DESIGN & TECHNOLOGY KS5: Year 12

CARDINAL NEWMAN CATHOLIC SCHOOL
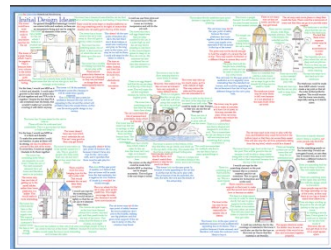
NEA
- Relevant research
- Useful measurements
- Stakeholder requirements
- Design specification
- Initial design ideas

M6 Coordinates and geometry

SUMMER 3:2

NEA
- Exploring and analysing possible contexts
- Chosen context and possible opportunities
- Design brief
- User/Stakeholder needs
- Existing products

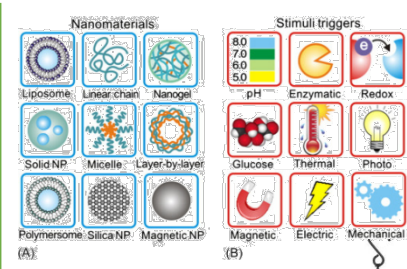M5 – Use and analysis of data, charts and graphs

SUMMER 3:1

KNOWLEDGE
5.1 – 5.3 Smart & modern materials
7.1 – 7.5 Fabrics and paper & boards
4.3 Design thinking
8.1 – 8.3 Viability of design solutions
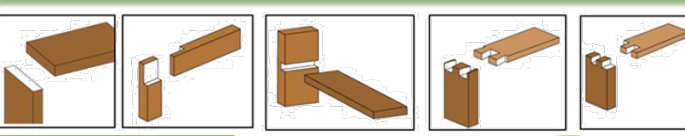9.1 – 9.2 Health & safety

SKILLS
USB lamp project

Combined materials – concrete, electronics, smart materials, fixings and fastenings

M4 – Use of trigonometry

SPRING 2:2

KNOWLEDGE
5.1 – 5.3 Metals
7.1 – 7.5 Manufacturing metals
2.3 Past & present designers
2.4 Lifecycles
3.1 Moral & commercial factors
3.2 Developing for manufacture

SKILLS
Wind chime and dice project

Metals – pewter casting, turning, polishing

SPRING 2:1

KNOWLEDGE
5.1 – 5.3 Timbers
7.1 – 7.5 Manufacturing timbers
3.3 Factors for manufacturing
3.4 – 3.5 Distribution and energy sources
4.1 2D & 3D sketching
4.2 Digital design tools

SKILLS
Engraved keepsake box

Timbers – joints, wood turning, laser engraving, staining, varnishing

M2 – Ratios and percentages

AUTUMN 1:2

M3 – Calculating surface areas and volumes

KNOWLEDGE
5.1 – 5.3 Polymers
7.1 – 7.5 Manufacturing polymers
1.1 - 1.2 Contexts & stakeholders
1.3 Usability
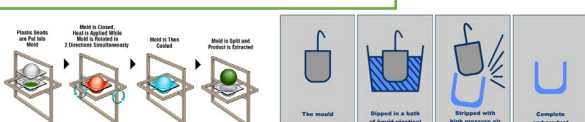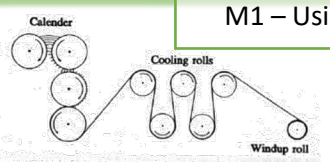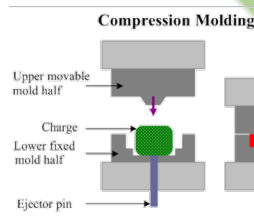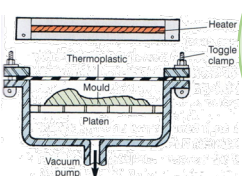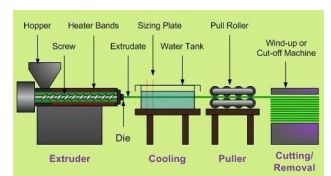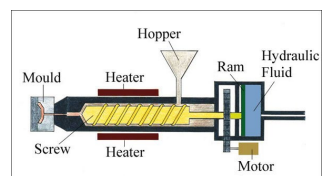2.1 0 2.2 Analyse products & technical advancements

SKILLS
3 week induction project: Peeler

Polymers – Injection moulding, vacuum forming, line bending, oven forming, laser cutting, 3D printing

AUTUMN 1:1

M1 – Using numbers and percentages

OUR LEARNING JOURNEY

In year 12, you will expand your knowledge and understanding of all the material areas of Design Technology including timbers, metals, polymers, fabrics, papers & boards, as well as developing your design thinking.