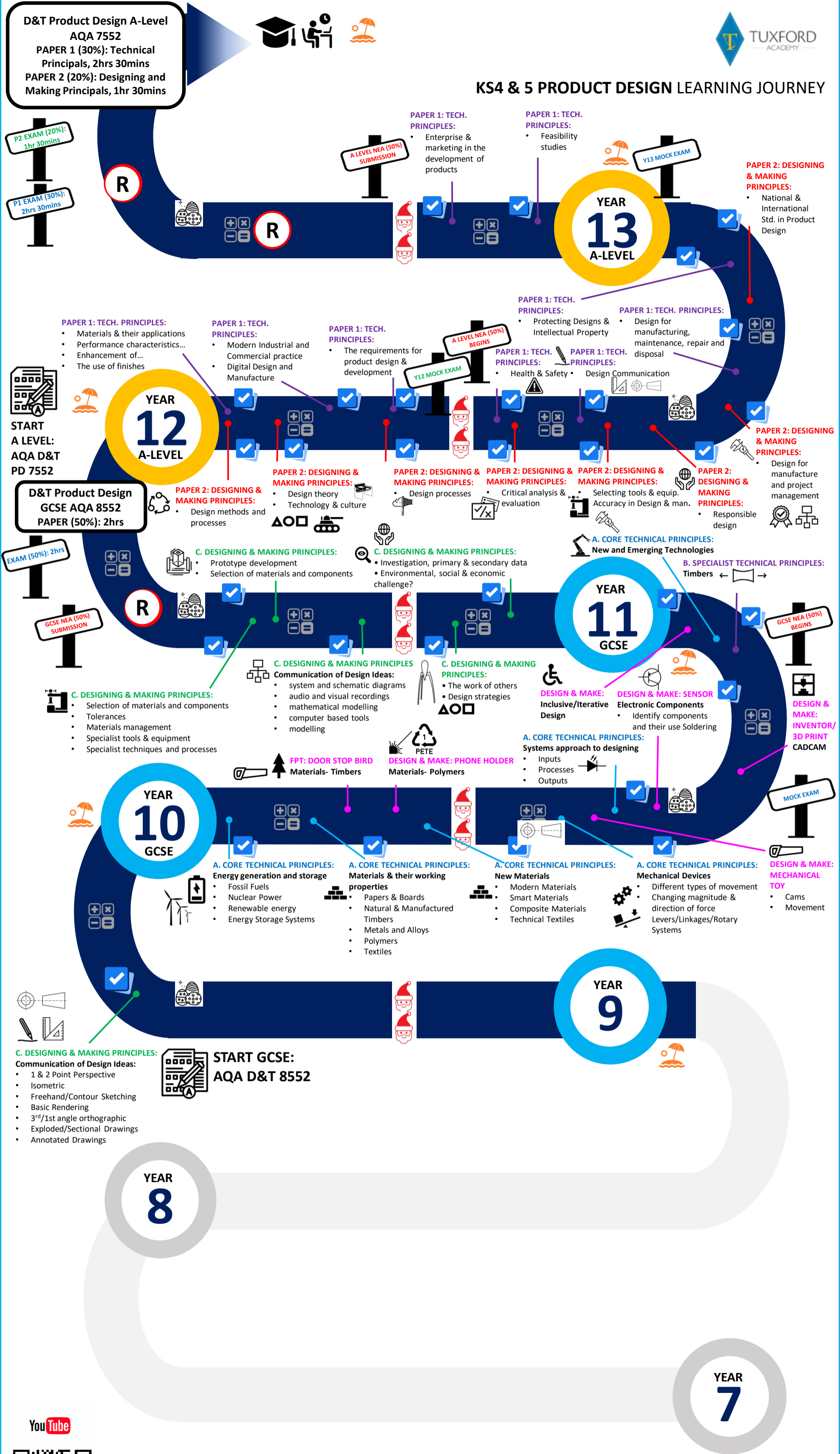


# KS4 & 5 PRODUCT DESIGN LEARNING JOURNEY



**D&T Product Design A-Level**  
AQA 7552  
PAPER 1 (30%): Technical  
Principals, 2hrs 30mins  
PAPER 2 (20%): Designing and  
Making Principals, 1hr 30mins

