

KS3 Project Scheme of Work 2018-19

| Unit title | Topic | Year Group | Length | <u>Target levels</u> 3 - 5 |
|------------|---|------------|---------|--------------------------------------|
| Desk tidy. | Design and Make an acrylic desk tidy from 150mm by 100mm piece. Using strip heater and pillar drill to achieve the practical piece. | 7 | 4 weeks | |

| <u>Explore</u> | <u>Generate</u> | <u>Developing</u> | <u>Planning</u> | <u>Evaluating</u> |
|--|--|-------------------|-----------------|--|
| <p>Level 3– Show that you know that your desk tidy needs to meet various needs and requirements.</p> <p>Level 4– Produce a questionnaire to ask users what the Desk tidy should be like.</p> <p>Level 5– Show 3 sources of research – Pen sizes, Questionnaire and Existing products page.</p> | <p>Level 3– You will generate at least three simple ideas to show how the Desk tidy will look.</p> <p>Level 4– Add notes onto your well presented drawings to show how your research has helped.</p> <p>Level 5– Add detailed annotation to your detailed drawings to show how the Desk tidy will be made.</p> | | | <p>Level 3- Identify superficial shortcomings in the final outcome.</p> <p>Level 4- Recognise and record any shortcomings in the final outcome.</p> <p>Level 5—Suggest ways in which the Desk tidy could be improved using annotated sketches.</p> |

ICT SKILLS

Searching and presentation of Existing products page.

Making

Produce a practice pen rack. Use a 150mm by 100mm piece of acrylic to make a desk tidy to the pupils design.

HEALTH AND SAFETY

Demonstrations and supervision whilst using hand and machine tools. Strip heater, and Pillar drill are areas of potential risk.

EXTENSION WORK

Pupils can shape a small aluminium keyring.

ACTIVITY

Pupils will present some research in the form of a survey.

Pupils will design and make their own desk tidy using a 150mm by 100mm piece of acrylic. They will design three alternative Desk tidys and will sketch them out. Following some brief development work the pupils will make their chosen design.

SKILLS AND KNOWLEDGE

How to drill, bend, shape and smooth acrylic sheet.

How to research a project.

Development of graphical skills 2D and 3D.

PERSONAL LEARNING and THINKING Skills

Pupils will be assessed on the following two PLTS:

EFFECTIVE PARTICIPANTS
Discuss ideas, Persuade others, Find solutions, Communicate confidently, Flexibility and Get involved.

CREATIVE THINKERS
Invent, Question ideas, Make Connections, Persevere, Use imagination and Take risks.

OPPORTUNITIES FOR LAC
Acrylic, Thermoplastic., Dimensions Strip Heater, Pillar drill, Emery cloth Wet and 'Dry paper, Brasso polish.

Include these key words on the board and or printed sheet to help with Homework and class work.

Expected Prior Knowledge
Pupils will have made a small practice pen rack prior to this project. This will teach them how to smooth, drill and bend acrylic.

Differentiation
The pupils practical ability will be evident from the practice pen rack. Pupils will be guided when designs are too complex.

| Wk | Learning Objectives We are Learning to (WALTs) | Strategy Focus | PLT focus And LAC | Teaching Activity (Including Dyslexia friendly teaching) | Outcomes Plenary (WILFs) (Assessment) | Health and Safety | Resources Inc <i>Dyslexia friendly resources</i> |
|----|--|-------------------------------|-------------------------|--|---|---|---|
| 1 | Marking out, shaping, drilling, smoothing and bending acrylic. | Making high quality products. | Creative thinkers. | - Pupils to make an example pen rack from 100mm by 50mm acrylic. Focussed task. Demo pillar drill and strip heater and smoothing edges. H,wk- Produce a step by step plan of how you made your practice pen rack. <i>Allow pupils to write in a list of Keywords.</i> | Accurate marking out, Accurate drilling, Smooth edges, Precisely bent angles. | All machinery and hand tools to be demonstrated fully and pupils to be supervised while using them. | Fully equipped workshop. Strip heater. |
| 2 | Learn how to write an effective questionnaire. | Exploring the task. | | - Produce a questionnaire & get 10 peers to fill in answers <i>Use computers for gammar and spell checks.</i> - Hwk- Collect info about the sizes of items to fit in product. | Effectively laid out surveys which are easy to fill in. | Use a correctly sharpened drill bit, hand vice and guard. | 100mm by 50mm acrylic each. <i>Keywords list.</i> <i>Computer suite.</i> |
| 3 | Learn how to Generate ideas and present them. | Generation of Ideas. | | - Explain by demo how to produce gen of ideas. - Pupils use research to draw three ideas with annotation. -Make scale paper prototypes of ideas to clarify design thoughts. <i>Kinaesthetic Learning.</i> H-wk- Add detail to gen of ideas and add colour rendering. | Well presented design ideas which are workable. Use of Card models to reinforce the readers understanding of the ideas. | Use wooden formers to bend acrylic to the correct angle. | <i>Steel Rulers with mm measurements.</i> |
| 4 | Marking out, shaping, drilling, smoothing and bending acrylic. | Making high quality products. | Effective participants. | - Pupils to make product. <i>Kinaesthetic learning</i> - Drill holes, finish edges and bend into shape. Hwk- Produce a step by step of how the making was done. <i>Encourage all pupils to make a keyword list. Allow pupils to take photo of key list if they want.</i> | Accurate marking out, Accurate drilling, Smooth edges, Precisely bent angles. | As above. Power tools to be used with Goggles, aprons. | 150mm by 100mm Acrylic each. <i>Key words list.</i> Pillar drills fitted with 4mm drill and 11mm drill. |
| 5 | Learn how to evaluate a product and how to present work to others. | Making high quality products. | | -Complete making of the product. -Evaluate the finished product by allowing peers to try it out. Take part in a short presentation to persuade others that their Desk tidy is a viable product. | Confident presentation of the product. The ability to talk about their experience in Resistant Materials. | | Aprons and goggles. |

Assessment

| Level | Exploring Ideas and Task | Generating ideas | Developing and modelling | Planning | Evaluating | Making |
|-------|---|--|--------------------------|----------|---|---|
| 3 | Level 3– Show that you know that your desk tidy needs to meet various needs and requirements. | Level 3– You will generate at least three simple ideas to show how the Desk tidy will look. | | | Level 3- Identify superficial shortcomings in the final outcome. | Use tools and equipment to produce a Desk tidy with some accuracy, <ul style="list-style-type: none"> • Marking out • Shaping • Drilling • Smoothing |
| 4 | Level 4– Produce a questionnaire to ask users what the Desk tidy should be like. | Level 4– Add notes onto your well presented drawings to show how your research has helped. | | | Level 4- Recognise and record any shortcomings in the final outcome. | You should select and work with a range of tools and equipment paying attention to finish and function. |
| 5 | Level 5– Show 3 sources of research– Pen sizes, Questionnaire and Existing products page. | Level 5– Add detailed annotation to your detailed drawings to show how the Desk tidy will be made. | | | Level 5—Suggest ways in which the Desk tidy could be improved using annotated sketches. | Able to modify ideas when needed. Working with tools and equipment showing some precision. |

Addition all assessment

Examples of Year 7 Work

