Resistant Materials Overview

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| Term | Year 7  | Year 8 | Year 9 | Year 10 | Year 11 |
| Autumn Term  | **The novelty pen project.**Pupils will use the design process to produce a set of design drawings leading to a final design.Pupils will produce a prototype of their final design.Pupils will produce a novelty pen reflecting their intended design.Produce an evaluation.**Baseline assessment week 3 the developed designs section of the design booklet.**  | **Model wooden car project**Pupils will use the design booklets to produce a set of design drawings working towards producing a final design.Pupils will use a selection of hand tools to make the wooden car.Produce an evaluation | **Model train project**Pupils will use the design booklets to produce a set of ideas leading to a final design that is rendered and with notes explaining their design concept.Pupils will use a selection of hand tools to make a wooden train.Pupils will produce an evaluation of their completed product | **Resistant Materials.****Common wood joints.**Different common types of wood joints, and different methods of joining wood.Will learn about:Marking outCutting joints accurately,Assembly of joints.Working in a safe manner.Pupils learn how to mark out and cut and fix different types of wood joints.**Design and make young child’s moving toy.**Pupils will produce a design portfolio leading towards producing a final presentation design drawing.Pupils will make the child’s toy they have designed. | **OCR Life and Living****Designing an art or craft product** **unit A7**Pupils will produce a design portfolio leading to a final presentation drawing of the product the learner intends to make. |
| Spring Term | **Wooden boat project.**Pupils will complete the design booklet producing a set of design drawing working towards producing a final design.Pupils will using a selection of hand tools make a wooden boat.Produce an evaluation. | **Cam project, design and make a young child moving toy.**Pupils will use the design booklets to produce a set of design drawings working towards producing a final design for their moving toy.Pupils will use a selection of hand tool to make their cams moving toy.Produce an evaluation | **Buzzer steady hand game.**Pupils will use the design booklets to produce a set of ideas leading to a final design that is rendered and with notes explaining their design concept for the theme for their buzzer game.Pupils will use a selection of hand tools to make and assemble their game.Pupils will use the soldering iron and the required components to make their buzzer circuit and fit it to their game.Evaluation and testing of pupil’s games. | **Resistant Materials.****Common wood joints.**Different common types of wood joints, and different methods of joining wood.Will learn about:Marking outCutting joints accurately,Assembly of joints.Working in a safe manner.Pupils learn how to mark out and cut and fix different types of wood joints.**Design and make young child’s moving toy.**Pupils will produce a design portfolio leading towards producing a final presentation design drawing.Pupils will make the child’s toy they have designed. | **Making an art or craft product Unit A 8**Pupils will make the product that they have designed.**Exhibiting an art or craft product Unit A 9.**Pupils will exhibit their product and collect feedback to suggest improvements to their product and the exhibition. |
| Summer Term | **Clay tile project.**Pupils will complete a set of designs drawings leading to a final design for a clay tile.Pupils will produce a clay tile and decorate them to reflect their own individual design.Produce an evaluation.**Maze game short project.**Pupils will produce a set of designs leading to a final design for a maze game.Pupils will make the maze game they have designed. | **Buzzer steady hand game.**Pupils will use the design booklets to produce a set of ideas leading to a final design that is rendered and with notes explaining their design concept for the theme for their buzzer game.Pupils will use a selection of hand tools to make and assemble their game.Pupils will use the soldering iron and the required components to make their buzzer circuit and fit it to their game.Evaluation and testing of pupil’s games | **Jewellery project**Pupils will work in pairs and will experiment using different types of structures to make the frame to withstand the different stresses the car will encounter.Pupils will test their cars, distance, speed and a jump.**Bridge structures short project.**Pupils will learn about different types of structures and their shapes and properties.Pupils will build bridge using a given selection of materials with which to work with.Test their structures to failure and record the results. | **Designing and make a pencil case.**Pupils will be given a design for a wooden pencil case.Pupils will produce a drawing illustrating the wood joint they will use selected from a selection provided.Produce a one point perspective drawing of the pencil case.Pupils will make the pencil case from the materials provided**.** |  |

