GCSE Engineering

Unit 1 - Design and Graphic Communication
Unit 2 - Engineered Products

Student Assessment Activity – Teachers Notes

advancing learning, changing lives

Professional Development and Training

Joint Edexcel/DfES Initiative – September 2004

Assessment Activities

Introduction

These assessment activities have been written by a team of subject specific people including teachers and moderators. They are examples of the type of activities you might want to consider using with your students.

They gives a basic format that you might want to follow for your assessment activities. If you use this format remember **it is your responsibility to check that the work the students produce meets the requirements of the specification.**

Before you use these **assessment** materials remember that there are various preliminary stages to pass through -

Teaching – remember the 'What you need to learn' section of the specification – make sure you have read the specification and have fully addressed the detail of the unit. Teach the knowledge that is required.

Learning – students need to engage in activities that reinforce learning. This may be through group work, discussion, role plays, problem solving activities, worksheets, interviews, investigations or visits to real organisations.

Assessment – once the teaching and learning aspects are complete and you are confident that the student has gained the appropriate knowledge you will want to give them an assessment activity. The work that is then produced becomes the evidence for their portfolios.

Teaching and Learning

Skills the students need to learn

- Ensure the pupils know the vocabulary of the specification – you may want to put key words on display somewhere, or use the development of understanding of key words as an activity; encourage them to use correct vocabulary from the start.
- Students will need help to differentiate between a description and an evaluation – the relevant words in the mark bands.
- Students will need practice at applying the concepts and vocabulary in real contexts – have activities that replicate the world of work.
- Ensure the skills developed relate to the standard required by industry. In Engineering for example students must be able to produce engineering drawings that comply with sector specific standards and conventions

Links/External needs/Resources

- Industry links could be used to provide useful resources and give the students opportunities to experience different types of organisations/products relevant to the course – visits, case studies, speakers, sample documentation
- Check out the resources and other advice in the Teachers Guide

Delivery

- These are vocational courses – avoid making it too theoretical.
- When planning the course build in the vocational relevance
- When delivering the course make the most of links with industry/commerce
- Make the classroom an 'adult learning environment'

Assessment

- Check assessment activities to make sure they allow the student to
  - demonstrate learning and work independently where possible so as to access the higher mark bands
  - produce the right evidence across the mark bands
- Make sure the students have access to the most appropriate resource in order to get the unit evidence right, here are a few examples of the things you need to remember but it is important that you check the unit specifications carefully:
  - Applied Art & Design – check the specifications carefully if you are integrating the delivery
  - Applied Business – make sure they have chosen the right organisation
  - Applied ICT – they have chosen the right business organisation to investigate
  - Applied Science – make sure they cover all the topics in Unit 1 'What you need to learn' and that it is relevant to the content
  - Engineering – they have a client brief and a product specification to include a set of drawings
  - Health & Social Care – they have chosen two different clients with an appropriate range of needs who use the services of their chosen organisation
  - Leisure & Tourism – they need practice in customer service situations
  - Manufacturing – they have the right client Brief and Production Plan including a product specification
- **Check the specification carefully to ensure that you have covered the key points like the things noted above**
- Ensure students work is internally moderated
- Attend Getting the Standards Right events to help with marking

Assessment Activities in this pack

These follow closely the structure of the assessment evidence grid and give suggested activities the students might do in each of the mark bands.

The Front Page

This clearly identifies the 'Title of the Assessment Activity', Subject, Unit Number and Title. The subject and unit number are then given in the footer in case the pages get misplaced.

Get Ready This states the banner – the first line in the assessment evidence grid – which states the nature of the work the student has to produce.

Get Set This gives the context in which the work is to be done. This reinforces the nature of the GCSEs and gives a work-related context.

Go The assessment criteria are listed here – these form the basis of the assessment activities that follow.

The pages that follow take one of the criteria at a time and suggest activities in the given context for each mark band. Clearly just stating the work the students might do does not guarantee that they will do it, nor that what they produce meets the evidence requirements. It is important therefore to check the work and give feedback to the students.

Formative and Summative Feedback

Teachers giving feedback to the students as they work through the activities can motivate them to achieve their full potential. Once the work has been assessed the **mark record sheet** should be completed and put with the work. The work can then go in the **portfolio**.

Mark Record Sheets

These are given in the Teachers Guide.

Portfolio Management

- Only the evidence that meets the assessment criteria should be put in the portfolio – nothing else, no teaching notes, handouts or unnecessary materials. Where questionnaires have been used then one example with a summary should be included – not all the completed questionnaires
- Look at the sheet headed Virtual Portfolio included with these notes – it outlines a portfolio structure that you might want to follow
- Portfolios must have a front sheet clearly indicating the student name and qualification
- Each unit should have a separate section in the portfolio – with the possible exception of Applied Science and Applied Art & Design
- Annotate the work – refer again to the instructions, show the moderator where the evidence can be found and why marks have been awarded. Moderators should be able to locate the evidence quickly and easily
- Use the mark record sheets given
- Students should put page numbers on the work
- Witness statements should be detailed, what exactly has been witnessed, by whom and when
- Make sure any photographs are real evidence of an individual student's work – a photograph of a class/group without annotation is not evidence. The photograph must clearly show the specified student with the specified evidence and must be annotated/signed by the teacher
- Do not put work in plastic wallets it is preferable if each unit of work is hole punched and treasury tagged on the left hand side

Other types of evidence

Witness Statements

A witness statement should be a statement about an individual student outlining what the witness wishes to state about the student in the context of the assessment evidence criteria.

Witness statements should not be a list photocopied for each member of the class – such statements are meaningless. If lists are used anything ticked should be supported by a statement outlining what the individual student should be credited with having done or achieved.

Photographs

Photographs are only acceptable as evidence if it is clearly annotated – the performance of the individual student clearly seen. A group photograph around an object/display or such like without any annotation is not evidence. Evidence must be of what the individual student did as part of the group outcome.

