DESIGN AND TECHNOLOGY

YEAR 8

RESISTANT MATERIALS

Innovation project (13weeks) Students develop skills in designing and model making. Working as individuals and in groups, keeping safe in a workshop and empathising with the end user who has a disability.	**Sustainability Project** (8 weeks) Students look at the impact of design on the environment, fossil based plastics vs bioplastics, sustainable home design and other environmental issues.	**Electronic Night Light** (6 or 10 weeks) Students learn about electronics in greater depth including how microcontrollers are used. They make a sensing night light from electronic components.	**Structures** (4 weeks) Students complete a series of making tasks designed to help them understand forces and how structures stay up.	**Mechanisms** (8 weeks) Students learn about a range of mechanisms including gears, cams, levers, linkages and how they are used to give us mechanical advantage.	Prior Learning Each project builds on knowledge and skills learned in year 7.

CAD/CAM

Mobile phone holder (10 or 13 weeks) Students use Corel Draw and Google Sketchup to design a mobile phone holder and its packaging. They then use the laser cutter to manufacture their product as well as experiencing the use of the 3D printer.	Prior Learning Corel draw is taught in year 7 and built on in year 8 with more skills. Google Sketchup is also used in some primary schools.

TEXTILES

Frisbee (10 or 13 weeks) Students learn a range of dying techniques to colour fabric and then use a combination of hand stitching and machine work to manufacture a Frisbee from fabric.	Prior Learning Skills in year 7 are basic hand sewing and machine skills, year 8 builds on these and introduces surface decoration techniques.

FOOD

Hygiene and safety-recap on food Safety and correct practice for Food prep .Further development of practical skills to make. Healthy fruit pudding. Adapting a recipe to make it healthy.	**Where food comes from** Learning about staple foods-rice pasta, flour and potatoes and how to include them in the diet and their nutritional value. Including them in the diet to make a hot pasta dish with a homemade sauce.	**Developing knowledge of consumer food and drink choice** How are chicken nuggets made commercially? Making a healthier homemade alternative. Comparing the nutritional value.	**Developing knowledge of healthy eating** Planning a healthy meal for teenagers. This will be done as an assessed piece of work including theory and practical work.	Prior Learning Year 7 focuses on different uses for a cooker (hob, oven, and grill) healthy eating and hygiene. These are built on in year 8 introducing detail on the function of different ingredients and how to adapt recipes to make them healthier.

CAREERS LINKS

ICT teacher, graphic designer, games developer , product designer, engineer, using CAD as a designer, architect or engineer, fashion designer, fabric specialist, costume designer, textile technician or textile developer, careers in catering, as a chef, food hygiene, product development, manufacturing and many more.

CHARACTER LINKS

Teamwork, responsibility when using tools and equipment (performance virtues), resilience, learning from failure, awareness of the needs of others, awareness of environmental issues (civic virtues), critical thinking, problem solving, making judgements, awareness of health and wellbeing (moral virtues).

KEY ASSESSMENT DATES

The main areas for assessment are Designing/ Making/ Evaluating and Technical knowledge. Each project has formal assessment pieces built into the project. For example, Food assesses' Making and Technical knowledge', the innovation project assesses 'Making and Evaluation'. All areas are covered at least twice throughout the year.