Kindy to Year 2 Level

STATISTICS & PROBABILITY

Statistics and Probability initially develop in parallel and the curriculum then progressively builds the links between them. Students recognise and analyse data and draw inferences. They represent, summarise and interpret data and undertake purposeful investigations involving the collection and interpretation of data. They assess likelihood and assign probabilities using experimental and theoretical approaches. They develop an increasingly sophisticated ability to critically evaluate chance and data concepts and make reasoned judgments and decisions, as well as building skills to critically evaluate statistical information and develop intuitions about data

	Understanding	Fluency	Problem Solving	Reasoning
F	*Understanding* includes connecting names, numerals and quantities	*Fluency* includes readily counting numbers in sequences, continuing patterns	*Problem Solving* includes using materials to model authentic problems, sorting objects, using familiar counting sequences to solve unfamiliar problems, and discussing the reasonableness of the answer	*Reasoning* includes explaining comparisons of quantities, creating patterns
1	*Understanding* includes connecting names, numerals and quantities, and partitioning numbers in various ways	*Fluency* includes counting number in sequences readily forward and backwards and locating numbers on a line	*Problem Solving* includes using materials to model authentic problems, giving and receiving directions to unfamiliar places, and using familiar counting sequences to solve unfamiliar problems and discussing the reasonableness of the answer	*Reasoning* includes justifying representations of data, and explaining patterns that have been created
2	*Understanding* includes connecting number calculations with counting sequences, partitioning and combining numbers flexibly, identifying and describing the relationship between addition and subtraction and between multiplication and division	*Fluency* includes counting numbers in sequences readily and using the language of chance to describe outcomes of familiar chance events.	*Problem Solving* includes formulating problems from authentic situations, making models and using number sentences that represent problem situations	*Reasoning* includes using known facts to derive strategies for unfamiliar calculations, and creating and interpreting simple representations of data

What do I believe about statistics & probability and learning how to work with statistical & probability concepts?	Therefore, what do I need to do in my classroom? What do the children need? What equipment could I use?
➢ Link to everyday life ➢ Model simple display strategies for interpreting data (T-chart, Venn diagram, Bar graph) ➢ Ask questions to collect data ➢ Extreme probabilities – what would never happen. ➢ Continuing patterns ➢ Shared language. ➢ Real life situations ➢ Integrated with other LA's. ➢ Promotes analytical language. ➢ Classifying/sequencing/summarising are processes. ➢ Conclusions are reached, using a variety of methods of representations. ➢ Children can make predictions, interpret data and draw conclusions. ➢ Students need to have a bank of strategies to draw upon and to organise their information. ➢ Students need to be able to communicate their understanding – using terminology.	➢ Concrete materials – charts, post it notes, poster board ➢ Technology ➢ Visual aids showing different data collection (books, posters) ➢ Explore the language eg language cards. ➢ Games (probability): dice, cards, timer, and spinners. ➢ Explore different ways to present the same data. ➢ Time to talk. ➢ Integrate into other learning areas. ➢ Need to learn to interpret graphs. ➢ Concrete materials. ➢ Make connections to real life e.g. Melbourne Cup, footy tipping. ➢ Risk-taking: taking chances. ➢ Predicting, collecting, organising, recording and interpreting data.

Year 3 Level 3

STATISTICS & PROBABILITY

Statistics and Probability initially develop in parallel and the curriculum then progressively builds the links between them. Students recognise and analyse data and draw inferences. They represent, summarise and interpret data and undertake purposeful investigations involving the collection and interpretation of data. They assess likelihood and assign probabilities using experimental and theoretical approaches. They develop an increasingly sophisticated ability to critically evaluate chance and data concepts and make reasoned judgments and decisions, as well as building skills to critically evaluate statistical information and develop intuitions about data

Understanding	Fluency	Problem Solving	Reasoning
Understanding includes connecting number representations with number sequences, partitioning and combining numbers flexibly, representing unit fractions, using appropriate language to communicate times, and identifying environmental symmetry	*Fluency* includes recalling multiplication facts and identifying and describing outcomes of chance experiments	*Problem Solving* includes formulating and modelling authentic situations involving planning methods of data collection and representation, and using number properties to continue number patterns	*Reasoning* includes using generalising from number properties and results of calculations, and creating and interpreting variations in the results of data collections and data displays

