

# Resistant Materials AT HORRINGER COURT

Enable all pupils to be confident, organised and creative with a practical approach to problem solving. Develop life skills that will allow a range of employment options.



## BIG IDEAS

Pupils learn through a creative process.  
Ideas are developed to a practical completion.  
Processes are adapted and modified along the way to ensure a successful outcome.  
Complex ideas are realised to ensure full comprehension and learning.



## CONTENT & SEQUENCING

Design and technology is an inspiring and practical subject that encompasses a broad range of knowledge, skills and understanding of materials and the design process. Pupils design and manufacture products that fulfil a design brief for a specific task or customer. This builds a repertoire of skills that included design, 2D and 3D drawing skills, safe use of hand and machine tools, planning sequence of work, finishing techniques and evaluation of the final outcome and potential improvements. Pupils begin investigating structures and construction techniques. Contemporary design, is sequenced with a thorough enquiry into mechanism and movement. Pupils construct working mechanism while working from engineering drawings. Modern manufacturing techniques are investigated through Computer Aided Design and Manufacture (CAD/CAM).



## LINKS WITH ENGLISH & MATHS

Subject specific vocabulary i.e materials, methods and tools.  
Accurate measurement. Decimal and percentages.  
Scale. Margin of error.  
Comprehension of 3 D shapes.



## RETRIEVAL PRACTICE

Consolidate prior learning through Q & A. Intervention to avoid misconceptions. Monitor activities to recommend improvements.  
Evaluation at practical completion.



## PROGRESS

Subsequent units of work increase in scope and complexity.  
Greater accuracy, dexterity, finesse and confidence are required.  
The ability to plan ahead helps define progress and outcome.  
Exemplar material demonstrate potential outcomes.



## SUPPORT

G & T encouraged to extend scope of project. Less able pupils are guided to undertake projects that can be successfully completed.  
Pupil Passports provide specific and essential guidance on relevant pupils.