

## Chance

Children should be given opportunities to demonstrate how the knowledge and skills gained in this strand can be used to link, reinforce and progress learning across the other four interconnected strands.

	a The learner	b The learner	c The learner	d The learner	e The learner	f The learner	g The learner	h The learner	i The learner	j The learner	k The learner
<b>Elements</b>	<b>Chance</b>										
<b>Understanding and Connecting</b>							<p>Identifies practical activities and everyday events that involve chance.</p> <p>Explore the independence of each trial in an investigation. (For example: when tossing a coin, each toss has a 50/50 chance, regardless of what came before it).</p>	<p>Explores the concept of even chance.</p> <p>Uses various materials such as coins and dice to investigate probability.</p>	<p>Recognises that probabilities range from 0-1 [With 0 being impossible/never and 1 being always/certain].</p> <p>Predicts and represents all the possible outcomes in a simple probability experiment using systematic lists and models</p>	<p>Uses data to predict how likely an event is to happen in the future.</p> <p>Explores how the greater the number of trials brings the experimental [actual] outcomes closer to the theoretical [expected] outcomes.</p> <p>Examines the range of variability in small samples (Useful to explain the law of small numbers).</p>	<p>Uses technology, to rapidly replicate random events (For example: toss coins, spinners or roll dice) for efficient investigations.</p> <p>Uses technology to rapidly identify the set of all possible outcomes in an investigation.</p>
<b>Communicating</b>						<p>Uses examples of everyday situations to talk about the likelihood of events happening and use the language of chance and probability.</p>	<p>Uses mathematical language [impossible, never, sometimes, possible, certain, always], to describe the likelihood that events will occur.</p>	<p>Uses mathematical language [very likely, unlikely, probable, improbable], to describe the likelihood that events will occur.</p> <p>Records outcomes of trials and investigations using appropriate strategies (For example: tally marks or simple tables).</p>	<p>Selects appropriate methods of recording results of probability investigations.</p> <p>Express as a common fraction, the probability that an event will occur.</p>	<p>Represents probability using values from the range of 0 to 1. [With 0 being impossible/never and 1 being always/certain].</p> <p>Represents all possible outcomes of an experiment using a sample space [A sample space is a set of all possible outcomes in an experiment].</p>	<p>Describes real-world applications of probabilities expressed in various forms (For example: fractions, decimals, percentages and graphs).</p>

	a	b	c	d	e	f	g	h	i	j	k
	The learner	The learner	The learner	The learner	The learner	The learner	The learner	The learner	The learner	The learner	The learner
Elements	<b>Chance</b>										
Reasoning							Predicts outcomes and tests through simple probability experiment or game.	Compares experimental values with theoretical values of an investigation (For example: compare observed results from tossing a coin 50 times with expected values i.e. 25 heads, 25 tails).	Deduces through investigation, how the number of repetitions of a probability experiment can affect the conclusions drawn.	Predicts and calculates the probability of an outcome considering frequency, fairness and rigour of investigation.  Establishes the reliability of outcomes based on the number of investigations conducted.	Makes predictions about an unknown situation when given a probability.
Applying and Problem-Solving							Investigates the probability that an everyday event will occur.  Plays games with an element of chance.	Conducts chance experiments, identifying and describing possible outcomes and recognising variation in results.  Ranks possible events in order of their likelihood.	Poses simple probability problems and solves them by conducting probability experiments.  Uses probability to determine and design mathematically fair and unfair games and explains possible outcomes.	Uses games to carry out blind experiments and predict whether they are fair or unfair.  Uses previous data to evaluate whether you can use patterns to make informed decisions about future events.	Refines all possible outcomes to meet a given criteria.  Conducts chance experiments with both small and large numbers of trials using appropriate digital technologies.