

## AUTUMN TERM DISCOVERING MATHS 7C 2021-22

### Rights Respecting Schools (RRS) in Maths

In order to support and develop RRS in Maths at Clyst Vale Community College all teachers in the Maths Department will make sure that the following happens in every Maths lesson:

Every child is taught maths without discrimination, whatever their ethnicity, gender, religion, language or ability. (Article 2- non- discrimination)

Every child's best interests are top priority in every Maths lesson (Article 3-best interests of the child)

In all Maths lessons every child is given the right to express their views and ideas about a particular area of work and these views and ideas are considered, taken seriously and responded to by both other students and teachers. (Article 12-respect for the views of the child)

In all Maths lessons every child is free to express their thoughts and opinions about a particular area of work. Every child is given access to all information that is required (Article 13-freedom of expression)

Discipline in the Maths classroom is consistent and respects every child's dignity and their right. Every child in the classroom has the right to an education (Article 28-right to education)

Every child's mathematical ability and talent will be developed to the full. They will be encouraged to show their peers and teachers the respect that they deserve (Article 29-goals of education)

### Differentiation in Maths Lessons

Differentiation is about tailoring lessons for students with individual needs. We must change the content delivery or methods of learning to ensure that every child learns in a way that is suitable for them. When done right differentiation in teaching challenges every student at an appropriate level. It allows the student to grow and succeed in a way that is fair to them. In Maths lessons we try to incorporate the following in all lessons:

Maths teachers target the majority and differentiate around.

Maths teachers keep it short and simple (KISS).

Maths teachers know their students and are clear about what they want them to achieve.

We use support staff wisely.

Maths teachers are flexible and they use a range of strategies-if it doesn't work then we stop!

We assess the students' learning using a variety of methods: formative assessment, questioning, no hands up, quizzes, think pair share, open ended tasks, tiered resources...and many more






Every Maths classroom is managed to create a safe and supportive environment.

Maths teachers share their own strengths and weaknesses.

Thought provoking questions are posed to encourage students to think for themselves and become more independent learners.

**MON 13<sup>TH</sup> SEPT**

**KERBOODLE Book 1C**

|                      |  |  |  | Pages  |       |
|----------------------|--|--|--|--|-------|
| Autumn term / Week 1 | <b>Chapter 1 Positive Real Numbers</b> |  | <ul style="list-style-type: none"> <li> Chapter 1 introduction video</li> <li> Chapter 1 online skills test</li> <li> Chapter 1 end-of-chapter test and mark scheme</li> </ul> Workbook 1C Chapter 1<br>Graded Question Bank 1, Chapter 1<br><ul style="list-style-type: none"> <li> Fully-worked solutions: Chapter 1 in Workbook 1C, and Graded Question Bank 1</li> </ul> |  |       |
|                      | 1.1 Place Values and Rounding Integers | <ul style="list-style-type: none"> <li>• Recognise the place values of an integer</li> <li>• Round a number to the nearest 10, 100, 1000</li> </ul>  | DF1, 2, 5, 7<br>RM1, 5<br>SP1-4<br>N1, 2, 12, 13, 16   | 6-8  |       |
|                      | 1.2 Addition                           | <ul style="list-style-type: none"> <li>• Add two positive integers, using:                             <ul style="list-style-type: none"> <li>• column method</li> <li>• laws of addition</li> <li>• mental addition</li> </ul> </li> </ul>                        | DF2, 5, 7<br>RM1, 5<br>SP1-4<br>N4, 12   |  Try It! video 43 | 9-11  |
|                      | 1.3 Subtraction                        | <ul style="list-style-type: none"> <li>• Subtract two positive integers, using:                             <ul style="list-style-type: none"> <li>• column method</li> <li>• mental subtraction</li> </ul> </li> <li>• Relate addition and subtraction</li> </ul> | DF2, 5, 7<br>RM1, 5<br>SP1-4<br>N2, 4, 6, 12   |  | 12-15 |

### MON 20<sup>th</sup> SEPT

|                      |                    |   |  |                  |                              |
|----------------------|--------------------|---|--|------------------|------------------------------|
| Autumn term / Week 2 | 1.4 Multiplication | <ul style="list-style-type: none"> <li>• Multiply two positive integers, using               <ul style="list-style-type: none"> <li>• grid method and column method</li> <li>• laws of multiplication</li> <li>• mental multiplication</li> </ul> </li> </ul> | DF2, 5, 7<br>RM1, 5<br>SP1-4<br>N4, 12 | Try It! video 11 | <b>Pages</b><br><b>16-19</b> |
|----------------------|--------------------|---|--|------------------|------------------------------|