Teachers' Guide and Portfolio Marking Guidance

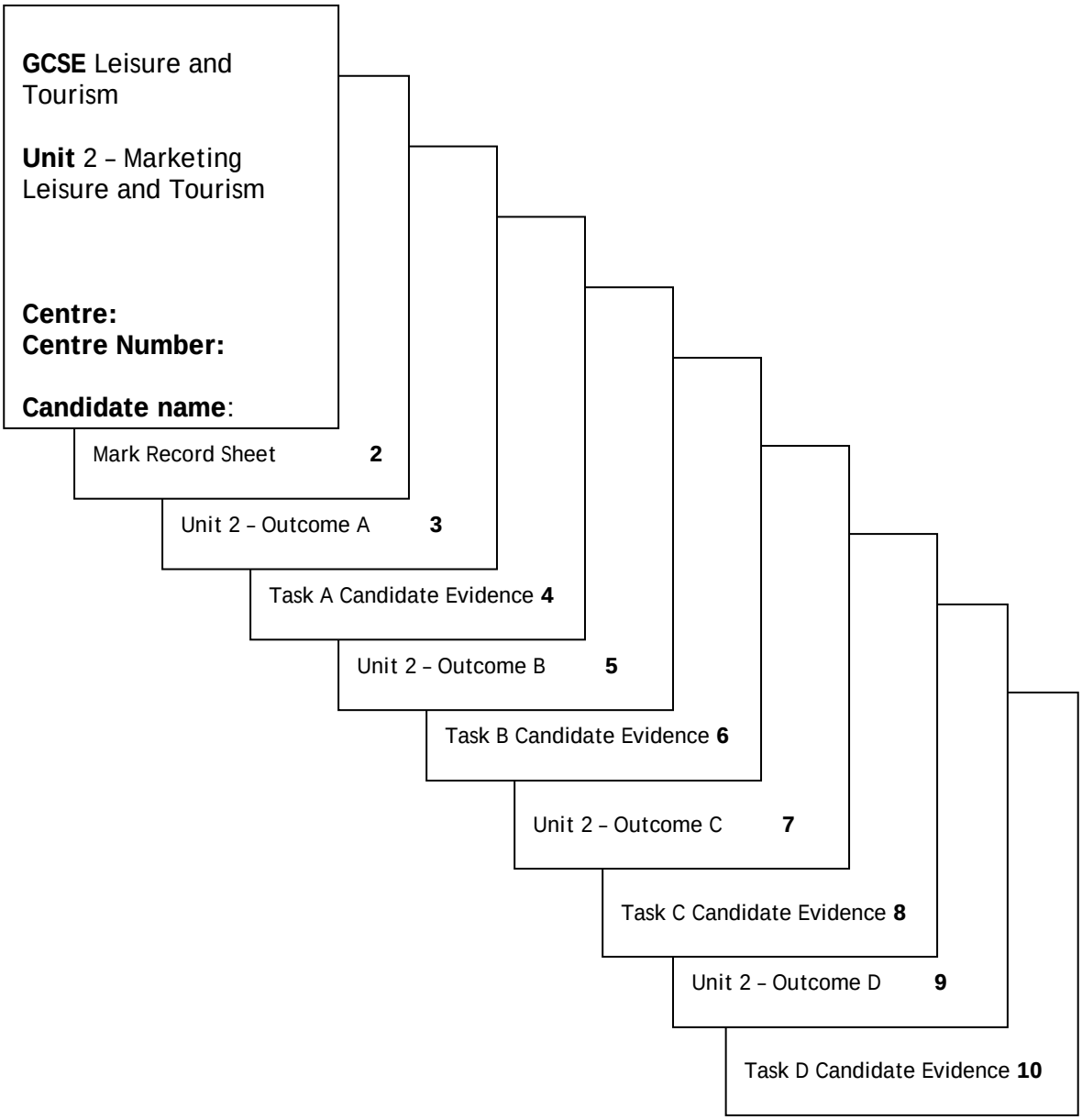
Teachers should refer to the Edexcel Teachers Guide and Portfolio Marking Guidance for further use of Witness Statements and Observation Records.

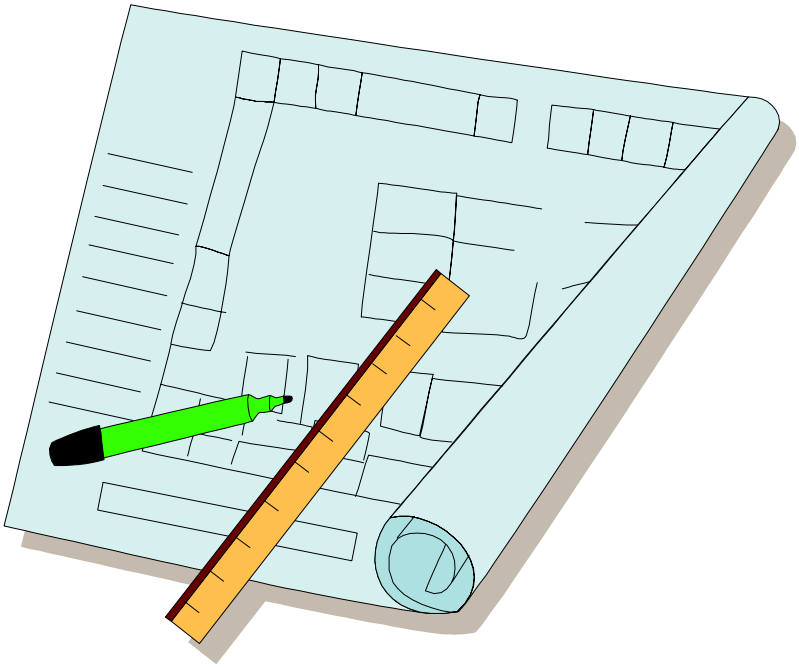
Virtual Portfolio

Example from Leisure and Tourism

Unit 2 – Marketing Leisure and Tourism

The following represents a virtual portfolio. It incorporates standard sheets to be included in the portfolio. Some of these sheets will need to have candidate information while others need teachers to provide feedback on candidate performance.





GCSE Engineering

Unit 1 – Design and Graphic Communication

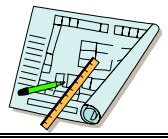
Student Assessment Activities

advancing learning, changing lives

Professional Development and Training

TITLE OF ASSESSMENT ACTIVITY	Remote control car
SUBJECT	Engineering
UNIT NUMBER AND TITLE	Unit 1 - Design and Graphic Communication

	**GET READY:**	You need to produce a design specification and design solution for an engineered product.
	**GET SET:**	A local toy manufacturer called LAnD toys, has asked you to design a remote control car. It is intended for primary school age children (age 6-11) and needs to be small enough to be pocket sized, appealing to the age range and suitable for indoor and outdoor use. It needs to be powered by rechargeable batteries that will last for at least 2 hours playing time and which can be recharged without having to be removed from the car overnight. An initial batch of 10 000 is required with a selling price of £10. It must meet the required sector safety standards.
	**GO:**	You need to produce a design specification and design solution for an engineered product including: a) an analysis of the brief with key features of the product or service b) details of the product criteria and production constraints c) a range of ideas and design solutions d) evidence of how you tested and selected the final solution e) evidence of how you selected and used engineering drawing techniques f) engineering drawings and technical details g) evidence of how the solution meets the criteria with suggested modifications to improve fitness for purpose.



TITLE OF ASSESSMENT ACTIVITY - Remote Control Car.

What must be included in your portfolio:

You need to produce a design specification and design solution for an engineered product including:

a) an analysis of the brief with key features of the product or service.

What you must do to gain 1-2 marks/mark band 1

- an analysis of the brief to identify basic client needs, with the identification of some key features of the engineering product.

Suggested task

i) Produce a list of the most obvious client needs, eg simple to operate.

ii) Produce a list of the most obvious key features, eg size.

What you must do to gain 3-4 marks/mark band 2

- an analysis of the brief to identify the main client needs, with a description of the main key feature of the engineering product.

Suggested task

i) Describe the main client needs, outlining a more precisely defined group eg suitable to be operated by a 6 – 10 year old.

ii) Describe the main features of the product with some qualification, eg should be pocket sized.

What you must do to gain 5-6 marks/mark band 3

- an analysis of the brief to explain the main client needs, with a justification of the main key feature of the engineering product.

Suggested task
i) Explain the main client needs, eg simple to operate because this age group cannot operate complicated controls. ii) Explain the main key features, eg should be pocket sized so it can be taken and used indoors and out.

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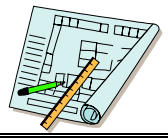

TITLE OF ASSESSMENT ACTIVITY - Remote Control Car.

What must be included in your portfolio:

You need to produce a design specification and design solution for an engineered product including:

b) details of the product criteria and production constraints.

What you must do to gain 1-2 marks/mark band 1

- a design specification that describes basic details of the product and of the production constraints.

Suggested task

i) Produce a design specification that provides a brief description of some basic product criteria eg must be weatherproof.

ii) Describe, in simple terms, some of the basic product constraints eg cost.

What you must do to gain 3–4 marks/mark band 2

- a design specification that describes some of the main details of the product and of the production constraints.

Suggested task

i) Produce a design specification that provides a brief description of the main details of the product eg must be weatherproof so it can be used outside.

ii) Describe, in some detail, the basic product constraints, eg selling price should be no more than £10.

What you must do to gain 5-6 marks/mark band 3

- a design specification that describes the main details of the product and of the production constraints.

