

KS3 Project Scheme of Work 2018-19

Unit title	Topic	Year Group	Length	<u>Target levels</u> 5-7
Resistant Materials	Jumping Jacks	9	9 weeks @ 2 lessons per wk	

<p>Level 5– Use a variety of sources to get information about games and puzzles.</p> <p>Level 6– Incorporate into this research comments about form and function of various existing products.</p> <p>Level 7– Take into account the different needs of a range of users.</p>	<p><u>Generate</u></p> <p>Level 5– Discuss with fellow pupils, draw and make models of your design ideas.</p> <p>Level 6– Use a detailed specification to guide you when producing your generation of ideas.</p> <p>Level 7– Produce very detailed drawing with labelling included to tell others about materials and methods of making to be used.</p>	<p><u>Developing</u></p>	<p><u>Planning</u></p> <p>Level 5– Pupils use their own detailed plan and are able to modify them when necessary. The plan incorporates detail about tools and processes.</p> <p>Level 6– Pupils produce plans which incorporate different methods of production and some time predictions.</p> <p>Level 7– Pupils will include estimations of time needed for each stage of making. High level drawing skills.</p>	<p><u>Evaluating</u></p>
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ICT SKILLS

Using 2D design to draw their designs for the Jumping Jack figure. Use Pro-desktop. Use drop in folder.

Making

5 - Use your own detailed plans, adjusting where needed, and use Resistant Materials Tools and machinery with precision to create a highly accurate outcome.

6 - Create and follow a time estimated detailed plan to produce a Pencil Box and Jumping Jack which has been quality checked for consistent standard throughout.

7 - Carry out all tasks with accuracy and precision.

EXTENSION WORK

Pupils can work on with other focussed tasks using plastic or metal after they complete the projects.

ACTIVITY

Manufacturing a Jumping Jack. Some pupils will be able to design their own personalised figures.

Design and Making activity based on the idea of Games and Toys. Research, Design and Make undertaken.

SKILLS AND KNOWLEDGE

Knowledge of how to make using Wood and Thermoplastic.

Develop the pupil’s ability to design and make for a target market.

HEALTH AND SAFETY

All tools and machinery will be demonstrated and pupils will be supervised when using the workshop.

TECHNICAL LANGUAGE And LAC

Pine, Thermoplastic, Dowel, Pillar drill, CAD CAM, Laser cutting, Target market, Bandsaw.

Expected Prior Knowledge

A basic knowledge of tools and materials. Some knowledge of 2D design.

Differentiation

Pupils who struggle with computer aided design will use a pre– made figure.

Lesson	Learning Objectives We are Learning to (WALTs)	Strategy Focus	PLT focus And LAC	Teaching Activity <i>INC Dyslexia friendly teaching.</i>	Outcomes Plenary (WILFs) (Assessment)	Health and Safety	Resources
Wk1	Recapping/ Developing knowledge of Pro-desktop.	Designing.	Creative thinkers	Introduce the Jumping Jack project to the class. Use pro-desktop to draw the Jumping Jack frame. <i>Pupils allowed to take photos of instructions.</i>	Good understanding of Pro-desktop.		Computers
Wk2	Using marking out , shaping, cutting and drilling tools and machinery.	Making.	Team Workers Effective participation.	Demonstrate making the wooden frame for the Jumping jack. Set the pupils on task– Chamfering edges, drilling holes and cutting dowel to 60mm length. H/wk– Write up the making process.	Accurate and safe use of all tools and Machinery.	Demonstration and supervision while using all tools and machinery.	Softwood– 250 by 25 by 12 mm (2 per pupil). 9mm dowel– 60mm per pupil.
Wk3	Recapping/ Development of 2D design knowledge.	Generating ideas	Creative thinkers	Introduce and re-cap 2D design. Pupils are shown how to design their own figure on computer. H/wk– Complete their figure design.	An understanding of 2D design.		Fully equipped workshop.
Wk4	Developing knowledge of Laser cutting. Assembly and finishing of wooden products.	Generating Ideas.	Self managers Keywords used as LAC focus.	Pupils send their figure design via drop-in folder to the teacher. Pupils can carry on with smoothing, assembling and varnishing the wooded frames while their figures are cut on the Laser cutter. H/wk– Write up process. <i>Keywords for dyslexic pupils– Taking photo also.</i>	Imaginative and feasible designs for the figure. Accurate assembly of the frame.		Computers
Wk5	Assembly and finishing of wooden products.	Making high quality products. Exploring the task.	Self managers	Pupils assemble their Jumping jacks. Introduction to next project– Pull along toys. Set on task collecting research for new project. H/wk– Collect research.	Accurate assembly of the frame. Ability to collect useful research.	Demonstration and supervision while using all tools and machinery.	Laser cutter. Acrylic sheet. Computers

Assessment

Level	Designing	Evaluating	Making
5	<p>5 - Draw complex designs for Pencil Boxes based upon material properties Restrictions and research findings.</p>	<p>5 - Test and evaluate your product to suggest improvements for future projects.</p>	<p>5 - Use your own detailed plans, adjusting where needed, and use Resistant Materials Tools and machinery with precision to create a highly accurate outcome.</p>
6	<p>6 - Gathering a wide range of research, inclusive of designer influence, to make a specification to form creative ideas.</p>	<p>6 - Evaluate through all stages of designing and development and to concluded. This is to help improve your Pencil Box.</p>	<p>6 - Create and follow a time estimated detailed plan to produce a Pencil Box and Jumping Jack which has been quality checked for consistent standard throughout.</p>
7	<p>7 - Generate a wide range of well explained and Justified ideas.</p>	<p>7 - Suggest alternative materials and use 3rd Party feedback to evaluate the designing and making.</p>	<p>7 - Carry out all tasks with accuracy and precision.</p>

Addition all assessment

Examples of Year 9 Work

