

St Mary's CE Middle School, Puddletown

Subject - Resistant Materials

Subject leader - Tom Evans

Design and Technology allows pupils to explore their creativity using a range of materials and techniques. Pupils have the opportunity to design and make products that respond to a wide variety of problems within a range of contexts.

Resistant Materials specifically develops pupils' design skills as well as their practical skills. We focus on two main areas; designers and makers which are the key skills to have when entering a manufacturing career.

All pupils have two lessons per week over a twelve week period whereupon they rotate to another DT discipline.

Intent

Our ambition is to provide opportunities to develop learners' capability and creativity skills with the aim of promoting independent thought and ultimately learning. The subject strongly encourages challenge, engagement and knowledge routinely during lessons.

By combining their designing and making skills with knowledge and understanding, learners will create high quality products. They will design and manufacture products that solve genuine, relevant problems using a range of manufacturing methods.

There is a clear progression and high expectation within years which ultimately encourages pupils in year 8 to become independent and selective about how they approach their final products which is drawn from their experiences in past years.

As well as the expected hand tools and machines within a workshop we have heavily invested in the future of the subject; having a laser cutter and 3D printer which allows all pupils to access CAD CAM. This has meant that pupils are learning current methods of manufacture which not only allows them to provide high end products for their age but also gives students transferable skills for the future.

Implementation

All schemes of work have been developed to have clear progression and expectation in knowledge and skill allowing students to keep pupils challenged. We liaise with our feeder schools and the main secondary school to ensure good transition of the subject.

Recap sessions are consistently used especially in practicals involving equipment to maintain safety incase of gaps of learning from previous years. When using CAD CAM pupils can also access video help guides and worksheets to assist them if necessary, so they can continue to learn without additional support from the teacher.

The subject also relies upon the pupils' knowledge of other subjects, in particular; Maths, Computing and Art which allows us to put learning in other subjects into a real life context.

Pupils are assessed twice a year from the two products they design and make.

Impact

We are proud to say many pupils take up Resistant Materials at our THS. We hope this is due to the high expectations we have on the pupils and how the learning is implemented within Resistant Materials.