

CfE Course Outline Summary – S1 Block 1

Please note that Science teachers are covering the following Numeracy topics: **Whole Numbers and , Decimals** throughout session 2021-22.

Co-ordinates

Level 2: Coordinates in the 1st quadrant.

Level 3: Coordinates in all the 4 quadrants. Use of number line and naming of axis X & Y.

Level 4: Pythagoras but only as intro and basic examples.

Introduction of negative numbers through extension of the numberline.

Statistics – Graphs, Charts and Tables

Level 2: Introduction to statistics and basic terminology;

Reading and constructing Frequency Tables (emphasise and make reference to these being called tally charts at Primary), Bar and Line graphs;

Reading basic pie charts.

Level 3: Reading Pie Charts;

Graphs ICT work.

Enrichment Activity: Slave Trade Statistical Project

Length and Area

Level 2: Perimeter and area of basic 2D shapes, square, rectangle and compound shapes using formulae.

Units of measure - conversion mm-cm-m-km.

Include Grid method for long multiplication.

Level 3: Area of triangle using formulae.

Compound 2D shapes, rectangles and triangles only.

Level 4: Circumference and area of a circle.

Angles

Level 2: Types of angles, measuring and drawing angles with a protractor.

Level 3&4: Naming angles and sizes/angle properties/angles in a triangle/ extended angle vocabulary and understanding i.e. supplementary, corresponding, alternate etc.

Enrichment Activity: Please refer to GuwLL link on front of course outline.

CfE Maths Course Outline Summary – S1 Block 2

Integers

Level 2: Negative numbers – Extending number line visually, using temperature etc.

Level 3: Adding and subtracting with negatives using the number line.

Level 4: Multiplication and division with negatives using the number line.

Embed BIDMAS using integers (BIDMAS taught within Numeracy course)

Fractions

Level 2: The meaning of a fraction;

Linking common fractions with decimals and percentages;

Equivalent fractions;

Fractions of quantities;

Add and subtract common and simple fractions.

Level 3: Add and subtract fractions;

Convert between mixed numbers and top heavy fractions.

Level 4: Add, subtract and multiply fractions including mixed numbers;

Division method; use of reciprocal.

Percentages

Level 3: Conversion between fractions, decimals and percentages;

Percentage of amount calculations in context;

Appreciation and depreciation.

Level 4: Reverse percentages and compound interest.

Algebra – Simplifying and Substitution

Level 3: Simplifying and Evaluating expressions (Substitution).

Level 4: Multiplying-Out single brackets.

CfE Course Outline Summary – S1 Block 3

Algebra - Equations

Level 2: Use of equals, not equal, less than/greater than, =, <, >,
Cover Up Equations (Unknown values represented by symbol)

Level 3: Balance Method (Unknown values represented by letters)
Simple equations: terms on both sides; NO BRACKETS OR FRACTIONS.
Making equations up from diagrams.

Level 4: Basic Inequalities – symbols used (relate to integers).
Equations: terms on both sides; NO BRACKETS OR FRACTIONS.

Time

Level 2: Timetables – interpret and calculate from these.
Units of time – appropriate use – time period use in particular situations.
Journey time - Time/Speed/Distance – without using a formula – common sense examples.

Level 3: Units of time – appropriate use – no decimal time/whole hours.
Time/Speed/Distance – whole number calculations using a formula.
Practical Tasks – for example, F1(formula one) task.

Level 4: Time/Speed/Distance – decimal time calculations using a formula.
Time/Speed/Distance – Graphs.

Volume & Weight

Level 2: Conversion of the units of measure, investigation and estimation of weight.
Volumes of cubes, cuboids and compound shapes.

Level 3: Applying volume formulae to solve problems in context.

Level 4: Volume of a prism formula in context.

Symmetry

Level 2/3: Lines of Symmetry & Reflection.

Level 4: Rotational.

CfE Course Outline Summary – S2 Block 4

2021-22 only

For Session 2021-22, S2 classes need to cover topics that were missed during lockdown; These topics have been slotted into the “new” course. The assumption is that Algebra – Equations has been covered at the end of S1 2020-21.

