(Becoming a) PRODUCT DESIGN (ER)

- Investigating, primary and secondary data
- Environmental, social and economic challenge
- The work of others
- Design strategies
- Communicating of design ideas
- Selection of materials and components

Exam

Deadline for NEA

6 - Analysing and Evaluating

3 - Generating Design Ideas

2 - Design Brief / Specification

1 - Investigating Design Possibilities

4 - Developing Design Possibilities

5 - Realising Design Ideas

YEAR 11

Actual NEA

Designing and making principles

Mini NEA practice

Specialist technical principles

Specialist processes

Surface treatments and finishes

Core technical principles

Make Deck chair

Make Russian triple box

Create Delft clay casting

Create/make Ferrous metal fish

Evaluate Developments in new materials

Create Understanding a systems approach when designing

Evaluate Mechanical devices

Evaluate Materials and their working properties

Evaluate Selection of materials

Forces and stress

Ecological and social footprint

Sources and origins

Using and working with materials

Stock forms, types and sizes

Scale of production

Evaluate Energy generation and storage

Evaluate New and emerging technologies

YEAR 10

Make: Can you make an accurate product using machines and tools independently?

Evaluate: What skills have you developed? Test your product and consider how you would improve it.

Evalua DIRT

Mastering Threading up the sewing machine

Technical: 6 R's Materials and sustainability

Explore: Analyse a problem Who, what, where ....

Testing / Modelling: Will my product work? What can I do to improve it?

Explore: The 6 R's from a designers perspective

Explore: Definitions of keywords

Testing: Have I successfully stitched the animal so that the stuffing does not come out?

Upcycling
Textile

Lamp
Timber/Metal /Concrete

Evaluate: What are the differences between CAD/CAM and hand stitching?

Create: Applique samples. Layering of fabrics.

Create Clay modelling

Explore History of automobiles

Analyse Automation analysis

Make: Make a small stuffed animal. Developing blanket stitch skills

Materials: Fabric properties.

Explore: Upcycling, What can my garment be turned into?

Create Soldering, Basic circuits

YEAR 9

Maths: Seam allowance/tolerance

Car
Plastics/polymers

Testing: Does the circuit work? Why not?

Materials: Technical textiles. What is a technical textile?

Make: Can you make the circuit light up using accurate stitching?

Materials: Smart materials. What is a smart material?

Explore: What does each component in my circuit do?

Create: Can I stich a neat pencil case using the sewing machine independently?

Create Production plan, make an accurate plan for how you will construct your model

Technical: Electronic components

Pencil case
Textiles

Materials Vac Forming of clay model

Materials: Plastics and polymers.

Explore: Use a variety of hand stitching to create an embroidery sample

Maths: Conversions and scale

Fixtures: Spot welding and pop rivets.

Evaluate: Self-evaluation. What makes a good product? How can you improve your skills?

Maths: Seam allowance

Technical: Threading up the sewing machine

Insect
Metal

YEAR 8

Explore: Definitions of keywords

Create Use of templates and jigs

Create/Technical: Design ideas and development

Create Metal tools Use of hand tools and machines

Materials: Ferrous and non-Ferrous metals

Health & Safety; Personal protective Equipment

Introduction to the workshop: Health and Safety

Man-made Why do we use man-made boards instead of wood sometimes?

CAD CAM box
Timber

YEAR 7

Technical: CAD/CAM 2D Design

Evaluate: What makes a good product? How can you improve your skills?

Create Wood tools Use of hand tools and machines

Explore: Wood classification. Where does timber come from?

Sustainability: Sustainable forests. Hardwoods and Softwoods