

The Design & Technology Design Journey KS3-4

7 taking a brief
properties of Pewter
designing a mould
the work of others
avoiding clichés
drawing techniques
Initial designs
feedback
developing designs
CAD and CAM
health and safety
quality control
working with Pewter
use of cutting and wasting tools
Abrading techniques
Finishing
Zipgrade theory test

8 brief and specs
target market
initial designs
ergonomics and anthropometrics
30° isometric projection
peer feedback
iterative design
CAD and CAM
design development
final design
manufacturing diary
health and safety
quality control
testing in industry
evaluation
Branding and industry

Drawing Techniques
(focus on craft skills)

9 Kitchen Laminate
(focus on traditional woodworking skills)
Analysis and evaluation
Aeroply Challenge
final design
Solidworks
handle design
design development
wood turning
templates and jigs
quality control
health and safety
further tools and equipment
generating design ideas
materials, tools and equipment
task analysis and design spec
rendering materials
1 and 2 point perspective
exploded diagrams
3rd angle orthographic projection
30° isometric projection
crating and freehand accuracy

8 6 Rs Lamp
(focus on sustainable design)
evaluation and feedback
manufacturing techniques
cutting techniques
machine tools
soldering
quality control
health and safety
plan for manufacture
design specifications
iterative design
initial ideas
marking and measuring
re-using re-purposing
the work of others
taking a design brief
6Rs of sustainability

Garden Tool
(focus on prototyping)

10 Kitchen Implement
(focus on ergonomics and anthropometrics)
brief taking
choosing a client
work of others
generating design ideas
initial designs
clay modelling
developed designs
wood/polystyrene modelling
Solidworks modelling
final designs
diary of manufacture
analysis and evaluation
Context and brief
client analysis
sustainable design
rules of the challenge
containers
open source and patents

USB Lamp
(focus on woods, metals and plastics)

9 taking a brief
choosing a client
client profile
design brief and specifications
moodboard
cultural influences
geometric shapes
tessalation
generating design ideas
initial design ideas
Solidworks
working drawings
health and safety
quality control
jigs and formers
bending polymers
cutting metals
soldering
assembly
manufacturing diary
testing and evaluation

10 taking a brief
investigating client
work of others
research existing market
initial design
generating design ideas
design refinement
feedback
clay modelling
design refinement
wood/expanded polystyrene modelling
design refinement
Solidworks modelling
final design
evaluation

GCSE Non Exam Assessment
(50% of final grade)

10 GCSE NEA
client questionnaire
client interview
client choice
mind maps
Contexts
evaluation

10 Squashed Tomato
(focus on problem solving)
Team Challenge
modelling
final design
Solidworks
feedback
container modelling
rollers and wheels
peer assessment
pulley design
initial container design
generating design ideas
teamwork
3 classes of lever
pulleys
clips buckles and fixers

GCSE EXAM
(50% of final grade)
Theory revision
evaluation
peer feedback
review against specifications
client feedback
final outcome
manufacturing diary
quality control
health and safety
jigs and formers
life cycle assessment
plan for manufacture
materials testing
orthographic drawing
final design render
client interview
CAD design
client interview
clay/wood/ polystyrene modelling
design development
client interview
card modelling
design development
client interview
initial designs
generating design ideas
design brief and specifications
product research
work of others

11