

Picking the Investigations you want to conduct in your class is easy with the *iMaths 2 Investigation Overview* document. Simply peruse the table below for a 'snapshot' of every Investigation in the year.

Investigation	About the Investigation	Duration	Group size	Students will need	Ideal for ...	Related learning area	ACARA Sub-strands
Investigation 1 Marble ramp	Maths, technology and science come together as students plan, sketch and construct a ramp that will allow a marble to travel more than two metres. Students will select suitable resources and techniques, using trial and error and manipulating variables to improve their ramp design and outcome.	3 weeks	pairs or small groups	<ul style="list-style-type: none"> internet access Tear-out 1 – <i>Column graph</i> coloured card and paper craft materials – cardboard tubes, cereal boxes, plastic hose, lunch wrap boxes, fabric rolls, glue, masking tape, sticky tape, scissors marbles metre rulers, trundle wheel, tape measures 		Science, Technologies	<ul style="list-style-type: none"> Using units of measurement Shape Location and transformation Data representation and interpretation
Investigation 2 Show time	Show day is here again with fairy floss, rides and show bags galore. Students will use a show guide to negotiate and make choices about spending money. The number concepts of addition and subtraction are practised in calculating a \$60 budget. This Investigation is best done at the time of your local show.	3 weeks	pairs	<ul style="list-style-type: none"> internet access Tear-out 2 – <i>Show guide</i> Tear-out 3 – <i>My plan for a day at the show</i> Tear-out 4 – <i>Wish list</i> Tear-out 5 – <i>Final budget</i> BLM 2.1 – <i>Australian notes</i> BLM 2.2 – <i>Australian coins</i> play money (notes and coins) A3 paper calculator 	Any of the state show days e.g. Royal Queensland Show.	English	<ul style="list-style-type: none"> Number and place value Money and financial mathematics Using units of measurement
Investigation 3 Quizit	In this Investigation students work in teams to compete in the Quizit maths quiz. Students test their skill and knowledge in a variety of number concepts including probability, place value, number lines and growing and repeating patterns. Positive social interaction skills are encouraged as students work cooperatively and effectively to solve each quiz question in the given time.	3 weeks	small groups of 4 or 5 students	<ul style="list-style-type: none"> internet access BLM 3.1 – <i>Chance cards</i> BLM 3.2 – <i>Chance card labels</i> BLMs 3.3–3.12 – <i>Quiz questions</i> stopwatch prizes (such as a trophy, certificate or voucher) craft materials 	Working as a team to solve a quiz, as this is a collaborative investigation.		<ul style="list-style-type: none"> Number and place value Patterns and algebra Chance

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Investigation 4 Gone fishing	Where is everybody? Gone fishing! Students will read for important information, work backwards and practise mental computation strategies to evenly distribute a catch of fish between friends. This Investigation can also be used to raise student's awareness of sustaining healthy waterways, fish habitats and the environmental impact of fishing.	3 weeks	3 students	<ul style="list-style-type: none"> internet access Data page 1 – <i>Fisherman's guide</i> Tear-out 6 – <i>The catch</i> BLMs 4.1–4.3 – <i>Fish cards</i> paper, calculators, pencils and ruler magnets string and paperclips sticks, lengths of dowel or rulers 	Learning about the environment and the different risks we face (e.g. environmental impacts of fishing). Links in well with days of note such as, World Environment Day etc.		<ul style="list-style-type: none"> Number and place value Patterns and algebra Using units of measurement
Investigation 5 Once upon a castle	This hands-on Investigation allows students to explore and apply their knowledge of 2D shapes and 3D objects as they work in groups to design and construct a model castle. Communication skills are practised as students work cooperatively and interact effectively in order to complete their project.	3 weeks	individuals, pairs or small groups	<ul style="list-style-type: none"> internet access Tear-out 7 – <i>Castle diagram</i> BLMs 5.1–5.7 – <i>Castle nets</i> (multiple copies to card) BLM 5.8 – <i>Tally table</i> craft materials – popsticks, straws, string, matchsticks, coloured card and paper, sticky tape, scissors, glue Everyday 3D objects, e.g. party hats, small sultana box, cereal box, cardboard tube 	Any big construction works going on around the area. Could also link to learning about fairytales that feature castles.	History, The Arts, Technologies	<ul style="list-style-type: none"> Shape Location and transformation Data representation and interpretation
Investigation 6 Treasure trove	Students take on the role of a game designer as they work in teams to complete and test a pirate board game. In this game of chance, students roll the dice and use map references to move about the game board. Addition and subtraction concepts are practised as they play the game and keep a tally of their winnings.	3 weeks	2 or 3 students	<ul style="list-style-type: none"> internet access Tear-out 8 – <i>Game grid</i> Tear-out 9 – <i>Board game tokens</i> BLM 6.1 – <i>Chance cards</i> BLM 6.2 – <i>Dice nets</i> play money calculators snap lock bags counters 	Learning about how different board games work and how to play them.	Geography	<ul style="list-style-type: none"> Number and place value Money and financial mathematics Patterns and algebra Location and transformation

