A-LEVEL

DESIGN AND TECHNOLOGY

PRODUCT DESIGN

(7552)

This creative and thought-provoking qualification gives you the practical skills, theoretical knowledge and confidence to succeed in a number of careers.

Especially those in the creative industries.

You will investigate historical, social, cultural, environmental and economic influences on design and technology, whilst enjoying opportunities to put your learning in to practice by producing prototypes of your choice.

You will gain a real understanding of what it means to be a designer, alongside the knowledge and skills sought by higher education and employers.

The specification is structured so that schools can co-teach AS and A-level Design and Technology students.

What's assessed

Paper 1 - Technical principles

How it's assessed

- Written exam: 2 hours and 30 minutes
- 120 marks
- 30% of A-level

Questions

Mixture of short answer and extended response.

NEA – (Non examined assessment)

Practical application of technical principles, designing and making principles.

How it's assessed

- Substantial design and make project
- 100 marks
- 50% of A-level

Evidence

Written or digital design portfolio and photographic evidence of final prototype.

Paper 2 - Designing and making principles

How it's assessed

- Written exam: 1 hour and 30 minutes
- 80 marks
- 20% of A-level

Questions

Mixture of short answer and extended response questions.

Section A:

- Product Analysis: 30 marks
- Up to 6 short answer questions based on visual stimulus of product(s).

Section B:

- Commercial manufacture: 50 marks
- Mixture of short and extended response questions

Maths knowledge

a Confident use of number and percentages
Calculation of quantities of materials, costs and sizes
b Use of ratios Scaling drawings
c Calculation of surface areas and/or volumes
Determining quantities of materials
d Use of trigonometry Calculation of sides and angles as part of product design
e Construction, use and/or analysis of graphs and charts
Representation of data used to inform design decisions and evaluation of outcomes. Presentation of market data, user preferences, outcomes of market research
f Use of coordinates and geometry Use of datum points and geometry when setting out design drawings
g Use of statistics and probability as a measure of likelihood
Interpret statistical analyses to determine user needs and preferences.
Use data related to human scale and proportion to determine product scale and dimensions

Science knowledge

a Describe the conditions which cause degradation
Ensure products are designed to take account of potential corrosion due to environmental factors
b Know the physical properties of materials and explain how these are related to their uses. Understand the appropriate use of materials, including glass and ceramics, polymers, composites, woods, and metals, based on their physical properties

Task

1st Project - Term 1

Design a lamp and candlestick that links to the ideals of a design period

The lamp must incorporate usb power

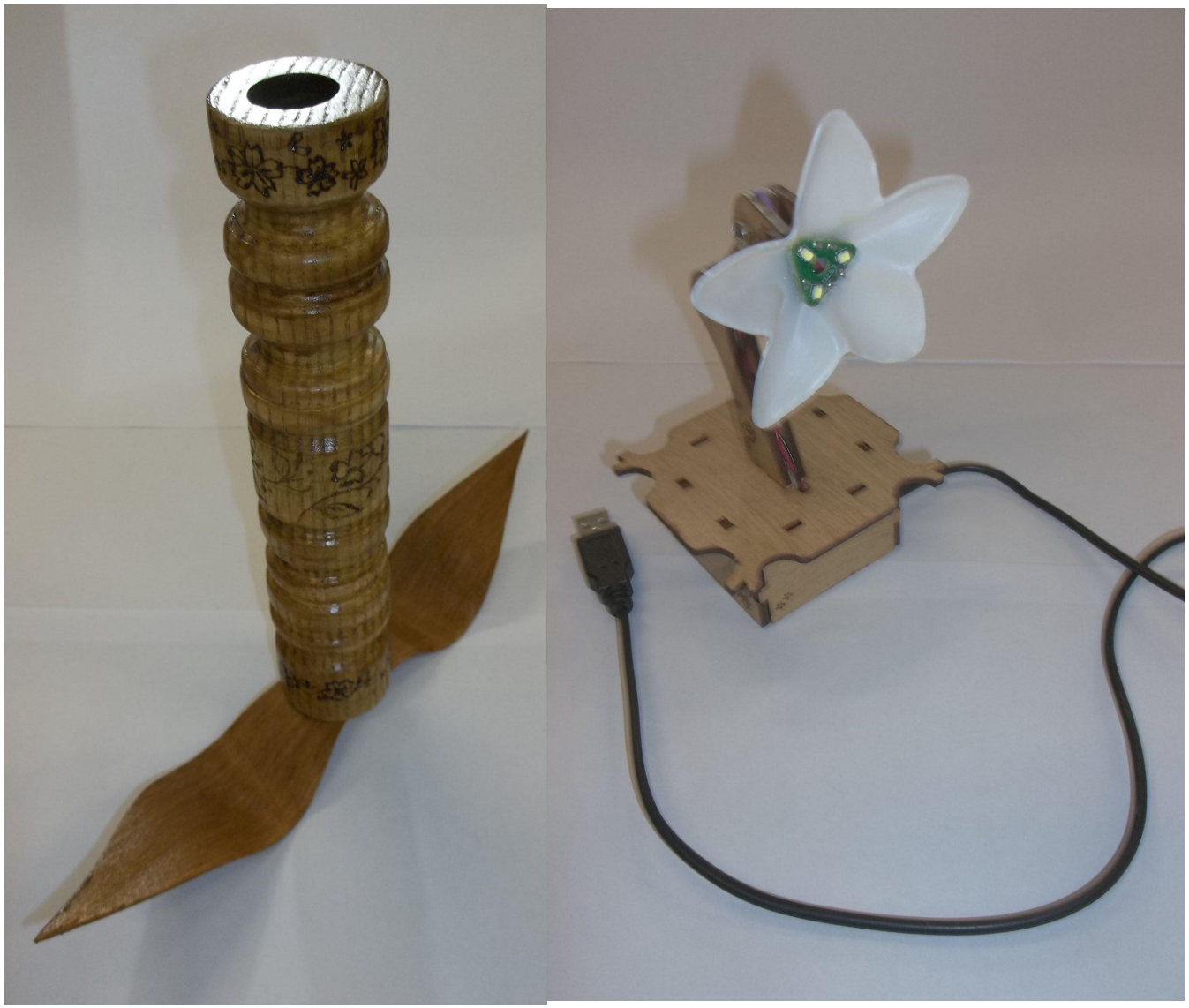
The candlestick must be turned on the lathe

