If you have suggested additions, or you find that some links are not working, please email [resourcelist@fess.ie](mailto:resourcelist@fess.ie)

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| **Minor Award Name** | **Mathematics** |
| **Minor Award Code** | 3N0929 |
| **Level** | 3 |

**Some suggested resources to support delivery:**

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| --- | --- | --- | --- | --- |
| **Theme/Topic** | **Type** | **Relevance** | **Author/Source** | **Web Link** |
| **Real life maths** | Website | A website with videos, guides, posters and resources to assist people to see the maths they do every day. It helps make maths meaningful and relevant to the learner. | Maths Eyes | <http://www.haveyougotmathseyes.com/> |
| **Integers** | Teaching and learning plan | A lesson plan for teaching integers. It including addition, subtraction, multiplication and division of integers. Student activity sheets are included. | Project Maths Development Team | <http://www.projectmaths.ie/documents/T&L/Integers.pdf?strand> |
| **Fractions, ratios, decimals and percentages** | YouTube video  Worksheet | A visual representation of fractions, decimals and percentages, including real life examples. The video demonstrates equivalence between them by conversion.  Worksheet to practice conversion. | abc teach  Super Teacher Worksheets | <https://www.youtube.com/watch?v=Kr52yfR3wGA>  <https://www.superteacherworksheets.com/percents/converting-fractions-decimals-percents_EASIE.pdf> |
| **Ratio and Proportion** | PDF handout  Worksheet | A visual guide for ratio and proportion, including worked examples  Ratio worksheet including a good mix of questions. One question involves working backwards from a paint mixing chart to discover what colour paint you will end up with. | John Mensah  Dave Hagon | <http://www.skillsworkshop.org/resources/ratio-and-ratio-sharing>  <http://www.skillsworkshop.org/resources/mixing-paint> |
| **Rounding** | Interactive PowerPoint presentation | Rounding presentation that uses number lines and animation to demonstrate rounding whole numbers, decimals and using significant figures. This is useful as a class activity with the tutor facilitating discussion. | Jane Marsh | <http://www.skillsworkshop.org/resources/rounding> |
| **Shape and space** | Videos and interactive activities | Useful for classifying shapes based on their number of sides, number of corners, side lengths and angle types. | Khan Academy | <https://www.khanacademy.org/math/early-math/cc-early-math-geometry-topic/cc-early-math-properties-shapes/v/sides-corners> |
| **Area of square an rectangle** | Interactive video | Use to discover the area formula for squares and rectangles. | Intel Education | <http://inteleducationresources.intel.co.uk/content/primary/maths/area/index.html> |
| **Area of circle and triangle** | Handout and worksheet | The handout breaks down the use of each formula very clearly. It gives sample questions for the learner to practice. | Ian Saunders | <http://www.skillsworkshop.org/resources/area-circles-and-triangles> |
| **Perimeter and area (squares, rectangles, circles)** | Worksheet | A worksheet based on calculating the area of rooms, and hence the price of carpeting them. Also, calculating the perimeter of a garden and the cost of fencing it. The second page may be left out if required for differentiation purposes. | Chris Cook | <http://www.skillsworkshop.org/resources/perimeter-and-area-exercise> |
| **Volume of cylinder and cone** | YouTube Videos | Video demonstrating calculating the volume of a cone using formula.  Video demonstrating calculating the volume of a cylinder using formula. | VividMaths.com  VividMaths.com | <https://www.youtube.com/watch?v=dtgHBVRHI1E>  <https://www.youtube.com/watch?v=y3TjAHV7esk> |
| **Length, capacity, weight** | Practical activity plan | A practical lesson, which allows learners to demonstrate measurement skills including length, width, weight and capacity. | Tim Goldstein | <http://www.skillsworkshop.org/resources/practical-sessions-weights-lengths-areas-capacities> |
| **Introduction to algebra** | Webpage | Explains the use of algebra very well using various methods. Includes student activities. | Mathisfun.com | <https://www.mathsisfun.com/algebra/introduction.html> |
| **Simplify algebraic expressions of one or two variables** | Worksheet generator | Creates various worksheets for simplifying algebraic expressions of one or two variables. | Math-Aids.Com | <http://www.math-aids.com/Algebra/Pre-Algebra/Expressions/> |
