


Scheme of Work 2020 - 2021
Subject: Design and computing.

Year Group: 7

Specification: LED – Acrylic light.

Express / Mainstream

Lesson No	Topic & Objectives	Key Activities & Specialist Terminology	Big Think Qs & Stretch	Assessment (Include relevant GCSE Q stem)	Homework	Lit Num SMSC Codes
<p>1 - WEEK BEGINNING 12/4/2021</p>	<p>Electronics</p> 	<p>Outline task – What are they going to be making?</p> <p><i>An LED light. Using an acrylic sheet that they etch a design into. An LED, a circuit and a battery.</i></p> <p>Show examples – Show students what etching is, how to do it and what it can look like. Have either physical examples or images to show students what the final result will look like.</p> <p>Showing examples of what learners will achieve :</p> <p>Step 3 – a basic example shown Step 4 – an intermediate example shown Step 5 + - a complex example shown.</p> <p>Giving the student a visual representation of what they need to aim for.</p>	<p>What could they add to their design to make it reach a higher grade?</p> <p>What are the benefits of learning this skill?</p> <p>What could they add to their design to maximize their final outcome to its full capacity?</p> <p>Who would benefit from these lights?</p> <p>Who would the target market be?</p> <p>Which industry would they fall into?</p>	<p>Teacher led assessment:</p> <ul style="list-style-type: none"> • Verbal feedback • Peer assessment • Tips and hints on how to improve. • Guide self-evaluation throughout. 	<p>Doddle</p>	<p>S06, S09,C1,C3,SP9</p>

		<p>First task – Design what they want their light to look like. Using a pencil and paper. Paper will have a set sized grid for students to fit their design within.</p>				
<p>2 - WEEK BEGINNING 19/4/2021</p>	<p>Electronics</p>	<p>Starter – Worksheet</p> <p>Show examples – Have either physical examples or images to show students what the final result will look like.</p> <p>Finish – Complete design of what will be etched onto the acrylic.</p> <p>Task - Trace image onto a new sheet of paper, going over the line clearly with a fine liner pen. So that students will have a clear outline to work with when etching.</p>	<p>What could they add to their design to make it reach a higher grade?</p> <p>What are the benefits of learning this skill?</p> <p>What could they add to their design to maximize their final outcome to its full capacity?</p> <p>Who would benefit from these lights?</p> <p>Who would the target market be?</p> <p>Which industry would they fall into?</p>	<p>Teacher led assessment:</p> <ul style="list-style-type: none"> • Verbal feedback • Peer assessment • Tips and hints on how to improve. • Guide self-evaluation throughout. 	<p>Doddle</p>	<p>S06, S09,C1,C3,SP9</p>
<p>3 - WEEK BEGINNING 26/4/2021</p>	<p>Electronics</p>	<p>Starter – Worksheet</p> <p>Show examples – Have either physical examples or images to show students what the final result will look like.</p> <p>Finish - Tracing image onto a new sheet of paper, going over the line clearly with a fine liner pen. So that students will have a clear outline to work with when etching.</p>	<p>What could they add to their design to make it reach a higher grade?</p> <p>What are the benefits of learning this skill?</p> <p>What could they add to their design to maximize their final outcome to its full capacity?</p>	<p>Teacher led assessment:</p> <ul style="list-style-type: none"> • Verbal feedback • Peer assessment • Tips and hints on how to improve. 	<p>Doddle</p>	<p>S06, S09,C1,C3,SP9</p>

		<p>Task – On a scrap piece of acrylic, practice etching. Learning how hard or soft to use the tool to achieve desired effect.</p> <ul style="list-style-type: none"> • Attach chosen design to sheet of acrylic, so that the student can see their design clearly. • Begin to lightly outline design. 	<p>Who would benefit from these lights?</p> <p>Who would the target market be?</p> <p>Which industry would they fall into?</p>	<ul style="list-style-type: none"> • Guide self-evaluation throughout. 		
<p>4 - WEEK BEGINNING 03/5/2021</p>	<p>Electronics</p>	<p>Starter – Worksheet</p> <p>Show examples – Have either physical examples or images to show students what the final result will look like.</p> <p>Finish - On a scrap piece of acrylic, practice etching. Learning how hard or soft to use the tool to achieve desired effect.</p> <p>Etch design into acrylic.</p>	<p>What could they add to their design to make it reach a higher grade?</p> <p>What are the benefits of learning this skill?</p> <p>What could they add to their design to maximize their final outcome to its full capacity?</p> <p>Who would benefit from these lights?</p> <p>Who would the target market be?</p> <p>Which industry would they fall into?</p>	<p>Teacher led assessment:</p> <ul style="list-style-type: none"> • Verbal feedback • Peer assessment • Tips and hints on how to improve. • Guide self-evaluation throughout. 	<p>Doddle</p>	<p>S06, S09,C1,C3,SP9</p>
<p>5 - WEEK BEGINNING 10/5/2021</p>	<p>Electronics</p>	<p>Starter – Worksheet</p> <p>Show examples – Have either physical examples or images to show students what the final result will look like.</p>	<p>What could they add to their design to make it reach a higher grade?</p> <p>What are the benefits of learning this skill?</p>	<p>Teacher led assessment:</p> <ul style="list-style-type: none"> • Verbal feedback • Peer assessment 	<p>Doddle</p>	<p>S06, S09,C1,C3,SP9</p>

