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**ICT Capabilities**
**MATHS**

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| NSW Syllabus for the Australian Curriculum**Stage 3** | **Content Strand** | **ICT Strand** | **ICT Activities** |
| Interpret information from the internet, the media, the environment and other sources that use large numbers  | *Number and Algebra* [***Whole Numbers 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/671) | **Communicating****Investigating** |  |
| Explore square and triangular numbers using arrays, grid paper or digital technologies  | *Number and Algebra* [***Whole Numbers 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/672) | **Communicating****Investigating** |  |
| Select and apply efficient mental, written and calculator strategies to solve addition and subtraction word problems, including problems involving money | *Number and Algebra* [***Addition and Subtraction 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/673) | **Communicating****Investigating** |  |
| Record numerical data in a simple spreadsheet  | *Number and Algebra* [***Addition and Subtraction 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/673) | **Communicating** |  |
| Select and apply appropriate mental and written strategies, with and without the use of digital technologies, to solve unfamiliar problems  | *Number and Algebra* [***Addition and Subtraction 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/674) | **Investigating** |  |
| Use digital technologies to multiply numbers of up to four digits | *Number and Algebra* [***Multiplication and Division 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/685) | **Investigating** |  |
| Check answers to mental calculations using digital technologies  | *Number and Algebra* [***Multiplication and Division 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/685) | **Investigating** |  |
| Apply appropriate mental and written strategies, and digital technologies, to solve multiplication word problems | *Number and Algebra* [***Multiplication and Division 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/685) | **Communicating****Investigating** |  |
| Use digital technologies to divide whole numbers by one- and two-digit divisors | *Number and Algebra* [***Multiplication and Division 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/685) | **Communicating****Investigating** |  |
| Check answers to mental calculations using digital technologies  | *Number and Algebra* [***Multiplication and Division 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/685) | **Investigating** |  |
| Apply appropriate mental and written strategies, and digital technologies, to solve division word problems | *Number and Algebra* [***Multiplication and Division 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/685) | **Communicating****Investigating** |  |
| Use a table or similar organiser to record methods used to solve problems  | *Number and Algebra* [***Multiplication and Division 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/686) | **Communicating****Investigating** |  |
| Investigate whether different digital technologies apply the order of operations  | *Number and Algebra* [***Multiplication and Division 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/686) | **Investigating** |  |
| Calculate unit fractions of collections, with and without the use of digital technologies, eg calculate 1/5 of 30 | *Number and Algebra* [***Fractions and Decimals 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/678) | **Communicating****Investigating** |  |
| Calculate a simple fraction of a collection/quantity, with and without the use of digital technologies, eg calculate 2/5 of 30 | *Number and Algebra* [***Fractions and Decimals 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/678) | **Communicating****Investigating** |  |
| Add and subtract decimals with the same number of decimal places, with and without the use of digital technologies | *Number and Algebra* [***Fractions and Decimals 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/678) | **Communicating****Investigating** |  |
| Add and subtract decimals with a different number of decimal places, with and without the use of digital technologies | *Number and Algebra* [***Fractions and Decimals 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/678) | **Communicating****Investigating** |  |
| Multiply decimals of up to three decimal places by whole numbers of up to two digits, with and without the use of digital technologies, eg 'I measured three desks. Each desk was 1.25 m in length, so the total length is 3 × 1.25 = 3.75 m' | *Number and Algebra* [***Fractions and Decimals 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/678) | **Communicating****Investigating** |  |
| Calculate common percentages (10%, 25%, 50%) of quantities, with and without the use of digital technologies | *Number and Algebra* [***Fractions and Decimals 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/678) | **Communicating****Investigating** |  |
| Calculate the sale price of an item after a discount of 10%, 25% and 50%, with and without the use of digital technologies, recording the strategy and result | *Number and Algebra* [***Fractions and Decimals 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/678) | **Communicating****Investigating** |  |
| Create, with materials or digital technologies, a variety of patterns using whole numbers, fractions or decimals, eg 14, 24, 34, 44, 54, 64, … or 2.2, 2.0, 1.8, 1.6, … | *Number and Algebra* [***Patterns & Algebra 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/679) | **Communicating****Investigating** |  |
| Continue and create number patterns, with and without the use of digital technologies, using whole numbers, fractions and decimals, eg 14, 18, 116, … or 1.25, 2.5, 5, … | *Number and Algebra* [***Patterns & Algebra 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/680) | **Communicating****Investigating** |  |
| Use bus, train, ferry and airline timetables, including those accessed on the internet, to prepare simple travel itineraries | *Measurement and Geometry* [***Time 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/722) | **Communicating****Investigating****Creating** |  |
| Use computer drawing tools to construct a shape from a description of its side and angle properties  | *Measurement and Geometry* [***Two-Dimensional Space 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/725) | **Communicating****Investigating** |  |
| Rotate a graphic or object through a specified angle about a particular point, including by using the rotate function in a computer drawing program  | *Measurement and Geometry*[***Two-Dimensional Space 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/725) | **Communicating****Investigating****Creating** |  |
| Construct designs with rotational symmetry, with and without the use of digital technologies | *Measurement and Geometry*[***Two-Dimensional Space 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/725) | **Communicating****Investigating****Creating** |  |
| Make enlargements of two-dimensional shapes, pictures and maps, with and without the use of digital technologies | *Measurement and Geometry* [***Two-Dimensional Space 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/725) | **Communicating****Investigating****Creating** |  |
| Investigate and use functions of digital technologies that allow shapes and images to be enlarged without losing the relative proportions of the image  | *Measurement and Geometry*[***Two-Dimensional Space 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/725) | **Investigating** |  |
| Construct patterns of two-dimensional shapes that involve translations, reflections and rotations using computer software | *Measurement and Geometry* [***Two-Dimensional Space 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/726) | **Communicating****Investigating****Creating** |  |
| Use a street directory or online map to find the route to a given location  | *Measurement and Geometry*[***Position***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/729) | **Communicating****Investigating** |  |
| Tabulate collected data, including numerical data, with and without the use of digital technologies such as spreadsheets | *Statistics and Probability* [***Data 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/643) | **Communicating****Investigating****Creating** |  |
| Construct dot plots for numerical data, eg the number of siblings of each student in the class | *Statistics and Probability* [***Data 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/643) | **Communicating****Investigating****Creating** |  |
| Interpret data representations found in digital media and in factual texts | *Statistics and Probability*[***Data 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/644) | **Communicating****Investigating** |  |
| Interpret tables and graphs from the media and online sources, eg data about different sports teams  | *Statistics and Probability* [***Data 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/644) | **Communicating****Investigating** |  |
| Critically evaluate data representations found in digital media and related claims | *Statistics and Probability*[***Data 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/644) | **Ethics/Cybersafety** |  |
| Identify misleading representations of data in the media, eg broken axes, graphics that are not drawn to scale  | *Statistics and Probability* [***Data 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/644) | **Investigating** |  |
| Determine the likelihood of winning simple games by considering the number of possible outcomes, eg in a 'rock-paper-scissors' game  | *Statistics and Probability* [***Chance 1***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/645) | **Investigating** |  |
| Assign expected probabilities to outcomes in chance experiments with random generators, including digital simulators, and compare the expected probabilities with the observed probabilities after both small and large numbers of trials | *Statistics and Probability* [***Chance 2***](http://syllabus.bos.nsw.edu.au/mathematics/mathematics-k10/content/646) | **Communicating****Investigating** |  |