

Third Level Time Line

- Significant aspects.

Each topic has a short assessment in the Smart board folder.

Unit 1

1* BODMAS MTH 403b

- I can solve number problems using a variety of methods, communicating my methods.
- I can continue to recall and use times table and number facts.
- I can substitute numbers into an expression and use the rules of BOMDAS to evaluate expressions.
- I can read the notation for squaring numbers and raising numbers to the power of n .
- I can square simple whole numbers and raise simple whole numbers to whole number powers mentally.

2 Symmetry MTH 319a, MTH419a

- I can complete a symmetrical pattern/picture, given the line(s) of symmetry.
- Complete/create Rotational Symmetry drawings
Order of rotational symmetry

3* Types of Numbers MTH 305a MTH 305b

- I can find a common multiple of 2 or more numbers and LCM
 - I can find all common factors of a pair (or group) of numbers and HCF
 - I can investigate whether a number is prime or not.
- Find prime factors, use a factor tree.

4 Negative Numbers MNU 304a

- I can solve number problems using a variety of methods, communicating my methods.
- I can continue to recall and use times table and number facts.
- I can add, subtract, multiply and divide positive and negative numbers and in context.

5 Decimals MNU 301a MNU 303a MNU 303b MNU 307a

- I can solve number problems using a variety of methods, communicating my methods.
 - I can continue to recall and use times table and number facts.
- Add, subtract, multiply and divide decimals
Multiply and divide by 10 100 1000...- level2
Multiply and divide by the multiples of 10 100 1000....
Rounding to 1 & 2 decimal places

6 Estimation workshop

Estimating weights, heights, lengths, time.

The degree of accuracy for rounding is determined by the context of the problem

7 Finance A

Learning financial vocabulary. Match cards.

8 Angles

MTH 317a

- Start topic with a recap of Level 2 angles work.
- I can calculate complimentary and supplementary angles.
- I can find missing angles in a variety of triangles and polygons- exterior and interior angles
- I can find missing angles in diagrams of intersecting and parallel lines.

Measure angles.

Name angles with three letters.

Angles in a clock face.

9 Statistics

MNU 320a MTH 320b MTH 420b

MTH 321a MTH 421a MNU 322a

- I can interpret data to help me draw conclusions.
- I can decide whether data is robust, vague or misleading and justify my decision.
- I can use a sound method to sample data
- I can select the most appropriate way to display the data and can justify my choice
- I can calculate the probability of an event happening as a fraction.

Mean median mode and range

Identify discrete data sets.

Identify continuous data sets

Draw and interpret pie charts, scatter graphs, line graphs and stem & leaf.

Construct frequency tables with class intervals

Pupils to do car survey on Bridge Road/Lanark Road West

Use technology to convert data into a meaningful representation

Complete graphs on excel.

Hypotheses on what findings will be and conclusions afterwards.

Summative Assessment on First seven topics.

Two assessments, Upper for future N5 and Lower for future N4/N3.

The Lower one has two parts 1st write on, 2nd in test jotter.

Unit 2

10* Fractions to decimals MNU 307a

- I can convert fractions/improper fractions to decimals without remainders.
- I can perform a division without a calculator giving my answer to 2d.p. etc.

11 Finance B Budgeting MNU 3-09a,3-09b

- I can use a budget to manage money and plan for future expenses.

What is essential to spend money on what is not?

Balancing Jenny's budget in groups.

12 * Algebra MTH 314a MTH 414a MTH 414b

- I can simplify expressions.
- I can substitute numbers into an expression and use the rules of BOMDAS to evaluate expressions.
- I can remove brackets from an expression.
[eg: $3(a + b)$, $2 + 3(a + b)$, $3(a + b) - 2(c - d)$]
- I can factorise using common factor.
- I can interpret problems into algebraic expressions.

13 Coordinates MTH 318a MTH 418a

Complete Harold and/or Sonic

- I can complete a shape by plotting the missing vertex and stating its coordinates.
- Plotting and reading coordinates in all four quadrants.

14 Area MUN311a MNU 311

- I can use a formula to find the area or volume of a shape to solve a problem.
- I can find the areas of compound 2D shapes using areas of simple 2D shapes.

Quadrilaterals: Square, rectangle, rhombus, kite, trapezium, Parallelogram.