Fractions

Recall work covered in Numeracy course, deepen knowledge of the connection between these types of numbers and ensure young people have a good understanding.

Link to non-calculator questions at National courses.

Algebra – Equations

Level 2: Use of equals, not equal, less than/greater than ie =, <, >

Cover Up Equations (Unknown values represented by symbol)

Level 3: Balance Method (Unknown values represented by letters);

Simple equations: terms on both sides;

Making equations up from diagrams.

Level 4: Basic Inequalities – symbols used (relate to integers);

Equations: terms on both sides; including brackets and fractions;

Make and solve equations in context.

Time

Level 2: Timetables – interpret and calculate from these.

Units of time – appropriate use – time period use in particular situations.

Journey time - Time/Speed/Distance – without using a formula – common sense examples.

Level 3: Units of time – appropriate use – no decimal time/whole hours.

Time/Speed/Distance – whole number calculations using a formula.

Practical Tasks – for example, F1(formula one) task.

Level 4: Time/Speed/Distance – decimal time calculations using a formula.

Time/Speed/Distance – Graphs.

Angles

Level 2: Types of angles, measuring and drawing angles with a protractor.

Level 3&4: Naming angles and sizes/angle properties/angles in a triangle/ extended angle vocabulary and understanding i.e. supplementary, corresponding, alternate etc.

CfE Course Outline Summary - S2 Block 5

2021-22 only

Quadrilaterals & 2D

Level 2: Revision of area of rectangle and triangle;
Properties of quadrilaterals;
Introduction of circle.

Level 3 & 4: Angle properties within quadrilaterals;
Areas of quadrilaterals;
Circumference and Area of a Circle.

Enrichment Activity: Drawing shapes with accuracy.

Ratio and Proportion

Level 3: Understanding ratio and Simplifying ratio;
Applying equivalent ratios;
Calculate unit rate, direct proportion in context and graphically.

Level 4: Share amount in a given ratio ;
Inverse proportion (graphically where appropriate).

Patterns, Sequences and Lines

Level 2: Extending number patterns, Explaining term to term rule.

Level 3: Using formula to complete tables.

Level 4: Linear patterns;
Equation of a line from context into its graph.

Enrichment Activity: *Special number patterns* i.e square, triangle, cubed, Pascal's triangle, Fibonacci

Bearings & Journeys

Level 2: Know Compass points, understanding of bearings, make and follow a routes involving N, S, E & W directions.

Level 3: Scale Drawings including bearings, Calculating 3 figure bearings.

Level 4: Calculating back bearings using angle rules.

CfE Course Outline Summary – S2 Block 6

2021-22 only

Scale

Level 2: Understand simple scales to interpret and draw simple drawings/models (eg 1cm= 5m).

Level 3: Interpret and draw scale drawings accurately (eg 1:30 000).

Scale Factor using simple enlargement and reduction.

Level 4: Scale Factor using a calculation.

Enrichment Activity – Drama CSI IDL: Apply understanding of scale when reducing a room plan using Microsoft Word

3D Work

Level 2: 3D Objects and their relationship to nets .

Level 3: Properties of 3D shapes.

Level 4: Surface Area.

Pythagoras

Level 3: Introduction and understanding of Pythagoras Theorem.

Level 4: Use Pythagoras theorem to find either the hypotenuse or another side.

Scientific Notation

Level 3: power notation and its advantages

the use of powers in context

mental strategies to evaluate powers

correct use of calculator functions when dealing with powers

Level 4: express a given number in scientific notation

Express a number given in scientific notation in “normal” form

Perform simple calculations on numbers in scientific notation (using a calculator).

The following should be taught fully in Term 1 of S3 as per our S3 Numeracy course outline:

Decimals and Percentages

Statistics

Level 2: Line graphs, bar graphs, **scatter graphs**, misleading graphs,

Level 3: Pie Charts including constructing;
Interpretation of dot plots, tables, spreadsheets;
Basic calculations of mean, median, mode and range.

Level 4: Scattergraphs, Stem and leaf

Probabilty

Level 2: Vocabulary of probability

Level 3: Simple probability, fractions and scale of 0 to 1, Order of probability

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