Suggested task
i) Produce a design specification that provides a full description of the main details of the product, eg must be weatherproof because children of this age are likely to leave it outside overnight. ii) Describe the main relevant production constraints, eg affordable for the age group to save up and buy.

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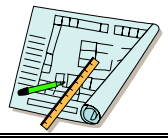

TITLE OF ASSESSMENT ACTIVITY - Remote Control Car.

What must be included in your portfolio:

You need to produce a design specification and design solution for an engineered product including:

c) a range of ideas and design solutions.

What you must do to gain 1-2 marks/mark band 1

- the generation of basic design ideas and the development of simple design solutions.

Suggested task

i) Produce 2 or 3 freehand sketches of basic ideas.

ii) Develop simple design solutions with limited understanding of scientific principles eg material used for body.

What you must do to gain 3-4 marks/mark band 2

- the generation of alternative design ideas and the development, in some detail, of design solutions.

Suggested task

i) Produce 2 or 3 freehand sketches of genuinely different ideas.

ii) Develop in some detail design solutions with understanding of scientific principles, eg material used for body is suitable for a range of manufacturing processes.

What you must do to gain 5–6 marks/mark band 3

- the generation of imaginative design ideas and the development of detailed and appropriate design solutions.

Suggested task
i) Produce 2 or 3 freehand sketches that show imaginative quality design solutions. ii) Develop detailed design solutions with full understanding of scientific principles, eg material used and manufacturing process meets design cost requirements.

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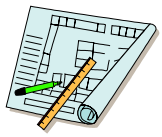

TITLE OF ASSESSMENT ACTIVITY - Remote Control Car.

What must be included in your portfolio:

You need to produce a design specification and design solution for an engineered product including:

d) evidence of how you tested and selected the final solution.

What you must do to gain 1–2 marks/mark band 1

- limited testing against the design criteria to select and outline the final design solution.

Suggested task
i) Compare each design against some of the features of the design specification.
ii) Choose your best design solution and give a reason why.

What you must do to gain 3-4 marks/mark band 2

- a range of testing against the design criteria to select and describe the final design solution.

Suggested task
i) Carry out a range of tests linked to most of the main design criteria eg a matrix table.
ii) Give a detailed description of how your best design solution meets most of the design criteria.

What you must do to gain 5-6 marks/mark band 3

- objective testing against the design criteria to select and justify the final design solution.

Suggested task
i) Carry out range of tests that demonstrate that all the main design criteria have been met, eg a matrix table. ii) Explain how your best design solution meets all the design criteria.

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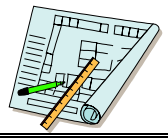

TITLE OF ASSESSMENT ACTIVITY - Remote Control Car.

What must be included in your portfolio:

You need to produce a design specification and design solution for an engineered product including:

e) evidence of how you selected and used engineering drawing techniques.

What you must do to gain 1-2 marks/mark band 1

- the selection and use of a range of engineering drawing techniques to communicate, in some detail, the final solution.

Suggested task

Choose 1 drawing technique for your final design and state why you used it.

What you must do to gain 3-4 marks/mark band 2

- the selection and use of a limited range of engineering drawing techniques to communicate the final solution.

Suggested task

Choose a range of drawing techniques for your final design and describe why you used each technique.

What you must do to gain 5-6 marks/mark band 3

- the selection and use of an effective range of engineering drawing techniques to communicate, in detail, the final solution.

Suggested task

i) Choose a range of drawing techniques for your final design and explain how each technique is suitable for the intended audience.

ii) Produce a range of accurate and detailed drawings.

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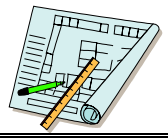

TITLE OF ASSESSMENT ACTIVITY - Remote Control Car.

What must be included in your portfolio:

You need to produce a design specification and design solution for an engineered product including:

f) engineering drawings and technical details.

What you must do to gain 1-2 marks/mark band 1

- engineering drawings that have limited compliance with sector-specific standards and conventions, and that use some common standard symbols.

Suggested task

Produce an engineering drawing of your final design which meets some standards and conventions and uses some relevant common standard symbols, eg a title, name block, scale and borders.

What you must do to gain 3-4 marks/mark band 2

- engineering drawings that comply, in some detail, with sector-specific standards and conventions, describing the purpose of the components and features used.

Suggested task

i) Produce an engineering drawing of your final design which meets most standards and conventions eg a title, name block, scale and borders, dimensions and electrical or mechanical features.

ii) Describe some of the components and features.

What you must do to gain 5-6 marks/mark band 3

- appropriate engineering drawings that comply, in detail, with sector-specific standards and conventions, explaining the purpose of the components and features used.

Suggested task
i) Produce a detailed engineering drawing of your final design that meets all appropriate standards and conventions. i) Explain the purpose and use of the components and features in your drawing.

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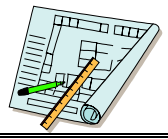

TITLE OF ASSESSMENT ACTIVITY - Remote Control Car.

What must be included in your portfolio:

You need to produce a design specification and design solution for an engineered product including:

g) evidence of how the solution meets the criteria with suggested modifications to improve its fitness for purpose.

What you must do to gain 1-2 marks/mark band 1

- limited description of how the final design solution meets the brief and specification, with an identification of some relevant modifications.

Suggested task

i) Produce short statements about how your final design solution meets the design brief and specification.

ii) Discuss your final design in groups or with the client and list some relevant modifications which might improve your design.

What you must do to gain 3-4 marks/mark band 2

- description, in some detail, of how the final design solution meets the brief and specification, describing relevant modifications.

Suggested task

i) Produce a detailed description of how your final design solution meets the main key features of the design brief and specification.

ii) Discuss your final design in groups or with the client and describe how you could make some relevant modifications which would improve your design eg provide a wide range of colours to make it more appealing to 6-10 year olds.

What you must do to gain 5-6 marks/mark band 3

- an explanation, in some detail, of how the final design solution meets the brief and specification, explaining relevant modifications.

Suggested task

i) Produce a detailed explanation of how your final design solution meets the main key features of the design brief and specifications.

ii) Discuss your final design in groups or with the client and explain how you would make some relevant modifications which would improve your design eg by providing interchangeable coloured bodies that children would swap with their friends.

Formative Feedback **Signature:** **Date:**
Summative Feedback **Signature:** **Date:**

GCSE Engineering

Unit 2 – Engineered Products

Student Assessment Activities

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Professional Development and Training

TITLE OF ASSESSMENT ACTIVITY	Making a Desktop Lamp
SUBJECT	Engineering
UNIT NUMBER AND TITLE	Unit 2 - Engineered Products

	**GET READY:**	You need to make an engineered product.
	**GET SET:**	You are to manufacture a Desktop Lamp which comprises a base and feet, two uprights, a lamp hood and an electrical circuit. The engineering drawings for the assembled Desktop Lamp and the circuit diagram along with a parts list on the assembly drawing and an electrical components list are provided. Further clarification to help you understand this product specification is also given.
	**GO:**	You need to make an engineered product including evidence of: a) how you used a product specification and interpreted engineering drawings b) information about details of resources and processing requirements c) information about production details and constraints d) how you selected and used materials to safely make your product e) how you selected and used parts and components to safely make your product f) how you selected and used processes, tools and equipment to safely make your product g) how you tested your product and how it complied to the standards required.

TITLE OF ASSESSMENT ACTIVITY – Making a Desktop Lamp

What must be included in your portfolio:

You need to make an engineered product including evidence of:

a) how you used a product specification and interpreted engineering drawings.

What you must do to gain 1-2 marks/mark band 1

- use of some information in a product specification and interpretation of basic details in engineering drawings and/or diagrams.

Suggested task

Use the drawings and specification provided to produce a basic list of what you need to make the product, eg materials, tools and equipment. You can get help from your tutor.