Triangles.

Correct units

15 Using Scale factors MTH4.18B MNU 4.07A

- I can use the scale factor to enlarge/reduce a shape/picture.

Use fractional scale factors to enlarge/reduce a shape.

Scale with maps and plans.

16 Percentages MNU 307a MNU 303a

- I can express one quantity as a percentage of another.
- I can work with equivalent fractions, decimals and percentages to solve problems

Non calculator percentages 5%, 10%, 25%, 33 $\frac{1}{3}$ %, 50%, 66 $\frac{2}{3}$ % 75% and multiples of 10%.

Calculator percentages in context.

17 Volume

MNU 311a MNU 3111b

Cube, cuboid, triangular prism.

- I can convert between l, ml and cm³ when working with volume.
- I can use a formula to find the area or volume of a shape to solve a problem.
- I can find the volume of a compound 3D object using volumes of simple 3D objects

Working backwards to find one dimension.

Correct units

18 Finance C

Comparing Costs

- I can consider all factors when comparing contracts and services and explain which product or service offers best value to me.

Best buy.

Reading and understanding shop labels.

19 * Fractions

MTH 307b MTH307c MTH407b

- I can work with equivalent fractions, decimals and percentages to solve problems- find a fraction of a quantity.
- I can convert between whole numbers, mixed numbers and fractions as appropriate.
- I can add, subtract, multiply and divide fractions

Simplify fractions

20 Construction

MTH316a

Be able to draw and the properties of:

Quadrilaterals: Square, rectangle, rhombus, kite, trapezium, Parallelogram.

Triangles: isosceles, equilateral and scalene.

With Protractor, Compass and ruler.

Test with "wanted" posters

21 Maths in the Work Place

MTH 312a

Talk

Summative Assessment on eight topics.

Two assessments, Upper for future N5 and Lower for future N4/N3.

The Lower one has two parts 1st write on, 2nd in test jotter.

S3 or S4 only. All three National 3 Lifeskills Assessments could now be assessed after covering Basic payslip, Simple Number Patterns and Maps & Scale.

Unit 3

22* Equations

MTH 315a MTH415a

- I can construct an equation to express a problem I want to solve.
- I can use a suitable method to solve a simple equation.

Linear: unknowns on both sides, brackets.

23* Patterns & Formulae

MTH313a MTH315a MTH315b

- I can write the rule for a given linear sequence

Use substitution and equations to find missing terms.

24 Ratio and Proportion

MNU308a

- I can solve direct proportion problems.

Inverse problems

Simplify ratios.

Equivalent ratios

Ratio calculations to share quantities.

25 Finance C

Financial Inclusion

Financial inclusion.

Looking at those who do not have a bank account or access to financial knowledge.

Benefits of having a bank account.

Cost of not having access to a credit card or internet shopping.

26* Pythagoras

MTH306a MTH 406a

MTH416a MNU301a

- I can read the notation for squaring numbers and raising numbers to the power of n.
- I can square simple whole numbers and raise simple whole numbers to whole number powers mentally - know square numbers up to 20^2 .

Find the hypotenuse and shorter side.

Applications

Rounding answers appropriately.

Distance between two points

27 DST

MNU 310a MNU 410b

- I can calculate distance, speed and time for simple time intervals in a variety of situations.

Decimal time minimum of $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ hour.

Interpret and draw Distance / Time graphs

28* Circle**MNU 301a MNU311a MNU311b
MNU4.16b**

Circumference and area with correct units

Given the circumference of a circle, work backwards to find the length of its diameter and radius.

Area and Perimeter of a fraction of a circle (Level 4 will cover arcs and sectors).

29 Finance E & F**MNU307a MNU309a
MNU309b MNU 303a**

Financial Products & Earnings

- I can consider all factors when comparing contracts and services and explain which product or service offers best value to me.

Hire purchase.

Foreign Currency.

Salaries and Overtime.

30 Scientific Notation**MTH 306a MTH406b**

Very big and very small numbers.

In context.

31* Bearings**MTH317b**

- I can use scales and bearings to create and interpret maps, plans and scale drawings of routes and journeys.

Summative Assessment on eight topics.

Two assessments, Upper for future N5 and Lower for future N4/N3.

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* Important topics for National 5 and Higher

- Significant aspects.