


Learning Plan		Subject: Product Design		Year: 7	
<p>Knowledge focus/What matters:</p> <p>Being curious and searching for answers is essential to understanding and predicting phenomena.</p> <p>Design thinking and engineering offer technical and creative ways to meet society's needs and wants.</p>		<p>4 Purposes: <i>Ambitious Capable Learners, Enterprising Creative, Contributors, Ethical Informed Citizens, Healthy Confident Individuals</i></p> <p>Our Vision: <i>At Prestatyn High School, we are creating learners who:</i></p> <p>ASPIRE to great things; Have a desire to CREATE and be enterprising; Are inspired to LEARN new and interesting things; THINK for themselves and make good choices; Are encouraged to GROW in confidence, health and understanding; ACHIEVE goals which will set them up for their whole lives; ENJOY learning, now and through the rest of their lives.</p>		 <p>Ysgol Uwchradd Prestatyn High School</p>	
Learning Objective/Big Question	Learning activities	I can...	Skills (Integral, Literacy, Numeracy, Digital Competency)		
<p>Week 1&2: What is Product Design and how are we going to create our new project?</p>	<ul style="list-style-type: none"> Introduce the subject and topic of ourselves and others and the new project (air pod/phone holder). To begin developing the skills needed on 2D design, basic instructions/tools needed to set pupils up for the project. 	<p>I can ask questions and use my experience to suggest simple methods of inquiry. I can safely use a range of tools, materials and equipment to construct for a variety of reasons.</p>	<p><i>Digital competency: 2D design CAD programme.</i> <i>Numeracy: 2D design measurements.</i> <i>Problem solving.</i></p>	<p>Measurements research task for phone holder/air pod holder. Modelling task of ideas.</p>	
<p>Week 3&4: What is 2D design and how are we going to use it within our project?</p>	<ul style="list-style-type: none"> Independently carry out a quick tools/equipment re-cap to demonstrate tools learnt and to solidify knowledge learnt last lesson. Implement the basic tools and equipment basic knowledge learnt last lesson and begin designing the new project. 	<p>I can produce designs to communicate my ideas in response to particular contexts. I can safely use a range of tools, materials and equipment to construct for a variety of reasons.</p>	<p><i>Digital competency: 2D design CAD programme.</i> <i>Numeracy: 2D design measurements.</i> <i>Problem solving.</i></p>	<p>CAD/CAM research task.</p>	
<p>Week 5&6: How do we link CAD to CAM to manufacture our project?</p>	<ul style="list-style-type: none"> To continue developing knowledge of 2D design and refine all design elements of the project. Ensure all lines are the correct colour to be laser cut in the following lesson. 	<p>I can observe and describe ways in which materials change when they are mixed together. I can make design decisions, using my <i>knowledge</i> of materials and existing products, and suggest design improvements.</p>	<p><i>Digital competency: 2D design CAD programme.</i> <i>Numeracy: 2D design measurements.</i> <i>Problem solving.</i></p>	<p>Plastic theory research task.</p>	
<p>Week 7: Have we successfully made a final outcome?</p> <p style="background-color: #ff69b4; padding: 5px; color: white; text-align: center;">Mid-term formative feedback point</p>	<ul style="list-style-type: none"> To ensure all air pod holders/phone holders have the correct measurements and then send them to the laser cutter. Demonstrate knowledge of how a laser cutter works and how CAD links to CAM. 	<p>I can explore and describe the properties of materials and justify their uses. I can make design decisions, using my <i>knowledge</i> of materials and existing products, and suggest design improvements.</p>	<p><i>Digital competency: 2D design CAD programme.</i> <i>Numeracy: 2D design measurements.</i> <i>Problem solving.</i></p>		

<p>Week 8&9: How can our previous project link to this one?</p>	<ul style="list-style-type: none"> • Re-cap the subject and topic of ourselves and others and the new project (drawing our houses). • Gain an understanding of the basic use of colour and re-cap the difference between primary and secondary colours. • Develop rendering skills in the boxes correctly and accurately. 	<p>I can ask questions and use my experience to suggest simple methods of inquiry. I can produce designs to communicate my ideas in response to particular contexts.</p>	<p><i>Critical thinking.</i> <i>Problem solving.</i></p>	<p>Bring in a picture/take a photo of their houses (outside).</p>
<p>Week 10&11: What is the Y rule and how can it help us?</p>	<ul style="list-style-type: none"> • Develop using basic colours and sketching skills in the previous lesson to attempt the different shading techniques. • Develop the basic rules of the Y rule when drawing 3D cubes. Making sure the students use parallel lines and equal lines. • 	<p>I can produce designs to communicate my ideas in response to particular contexts. I can explore how different component parts work together.</p>	<p><i>Critical thinking.</i> <i>Numeracy: measurements.</i> <i>Problem solving.</i></p>	<p>Practise the y rule by drawing something within their homes.</p>
<p>Week 12&13: What is single point perspective and how can we use it?</p>	<ul style="list-style-type: none"> • Develop the skill of using Single point perspective, showing the students another method of how to produce 3d drawings in a simple way. 	<p>I can produce designs to communicate my ideas in response to particular contexts. I can safely use a range of tools, materials and equipment to construct for a variety of reasons.</p>	<p><i>Critical thinking.</i> <i>Numeracy: measurements.</i> <i>Problem solving.</i></p>	<p>Complete in one-point perspective house drawing.</p>
<p>Week 14: What is two-point perspective and how can we use it?</p> <p style="background-color: #ff69b4; padding: 5px; text-align: center;"><i>End of unit assessment</i></p>	<ul style="list-style-type: none"> • Explore two-point perspective, showing how this develops from single point perspective, this also shows the students another method of how to produce 3d drawings in a simple way. 	<p>I can produce designs to communicate my ideas in response to particular contexts. I can make design decisions, using my knowledge of materials and existing products, and suggest design improvements.</p>	<p><i>Critical thinking.</i> <i>Numeracy: measurements.</i> <i>Problem solving.</i></p>	<p>Book check task.</p>