What you must do to gain 3-4 marks/mark band 2

- use of the main information in a product specification and interpretation of the main details in engineering drawings and/or diagrams.

Suggested task

Use the drawings and specification provided to produce a list of the main information that you will need to make the product, eg size of materials, specific tools and equipment. You can get limited help from your tutor.

What you must do to gain 5-6 marks/mark band 3

- confident use of the main information in a product specification and competent interpretation of the main details of engineering drawings and/or diagrams.

Suggested task
Use the drawings and specification provided to produce a list of the main information that you will need to make the product, eg size of materials, specific tools and equipment. You must do this independently.

Formative feedback	
Signature:	**Date:**
Summative feedback	
Signature:	**Date:**

TITLE OF ASSESSMENT ACTIVITY – Making a Desktop Lamp

What must be included in your portfolio:

You need to make an engineered product including evidence of:

b) information about details of resources and processing requirements.

What you must do to gain 1-2 marks/mark band 1

- a production plan that identifies basic details of resources and processing requirements.

Suggested task
Produce a production plan which identifies basic details of resources to be used and basic details of processing requirements, eg materials, parts and components.

What you must do to gain 3-4 marks/mark band 2

- a production plan that identifies basic details of resources and processing requirements.

Suggested task
Produce a production plan which describes some of the main details of resources to be used and describes the processing requirements, eg materials, parts and components.

What you must do to gain 5-6 marks/mark band 3

- a production plan that explains the main details of the resources and processing requirements.

Suggested task
Produce a production plan which explains the main details of resources to be used and explains the processing requirements, eg materials, parts and components.

Formative feedback	
Signature:	**Date:**
Summative feedback	
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TITLE OF ASSESSMENT ACTIVITY – Making a Desktop Lamp

What must be included in your portfolio:

You need to make an engineered product including evidence of:

c) information about production details and constraints.

What you must do to gain 1-2 marks/mark band 1

- a production plan that identifies basic details of resources and processing requirements.

Suggested task
Produce a production plan which identifies the basic details about the production requirements and constraints, eg quality control points.

What you must do to gain 3-4 marks/mark band 2

- a production plan that describes, in some detail, production requirements and constraints.

Suggested task
Produce a production plan which describes in some detail the production requirements and constraints, eg quality control points.

What you must do to gain 5-6 marks/mark band 3

- a production plan that explains the production requirements and constraints.

Suggested task
Produce a production plan which explains the production requirements and constraints, eg quality control points.

Formative feedback	
Signature:	**Date:**
Summative feedback	
Signature:	**Date:**

TITLE OF ASSESSMENT ACTIVITY – Making a Desktop Lamp

What must be included in your portfolio:

You need to make an engineered product including evidence of:

d) how you selected and used materials to safely make your product.

What you must do to gain 1-2 marks/mark band 1

- a selection, with guidance, of some appropriate materials, using them safely with some skill to make a product.

Suggested task

Produce a list of materials that you will need to manufacture the product. You can get help from your tutor.

Get an observation record or annotated photographs from your tutor stating that you used the materials safely and with some skill. You need to seek authority from your tutor before you connect your Lamp assembly to the electricity.

What you must do to gain 3-4 marks/mark band 2

- a selection, with limited guidance, of appropriate materials, using them safely with skill to make a product.

Suggested task

Produce a list of materials that you will need to manufacture the product. You can get limited help from your tutor.

Get an observation record or annotated photographs from your tutor stating that you used the materials safely and with skill. You need to seek authority from your tutor before you connect your Lamp assembly to the electricity.

What you must do to gain 5-6 marks/mark band 3

- an independent selection of appropriate materials, using them safely with skill and accuracy to make a product.

Suggested task
Produce a list of materials that you will need to manufacture the product. You should do this independently. Get an observation record or annotated photographs from your tutor stating that you used the materials safely and with skill and accuracy. You need to seek authority from your tutor before you connect your Lamp assembly to the electricity.

Formative feedback **Signature:** **Date:**
Summative feedback **Signature:** **Date:**

TITLE OF ASSESSMENT ACTIVITY – Making a Desktop Lamp

What must be included in your portfolio:

You need to make an engineered product including evidence of:

e) how you selected and used parts and components to safely make your products.

What you must do to gain 1-2 marks/mark band 1

- a selection, with guidance, of some appropriate parts and components, using them safely with some skill to make a product.

Suggested task

Produce a list of parts and components that you will need to manufacture the product. You can get help from your tutor.

Get an observation record or annotated photographs from your tutor stating that you used the parts and components safely and with some skill. You need to seek authority from your tutor before you connect your Lamp assembly to the electricity.

What you must do to gain 3-4 marks/mark band 2

- a selection, with limited guidance, of appropriate parts and components, using them safely with skill to make a product.

Suggested task

Produce a list of parts and components that you will need to manufacture the product. You can get limited help from your tutor.

Get an observation record or annotated photographs from your tutor stating that you used the parts and components safely and with skill. You need to seek authority from your tutor before you connect your Lamp assembly to the electricity.

What you must do to gain 5-6 marks/mark band 3

- an independent selection of appropriate parts and components, using them safely with skill and accuracy to make a product.

Suggested task
Produce a list of parts of components that you will need to manufacture the product. You should do this independently. Get an observation record or annotated photographs from your tutor stating that you used the parts and components safely and with skill and accuracy. You need to seek authority from your tutor before you connect your Lamp assembly to the electricity.

Formative feedback	
Signature:	**Date:**

Summative feedback	
Signature:	**Date:**

TITLE OF ASSESSMENT ACTIVITY – Making a Desktop Lamp

What must be included in your portfolio:

You need to make an engineered product including evidence of:

f) how you selected and used processes, tools and equipment to safely make your product.

What you must do to gain 1-2 marks/mark band 1

- a selection, with guidance, of some appropriate processes, tools and equipment, using them safely with some skill to make a product.

Suggested task

Produce a list of processes, tools and equipment that you will need to manufacture the product. You can get help from your tutor.

Get an observation record or annotated photographs from your tutor stating that you used the processes, tools and equipment safely and with some skill. You need to seek authority from your tutor before you connect your Lamp assembly to the electricity.

What you must do to gain 3-4 marks/mark band 2

- a selection, with limited guidance, of appropriate processes, tools and equipment, using them safely with skill to make a product.

Suggested task

Produce a list of processes, tools and equipment that you will need to manufacture the product. You can get limited help from your tutor.

Get an observation record or annotated photographs from your tutor stating that you used the processes, tools and equipment safely and with skill. You need to seek authority from your tutor before you connect your Lamp assembly to the electricity.

What you must do to gain 5-6 marks/mark band 3

- an independent selection of appropriate processes, tools and equipment, using them safely with skill and accuracy to make a product.

Suggested task
Produce a list of processes, tools and equipment that you will need to manufacture the product. You should do this independently. Get an observation record or annotated photographs from your tutor stating that you used the processes, tools and equipment safely and with skill and accuracy. You need to seek authority from your tutor before you connect your Lamp assembly to the electricity.

Formative feedback	
Signature:	**Date:**
Summative feedback	
Signature:	**Date:**

TITLE OF ASSESSMENT ACTIVITY – Making a Desktop Lamp

What must be included in your portfolio:

You need to make an engineered product including evidence of:

g) how you tested your product and how it complied to the standards required.

What you must do to gain 1-2 marks/mark band 1

- basic testing against the product specification and limited compliance to the standards required.

Suggested task
Carry out a basic test on your product and make a list showing how it meets some of the standards required of the specification, eg dimensions. You need to seek authority from your tutor before you connect your Lamp assembly to the electricity.

What you must do to gain 3-4 marks/mark band 2

- a range of testing against the product specification and compliance to the main standards required.

