

Picking the Investigations you want to conduct in your class is easy with the *iMaths 1 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
<b>Investigation 1</b> <b>All about birthdays</b>	This Investigation is an ideal way to start the year when students get to know each other. Birthdays provide the context as students conduct surveys, collect data and explore calendars, compiling a class calendar to keep track of up-and-coming birthdays.	3 weeks	individuals or small groups	<ul style="list-style-type: none"> <li>internet access</li> <li><b>BLMs 1.1–1.3</b></li> <li>coloured pencils</li> <li>glue</li> <li>general paper and chart paper</li> <li>variety of calendars</li> <li>gift box containing birthday party related items</li> </ul>	The start of the year to help students get to know each other and their birthdays. Also ideal for discussing upcoming school events and setting timeframes for student goals.	Science, History	<ul style="list-style-type: none"> <li>Number and place value</li> <li>Using units of measurement</li> <li>Chance</li> <li>Data representation and interpretation</li> </ul>
<b>Investigation 2</b> <b>Let's Roll</b>	Dice combinations are the focus of this Investigation as students roll dice, record addition facts and explore all possible combinations and their totals. Partitioning of numbers to 12 is practised as students solve problems. The foundational skill of subitising is further consolidated through manipulating and playing with dice, and becoming familiar with dot patterns.	2 weeks	individuals, pairs or small groups	<ul style="list-style-type: none"> <li><b>Tear-out 2.1</b></li> <li><b>BLM 2.1</b> – <i>Shark addition jigsaw</i></li> <li>board games using dice</li> <li>variety of dice</li> <li>concrete materials – blocks, counters, unifix cubes</li> <li>snap lock bags or envelopes</li> <li>scissors</li> <li>coloured pencils</li> </ul>	Learning about how different board games work and how to play them.	The Arts	<ul style="list-style-type: none"> <li>Number and place value</li> </ul>
<b>Investigation 3</b> <b>Biggest drink</b>	In this Investigation, students will explore the very real and current issue of water conservation. They will be empowered and made aware that we are all responsible and accountable for our water use, and that we can make a positive difference to our world. Working collaboratively, students will estimate, measure, record, compare and order capacity of containers using non-standard units. Students will test and observe, then infer and justify what type of container is best to water the garden.	2 weeks	individuals, pairs or small groups	<ul style="list-style-type: none"> <li><b>Tear-out 3.1</b> – <i>Container table</i></li> <li>internet access</li> <li>variety of containers (labelled) – large and small buckets, watering cans of different shapes and sizes, yoghurt/ice-cream containers, butter containers, empty juice bottles, milk bottles/cartons, soft drink bottles, pots and pans, baking trays and bowls</li> <li>funnel</li> <li>masking tape or sticky labels</li> <li>plastic cups</li> <li>coloured pencils</li> </ul>	Learning about the environment and the different risks we face (e.g. excessive water usage). Links in well with days of note such as World Water Day, World Environment Day etc.	Science, Geography	<ul style="list-style-type: none"> <li>Using units of measurement</li> <li>Data representation and interpretation</li> </ul>

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<b>Investigation 4</b> Number fact blast off	Explore the wonders of space through this Investigation, which offers opportunities to integrate with science and the arts as students work cooperatively to sort and classify, match and calculate number facts to 20.	3 weeks	individuals, pairs or small groups	<ul style="list-style-type: none"> <li>• <b>BLMs 4.1–4.15</b></li> <li>• internet access</li> <li>• books about space</li> <li>• craft materials</li> <li>• number line strip</li> <li>• ten frames</li> <li>• Unifix cubes and other concrete materials</li> </ul>	Learning about space e.g. planets, moons.	Science, The Arts	<ul style="list-style-type: none"> <li>• Number and place value</li> </ul>