What do I believe about statistics & probability and learning how to work with statistical & probability concepts?	Therefore, what do I need to do in my classroom? What do the children need? What equipment could I use?
➢ Shared language. ➢ Real life situations ➢ Integrated with other LA's. ➢ Promotes analytical language. ➢ Classifying/sequencing/summarising are processes. ➢ That they understand ratios. ➢ Conclusions are reached, using a variety of methods of representations. ➢ Children can make predictions, interpret data and draw conclusions. ➢ Students need to have a bank of strategies to draw upon and to organise their information. ➢ Students need to be able to communicate their understanding – using terminology. ➢ Students need to be able to use technology to represent data.	➢ Explore the language eg language cards. ➢ Games (probability): dice, cards, timer, and spinners. ➢ Explore different ways to present the same data. ➢ Time to talk. ➢ Integrate into other learning areas. ➢ Need to learn to interpret graphs. ➢ Concrete materials. ➢ Make connections to real life e.g. Melbourne Cup, footy tipping. ➢ Risk-taking: taking chances. ➢ Predicting, collecting, organising, recording and interpreting data. ➢ Understanding of computer programmes and how to use them.

Year 4 Level 4

STATISTICS & PROBABILITY

Statistics and Probability initially develop in parallel and the curriculum then progressively builds the links between them. Students recognise and analyse data and draw inferences. They represent, summarise and interpret data and undertake purposeful investigations involving the collection and interpretation of data. They assess likelihood and assign probabilities using experimental and theoretical approaches. They develop an increasingly sophisticated ability to critically evaluate chance and data concepts and make reasoned judgments and decisions, as well as building skills to critically evaluate statistical information and develop intuitions about data

Understanding	Fluency	Problem Solving	Reasoning
Understanding includes making connections between representations of numbers, partitioning and combining numbers flexibly, extending place value to decimals.	*Fluency* includes recalling multiplication tables, communicating sequences of simple fractions, and collecting and recording data	*Problem Solving* includes formulating, modelling and recording authentic situations involving operations, comparing large numbers with each other, and using properties of numbers to continue patterns	*Reasoning* includes using generalising from number properties and results of calculations, deriving strategies for unfamiliar multiplication and division tasks, communicating information using graphical displays and evaluating the appropriateness of different displays

What do I believe about statistics & probability and learning how to work with statistical & probability concepts?	Therefore, what do I need to do in my classroom? What do the children need? What equipment could I use?
➢ Shared language. ➢ Real life situations ➢ Integrated with other Learning Areas. ➢ Promotes analytical language. ➢ Classifying/sequencing/summarising are processes. ➢ That they understand ratios. ➢ Conclusions are reached, using a variety of methods of representations. ➢ Children can make predictions, interpret data and draw conclusions. ➢ Students need to have a bank of strategies to draw upon and to organise their information. ➢ Students need to be able to communicate their understanding – using terminology. ➢ Students need to be able to use technology to represent data. ➢ Involves predicting, collecting, organising, recording and interpreting data.	➢ Explore the language, eg. Word Walls. ➢ Games (probability): dice, cards, timer, and spinners. ➢ Explore different ways to present the same data. ➢ Encourage structured reflection time. ➢ Integrate into other learning areas. ➢ Teach the students to interpret graphs. ➢ Provide concrete materials. ➢ Make connections to real life e.g. Melbourne Cup, footy tipping. ➢ Provide a supportive environment for risk-taking. ➢ Conduct chance experiments and interpret results. ➢ Provide appropriate technologies.