| **Solve algebraic equations of one variable** | Interactive practice questions  Handout | A range of questions to practice solving algebraic equations. Includes explanations when a question is answered incorrectly.  A handout explaining how to solve algebraic equations of one variable. Practical examples included. | IXL learning  Maths.mq.edu.au | <https://www.ixl.com/math/algebra-2/solve-linear-equations>  <https://maths.mq.edu.au/numeracy/web_mums/module2/Worksheet22/module2.pdf> |
| **Data collection methods** | Webpage | An explanation of various data collection methods. Gives some questions for the students to answer. | BBC | <http://www.bbc.co.uk/schools/gcsebitesize/maths/statistics/questionnairesrev1.shtml> |
| **Collecting and representing data** | Project | A project designed to allow learners to demonstrate collection and representation of data. | Louisa Baddiley | <http://www.skillsworkshop.org/resources/questionnaire-project> |
| **Pie charts** | PowerPoint presentation | A visual guide to interpreting and creating pie charts. | Dave Clapham | <http://www.skillsworkshop.org/resources/pie-charts> |
| **Displaying data** | PDF workbook | Multiple choice questions on displaying data. It covers tables, bar charts, line graphs, pie charts, misleading charts, presenting data and tallies. Ideal for assessment or revision. | Victoria Whitham | <http://www.skillsworkshop.org/resources/functional-maths-l2-graphs-charts-tables-multiple-choice-worksheet> |
| Exploring Project Maths – Books 1, 2 & 3 | Books | All areas of the course are included in these books. They contain many worked examples, classroom activities, practice questions and real life problems.  Only some sections of the book are relevant to this programme, however the book has relevance across other Mathematics programme modules. | Author: Seamus McCabe  Published by: CjFallon | <http://www.cjfallon.ie/books/mathematics/> |
| New Concise Project Maths – Books 1 & 2 | Books | All areas of the course are included in these books. They contain many worked examples, classroom activities, practice questions and real life problems.  Only some sections of the book are relevant to this programme, however the book has relevance across other Mathematics programme modules. | Authors: George Humphrey, Brendan Guildea, Geoffrey Reeves and Louise Boylan  Published by: Gill & Macmillan | <http://www.gilleducation.ie/secondary-maths/secondary-maths/new-concise-project-maths-1->  <http://www.gilleducation.ie/secondary-maths/secondary-maths/new-concise-project-maths-2> |
| IXL | Website or App for iPad or tablet | Interactive skills and problem type questions for all parts of the programme. Gives students an explanation of the answer when they answer incorrectly. Questions are arranged into different classes from Junior Infants up to Leaving Cert – this allows for differentiation. | IXL learning | <https://ie.ixl.com/math/> |
| Maths Everywhere | Website or App for iPad or tablet | Covers most areas of the course – number, calculations, fractions, decimals, percentages, measurement and shape. Consists of a range of interactive practice questions and very well explained videos of the different topics. It is split into three levels – this allows for differentiation. | Bolton College and Modern-English Digital in partnership with NIACE | <http://www.mathseverywhere.org.uk/> |

**Useful Organisations:**

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| **Name** | **Contact Information** |
| National Council for Curriculum and Assessment (NCCA) | [www.ncca.ie](http://www.ncca.ie) |
| Quality and Qualifications Ireland (QQI) | <http://www.qqi.ie/> |
| Further Education Support Service (FESS) | [www.fess.ie](http://www.fess.ie) |
| National Adult Literacy Agency (NALA) | <https://www.nala.ie/> |

**Other Resources:**

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| --- | --- |
| **MOOCs (Massive Online Open Courses)** | |
| Online courses delivered mainly by Universities and Colleges worldwide.  Useful to search regularly for new courses and new start dates. Most courses are free. Charge often applies if assessment and certification is required.  Provide excellent CPD for individuals or resources that can support teaching and learning. | What is a MOOC?  <https://www.youtube.com/watch?v=eW3gMGqcZQc>  Providers of MOOCs  e.g.  <https://www.mooc-list.com/>  <https://www.coursera.org/>  <http://www.extension.harvard.edu/open-learning-initiative>  <https://www.uclaextension.edu/pages/search.aspx?c=free+courses>  <http://oyc.yale.edu/> |