Suggested task
Carry out a range of tests on your product and describe how it meets most of the standards required of the specification, eg dimensions, tolerances. You need to seek authority from your tutor before you connect your Lamp assembly to the electricity.

What you must do to gain 5-6 marks/mark band 3

- objective testing against the product specification and consistent compliance to the main standards required.

Suggested task
Carry out a range of tests on your product and explain how it meets all of the standards required of the specification, eg dimensions, tolerances, fit, finish, performance. You need to seek authority from your tutor before you connect your Lamp assembly to the electricity.

Formative feedback

Signature: **Date:**

Summative feedback

Signature: **Date:**

Brief for the Product Specification for a Desktop Lamp

The Product Specification for a Desktop Lamp is given on 8 pages of drawings and lists. This brief helps you when working with this specification.

A range of suggested electrical components is given. You need to confirm with your tutor whether these components or any alternatives are to be used in the manufacture of your Desktop Lamp. Variations are allowed as your tutor may prefer to use different types of components to those specified.

The design is for a 240V mains supply so care needs to be considered at all stages of its assembly but particularly on the testing stage where **you MUST discuss this with your tutor BEFORE you make any connection to the electrical supply**. The timing of the fitting of these electrical components is left to you and your tutor to decide due to any variations of components that may have been used. From the Product Specification supplied it is expected therefore that this will be a post-lamp assembly operation.

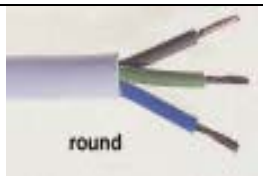
The selection of several items is left for you to decide. For example the 'Blind Pop Rivet' is not fully specified, nor is the 'Self Tapping Screws'.

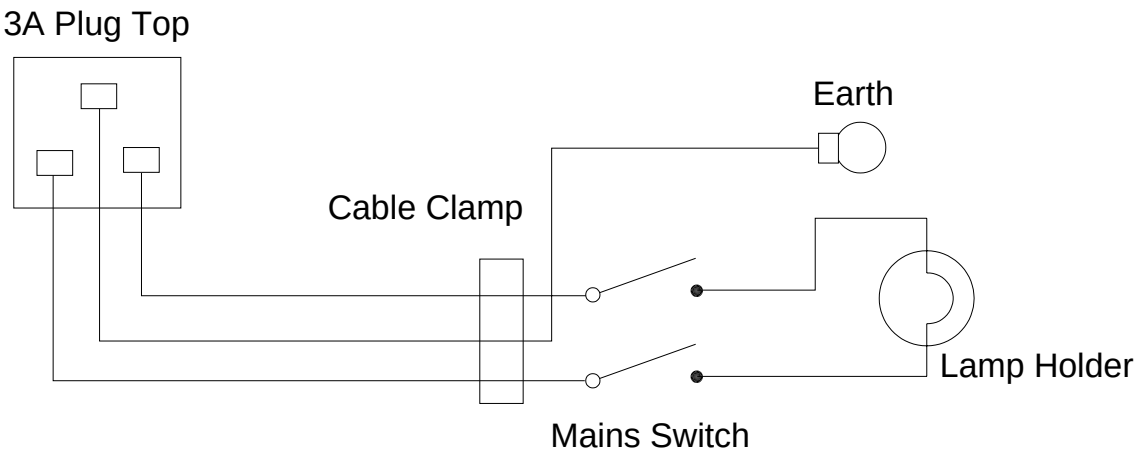
You need to consider your decisions when carrying out the tasks specified in this Assessment Activity – 'Making a Desktop Lamp'.

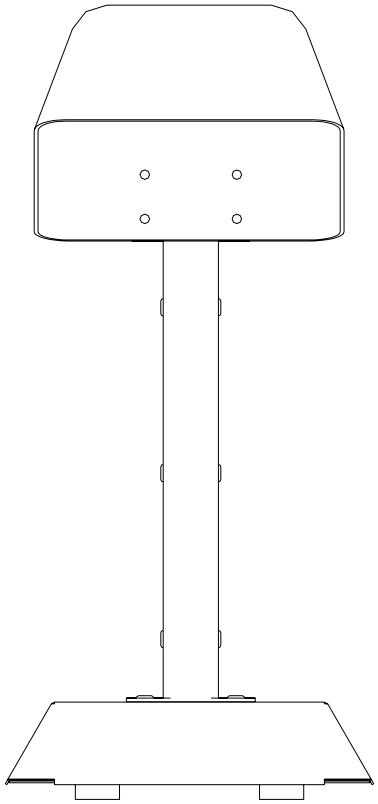
You need to be aware that this Product Specification has not been fully checked. Should you find any errors in any of the drawings it is appropriate that you highlight this to your tutor when interpreting these drawings. This is another way of showing that you understand drawings.