<b>Investigation 5</b> Ramp champ	Length and measurement using informal units are the key themes in this scientific investigation, which looks at ways of making toy cars move faster and therefore travel further when placed on a ramp. This process will include trial and error and manipulating variables that affect the distance the car will travel, such as the inclination of the ramp, mass of the car, and type and size of wheels.	3 weeks	small groups	<ul style="list-style-type: none"> <li>• <b>BLMs 5.1–5.2</b> – <i>Car distance tables</i></li> <li>• internet access</li> <li>• coins or washers</li> <li>• toy cars</li> <li>• materials to make car ramps</li> <li>• craft materials</li> </ul>	Learning about how cars and other vehicles are able to move.	Science	<ul style="list-style-type: none"> <li>• Number and place value</li> <li>• Using units of measurement</li> </ul>
<b>Investigation 6</b> Hungry spiders	Students immerse themselves in an insect's world as they explore the key concepts of addition and subtraction, using information from the food diaries of Sammy and Susy, the very hungry spiders. This Investigation also provides opportunities for students to represent and interpret data through a variety of individual and collaborative experiences.	3 weeks	individuals, pairs or whole class	<ul style="list-style-type: none"> <li>• <b>Tear-outs 6.1–6.3</b></li> <li>• <b>BLMs 6.1–6.4</b></li> <li>• number line strip</li> <li>• coloured counters</li> <li>• blocks</li> <li>• scissors</li> <li>• plastic spider</li> <li>• coloured pencils</li> </ul>	Learning about the anatomy of animals (in this case, the spider).	Science	<ul style="list-style-type: none"> <li>• Number and place value</li> <li>• Using units of measurement</li> <li>• Data representation and interpretation</li> </ul>
<b>Investigation 7</b> Treasure hunt	In this Investigation students embark on a treasure hunt as they apply their knowledge of number patterns with two-digit numbers, addition and subtraction, to reveal the mystery treasure. Students then create their own number pattern for their classmates to decode.	3 weeks	individuals	<ul style="list-style-type: none"> <li>• <b>Tear-outs 7.1–7.3</b></li> <li>• <b>BLMs 7.1–7.2</b></li> <li>• craft materials – glue, scissors, coloured pencils</li> <li>• number line strip</li> <li>• hundred board</li> </ul>	Building teamwork between students as they try to find the hidden treasure.		<ul style="list-style-type: none"> <li>• Number and place value</li> <li>• Patterns and algebra</li> </ul>

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<b>Investigation 8</b> Message in a bottle	Everyone loves a mystery. The initial stimulus for this fun Investigation is a message in a bottle, while codes and secret puzzles provide the context. Students are required to solve addition and subtraction number stories to decode the secret message. Then, they will formulate their own secret code. Now, let's get cracking.	3 weeks	individuals or groups	<ul style="list-style-type: none"> <li>• <b>Tear-outs 8.1–8.3</b></li> <li>• internet access</li> <li>• kids' magazines and a variety of puzzle and maze books</li> <li>• craft materials – scissors, glue, pencils and crayons</li> <li>• concrete materials – counters, MABs, number line strips, ten frames</li> <li>• bottle to hold secret message (optional)</li> <li>• chart paper</li> </ul>	Building teamwork between students as they try to decode the hidden message.		<ul style="list-style-type: none"> <li>• Number and place value</li> </ul>
<b>Investigation 9</b> Fruit cup morning tea	Bring out the chef in students as they plan and prepare a morning tea for their buddies. Students experience maths in a real life context as they work together to prioritise tasks, calculate how much food is needed, create a shopping list and follow a recipe to make fruit cups for the morning tea. Students use the key concepts of addition, multiplication, division and fractions as they calculate the fruit needed to follow a specified recipe. Clock time to the hour and half hour is used as students plan and follow a timetable of what needs to be done.	3 weeks	individuals or small groups	<ul style="list-style-type: none"> <li>• <b>Tear-outs 9.1–9.3</b></li> <li>• cutting boards</li> <li>• plastic cups for fruit</li> <li>• plastic spoons and knives</li> <li>• pieces of fruit – apples, bananas, grapes, mandarins, strawberries, watermelon</li> <li>• craft materials – paper, card, scissors, coloured pens and pencils</li> <li>• chart paper for recipe (optional)</li> </ul>	Learning about clocks and how to plan in accordance with the time that you have allocated. Great for tying in with school morning tea events or Australia's Biggest Morning Tea etc.	HPE	<ul style="list-style-type: none"> <li>• Number and place value</li> <li>• Fractions and decimals</li> <li>• Using units of measurement</li> </ul>
