St Benedict's Catholic School
The Catholic Secondary School for West Suffolk

Ora et Labora

MATHS CURRICULUM GUIDE 2016

Year 8 Autumn

Add & subtract negative numbers & use them in context.

Identify prime numbers, square numbers & triangular numbers & generate simple sequences.

Understand the equivalence between fractions, decimals & % and use them appropriately in context. Find a value after a % increase/decrease.

Expand & simplify simple algebraic expressions. Substitute into simple formulae.

Solve angle problems in special quadrilaterals.

Construct triangles & other simple geometrical loci to solve problems.

Know & use the formulae to find areas of rectangles, triangles, special quadrilaterals & circles, and of compound shapes made up of these.

Convert between area & volume measures & use these to solve problems.

Year 8 Spring

Consolidate standard written methods for the 4 rules of arithmetic.

Use a calculator efficiently to solve numerical problems involving more than one step.

Check answers using estimates rounded appropriately.

Construct & solve linear equations.

Derive simple formulae from word problems, and change the subject of a formulae.

Understand the difference between parallel & perpendicular lines.

Transform 2-d shapes by simple combinations of rotations, reflections and translations, and describe them using correct terminology.

Enlarge 2-d shapes using a scale factor, and understand that the image is not congruent.

Plan how to collect data, design and use two-way tables for discrete data.

Construct pie charts, bar charts and frequency diagrams for discrete data, and simple scatter graphs and interpret them in context.

Year 8 Summer

Convert between metric units and read & interpret scales.

Make and justify estimates and approximations of calculations.

Generate coordinate pairs that satisfy a simple linear rule.

Set up equations and begin to use graphs to solve simple problems involving direct proportion.

Divide a quantity into two or more parts in a given ratio; use the unitary method to solve simple word problems involving ratio and direct proportion.

Use scales to make scale drawings, including using 3 figure bearings.

Use isometric paper to draw out 3D shapes.

Know and use geometric properties of cuboids and shapes made from cuboids.

Compare two simple distributions using the range and one of the mode, median or mean.

Construct frequency diagrams for continuous data.

Recognise when it is appropriate to use the range, mean, median and mode, and for grouped data, the modal class and interpret these in context.

Half termly assessments will be given, in the form of past paper questions. Revision sheets are posted on the VLE.

Homework will be set once a week, one piece from each teacher per fortnight. Each piece should last about 30 minutes and may be an exercise from 'mymaths' or a worksheet. All students have a personal login to mymaths.

Homework details should be written on the homework record sheet in the front of the student's exercise book. Each student should keep their homework record updated, with the mark awarded - A means fully understood, B means largely understood and C means that there were problems with this technique/skill. Students should make use of this 'traffic light' system when they come to revise for the half termly test. Grades for the test should be recorded on the student's record sheet, in the front of their exercise book.