### MON 27<sup>th</sup> SEPT

|                      |              |   |  |                  |                              |
|----------------------|--------------|---|--|------------------|------------------------------|
| Autumn term / Week 3 | 1.5 Division | <ul style="list-style-type: none"> <li>• Divide two positive integers, using:               <ul style="list-style-type: none"> <li>• long division and short division methods</li> <li>• mental division</li> </ul> </li> <li>• Relate multiplication and division</li> </ul> | DF2, 7<br>RM1, 5<br>SP1-4<br>N4, 6, 12 | Try It! video 18 | <b>Pages</b><br><b>20-23</b> |
|----------------------|--------------|---|--|------------------|------------------------------|

### MON 4<sup>th</sup> OCT

|                      |   |  |   |                       |                              |
|----------------------|---|--|---|-----------------------|------------------------------|
| Autumn term / Week 4 | 1.6 Index Notation, Square Roots and Cube Roots | <ul style="list-style-type: none"> <li>• Understand the meaning of square, cube, square root and cube root of a number</li> <li>• Understand index notation</li> </ul> | DF1, 2, 7<br>RM1, 5<br>SP1-4<br>N2, 7, 12, 15 | Try It! videos 21, 23 | <b>Pages</b><br><b>24-27</b> |
|                      | 1.7 Order of Operations and Using a Calculator  | <ul style="list-style-type: none"> <li>• Apply the order of operations in calculations</li> <li>• Use calculators to apply operations</li> </ul>                       | DF2, 7<br>RM1, 5, 6<br>SP1-4<br>N4, 5, 12, 15 |                       |                              |

### MON 11<sup>th</sup> OCT

|                      |                           |  |                                     |                       |                              |
|----------------------|---------------------------|--|-------------------------------------|-----------------------|------------------------------|
| Autumn term / Week 5 | 1.8 Factors and Multiples | <ul style="list-style-type: none"> <li>• Identify multiples and factors of numbers</li> <li>• Apply the above concepts to solve daily life problems</li> </ul> | DF2, 7<br>RM1, 5<br>SP1-4<br>N3, 12 | Try It! videos 29, 32 | <b>Pages</b><br><b>31-33</b> |
|----------------------|---------------------------|--|-------------------------------------|-----------------------|------------------------------|

### MON 18<sup>th</sup> OCT

|                      |  |   |  |   |              |
|----------------------|--|---|--|---|--------------|
| Autumn term / Week 6 | <b>Chapter 2 Negative Real Numbers</b>   |   |  | Chapter 2 introduction video<br>Chapter 2 online skills test<br>Chapter 2 end-of-chapter test and mark scheme<br>Workbook 1C Chapter 2<br>Graded Question Bank 1, Chapter 2<br>Fully-worked solutions: Chapter 2 in Workbook 1C, and Graded Question Bank 1 | <b>Pages</b> |
|                      | 2.1 Negative Numbers and the Number Line | <ul style="list-style-type: none"> <li>• Recognise the use of negative numbers in the real world</li> <li>• Represent numbers on a number line</li> </ul> | DF2, 5, 7<br>RM1, 5<br>SP1-4<br>N2, 12 | Try It! video 1   | <b>38-41</b> |
|                      | 2.2 Addition and Subtraction of Integers | <ul style="list-style-type: none"> <li>• Identify integers and perform addition and subtraction on them</li> </ul>  | DF2, 5, 7<br>RM1, 5<br>SP1-4<br>N4, 12 | Try It! videos 5, 7   | <b>42-47</b> |

### SAT 23<sup>rd</sup> OCT-SUN 31<sup>st</sup> OCT HALF TERM

## MON 1<sup>st</sup> NOV

|                      |  |   |   |                 |                              |
|----------------------|--|---|---|-----------------|------------------------------|
| Autumn term / Week 7 | 2.3 Multiplication, Division and Combined Operations of Integers | <ul style="list-style-type: none"> <li>Identify integers and perform multiplication and division on them</li> <li>Combine operations of integers</li> </ul> | DF2, 7<br>RM1, 5, 6<br>SP1-4<br>N4, 5, 12, 15 | Try It! video 9 | <b>Pages</b><br><b>49-54</b> |
|----------------------|--|---|---|-----------------|------------------------------|

## MON 8<sup>th</sup> NOV

|                      |                                   |   |  |   |              |
|----------------------|-----------------------------------|---|--|---|--------------|
| Autumn term / Week 8 | Chapter 3 Introduction to Algebra |   |  | Chapter 3 introduction video<br>Chapter 3 online skills test<br>Chapter 3 end-of-chapter test and mark scheme<br>Workbook 1C Chapter 3<br>Graded Question Bank 1, Chapter 3<br>Fully-worked solutions: Chapter 3 in Workbook 1C, and Graded Question Bank 1 | <b>Pages</b> |
|                      | 3.1 Letters to Represent Numbers  | <ul style="list-style-type: none"> <li>Use letters to represent numbers</li> <li>Interpret simple algebraic notation</li> </ul> | DF2, 3, 4, 5, 7<br>RM1, 3, 5<br>SP1-4<br>N12<br>A1, 3, 6, 10 |   | <b>60-65</b> |