Year 5 Level 5

STATISTICS & PROBABILITY

Statistics and Probability initially develop in parallel and the curriculum then progressively builds the links between them. Students recognise and analyse data and draw inferences. They represent, summarise and interpret data and undertake purposeful investigations involving the collection and interpretation of data. They assess likelihood and assign probabilities using experimental and theoretical approaches. They develop an increasingly sophisticated ability to critically evaluate chance and data concepts and make reasoned judgments and decisions, as well as building skills to critically evaluate statistical information and develop intuitions about data

Understanding	Fluency	Problem Solving	Reasoning
Understanding includes making connections between representations of numbers, using fractions to represent probabilities, comparing and ordering fractions and decimals and representing them in various ways	*Fluency* includes using estimation to check the reasonableness of answers to calculations.	*Problem Solving* includes formulating and solving authentic problems using whole numbers and measurements and creating financial plans	*Reasoning* includes investigating strategies to perform calculations efficiently, continuing patterns involving fractions and decimals, interpreting results of chance experiments, posing appropriate questions for data investigations and interpreting data sets

What do I believe about statistics & probability and learning how to work with statistical & probability concepts?	**Therefore, what do I need to do in my classroom? What do the children need? What equipment could I use?**
➢ Shared language. ➢ Real life situations ➢ Integrated with other Learning Areas. ➢ Promotes analytical language. ➢ Classifying/sequencing/summarising are processes. ➢ That they understand ratios. ➢ Conclusions are reached, using a variety of methods of representations. ➢ Children can make predictions, interpret data and draw conclusions. ➢ Students need to have a bank of strategies to draw upon and to organise their information. ➢ Students need to be able to communicate their understanding – using terminology. ➢ Students need to be able to use technology to represent data. ➢ Involves predicting, collecting, organising, recording and interpreting data.	➢ Explore the language, eg. Word Walls. ➢ Games (probability): dice, cards, timer, and spinners. ➢ Explore different ways to present the same data. ➢ Encourage structured reflection time. ➢ Integrate into other learning areas. ➢ Teach the students to interpret graphs. ➢ Provide concrete materials. ➢ Make connections to real life e.g. Melbourne Cup, footy tipping. ➢ Provide a supportive environment for risk-taking. ➢ Conduct chance experiments and interpret results. ➢ Provide appropriate technologies.

Year 6 Level 6

STATISTICS & PROBABILITY

Statistics and Probability initially develop in parallel and the curriculum then progressively builds the links between them. Students recognise and analyse data and draw inferences. They represent, summarise and interpret data and undertake purposeful investigations involving the collection and interpretation of data. They assess likelihood and assign probabilities using experimental and theoretical approaches. They develop an increasingly sophisticated ability to critically evaluate chance and data concepts and make reasoned judgments and decisions, as well as building skills to critically evaluate statistical information and develop intuitions about data

Understanding	Fluency	Problem Solving	Reasoning
Understanding includes describing properties of different sets of numbers, using fractions and decimals to describe probabilities, representing fractions and decimals in various ways and describing connections between them, and making reasonable estimations	*Fluency* includes representing integers on a number line, calculating simple percentages, using brackets appropriately, converting between fractions and decimals, using operations with fractions, decimals and percentages and interpreting timetables	*Problem Solving* includes formulating and solving authentic problems using fractions, decimals, percentages and measurements and interpreting secondary data displays	*Reasoning* includes explaining mental strategies for performing calculations, describing results for continuing number sequences, and explaining why the actual results of chance experiments may differ from expected results

What do I believe about statistics & probability and learning how to work with statistical & probability concepts?	**Therefore, what do I need to do in my classroom? What do the children need? What equipment could I use?**
➢ Shared language. ➢ Real life situations ➢ Integrated with other Learning Areas. ➢ Promotes analytical language. ➢ Classifying/sequencing/summarising are processes. ➢ That they understand ratios. ➢ Conclusions are reached, using a variety of methods of representations. ➢ Children can make predictions, interpret data and draw conclusions. ➢ Students need to have a bank of strategies to draw upon and to organise their information. ➢ Students need to be able to communicate their understanding – using terminology. ➢ Students need to be able to use technology to represent data. ➢ Involves predicting, collecting, organising, recording and interpreting data.	➢ Explore the language, eg. Word Walls. ➢ Games (probability): dice, cards, timer, and spinners. ➢ Explore different ways to present the same data. ➢ Encourage structured reflection time. ➢ Integrate into other learning areas. ➢ Teach the students to interpret graphs. ➢ Provide concrete materials. ➢ Make connections to real life e.g. Melbourne Cup, footy tipping. ➢ Provide a supportive environment for risk-taking. ➢ Conduct chance experiments and interpret results. ➢ Provide appropriate technologies.