BLESSED TRINITY RC COLLEGE

BLESSED TRINITY LEARNING PROGRAMME

SUBJECT: DT - Resistant Materials YEAR: 9

Title	Learning Objectives	Classroom Activity	Recommended Homework	Marking & Assessment
Trebuchet Challenge	**Designing Skills** Design a trebuchet that will propel an object. The focus of the design primarily is the aesthetics, however consideration of the structure, stability and the mechanisms are a large factor of the design. **Making Skills** A desk top trebuchet will be manufactured using 20mm square pine. Pupils will develop marking out skills, shaping and joining wood. A jig will be used to enable accuracy of the shape for the marking out of the cross halving joints and halving joints. The mechanism (throwing arm) will be a length of pine with a mild steel bar to act as the fulcrum.	Produce a design Brief from a given situation Produce a specification that will satisfy the brief Use influence from research to successfully produce several creative initial ideas Develop at least one idea reviewing the choice of material and investigating the manufacturing process Accurately mark out pine using a ruler, pencil and tri-square. Mark and cut pine using correct equipment and processes. (Bench hook. Tenon saw & facing sander) Attach separate pieces together using most effective process	Research into existing trebuchets. Analysis of existing products Mechanisms and levers theory sheet. Completion of initial design ideas Final design produced from developed ideas The advantages/ disadvantages of using CAD/ CAM Manufacturing log	Pupils to investigate and analyse their product/project using self and peer assessment. Pupils have evaluated their design work throughout Pupils will be creative in analysing their own products and seeing how they can improve.

BLESSED TRINITY LEARNING PROGRAMME

SUBJECT: DT - Resistant Materials YEAR: 9

Title	Learning Objectives	Classroom Activity	Recommended Homework	Marking & Assessment
Trebuchet Challenge	**Knowledge & Understanding** To understand the properties of the materials used to manufacture the product. To develop a knowledge of the design process (design & make) and understand the need to produce specific tasks in the correct order. Develop the knowledge on understanding of using the correct equipment in a safe and proper way. To understand how to creatively design and develop ideas and turn these into a final functional product.	Produce evaluation from information gathered from self and peer assessment of finished product	Research into existing trebuchets. Analysis of existing products Mechanisms and levers theory sheet. Completion of initial design ideas Final design produced from developed ideas The advantages/ disadvantages of using CAD/ CAM Manufacturing log	Pupils will use feedback from others in producing their evaluation Pupils will use the grow sheet to assess how they have achieved and what they need to do to improve Final assessment carried out by teacher. Level awarded for designing, making and also an end of rotation test.