# KS4 Y10 GCSE CURRICULUM OVERVIEW



SPRING TERM

SUMMERTERM

#### Topics being taught

Materials and their working properties

Core technical principles

#### OCTOBER 1/2 TERM

Designing principles

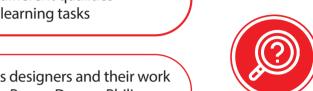
#### What you will be assessed on

An introduction to the different materials and their properties for core skills -Material categories, properties, forces & stresses, scales of production, ecological and social footprint.

Designing using existing data and the work of others. Difference between primary and secondary research. Famous designers and their work. Design Brief and Specification. Designing strategies.

### How you can support at home

Encourage students to look at different products to observe the materials they are made from. And that different materials have different qualities Support home learning tasks



Explore Famous designers and their work - such as Apple, Braun, Dyson, Philippe Starck, Charles and Ray Eames, Dieter Rams. Encourage drawing at home in spare time. Support home learning tasks



## **CHRISTMAS**

Designing principles

Making principles

Communicate design ideas using different media and techniques. Drawing and communication method. Materials management. Tools, equipment, techniques & finishes. Source, origins & properties **Ergonomics/Anthropometrics** 

Encourage drawing at home in spare time Use of PC/laptop to operate CAD Supply drawing equipment – isosketch, paper, pencils etc. Support home learning tasks



### FEB 1/2 TERM

Specialist materials

New and emerging technologies

Use a wide range of complex materials & components-specifically timbers. Working with specialist materials (timbers) Commercial manufacturing, surface & treatments and finishes. New/emerging technologies. Sustainability and the environment People, culture and society

Encourage drawing at home in spare time Use of PC/laptop to operate CAD Supply drawing equipment – isosketch, paper, pencils etc. Support home learning tasks







### **EASTER**

New and emerging technologies

The impact of new & emerging technologies on industry, enterprise, sustainability, people, culture, society & the environment, production techniques & systems. Mechanical Devices Levers & Linkages. Quality Control and Quality Assurance

Discuss how products and technology has evolved during their lives – the advances in modern technology. Support home learning tasks



### MAY 1/2 TERM

Energy, systems, materials and devices

Start of NEA

Developments in modern and smart materials, composite materials and technical textiles. Investigation Section A of NEA based on AQA Contexts released June 1st. What areas to research - making research relevant to project. Client research (needs & wants). Work of others

Support home learning tasks. NEA projects will be bespoke to each student, discuss these and help with investigations/research tasks.