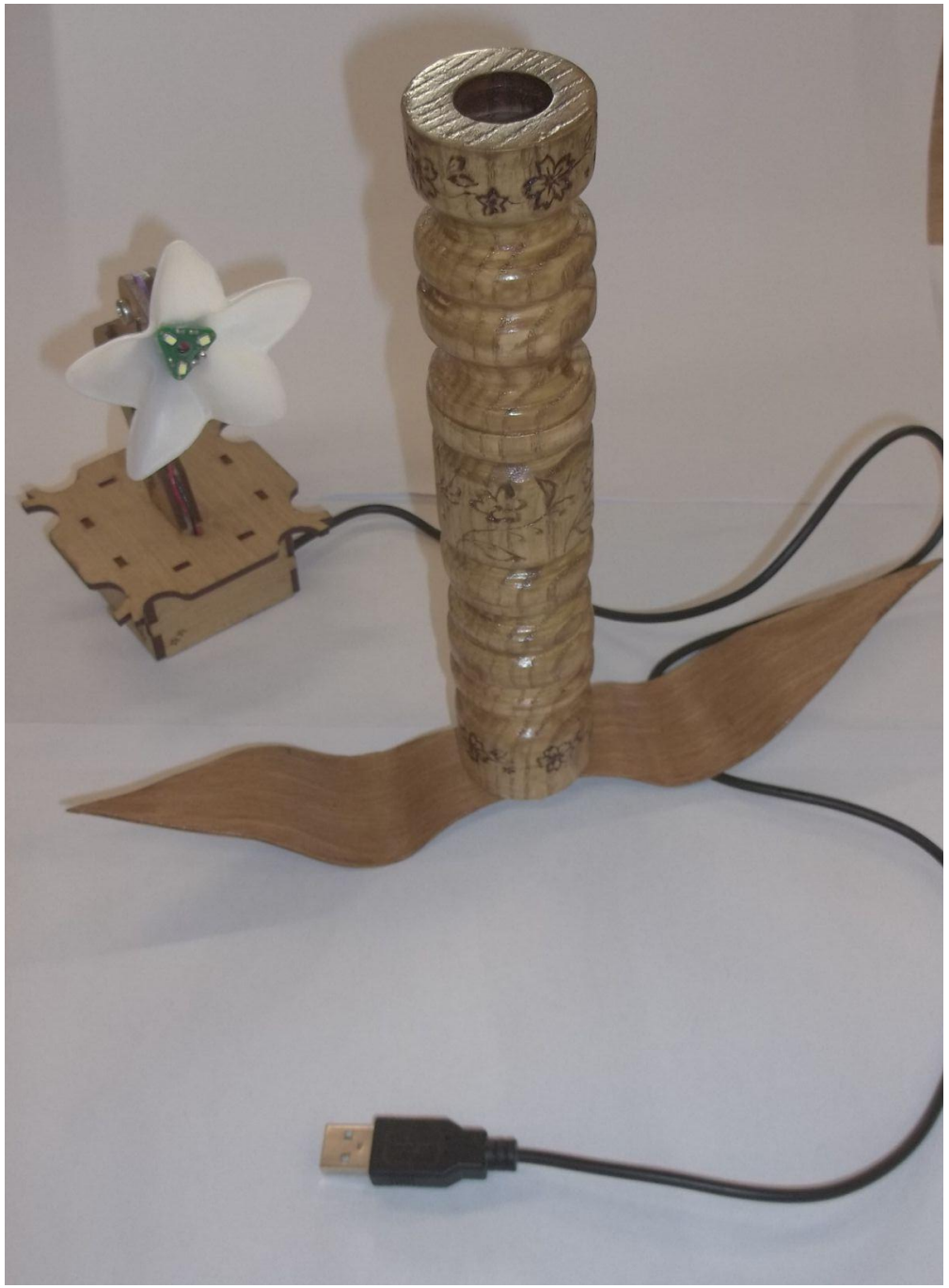
You should incorporate ideals from the period

You should show links between the two products

Ideally you will incorporate a range of skills

Arts and Crafts





Summer Research task

1. Produce a moodboard that relates to a design period

It must be labelled with key points to use later

You need to include images of products and ideals from that period

Ideally you will find key points for that period

1. Use those Key points to produce at least 1 concept idea for a lamp and candlestick and label the points to show where they have been considered.

Check AQA specification for which design periods you need to understand for the examination