KS3 Project Scheme of Work 2018-19

Unit title	Topic	Year Group	Length
Product Design	Sweet dispenser	9	9 weeks @ 2 lessons per wk

Target levels
5-7

DESIGNING	MAKING	EVALUATING
Level 5- Research the design context and make use of this research to come up with an idea. Level 6- Gathering a wide range of research, including the needs and tastes of the user to make a specification to form creative ideas. Level 7- Generate a wide range of well explained and Justified ideas. Able to work independently during the research and design stage.	Level 5- Work with a range of tools and equipment showing some precision. Able to be independent during some processes. Level 6- Use a range of tools and equipment to produce a usable product of good quality. Able to be independent in most making processes. Level 7- Carry out all tasks with accuracy and precision. Using a wide range of tools and equipment correctly and safely. Independent in almost all making processes.	Level 5- Test and evaluate your product to suggest improvements for future projects. Level 6- Evaluate through all stages of designing and development and to concluded. This is to help improve your Sweet dispenser. Level 7- Suggest alternative materials and use 3rd Party feedback to evaluate the designing and making. End product is tested to ensure good quality.

ICT SKILLS

Using 2D design to draw their designs for sweet dispenser front.
Use drop in folder.
Use of Spaceclaim

EXTENSION WORK

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

TECHNICAL LANGUAGE And LAC

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

ACTIVITY

Manufacture of a sweet dispenser based largely on a set design but with elements that pupils can develop into their own design ideas. This will allow for differentiation and will allow me to see who the more creative pupils are.

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.

PLTS-

Creative thinking, Independent Learners, Self Managers and reflective learners will be touched on in this project and highlighted when covered.

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. The scope for Design can be adapted to suit the pupil in this project.

Week	Learning Objectives We are Learning to	Strategy Focus	PLT focus and LAC	Teaching activity.	Outcomes	Health and Safety	Resources
1	Learn how to frame a project and consider the needs of others.	Designing	CT, EP, SM, IE.	Intro to PD. Stick in assessment sheets/ target sheet. Discuss pupil targets. Intro to sweet dispenser.	Pupils to sketch the basic design. Write a design situation and Brief. Consider user trequirements.	Supervision of practical work.	Fully stocked practical area.
2	Knowledge of using spaceclaim to assemble products using ICT. Working with plywood.	Designing Making.	CT, EP, SM, IE.	Teach pupils how to access components on Drop in and assemble the sweet dispenser. Drill the centre hole and prepare back plywood.	Assembled drawing of sweet dispenser on space claim. Knowledge of how to move separate components.	Supervision of use of hole saw. Demo before allowing pupils to use. Judge competence of pupil and assist if necessary.	6mm Plywood cut to 150mm by 100mm. 18 mm Plywood cut to 150mm by 100mm. Hole saw. Computers with spaceclaim.
3	Think about the rights of the consumer. Practical knowledge.	Making Design/Theory.	CT, EP, SM, IE. Consumer rights.	Produce the void in the wheel and start to assemble the product. Discuss consumer rights and set hwk about this.		Supervision. Cutting of void to be done with Coping saw only.	Fully stocked practical area.
4	Impact of new products and how it effects Sustainability.	Making Design/Theory.	CT, EP, SM, IE.	Use WJEC powerpoint to teach pupils about Impact of new and emerging tech on– industry, enterprise, sustainability etc. Continue with demo on attaching the front of sweet dispenser.	Produce a fact sheet about a favourite product including the required information about Impact of tech on others. Core content—2.1 a.		Front 6mm plywood or acrylic cut by teacher for each pupil.
5	The requirement for standards of quality for the consumer.	Making Design/Theory.	CT, EP, SM, IE.	Discuss BSI and ISO. Demonstrate the manufacture of the base and encourage pupils to form their own design shape with the technology provided. Use of Flexiply being the main one.	Pupils look for products around the house which have BSI kite mark/ CE marks. Bring in a list of what they find.		Fully stocked practical area.
6	Making of sweet dispenser.		CT, EP, SM, IE.	Each lesson the progress is recapped in order for pupils to know what needs to be done next.	Pupils continue with Practical work.	Supervision and restriction of use of disc sander.	Fully stocked practical area.
7	Making of sweet dispenser.		CT, EP, SM, IE.	Continue with practical work.	Pupils now Laser cut designs on front screen or dispensers. Attach and fit dispenser wheel.		Fully stocked practical area.

Week	Learning Objectives We are Learning to	Strategy Focus	PLT focus and LAC	Teaching activity.	Outcomes	Health and Safety	Resources
8	Design and making of Sweet dispenser.	Making/ Development.	CT, EP, SM, IE.	Demonstrate the attachment of the handle by PVA glue. Circulating class and providing aid.	Handles made via 3d printing/ hand skills.	Supervision. Restricted use of disc sander.	Fully stocked practical area.
9	Design and making of Sweet dispenser.	Making/ Development.	CT, EP, SM, IE.	Cut their dispensers to an angle using the bandsaw to allow the base to slope to allow sweets to roll. Circulating class and providing aid.	Continue to assemble the sweet dispenser.	Supervision. Restricted use of disc sander.	Fully stocked practical area.
10	Design and making of Sweet dispenser.	Making/ Development.	CT, EP, SM, IE.	Demo how to fit the lid of the jar to the top of the product. Circulating class and providing aid.	Finish assembly.	Teacher to use step drill to cut large hole in jar lid.	Fully stocked practical area.
11	Design and making of Sweet dispenser.	Making/ Development.	CT, EP, SM, IE.	Recap on how to fit the lid onto dispenser and attach the base tray. Circulating class and providing aid.	Finish assembly. Add any extra work into theory/design books prior to evaluation.		Fully stocked practical area.
12	Evaluation and testing.	Evaluation/Testing.	CT, EP, SM, IE, RL.		Evaluation completed in books. Testing with jelly beans.		Jelly beans.

Examples of Year 9 Work