		<p>Finish – Etching design onto acrylic</p> <p>Begin – Cutting wooden base to support acrylic. Creating circuit for LED light and battery.</p>	<p>What could they add to their design to maximize their final outcome to its full capacity?</p> <p>Who would benefit from these lights?</p> <p>Who would the target market be?</p> <p>Which industry would they fall into?</p>	<ul style="list-style-type: none"> • Tips and hints on how to improve. • Guide self-evaluation throughout. 		
<p>6 - WEEK BEGINNING 17/5/2021</p>	<p>Electronics</p>	<p>Starter – Worksheet</p> <p>Show examples – Have either physical examples or images to show students what the final result will look like.</p> <p>Finish – Etching design onto acrylic</p> <p>Begin – Cutting wooden base to support acrylic. Creating circuit for LED light and battery.</p>	<p>What could they add to their design to make it reach a higher grade?</p> <p>What are the benefits of learning this skill?</p> <p>What could they add to their design to maximize their final outcome to its full capacity?</p> <p>Who would benefit from these lights?</p> <p>Who would the target market be?</p> <p>Which industry would they fall into?</p>	<p>Teacher led assessment:</p> <ul style="list-style-type: none"> • Verbal feedback • Peer assessment • Tips and hints on how to improve. • Guide self-evaluation throughout. 	<p>Doddle</p>	<p>S06, S09,C1,C3,SP9</p>
<p>7 - WEEK BEGINNING 24/5/2021</p>	<p>Electronics</p>	<p>Starter – Worksheet</p> <p>Show examples – Have either physical examples or images to</p>	<p>What could they add to their design to make it reach a higher grade?</p>	<p>Student to photograph their work and self-evaluate their project</p>	<p>Doddle</p>	<p>S06, S09,C1,C3,SP9</p>

		<p>show students what the final result will look like.</p> <p>Finish - Cutting wooden base to support acrylic. Creating circuit for LED light and battery.</p> <p>Complete - Connect all components.</p> <p>Evaluate – Answer questions on provided worksheet and glue into books.</p>	<p>What are the benefits of learning this skill?</p> <p>What could they add to their design to maximize their final outcome to its full capacity?</p> <p>Who would benefit from these lights?</p> <p>Who would the target market be?</p> <p>Which industry would they fall into?</p>	<p>against steps using the provided evaluation sheet.</p> <p>Self-evaluation question examples:</p> <ul style="list-style-type: none"> • What did you make? • How? • How well did it go? • Are you pleased with the outcome? • What would you change? • Would you do anything differently next time? <p>Teacher then to grade each project with written feedback for each student.</p>		
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Half Term

Year Group: 7
Specification: Computer Science
Express / Mainstream

Lesson No	Topic & Objectives	Key Activities & Specialist Terminology	Big Think Qs & Stretch	Assessment (Include relevant GCSE Q stem)	Homework	Lit Num SMSC Codes
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1 - WEEK BEGINNING 07/6/2021	<u>Computer Science and programming - Programming</u> Introduction to programming	Students will be introduced to what is programming and what is a programming language	What is programming and how does it work	Worksheets activity	Students can practice playing with scratch if they have done this at primary school	S06, S09,C1,C3,SP9
2 - WEEK BEGINNING 14/6/2021	<u>Computer Science and programming - Programming</u> Introduction to programming	Students will be introduced to what an algorithm is and how it works. Including statements <ul style="list-style-type: none"> • sequencing • selection • iteration 	What is an algorithm >? Have you ever heard this word before	Practice on scratch	Students can practice playing with scratch if they have done this at primary school	S06, S09,C1,C3,SP9
3 - WEEK BEGINNING 21/6/2021	<u>Computer Science and programming - Programming</u> Introduction to scratch	Students will be introduced to procedures and functions on scratch to write a game.	Create your own program	Practice on sketch	Students can practice playing with scratch if they have done this at primary school	S06, S09,C1,C3,SP9
4 - WEEK BEGINNING 28/6/2021	<u>Computer Science and programming - Programming</u> Working with sketch	Students will be introduced to array and lists.	Create your own program	Practice on scratch	Students can practice playing with scratch if they have done this at primary school	S06, S09,C1,C3,SP9
5 – WEEK BEGINNING 07/7/2021	<u>Computer Science and programming - Programming</u> Working with s scratch	Students will be working on their own programs on scratch	Create your own program	Practice on scratch	Students can practice playing with scratch if they have done this at primary school	S06, S09,C1,C3,SP9

6 - WEEK BEGINNING 12/7/2021	<u>Computer Science and programming - Programming</u> Working with scratch	Students will be working on their own programs at the end of the session students will test each others games.	Create your own program	Practice on scratch	Students can practice playing with scratch if they have done this at primary school	
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