

BTEC

ENTRY LEVEL



Manufacturing project – Design, prototype, manufacturing

Skateboard design challenge
Learners will develop their knowledge of:
Design principles
Materials
Tools and equipment
Measurement and calculations
Assembly and construction
Testing and Evaluations



Unit 1 – Materials - Investigation of Plastics and their properties

Learners will develop their knowledge of:
Polymer structure
Types of plastics
Physical Properties
Chemical Properties
Processing methods
Recycling and sustainability

Unit 2 – Mechanism - Electronic system

Learners will develop their knowledge of:
Fundamental of electronics
Circuit analysis
Electronic components
Circuit design
Design electronics
Communication systems
Safety and precautions
Testing and troubleshooting

YEAR 9



Unit 2– Mechanism – Wheels and pulleys

Learners will develop their knowledge of:
Types of wheels
Axles
Bearings
Types of pulleys , levers
Mechanical advantages
Load Capacity
Friction



Unit 1– Materials - Investigation of wood types and their properties

Learners will develop their knowledge of:
Types of wood
Grain patterns
Density
Moisture content
Workability
Sustainability
Finishing

YEAR 8



YEAR 7