Statistics and Probability Year 4

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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 3	Year 4	Year 5
CHANCE	**CHANCE**	**CHANCE**
Conduct chance experiments, identify and describe possible outcomes and recognise variation in results *[ACMSP067]* - conducting repeated trials of chance experiments such as tossing a coin or drawing a ball from a bag and identifying the variations between trials	Describe possible everyday events and order their chances of occurring *[ACMSP092]* Identify everyday events where one cannot happen if the other happens *[ACMSP093]* Identify events where the chance of one will not be affected by the occurrence of the other *[ACMSP094]*	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]*
DATA REPRESENTATION & INTERPRETATION	**DATA REPRESENTATION & INTERPRETATION**	**DATA REPRESENTATION & INTERPRETATION**
Identify questions or issues for categorical variables. Identify data sources and plan methods of data collection and recording *[ACMSP068]* Collect data, organise into categories and create displays using lists, tables, picture graphs and simple column graphs, with and without the use of digital technologies *[ACMSP069]* Interpret and compare data displays *[ACMSP070]*	Select and trial methods for data collection, including survey questions and recording sheets *[ACMSP095]* Construct suitable data displays, with and without the use of digital technologies, from given or collected data. Include tables, column graphs and picture graphs where one picture can represent many data values *[ACMSP096]* Evaluate the effectiveness of different displays in illustrating data features including variability *[ACMSP097]*	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]*

Year 4 Achievement Target

By the end of Year 4, students choose appropriate strategies for calculations involving multiplication and division. They recognise common equivalent fractions in familiar contexts and make connections between fraction and decimal notations up to two decimal places. Students solve simple purchasing problems. They identify unknown quantities in number sentences. They describe number patterns resulting from multiplication. Students compare areas of regular and irregular shapes using informal units. They solve problems involving time duration.

They interpret information contained in maps. Students identify dependent and independent events. They describe different methods for data collection and representation, and evaluate their effectiveness. Students use the properties of odd and even numbers. They recall multiplication facts to 10 x 10 and related division facts. Students locate familiar fractions on a number line. They continue number sequences involving multiples of single digit numbers. Students use scaled instruments to measure temperatures, lengths, shapes and objects. They convert between units of time. Students create symmetrical shapes and patterns. They classify angles in relation to a right angle. Students list the probabilities of everyday events. They construct data displays from given or collected data.

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.

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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.

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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.

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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.

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ACTIVITIES