# Investigations Overview

Picking the Investigations you want to conduct in your class is easy with the *iMaths 3 Investigation Overview* document. Simply peruse the table below for a ‘snapshot’ of every Investigation in the year.

<table>
<thead>
<tr>
<th>Investigation</th>
<th>About the Investigation</th>
<th>Duration</th>
<th>Group size</th>
<th>Students will need</th>
<th>Ideal for …</th>
<th>Related learning area</th>
<th>ACARA Sub-strands</th>
</tr>
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<tbody>
<tr>
<td>Investigation 1</td>
<td>How do I measure up?</td>
<td>3 weeks</td>
<td>pairs</td>
<td>• internet access&lt;br&gt;• Tear-out 1 – My data&lt;br&gt;• coloured pencils&lt;br&gt;• calculator&lt;br&gt;• digital camera&lt;br&gt;• tape measure, ruler&lt;br&gt;• craft materials – string and rolls of paper, butcher’s paper, glue, scissors, sticky tape</td>
<td>Works well with a ‘getting to know you and your classmates’ unit towards the start of a school year.</td>
<td>English, Science, HPE</td>
<td>• Using units of measure&lt;br&gt;• Chance&lt;br&gt;• Data representation and interpretation</td>
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<td>Investigation 2</td>
<td>It’s on the cards</td>
<td>2 weeks</td>
<td>small groups</td>
<td>• internet access&lt;br&gt;• BLM 2.1 – Activity time sheet&lt;br&gt;• BLM 2.2 – Blank card shapes&lt;br&gt;• BLM 2.3 – Analogue clocks&lt;br&gt;• BLM 2.4 – Card box net&lt;br&gt;• card&lt;br&gt;• card games&lt;br&gt;• clocks&lt;br&gt;• scissors</td>
<td>Any local sporting games in which people must follow rules, have healthy competition etc.</td>
<td>Technologies</td>
<td>• Using units of measurement&lt;br&gt;• Shape</td>
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<td>Investigation 3</td>
<td>Kilogram quest</td>
<td>3 weeks</td>
<td>2 or 3 students</td>
<td>• internet access&lt;br&gt;• Tear-out 2 – Kilogram quest table&lt;br&gt;• calculator&lt;br&gt;• 12 counters per student&lt;br&gt;• gram and kilogram masses&lt;br&gt;• kitchen scales or other devices to measure mass</td>
<td>Learning about requirements for meeting a goal as it relates to construction parts needing to be a certain mass, length etc.</td>
<td>• Number and place value&lt;br&gt;• Using units of measurement</td>
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<td>Investigation 4</td>
<td>Slide show</td>
<td>3 weeks</td>
<td>2 to 3 students</td>
<td>• BLM 4.1 – Slide show storyboard&lt;br&gt;• internet access&lt;br&gt;• digital camera&lt;br&gt;• program to create a slide show</td>
<td>Learning how to use appropriate computer software to create a successful slideshow.</td>
<td>The Arts, Technologies</td>
<td>• Fractions and decimals</td>
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| Investigation 5        | Year 3 students enjoy the challenge of competing against older students or adults, particularly if they believe they have the ability to prove their skills are superior. This Investigation requires students to set maths tests for people in various age groups, then mark and record the results. The maths tests will focus on multiplication, providing very good motivation for students to master this concept. | 4 weeks  | pairs      | • BLM 5.1 – Group scores  
• internet access  
• paper  
• coloured pencils  
• scissors | Learning about competition relating to local sporting games etc. | Science                  | • Number and place value  
• Chance  
• Data representation and interpretation |
| Investigation 6        | In this Investigation, students will set up a class market stall, giving them the opportunity to practise money concepts, both as buyers and sellers. Many Year 3 students will have had some experience buying things, but very few will have had much selling experience. Setting reasonable prices, establishing attractive displays and giving the correct change are all sales skills that students will practise during the course of this Investigation. | 3 weeks  | 2 to 3 students | • BLM 6.1 – Buying record sheet  
• internet access  
• magazines, catalogues, shopping brochures  
• play money (Australian notes and coins)  
• money tray  
• products to sell | Local markets that involve the buying/selling dynamic or a school car boot sale. | Technologies, Financial Literacy | • Number and place value  
• Money and financial mathematics |
| Investigation 7        | This is a number-oriented Investigation, which gives students the opportunity to explore the use of numbers in our lives. They will also be able to see what 10, 100 and 1000 look like, in terms of words on a page. Estimation is an important mathematical skill, which students will practise in a realistic way as they work through the Investigation. | 4 weeks  | 1 or 2 students | • Tear-out 3 – Word grid  
