

Ecole Internationale Provence-Alpes-Côte d'Azur



**Forward Planning** 

**Long-Term Semester Planning** 

Academic Year: 2022-2023

Class: S3 Subject: Mathematics 4 Periods Teacher: Ms Rebeca Morones No. Students: 26







## **Curriculum – Long-Term Planning 2022-2023**

| Date      | Area               | Learning Objectives   | Activities                          | Resources  | Key<br>Competences      | Learning Outcomes<br>/ Assessment |
|-----------|--------------------|---|-------------------------------------|--|-------------------------|-----------------------------------|
| September | Number<br>revision | <ul> <li>Prime numbers</li> <li>Square number</li> <li>Roots (manually and calculator)</li> </ul>   | - Classwork<br>- Homework<br>- Test | - Ten ticks.<br>- Cambridge<br>international<br>Mathematics.   | 1, 2, 4                 |                                   |
| September | Number             | <ul> <li>Indices (+/-)</li> <li>Scientific notation.</li> <li>Arithmetic operations with scientific notation.</li> <li>Applied questions.</li> </ul>  | - Classwork<br>- Homework           |  | 1, 2, 3, 6, 7           |                                   |
| October   | Functions          | <ul> <li>Identify linear functions.</li> <li>Understand the notation and<br/>mathematical names of<br/>gradient and y/x-intercepts.</li> <li>Plot graphs given<br/>information of gradients and<br/>intercepts.</li> <li>Real life examples of linear<br/>functions.</li> <li>Direct and inverse<br/>proportion.</li> </ul> | - Classwork<br>- Homework<br>- Test | <ul> <li>Ten ticks.</li> <li>Cambridge<br/>international<br/>Mathematics.</li> <li>Geogebra</li> </ul> | 1, 2, 3, 4, 5, 6, 7, 8, |                                   |
| November  | Algebra            | <ul> <li>Formulae and expressions.</li> <li>Rearranging formulae.</li> <li>Applied examples.</li> </ul>   | - Classwork<br>- Homework<br>- Test | - GCSE<br>Mathematics.   | 1, 2, 3, 6, 7           |                                   |

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| November/December | Geometry     | <ul> <li>Revision of angle<br/>properties: vertically<br/>opposite, alternate interior<br/>and exterior angles and<br/>corresponding angles.</li> <li>Circle theorems</li> </ul>  | - Classwork<br>- Homework<br>- Test          | <ul> <li>Ten ticks</li> <li>Cambridge</li> <li>international</li> <li>Mathematics.</li> <li>Geogebra.</li> </ul>                 |                        |  |
|-------------------|--------------|---|--|--|------------------------|--|
| December          | Maths skills | - Problem solving skills  | - Group work<br>- Presentation               |  | 1, 2, 3, 4, 5, 6, 7, 8 |  |
| January           | Statistics   | <ul> <li>Revision of types of data:<br/>Quantitative (continuous,<br/>discret)</li> <li>Qualitative</li> <li>Revision of mean. Median<br/>and mode</li> <li>Choosing the correct<br/>measure to describe data.</li> </ul>                 | - Classwork<br>- Homework<br>- Group project |  | 1, 2, 3, 4, 5, 6, 7, 8 |  |
| January           | Geometry     | <ul> <li>Revision of<br/>transformations.</li> <li>Revision of enlargement.</li> <li>Investigating the effect of<br/>an enlargement on the<br/>perimeter, area and volume<br/>of a shape.</li> </ul>                                      | - Classwork<br>- Homework                    | <ul> <li>Working on<br/>geoebra drawing<br/>shapes and their<br/>transformation.</li> <li>Investigation<br/>activity.</li> </ul> | 1, 2, 3, 4, 5, 6, 7    |  |
| February/March    | Algebra      | <ul> <li>Introduction to quadratic<br/>expressions</li> <li>Expanding and factorising<br/>quadratic expressions.</li> <li>Learning the formulae:<br/>Binomial expansion of order</li> <li>2 and difference of two<br/>squares.</li> </ul> | - Classwork<br>- Homework<br>- Test          | <ul> <li>Ten ticks.</li> <li>Cambridge<br/>international<br/>Mathematics.</li> </ul>   |                        |  |

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|           |          | - Solving simple quadratic<br>expressions using the square<br>root./absolute value.   |                      |   |               |  |
|-----------|----------|---|----------------------|---|---------------|--|
| March     | Geometry | <ul> <li>Properties in right angled<br/>triangles.</li> <li>Investigate the ratios<br/>between sides and angles in<br/>right angled triangles.</li> </ul> |                      | - Geogebra<br>investigation                   | 1, 2, 3, 4, 5 |  |
| April     | Number   | <ul><li>Introduction to combinatronics.</li><li>Strategies for counting.</li></ul>  | - Homework<br>- Test | - Ten ticks                                   | 1, 2, 3, 4, 5 |  |
| April/May | Algebra  | <ul> <li>Solving equations revision.</li> <li>x's on both sides and using<br/>real numbers, brackets on<br/>both sides.</li> </ul>                        |                      | - Ten ticks<br>- GCSE examples                | 1, 2, 3, 6    |  |
| May       | Geometry | <ul><li>Area, volumes of prisms,<br/>cones, spheres.</li><li>Solve applied problems.</li></ul>  |                      | - Ten ticks<br>- GCSE exercises<br>- Geogebra | 1, 3, 5, 7    |  |

\* Link to 8 key competences:

- 1. Literacy (reading and writing)
- 2. Multilingualism
- 3. Mathematics, Science, Technology and Engineering
- 4. Digital
- 5. Personal, Social and Learning to Learn
- 6. Citizenship
- 7. Entrepreneurship
   8. Cultural Awareness and Expression