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Investigation 7 Up, up and away	Why not have paper planes flying around the classroom? Your students won't even realise they are learning about measurement, data collecting and recording, as they will be too busy having fun! Include the friendly element of competition and social interaction and you will have them hooked and flying high in no time.	3 weeks	individuals and pairs	<ul style="list-style-type: none"> internet access Data page 2 – <i>Paper dart</i> Data page 3 – <i>Paper glider</i> BLM 7.1 – <i>Area of wings</i> BLM 7.2 – <i>Flight distances table</i> BLM 7.3 – <i>Column graph – distance travelled</i> A4 paper trundle wheel, tape measures, metre rulers craft materials – scissors, stapler, paper clips, Blu-tack 	Any sporting competition as it feeds into the competitive aspect of a paper planes challenge.	Science	<ul style="list-style-type: none"> Using units of measurement Data representation and interpretation
Investigation 8 Pizza party	This Investigation immerses students in the familiar and fun context of ordering pizzas. Fractions, division and collecting and representing data are the focus as students explore, identify and practice sharing of whole parts and collections.	3 weeks	4 or 5 students	<ul style="list-style-type: none"> internet access Data page 4 – <i>Pizza Pantry</i> Tear-out 10 – <i>Favourite pizza</i> Tear-out 11 – <i>Pizza planner</i> craft materials – coloured pencils, scissors, glue 	Goes hand in hand with learning about what comes from different cultures (e.g. Italian). Also great for class/school celebrations (some schools reward students with pizza at the end of each semester or at the end of the year.	Science	<ul style="list-style-type: none"> Number and place value Fractions and decimals Data representation and interpretation
Investigation 9 Waterwise me	This Investigation takes students from the classroom to their home, as they work with family members to collect and record data on shower water usage. Students will perform calculations using litres and the four operations to explore information, analyse, hypothesise and think about how their household can more efficiently use water.	3 weeks	individuals and small groups	<ul style="list-style-type: none"> calculators 10 litre buckets 1 litre measuring jugs 	Learning about the environment and the different risks we face (e.g. excessive water usage). Ties in with days of note such as World Water Day or World Environment Day.	Geography	<ul style="list-style-type: none"> Number and place value Fractions and decimals Using units of measurement Data representation and interpretation

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Investigation 10 The big squeeze	In this Investigation, students will discover whether it is more economical to squeeze or buy orange juice. Understanding of multiplication, division, kilograms, litres and money are developed as students roll up their sleeves to organise a morning tea with fresh orange juice on the menu.	3 weeks	pairs, small groups and whole class	<ul style="list-style-type: none"> internet access Tear-out 12 – <i>The big squeeze planner</i> grocery catalogues balance scales calculators 1 kg masses Litre jugs, empty juice containers, buckets with litre measurements, breadboards, citrus juicers oranges plastic cups 	An excursion to a local markets that may sell oranges or other elements for the morning tea. Also a good opportunity to learn about healthy eating.	Science	<ul style="list-style-type: none"> Number and place value Money and financial mathematics Using units of measurement Data representation and interpretation
Investigation 11 Dog tales	This Investigation reflects a real-life scenario where pocket money is earned in exchange for services in the community. Students will discover that being responsible for the neighbour's pets and garden is more than they bargained for. Number and measurement concepts are applied as they identify relevant information, represent data and use a range of strategies to solve a number of everyday problems.	3 weeks	individuals	<ul style="list-style-type: none"> internet access BLM 11.1 – <i>Dog food visual calculator</i> 2 litre ice-cream containers and watering can highlighter pens 	Learning about how to manage pocket money, and the responsibilities that come with it.	HPE, Financial Literacy	<ul style="list-style-type: none"> Number and place value Fractions and decimals Using units of measurement
Investigation 12 Paint it!	Working to a budget and charging by the hour, this Investigation introduces students to early lessons in finding important information, forward planning and earning wages. Numerous Number and Algebra Topics are practised and revised as students work step-by-step to find out how to paint a fence within a given budget.	3 weeks	individuals or pairs	<ul style="list-style-type: none"> internet access BLM 12.1 – <i>Australian notes</i> highlighter pens 	Learning about how budgets work for different local projects e.g. the local park, shopping centre or perhaps the class budget for resources.	Financial Literacy	<ul style="list-style-type: none"> Number and place value Money and financial mathematics Patterns and algebra Using units of measurement