• internet access  
• newspapers and magazines  
• highlighters | | | • Number and place value  
• Using units of measurement |
| Investigation 8        | In this Investigation, students will investigate numbers and patterns in art. They will enjoy using their imagination and creativity to explore shape and design. Students must investigate a way to fill in an art piece with patterns of symbols in order to create their own symmetrical art. | 2 weeks  | individuals | • internet access  
• BLMs 8.1–8.4 – Symmetry art  
• coloured paper  
• coloured pencils  
• crayons  
• paint | Links well with a school or community art event or perhaps a planned display of the art in the school foyer. | The Arts                  | • Number and place value  
• Patterns and algebra  
• Location and transformation |
| Investigation 9        | Planting and watching seeds grow is an enjoyable and fascinating activity for many Year 3 students. This Investigation adds a scientific perspective, by asking students to predict the effect that changing the growing conditions might have on whether or not plants flourish. Other skills taught and practised in the course of this Investigation include measurement, organising and recording data. | 4 weeks  | 2 to 3 students | • Tear-out 4 – Experiment plan  
• BLM 9.1 – Plant diary  
• internet access  
• metre ruler  
• small containers  
• seeds  
• potting mix  
• mask and gloves  
• watering containers and calibrated measuring jugs | Learning about seasons and where our food comes from. | Science                  | • Using units of measurement  
• Chance  
• Data representation and interpretation |
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<td>Investigation 10</td>
<td><strong>Top team</strong>&lt;br&gt;Exercise and daily fitness are an important part of school life. In this Investigation, students will create enjoyable team activities that improve athletic skills. Measuring, timing and scoring these activities allow students to make real use of the maths concepts they have learned. Writing the instructions for the activities provides a meaningful link between literacy and numeracy.</td>
<td>3 weeks</td>
<td>5 equal groups</td>
<td>• Tear-outs 5–6 – Top team rules&lt;br&gt;• BLM 10.1 – Top team scoring sheet&lt;br&gt;• internet access&lt;br&gt;• trundle wheel&lt;br&gt;• digital camera&lt;br&gt;• stop watch&lt;br&gt;• tape measure&lt;br&gt;• equipment – balls, skipping ropes, hoops</td>
<td>Learning about maintaining a healthy lifestyle. Also ties in with sporting events such as a school athletics carnival.</td>
<td>English</td>
<td>• Number and place value&lt;br&gt;• Using units of measurement</td>
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<td>Investigation 11</td>
<td><strong>Big spender</strong>&lt;br&gt;We all dream about having large sums of money to spend on our loved ones and ourselves. This Investigation gives students the chance to spend $1000 on gifts for their family and friends. By using backtracking and closely monitoring their funds, students will come up with a list of carefully selected presents within their budget of $1000.</td>
<td>4 weeks</td>
<td>individuals</td>
<td>• internet access&lt;br&gt;• Tear-out 7 – Big spender table&lt;br&gt;• magazines, catalogues, shopping brochures&lt;br&gt;• craft materials – coloured pencils, scissors, tape and glue</td>
<td>The end of the year in the lead up to Christmas.</td>
<td>Financial Literacy</td>
<td>• Number and place value&lt;br&gt;• Money and financial mathematics</td>
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<td>Investigation 12</td>
<td><strong>Follow Freddy</strong>&lt;br&gt;This Investigation asks students to write their own set of clues in order to work their way through a grid map. With a wild rainforest setting, students will be eager to design a challenge for Freddy the Tiger. Sequencing, spatial understanding and working on a grid are the key concepts developed through this Investigation.</td>
<td>3 weeks</td>
<td>individuals or pairs</td>
<td>• Tear-out 8 – Freddy’s adventure&lt;br&gt;• Tear-out 9 – Freddy’s new adventure&lt;br&gt;• BLM 12.1 – Symmetrical stars&lt;br&gt;• internet access&lt;br&gt;• craft materials&lt;br&gt;• markers and counters</td>
<td>Learning about mapping.</td>
<td>History, Geography</td>
<td>• Location and transformation&lt;br&gt;• Geometric reasoning</td>
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