## MON 15<sup>th</sup> NOV

|                      |  |  |  |                      |                              |
|----------------------|--|--|--|----------------------|------------------------------|
| Autumn term / Week 9 | 3.2 Substituting Numbers for Letters           | <ul style="list-style-type: none"> <li>Substitute integers into simple expressions and formulae</li> </ul> | DF2, 3, 4, 7<br>RM1, 3, 5<br>SP1-4<br>N12<br>A1, 2, 3, 5           | Try It! videos 9, 13 | <b>Pages</b><br><b>66-70</b> |
|                      | 3.3 Writing Algebraic Expressions and Formulae | <ul style="list-style-type: none"> <li>Write simple expressions and formulae</li> </ul>                    | DF2, 3, 4, 5, 7<br>RM1, 3, 5<br>SP1-4<br>N12<br>A1, 2, 3, 5, 6, 10 |                      | <b>71-73</b>                 |

## MON 22<sup>nd</sup> NOV

|                                   |  |   |   |                           |                              |
|-----------------------------------|--|---|---|---------------------------|------------------------------|
| Autumn term / Week 10             | 3.4 Like Terms and Unlike Terms                    | <ul style="list-style-type: none"> <li>Simplify expressions by collecting like terms</li> </ul> | DF2, 3, 4, 7<br>RM3, 5<br>SP1-4<br>N12<br>A1, 2, 3, 4 |                           | <b>Pages</b><br><b>74-78</b> |
|                                   | 3.5 Addition and Subtraction of Linear Expressions | <ul style="list-style-type: none"> <li>Add and subtract linear expressions</li> </ul>           | DF2, 3, 4, 7<br>RM3, 5<br>SP1-4<br>N12<br>A1, 2, 3, 4 | Try It! videos 22, 23, 24 | <b>79-82</b>                 |
| Autumn term / Week 10 (continued) | 3.6 Expressions with Brackets                      | <ul style="list-style-type: none"> <li>Expand a single bracket</li> </ul>                       | DF2, 3, 4, 7<br>RM1, 3, 5<br>SP1-4<br>N12<br>A1, 4    | Try It! video 28          | <b>83-85</b>                 |

**MON 29<sup>TH</sup> NOV**

|                       |   |   |  |   |   |
|-----------------------|---|---|--|---|---|
| Autumn term / Week 11 | <b>Chapter 4 Simple Equations</b>           |   |  | <ul style="list-style-type: none"> <li><b>k</b> Chapter 4 introduction video</li> <li><b>k</b> Chapter 4 online skills test</li> <li><b>k</b> Chapter 4 end-of-chapter test and mark scheme</li> <li>Workbook 1C Chapter 4</li> <li>Graded Question Bank 1, Chapter 4</li> <li><b>k</b> Fully-worked solutions: Chapter 4 in Workbook 1C, and Graded Question Bank 1</li> </ul> | <b>Pages</b><br><br><b>92-97</b><br><br><b>99-100</b><br><br><b>101-105</b> |
|                       | 4.1 Equations in One Variable               | <ul style="list-style-type: none"> <li>• Understand the concept of equations and balancing</li> <li>• Solve simple equations in one variable</li> </ul> | DF2, 4, 5<br>RM3, 5<br>SP1-4<br>N12<br>A1, 3, 7    | <b>k</b> Try It! videos 2, 6  |   |
|                       | 4.2 Equations in One Variable with Brackets | <ul style="list-style-type: none"> <li>• Solve simple equations involving brackets</li> </ul>   | DF2, 4, 5<br>RM3, 5<br>SP1-4<br>N12<br>A1, 3, 4, 7 | <b>k</b> Try It! video 9  |   |
|                       | 4.3 Writing Equations to Solve Problems     | <ul style="list-style-type: none"> <li>• Write simple equations in one variable to solve problems</li> </ul>  | DF2, 4, 5<br>RM3, 5<br>SP1-4<br>N12<br>A3, 6, 7    | <b>k</b> Try It! videos 11, 14  |   |

**MON 6<sup>TH</sup> DEC**

|                       |  |   |                      |                                    |
|-----------------------|--|---|----------------------|------------------------------------|
| Autumn term / Week 12 | <p><b>Review and assessment:</b><br/>Review Exercise 1</p> | DF1, 2, 3, 4, 7<br>RM1, 3, 5, 6<br>SP1-4<br>N1, 3, 4, 5, 7, 12, 13<br>A1, 2, 3, 4, 6, 7, 10 | Workbook 1C Review 1 | <b>Pages</b><br><br><b>108-109</b> |
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**SAT 18<sup>TH</sup> DEC – MON 3rd JAN XMAS HOLIDAY**