Statistics and Probability Year 6

Teacher: Date:

A Local Public School

Cross Curriculum Priorities

- Aboriginal and Torres Strait Islander histories and culture
- Asia and Australia's engagement with Asia
- Sustainability

General Capabilities

- Literacy
- Numeracy
- ICT Competence
- Critical and Creative Thinking
- Intercultural Understanding
- Personal and Social Competence
- Ethical Behaviour

First Steps Links

Understand Chance

- ☐ KU 1 Pg.
- ☐ KU 2 Pg.
- ☐ KU 3 Pg.
- ☐ KU 4 Pg.
- ☐ KU 5 Pg.
- ☐ KU6 Pg.
- ☐ KU 7 Pg.

Collect and Process Data Part A

- ☐ KU 1 Pg.
- ☐ KU 2 Pg.
- ☐ KU 3 Pg.
- ☐ KU 4 Pg.
- ☐ KU 5 Pg.

Collect and Process Data Part B

- ☐ KU 1 Pg.
- ☐ KU 2 Pg.
- ☐ KU 3 Pg.
- ☐ KU 4 Pg.
- ☐ KU 5 Pg.
- ☐ KU 6 Pg.

Interpret Data

- ☐ KU 1 Pg.
- ☐ KU 2 Pg.
- ☐ KU 3 Pg.

Year 5	Year 6	Year 7
CHANCE	**CHANCE**	**CHANCE**
List outcomes of chance experiments involving equally likely outcomes and represent probabilities of those outcomes using fractions *[ACMSP116]* Recognise that probabilities range from 0 to 1 *[ACMSP117]*	Describe probabilities using fractions, decimals and percentages *[ACMSP144]* Conduct chance experiments with both small and large numbers of trials using appropriate digital technologies *[ACMSP145]* Compare observed frequencies across experiments with expected frequencies *[ACMSP145]*	Construct sample spaces for single-step experiments with equally likely outcomes *[ACMSP167]* Assign probabilities to the outcomes of events and determine probabilities for events *[ACMSP168]*
DATA REPRESENTATION & INTERPRETATION	**DATA REPRESENTATION & INTERPRETATION**	**DATA REPRESENTATION & INTERPRETATION**
Pose questions and collect categorical or numerical data by observation or survey *[ACMSP118]* Construct displays, including column graphs, dot plots and tables, appropriate for data type, with and without the use of digital technologies *[ACMSP119]* Describe and interpret different data sets in context *[ACMSP120]*	Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables *[ACMSP147]* Interpret secondary data presented in digital media and elsewhere *[ACMSP119]*	Identify and investigate issues involving continuous or large count data collected from primary and secondary sources *[ACMSP169]* Construct and compare a range of data displays including stem-and-leaf plots and dot plots *[ACMSP170]* Calculate mean, median, mode and range for sets of data. Interpret these statistics in the context of data *[ACMSP171]* Describe and interpret data displays and the relationship between the median and mean *[ACMSP172]*

Year 6 Achievement Target

By the end of Year 6, students recognise the properties of prime, composite, square and triangular numbers. They describe the use of integers in everyday contexts. They solve problems involving all four operations with whole numbers. Students connect fractions, decimals and percentages as different representations of the same number.

They solve problems involving the addition and subtraction of related fractions. Students make connections between the powers of 10 and the multiplication and division of decimals. They describe rules used in sequences involving whole numbers, fractions and decimals. Students connect decimal representations to the metric system and choose appropriate units of measurement to perform a calculation. They make connections between capacity and volume.

They solve problems involving length and area. They interpret timetables. Students describe combinations of transformations. They solve problems using the properties of angles. Students compare observed and expected frequencies. They interpret and compare a variety of data displays including those displays for two categorical variables. They evaluate secondary data displayed in the media. Students locate fractions and integers on a number line.

They calculate a simple fraction of a quantity. They add, subtract and multiply decimals and divide decimals where the result is rational. Students calculate common percentage discounts on sale items. They write correct number sentences using brackets and order of operations. Students locate an ordered pair in any one of the four quadrants on the Cartesian plane. They construct simple prisms and pyramids. Students list and communicate probabilities using simple fractions, decimals and percentages.

PROFICIENCY STRANDS	
Understanding Students build a robust knowledge of adaptable and transferable mathematical concepts. They make connections between related concepts and progressively apply the familiar to develop new ideas. They develop an understanding of the relationship between the 'why' and the 'how' of mathematics. Students build understanding when they connect related ideas, when they represent concepts in different ways, when they identify commonalities and differences between aspects of content, when they describe their thinking mathematically and when they interpret mathematical information. ☐	**Problem Solving** Students develop the ability to make choices, interpret, formulate, model and investigate problem situations, and communicate solutions effectively. Students formulate and solve problems when they use mathematics to represent unfamiliar or meaningful situations, when they design investigations and plan their approaches, when they apply their existing strategies to seek solutions, and when they verify that their answers are reasonable. ☐
Fluency Students develop skills in choosing appropriate procedures, carrying out procedures flexibly, accurately, efficiently and appropriately, and recalling factual knowledge and concepts readily. Students are fluent when they calculate answers efficiently, when they recognise robust ways of answering questions, when they choose appropriate methods and approximations, when they recall definitions and regularly use facts, and when they can manipulate expressions and equations to find solutions. ☐	**Reasoning** Students develop an increasingly sophisticated capacity for logical thought and actions, such as analysing, proving, evaluating, explaining, inferring, justifying and generalising. Students are reasoning mathematically when they explain their thinking, when they deduce and justify strategies used and conclusions reached, when they adapt the known to the unknown, when they transfer learning from one context to another, when they prove that something is true or false and when they compare and contrast related ideas and explain their choices. ☐

ACTIVITIES