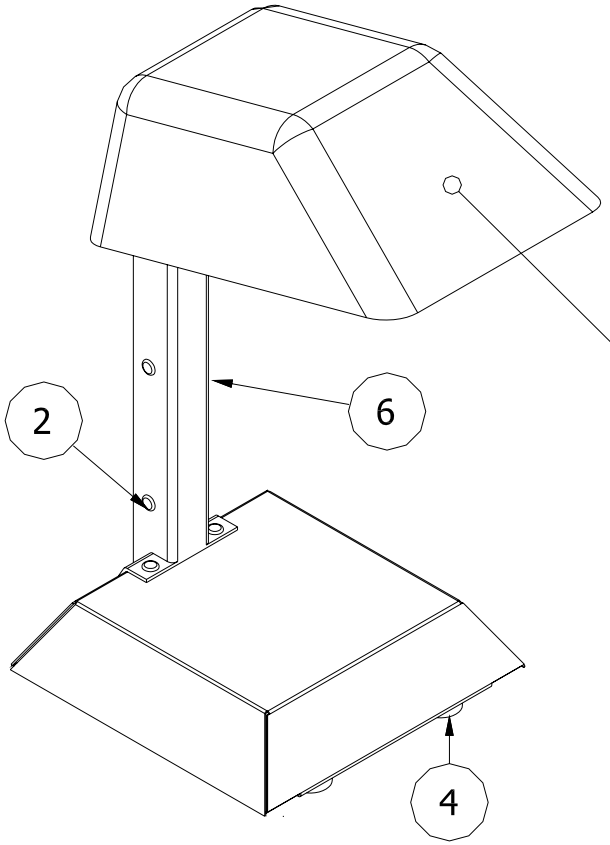
Desktop Lamp Electrical Components

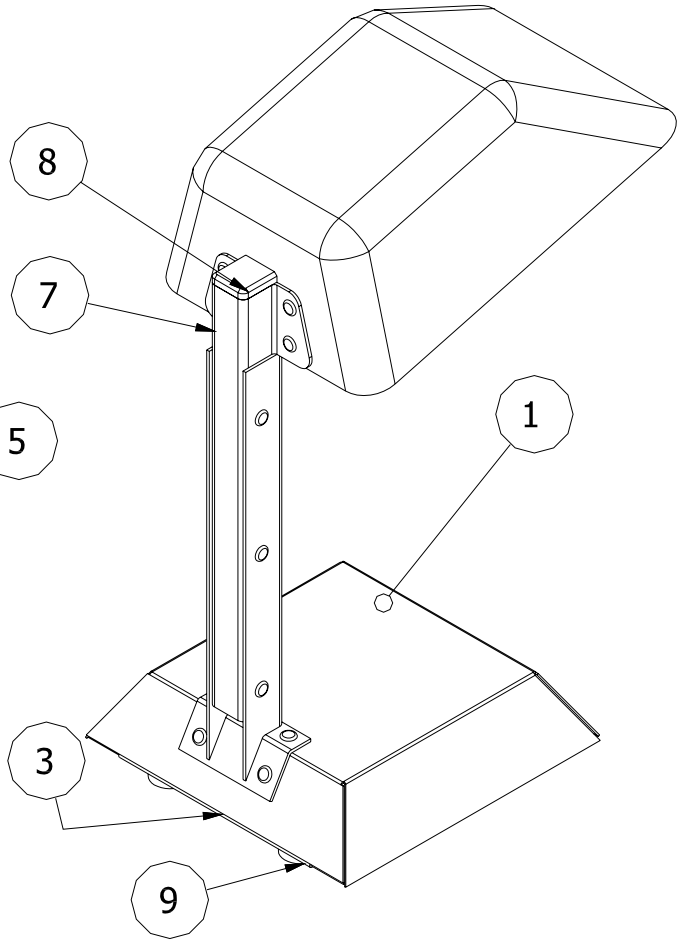
Available from RS Components: rswww.com

Item	Description	Stock Number	Quantity
	Brass Lamp holder	293-5986	1
	Lamp 240V BC 40W	226-9289	1
	Switch Mains	250-7929	1
	Ring Terminal M6	447-982	1
	Cable Clamp	543-866	1
	3 Core Mains Cable	377-962	1
	Plug Top 3A	490-009	1



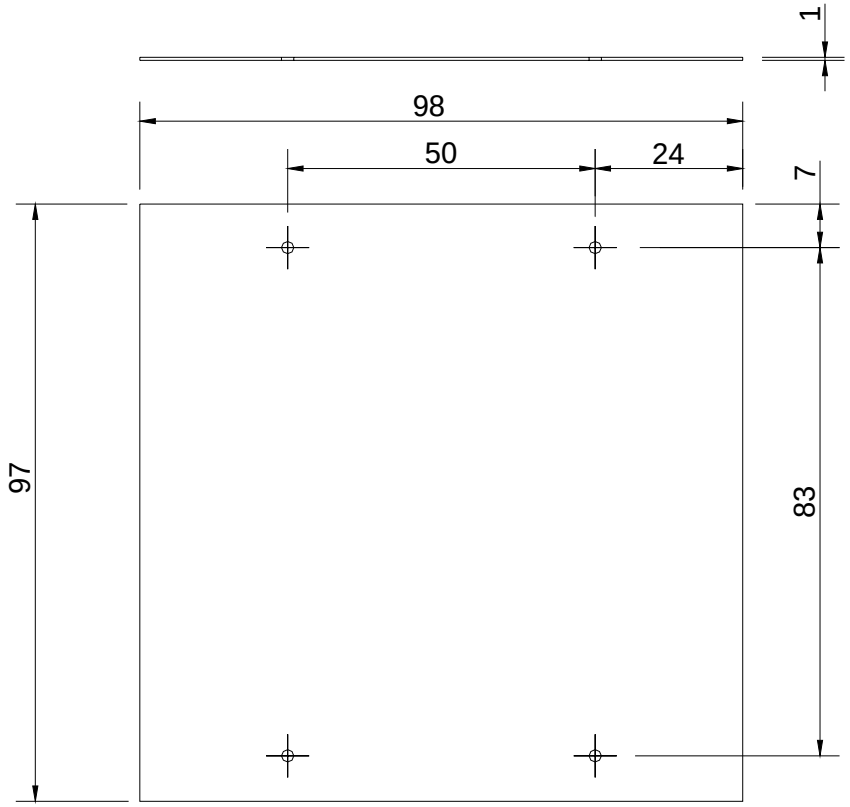


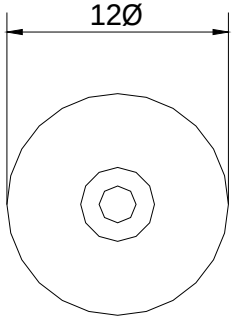


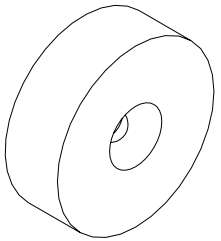


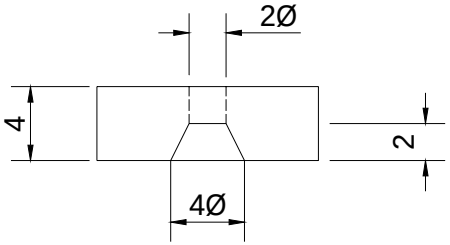
Parts List		
9	4	Self Tapping Screws
8	1	upright bung
7	1	upright2
6	1	upright1
5	1	lamp hood
4	4	Base foot
3	1	base plate
2	14	Blind 'Pop' Rivet
1	1	Lamp base
ITEM	QTY	PART NUMBER

Designed by	Checked by			
I Mawdsley				
Desktop Lamp		Parts List		
			Edition	Sheet

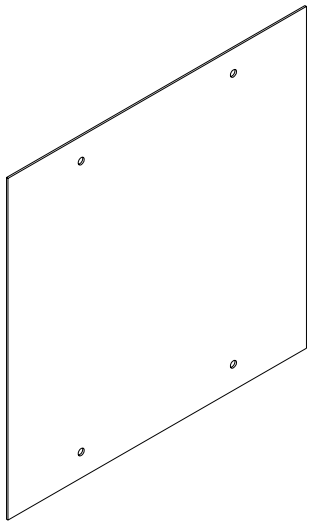






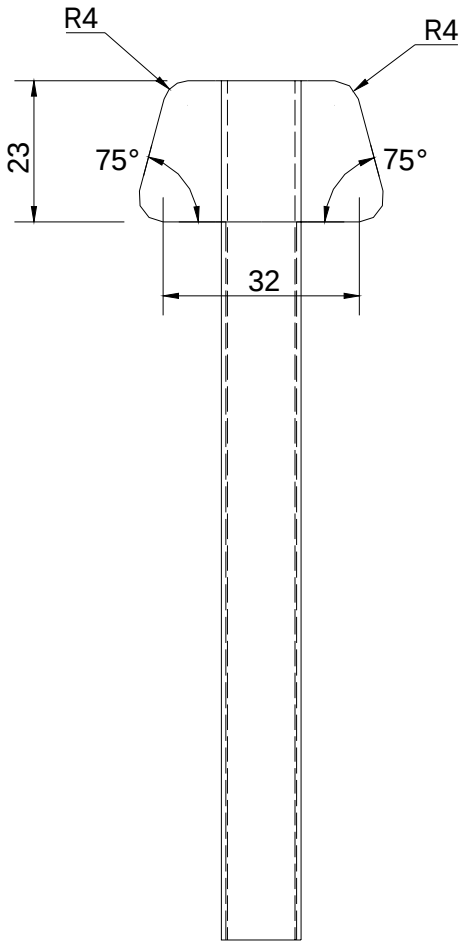


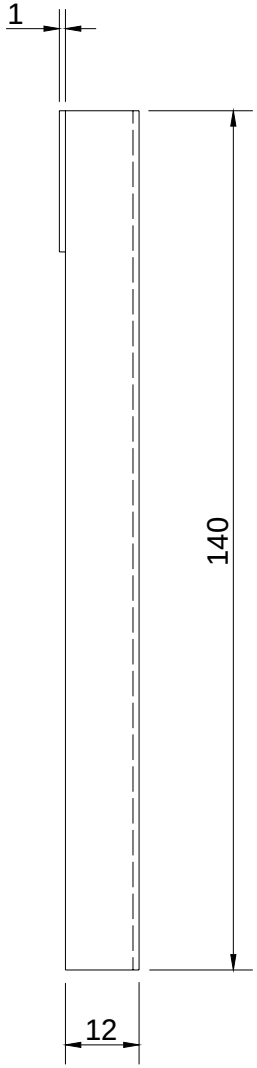
Feet x 4 MCS to be Hardened by Heat Treatment. Secured By self tapping screws

