|  | **Topic** | **Key concept – what do I want the students to learn from this unit?** | **What knowledge will they acquire?** |
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| **YEAR 7 OVERVIEW – carousel so students may carry out activities in different order** | | | | |
| **Y7 - half term 1** | Design communication  (all areas of DT and Engineering) | * Presentation of design work * Techniques to enhance creativity * Producing initial design ideas * Development of design ideas * Avoiding design fixation | * Jack straws * Scruffity * Line work * SCARED and SCAMPER * Biomimicry * rendering |
| **Y7 – half term 2** | Structures, metals and forces  (Design Technology) | * Properties and working with metal * working with plastic * Forces and structures * Working with specialist tools/equip * Safety in the workshop | * 4 forces in structures * Types of structure * Computer simulation * Workshop skills (wood) * Safety in a workshop * Types of metals * Working with metals * Line bending * Joining plastic |
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| **Y7 – half term 3** | Textiles  (Design Technology) | * Properties and working with textiles * Working with specialist tools/equip * Safety in the workshop * Tie dying fabric * Measuring and cutting out * Applying surface decoration techniques * Using a variety of hand sewing and machine skills * Creativity * The ability to evaluate and test a product | * Properties and working with textiles * Working with specialist tools/equip * Safety in the workshop * Tie dying fabric * Measuring and cutting out * Applying surface decoration techniques * Using a variety of hand sewing and machine skills * Creativity * The ability to evaluate and test a product |
| **Y7 – half term 4** | Tangler project  (Engineering design) | * Analyse existing products * Properties and working with plastics * Working with specialist tools/equip * CAD and CAM * Creativity * Prototyping * Safety in the workshop * Design development | * Designing without fixation * Prototyping to meet users needs * Properties and molecular structure of plastics * Vacuum forming * Laser cutter |
| **Y7 – half term 5** | Sustainability  (Design Technology) | * What is sustainability , * Understanding the 6 R’s * What we need to do to make the environment better * Creativity * Design * Thinking skills * Solving a problem * Melting plastic to create a storage item for school * to evaluate and improve work | * Designing without fixation * What is sustainability , * Understanding the 6 R’s * What we need to do to make the environment better * Creativity * Design * Thinking skills * Solving a problem * Melting plastic to create a * storage item for school * to evaluate and improve work |
| **Y7 – half term 6** | Food and Nutrition | * Basic food hygiene rules. * Safety rules. * Bridge and claw technique. * Rubbing in method * Fry, sauté, boil, simmer & bake. * Safe use of the cooker. * How to reflect and evaluate a practical * Eat well guide. | * Safe food preparation * Range of cooking skills * Evaluation, reflection and analysis |
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