<b>Investigation 10</b> It's my town	Would you live here? Students take on the role of a town planner as they design and construct the perfect town. Aspects of infrastructure and community needs are considered as they work in groups to plan, design and construct a 3D model. This hands-on Investigation allows students to explore and apply their knowledge of 2D shapes and 3D objects as they negotiate and complete the project.	3 weeks	pairs or small groups	<ul style="list-style-type: none"> <li>• internet access</li> <li>• <b>BLMs 10.1–10.2</b></li> <li>• a variety of small recycled boxes such as small grocery and toiletry packaging, e.g. toothpaste, band-aids, muesli bars, cereal boxes, cracker boxes, sultana packets, tape rolls, cardboard tubes</li> <li>• strong card for baseboards – cartons are ideal</li> <li>• craft materials – scissors, glue, tape</li> <li>• coloured card and paper</li> <li>• popsticks, matchsticks, cellophane, modelling clay and Blu-Tack</li> <li>• map of local community</li> <li>• digital camera (recommended)</li> </ul>	Any big construction works happening within the school or in the community.	English, Geography, Technologies	<ul style="list-style-type: none"> <li>• Shape</li> <li>• Location and transformation</li> </ul>

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<b>Investigation 11</b> How does your garden grow?	In this Investigation students explore and apply concepts of skip counting, measuring length, 2D shape and sharing equally while they plan a small vegetable garden. In groups, students design a full-size model vegetable garden and, if time and resources permit, choose the class favourite to create a real garden in the schoolyard.	3 weeks	small groups or whole class	<ul style="list-style-type: none"> <li>internet access</li> <li>gardening tools</li> <li>gloves</li> <li>seedlings</li> <li>paper</li> <li>counters</li> <li>metre rulers</li> <li>chalk, masking tape, string, scissors</li> <li>popsticks</li> </ul>	Any local ongoing agricultural projects or getting outdoors and working in the school's kitchen garden (note some schools have Stephanie Alexander kitchen gardens which they use to grow food for their tuck shop/canteen).	Science, Technologies	<ul style="list-style-type: none"> <li>Number and place value</li> <li>Using units of measurement</li> <li>Shape</li> </ul>
<b>Investigation 12</b> Go, go breakfast bar	Startling statistics reveal that about 25% of Australian school children are overweight or obese, so it is more important than ever to promote healthy eating habits. Setting up a class breakfast bar provides students with the context in which to consider and make informed decisions about healthy food choices, which can develop into lifelong habits. Students will apply their knowledge and understanding of currency and transactions involving addition and subtraction, problem solving and early multiplication to real-life situations.	3 weeks	pairs or small groups	<ul style="list-style-type: none"> <li><b>BLMs 12.1–12.4</b></li> <li>craft materials – felt pens, coloured pencils, glue, scissors</li> <li>paper and plastic cups, bowls or plates and cutlery</li> <li>empty food containers or packets (e.g. egg cartons, juice containers), large sturdy boxes</li> <li>calculator</li> <li>purse or wallet, play money, play cash register or money tray</li> <li>coloured card</li> <li>magazines, grocery catalogues</li> <li>white paper circles (side-plate size)</li> </ul>	Learning about healthy eating decisions and what makes a balanced diet.	HPE, Financial Literacy	<ul style="list-style-type: none"> <li>Number and place value</li> <li>Money and financial mathematics</li> </ul>