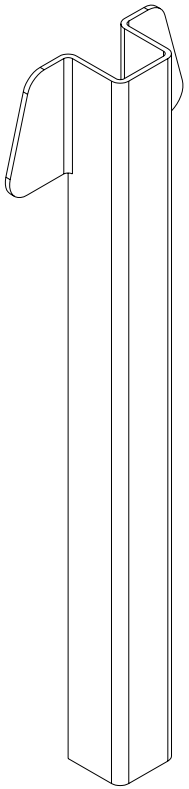


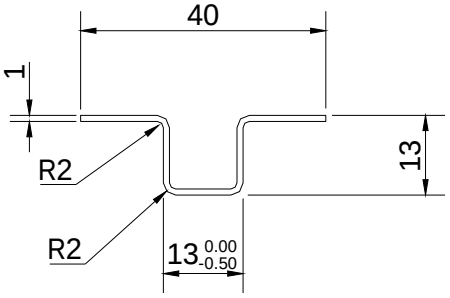
Designed by	Checked by	Gen. Tol ±0.5	Material - Mild Steel 1mm	
I Mawdsley				

Desktop Lamp	Lamp Base and Feet		
	All dimensions in mm	Edition	Sheet







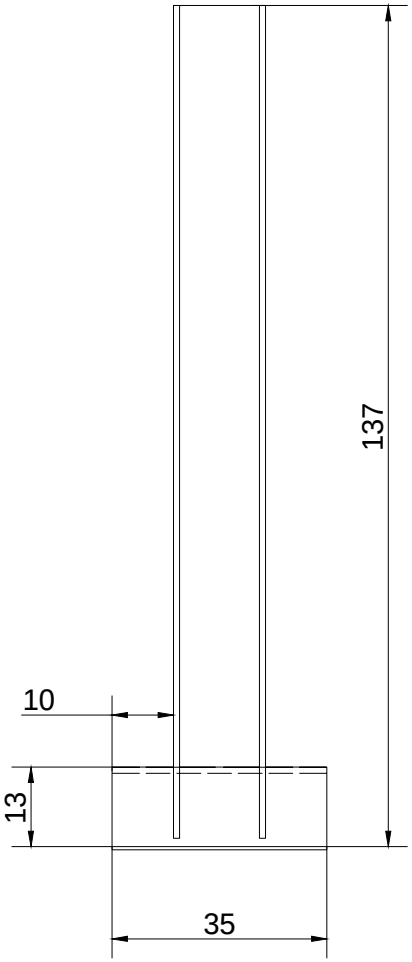


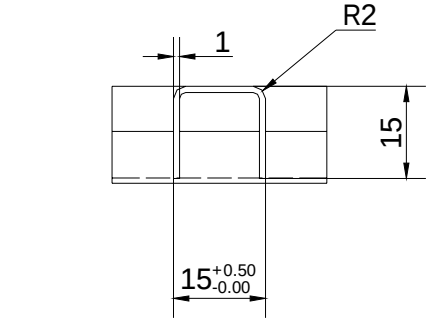
Designed by	Checked by	Gen. Tol ±0.5	Material - Mild Steel 1mm	
I Mawdsley				

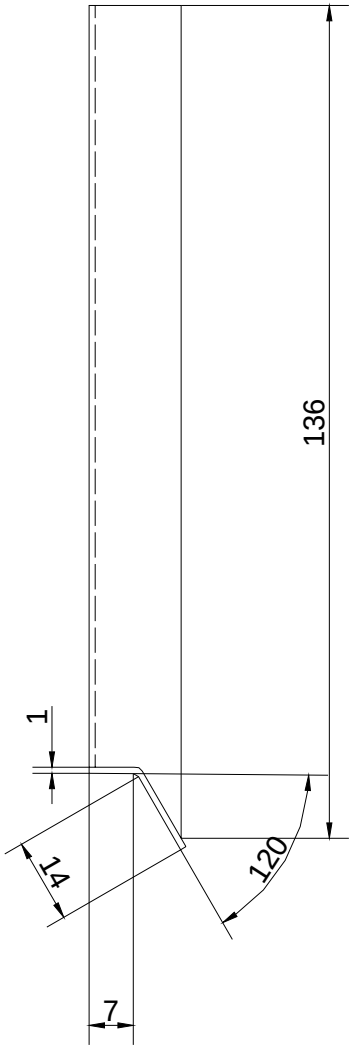
Desktop Lamp

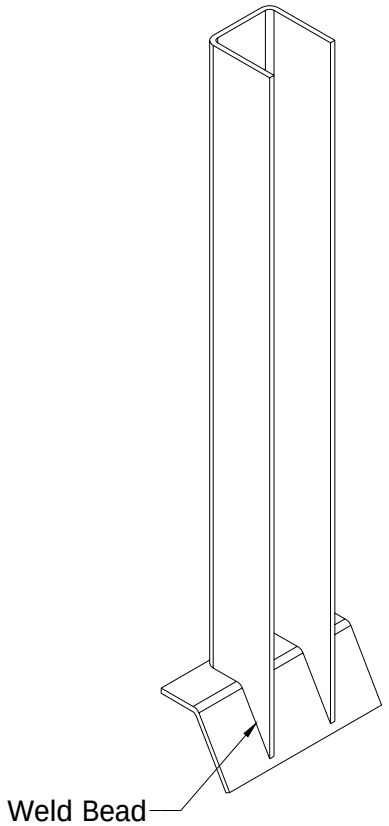
Upright 2

All dimensions in mm	Edition	Sheet







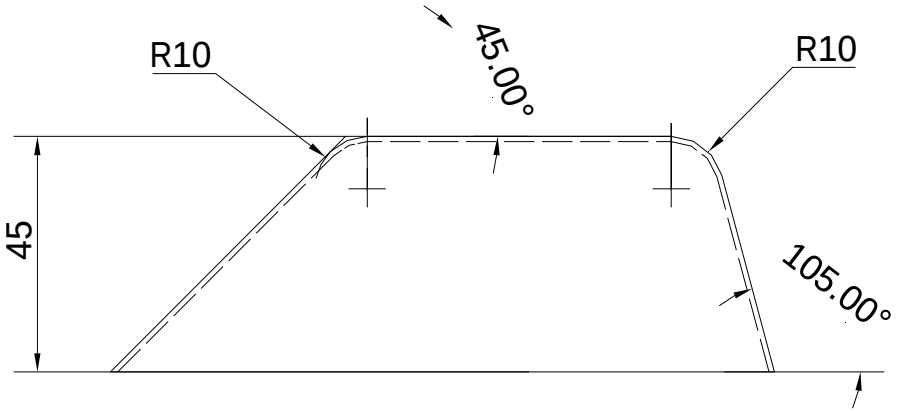


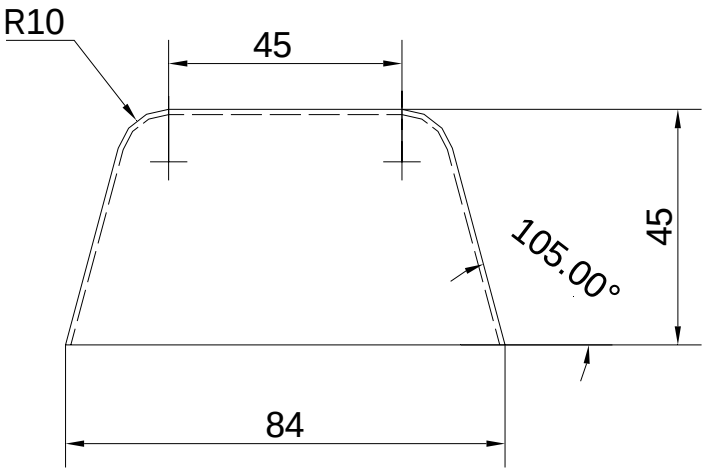
Designed by	Checked by	Gen. Tol ±0.5	Material - Mild Steel 1mm	
I Mawdsley				

