing the chance of an outcome occurring in broad terms. Or **Lonely kiwi** (Created by NZMaths) In this unit we have a first look at uncertainty and chance. We begin to develop an intuitive sense of what chance and possibilities are about through games that involve following rules, making predictions and seeing what happens.
Suggested picture books (and digital tools) to support oral language and vocabulary development.	**How Māui Slowed the Sun** - Is it possible, impossible or certain that there will be enough daylight to get everything done in your day? Is there a chance that Tama-nui-te ra will see Māui when he is waiting to throw the ropes? **Mr Fox** by Gavin Bishop - What is the chance of each of the characters ending up in Mr Fox's bag? How do you explain that? Is it possible, impossible or certain that Mr Fox will end up in the bag himself? **Two Cans of Corned Beef and a Manulele in a Mango Tree** - What is the chance of getting a pair of gumboots on the third day? Is it possible that on day nine there will be a tui in the tree instead of a manulele? Is it possible, impossible or certain that there will not be snow in this Christmas book?			
Vocab	**Probability Investigations**	Outcome, anticipate, collect, record, identify, list, frequency, explain, compare **Words to Describe Probability**	Certain, uncertain, likely, unlikely, possible, impossible **Critical Thinking in Probability**	Agree or disagree with others' statements, explain agreements and disagreements			

Year Three	Term 1	Term 2	Term 3	Term 4
Longitudinal	**Using Random Name Generator** (CensusAtSchool) There are many forms of random name generators utilised in classrooms across the curriculum. This provides many opportunities to make use of this lesson. It is a lesson that can be as small or as large as you would like to make it. We suggest that you teach this lesson as one larger lesson early in the year, it can then be used as an ongoing classroom activity to reinforce language and key vocabulary.			
Focus lessons	**Human Slot Machine** (CensusAtSchool) Ākonga will take turns playing a chance-based game that incorporates key vocabulary while anticipating outcomes. This game is intended as two lessons for Year 3 ākonga. The first lesson involves the creation of a pictorial tree diagram, and the second lesson involves exploring visual representations of chance-based data.	**Crazy Animals** (CensusAtSchool) This chance-based investigation explores possible combinations through an animal drawing activity. Students will draw different animal heads, bodies, and tails/legs, then experiment with various combinations to create new animals, discovering all possibilities. This activity offers the opportunity to create patterns when exploring possible outcomes and numerous opportunities for extension.	**Whano whano** (CensusAtSchool) This lesson explores a chance based game that is commonly played in schools, inviting ākonga to think mathematically about this game. This activity invites ākoonga to create their own versions of this game and explore probability in their own creations.	**That's not fair** (Created by NZMaths) In this unit we play probability games and learn about sample space and a sense of fairness. **or Cube and spinner Challenges** (Created by NZMaths) In this unit we play several games based on coloured cubes and spinners. The purpose is to investigate chance and think about the concept of a fair game.
Suggested books and digital tools to support oral language and vocabulary development.	**The Vile Vendor** The vile vendor serves vile drinks. This is a digital tool that asks a question and asks ākonga to think about whether that is impossible, unlikely, equal, likely or certain. **That's a possibility** - Bruce Goldstone. This book is full of the language of probability presented with easy to relate to bright coloured real life contexts. This book is available from the National Library of New Zealand. This is a teacher text to prompt and promote regular thinking and discussion about probability.			
Vocab	**Probability Investigations** | Data visualisations, possible outcomes, variation in outcomes, predict **Words to Describe Probability** | Certain, uncertain, likely, unlikely, possible, impossible, chance **Critical Thinking in Probability** | Explain and question statements about chance-based situations with reference to data			