

## STEM Programme of Study (2026-27)

|  |                                   |                                                        |                                |                                                                                                                                                                                                                             |                              |                                         |                                 |                                           |                                        |                                            |                                                                                                                                                           |                                                                |                                        |                                        |                                     |
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|  | Week 1                            | Week 2                                                 | Week 3                         | Week 4                                                                                                                                                                                                                      | Week 5                       | Week 6                                  | Week 7                          | Week 8                                    | Week 9                                 | Week 10                                    | Week 11                                                                                                                                                   | Week 12                                                        | Week 13                                | Week 14                                | Week 15                             |
|  | Autumn 1 – ‘Equality & Diversity’ |                                                        |                                |                                                                                                                                                                                                                             |                              |                                         |                                 |                                           | Autumn 2 – ‘Living in the Wider World’ |                                            |                                                                                                                                                           |                                                                |                                        |                                        |                                     |
|  | Subject Area Topic                |                                                        |                                |                                                                                                                                                                                                                             |                              |                                         |                                 |                                           | Subject Area Topic                     |                                            |                                                                                                                                                           |                                                                |                                        |                                        |                                     |
|  | 1.<br><br>Bridge Building         | 2.<br><br>Science of weapons- Elastic potential energy | 3.<br><br>Paper Rollercoasters | 4.<br><br>Knex Gravity Racer build                                                                                                                                                                                          | 5.<br><br>Robotic hand build | 6.<br><br>Water Balloon Protection drop | 7.<br><br>Wind Powered vehicles | 8.<br><br>STEM problem solving Challenges | 1.<br><br>Marble Run Challenge         | 2.<br><br>Strong Boats- Buoyancy practical | 3.<br><br>Remote control car track build Calculating Speed. P1                                                                                            | 4.<br><br>Remote control car track build Calculating Speed. P2 | 5.<br><br>Solar system creation Part 1 | 6.<br><br>Solar system creation Part 2 | 7.<br><br>Christmas STEM Challenge. |
|  | Notes/Links/Interleaving          |                                                        |                                | Additional Higher Content<br>-Describe how energy types can be exchanged.<br>-Explain why energy is not always fully conserved in our experiments and why is occurs why is the system not a perfect one for energy changes? |                              |                                         |                                 |                                           | Notes/Links/Interleaving               |                                            | Additional Higher Content<br>Describing additional methods of separation e.g. distillation techniques and examples of use.<br>Rf values in chromatography |                                                                |                                        |                                        |                                     |

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|  | Spring 1 – ‘The Circle of Life’                      |                                   |                                                       |                                                       |                                  |                                                       | Spring 2 – ‘Conflict’      |                                   |                                   |                                                                                                                   |                                   |    |    |
|  | Subject Area Topic                                   |                                   |                                                       |                                                       |                                  |                                                       | Subject Area Topic         |                                   |                                   |                                                                                                                   |                                   |    |    |
|  | 1.<br><br>Strength of paper and shapes investigation | 2.<br><br>Knex Zip line challenge | 3.<br><br>Elastic potential energy - exploding shapes | 4.<br><br>Elastic potential energy- Slingshot rockets | 5.<br><br>Diver rescue Challenge | 6.<br><br>Gravitational energy- vehicle investigation | 1.<br><br>Pop Up 3D shapes | 2.<br><br>Pyramid Slingshot build | 3.<br><br>Popsicle Stick Catapult | 4.Tower build challenge<br>3D printed joiners to build a tower.                                                   | 5<br>Waterproof message challenge | NA | NA |
|  | Notes/Links/Interleaving                             |                                   |                                                       | Additional Higher Content                             |                                  |                                                       | Notes/Links/Interleaving   |                                   |                                   | Additional Higher Content<br>Balanced chemical equations<br>Forces calculations using given equations (GCSE prep) |                                   |    |    |

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|  | Summer 1 – ‘Health & Leisure’ |  |  |  |  |  | Summer 2 – ‘Crime & Punishment’ (CSI THEME) |  |  |  |  |  |  |
|  | Subject Area Topic            |  |  |  |  |  | Subject Area Topic                          |  |  |  |  |  |  |

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|  | 1.<br>Cubes and sticks challenge | 2.<br>Lateral thinking tennis ball challenge | 3.<br>Air powered model rocket                                                                                       | 4.<br>Isometric drawing Challenge | 5.Da Vinci Bridge build | 6.<br>Cardboard vehicle kit build Part 1 | 7<br>Cardboard vehicle kit build Part 2. | 1.<br>Air powered rocket outdoor flight | 2.<br>Stem Team Challenge | 3.<br><br>Paper structure fidget challenge | 4.<br><br>Lollipop stick build challenge                                                                                                | 5.<br>Make-do cardboard challenge | 6.<br>Lego Challenge Part 1. | 7.<br>Lego Challenge Part 2. |
|  | Notes/Links/Interleaving         |                                              | Additional Higher Content<br>Gas exchange further detail<br>Equations/ balanced equations for<br>Aerobic respiration |                                   |                         |                                          |                                          | Notes/Links/Interleaving                |                           |                                            | Additional Higher Content<br>Additional equations for pressure and forces<br>Balanced chemical equations for metals reactions with air. |                                   |                              |                              |