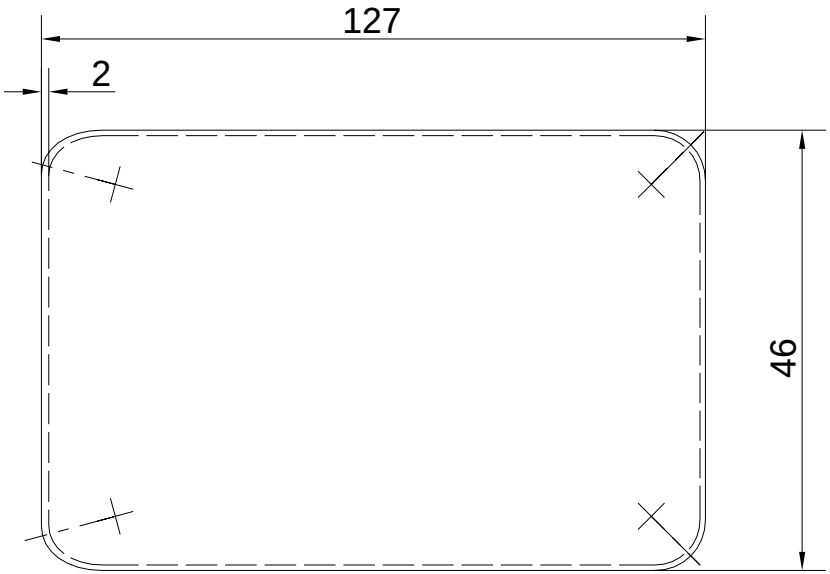
Desktop Lamp

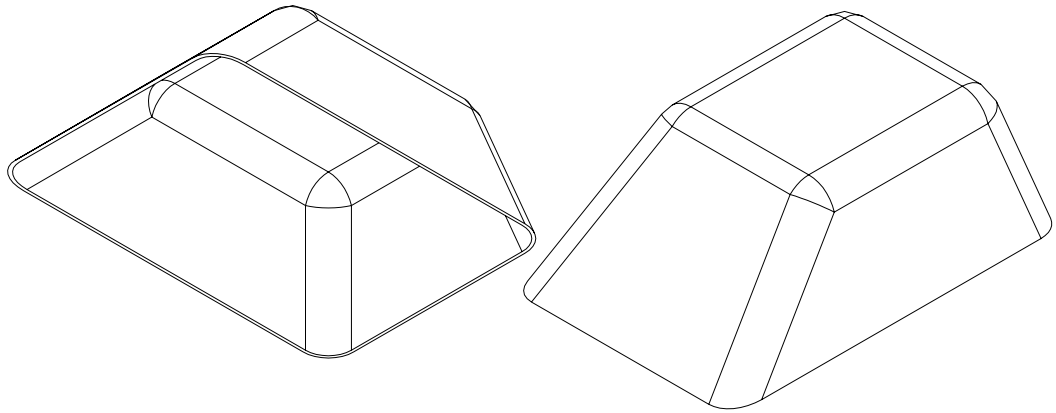
Upright 1

All dimensions in mm	Edition	Sheet







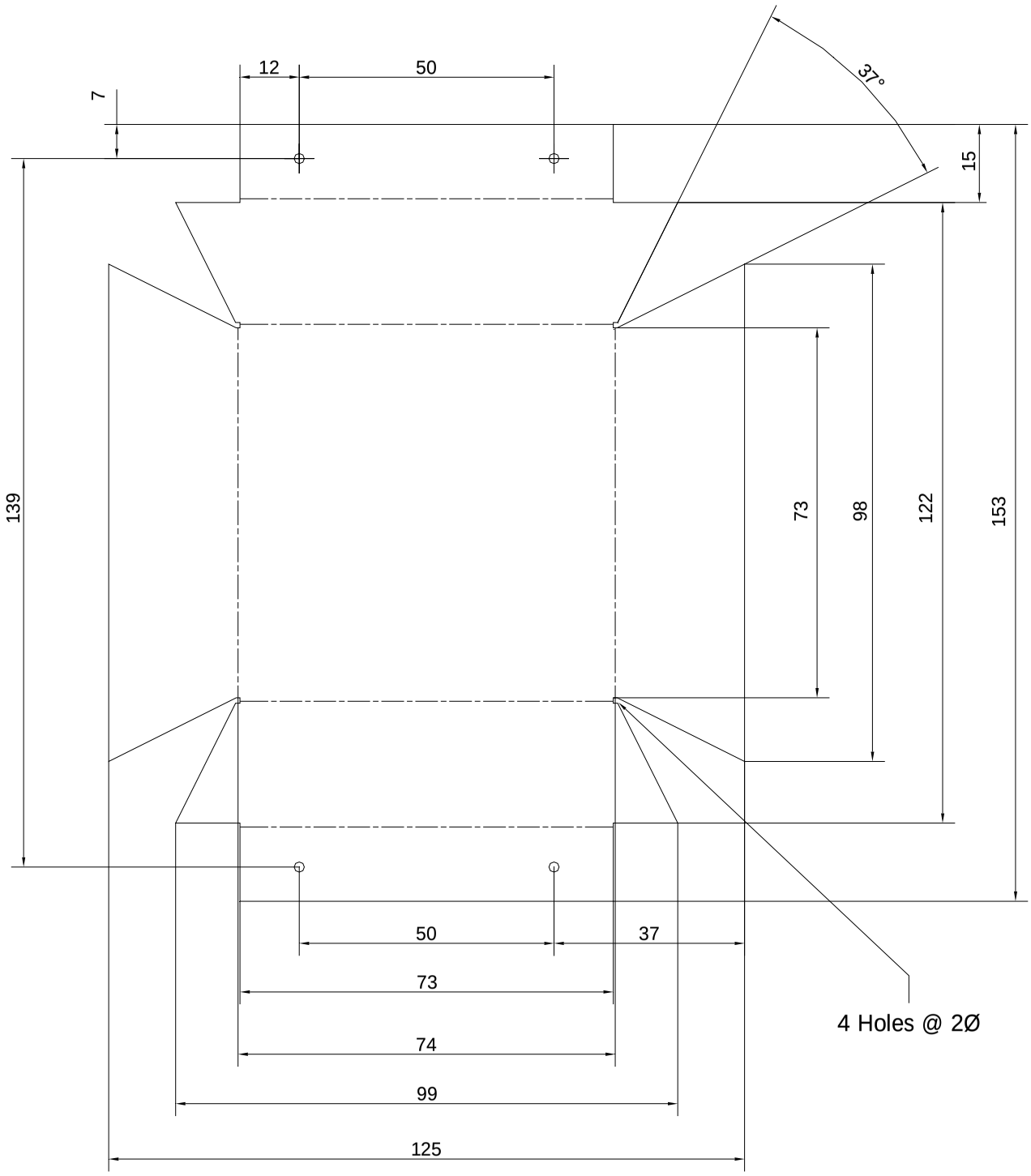


Inner View

Outer View

Designed by	Checked by	Gen. Tol ±0.5	Material - Appropriate Polymer	
I Mawdsley				

Desktop Lamp	Lamp Hood		
	All dimensions in mm	Edition	Sheet



Designed by	Checked by	Gen. Tol ±0.5	Material - Mild Steel 1mm	
I Mawdsley				

Desktop Lamp	Lamp Base Template Pattern		
	All dimensions in mm	Edition	Sheet