P2 EXAM (20%):  
1hr 30mins

P1 EXAM (30%):  
2hrs 30mins

A LEVEL NEA (50%)  
SUBMISSION

Y13 MOCK EXAM

**YEAR 13**  
A-LEVEL

**PAPER 2: DESIGNING & MAKING PRINCIPLES:**

- National & International Std. in Product Design

**PAPER 1: TECH. PRINCIPLES:**

- Protecting Designs & Intellectual Property

**PAPER 1: TECH. PRINCIPLES:**

- Design for manufacturing, maintenance, repair and disposal

**PAPER 1: TECH. PRINCIPLES:**

- Health & Safety

**PAPER 1: TECH. PRINCIPLES:**

- Design Communication

**PAPER 2: DESIGNING & MAKING PRINCIPLES:**

- Design for manufacture and project management

**PAPER 2: DESIGNING & MAKING PRINCIPLES:**

- Responsible design

**A. CORE TECHNICAL PRINCIPLES:**  
New and Emerging Technologies

**B. SPECIALIST TECHNICAL PRINCIPLES:**  
Timbers

**YEAR 11**  
GCSE

GCSE NEA (50%)  
BEGINS

**D&T Product Design GCSE AQA 8552**  
PAPER (50%): 2hrs

EXAM (50%): 2hrs

GCSE NEA (50%)  
SUBMISSION

**PAPER 2: DESIGNING & MAKING PRINCIPLES:**

- Design methods and processes

**PAPER 2: DESIGNING & MAKING PRINCIPLES:**

- Design theory
- Technology & culture

**PAPER 2: DESIGNING & MAKING PRINCIPLES:**

- Design processes

**PAPER 2: DESIGNING & MAKING PRINCIPLES:**

- Critical analysis & evaluation

**PAPER 2: DESIGNING & MAKING PRINCIPLES:**

- Selecting tools & equip.
- Accuracy in Design & man.

**C. DESIGNING & MAKING PRINCIPLES:**

- Prototype development
- Selection of materials and components

**C. DESIGNING & MAKING PRINCIPLES:**

- Investigation, primary & secondary data
- Environmental, social & economic challenge?

**C. DESIGNING & MAKING PRINCIPLES:**

- Selection of materials and components
- Tolerances
- Materials management
- Specialist tools & equipment
- Specialist techniques and processes

**C. DESIGNING & MAKING PRINCIPLES**  
Communication of Design Ideas:

- system and schematic diagrams
- audio and visual recordings
- mathematical modelling
- computer based tools
- modelling

**C. DESIGNING & MAKING PRINCIPLES:**

- The work of others
- Design strategies

**DESIGN & MAKE: Inclusive/Iterative Design**

**DESIGN & MAKE: SENSOR Electronic Components**

- Identify components and their use Soldering

**DESIGN & MAKE: INVENTOR/3D PRINT CAD/CAM**

**A. CORE TECHNICAL PRINCIPLES:**  
Systems approach to designing

- Inputs
- Processes
- Outputs

**FPT: DOOR STOP BIRD**  
Materials- Timbers

**DESIGN & MAKE: PHONE HOLDER**  
Materials- Polymers

**YEAR 10**  
GCSE

**A. CORE TECHNICAL PRINCIPLES:**  
Energy generation and storage

- Fossil Fuels
- Nuclear Power
- Renewable energy
- Energy Storage Systems

**A. CORE TECHNICAL PRINCIPLES:**  
Materials & their working properties

- Papers & Boards
- Natural & Manufactured Timbers
- Metals and Alloys
- Polymers
- Textiles

**A. CORE TECHNICAL PRINCIPLES:**  
New Materials

- Modern Materials
- Smart Materials
- Composite Materials
- Technical Textiles

**A. CORE TECHNICAL PRINCIPLES:**  
Mechanical Devices

- Different types of movement
- Changing magnitude & direction of force
- Lever/Linkages/Rotary Systems

**DESIGN & MAKE: MECHANICAL TOY**

- Cams
- Movement

**C. DESIGNING & MAKING PRINCIPLES:**  
Communication of Design Ideas:

- 1 & 2 Point Perspective
- Isometric
- Freehand/Contour Sketching
- Basic Rendering
- 3<sup>rd</sup>/1st angle orthographic
- Exploded/Sectional Drawings
- Annotated Drawings

**START GCSE:**  
AQA D&T 8552

**YEAR 8**

**YEAR 9**

**YEAR 7**

