



St Augustine's Catholic Academy  
DT Intent



Knowledge in red aimed at Y1, Knowledge in green aimed at Y2, Knowledge in black aimed at both Y1 and Y2.

Year 1/2 Cycle A Topic	<b>Food: Fruit and Vegetables</b> (History Robin Hood Sherwood Forest) <i>Learn how to identify fruits and vegetables. Then apply this knowledge to design and make a smoothie.</i>
<b>National Curriculum</b>	<p><b>Cooking and nutrition</b> Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from.</p> <p><b>Design</b> Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p> <p><b>Make</b> Select from and use a wide range of materials and components, including construction materials, textiles and <b>ingredients</b>, according to their characteristics.</p> <p>Select from and use a range of tools and equipment to perform practical tasks [for example, <b>cutting</b>, shaping, joining and finishing]</p> <p><b>Evaluate</b> Evaluate their ideas and products against design criteria</p>
<b>Core Knowledge</b>	<ol style="list-style-type: none"><li>1. Know the names of some fruits and vegetables. (Ref 1) Know that some foods we call vegetables are actually fruits e.g. cucumber, peppers, tomato Know that fruits have seeds and vegetables don't.</li><li>2. Know how to identify where plants grow and which parts we eat (Ref 2) Know that fruits and vegetables grow in one of three places: on trees or vines, above the ground, below the ground. Know fruits grow on trees or vines and vegetables grow above or below ground.</li><li>3. Know how to taste and compare fruit and vegetables. (Ref 3 - tasting) Know how to describe appearance/feel, smell and taste of fruits and vegetables. Know how to discern between the flavours and identifiable features of fruits and vegetables when blended in a smoothie.</li><li>4. Know which ingredients make a good taste combination in a smoothie (Ref 4 - designing) Know how to cut soft fruit safely using a claw grip. Know and describe how to prepare some fruit and vegetables before they are eaten e/g peeling, slicing, mashing. Know what they will include in response to their tasting. Know what they will include or exclude in response to their tasting.</li><li>5. Know how to design packaging that reflects the contents of the product. (Ref 4) Know what to include on the packaging e.g. images of the fruit used, ingredients. Know how to appeal to the consumer by using an alliterative brand name, references to healthy eating.</li><li>6. Know how to explore and evaluate a range of existing products. KSH – Kind, specific, helpful) (Ref 4) Know how to evaluate smoothie made from previous lesson.</li></ol>



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	Know how to evaluate their ideas and products against design criteria.
<b>Wider Knowledge</b>	<p>Know the importance of including a range of fruits and vegetables in a diet.</p> <p>Know the importance of washing fruits and vegetables before preparing.</p> <p>Know how to prepare and sample a variety of fruits and vegetables.</p> <p>Know the health benefits of eating fruits and vegetables daily.</p> <p>Know that some fruits are high in natural sugars.</p> <p>Know how to develop knife skills and basic culinary techniques.</p>
<b>Skills</b>	<ol style="list-style-type: none"><li>1. Identifying if a food is a fruit or a vegetable.</li><li>2. Describe appearance, smell and taste.</li><li>3. Chopping fruit and vegetables safely to make a smoothie.</li><li>4. Peel, chop and grate a selection of vegetables</li><li>5. Tasting and evaluating different food combinations.</li><li>6. Suggesting information to be included on packaging.</li><li>7. Designing smoothie carton packaging by – hand or an ICT software.</li></ol>
<b>Diversity Links</b>	<ul style="list-style-type: none"><li>• Know that warmer climates enhances and speeds up the growth of crops.</li><li>• Know that China is the leading producer of fresh fruit and vegetables.</li><li>• Know that China has enough land to grow so much, especially apples and pears.</li></ul>
<b>Vocabulary</b>	<p>Fruit and vegetable names.</p> <p>Sensory vocabulary:</p> <p>Soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard.</p> <p>Flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, planning, investigating tasting, arranging, popular, design, evaluate.</p>

Knowledge in red aimed at Y3, Knowledge in green aimed at Y4, Knowledge in black aimed at both Y3 and Y4.

<b>Year 3/4 Cycle A Topic</b>	<b>Mechanical systems - Making a slingshot car</b>
<b>National Curriculum</b>	<p><b>Make</b></p> <p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, <b>cutting, shaping, joining and finishing</b>], accurately.</p> <p>Select from and use a wider range of materials and components, including <b>construction</b> materials, textiles and ingredients, according to <b>their functional properties</b> and aesthetic qualities</p> <p><b>Evaluate</b></p> <p>Investigate and analyse a range of existing products.</p> <p>Understand how key events and individuals in design and technology have helped shape the world.</p> <p><b>Technical knowledge</b></p>



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	<p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p>Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p>
<b>Core Knowledge</b>	<p>1. Know how to build a car chassis (Ref 1) Know that the chassis is the frame of a car on which everything else is built. Know the benefits of adding extra reinforcement bars across the chassis</p> <p>2. Know how to create launch mechanism. (Ref 1) Know energy is the energy that something (object or person) has by being in motion e.g. the energy a swing has to keep moving. Know that a car needs a launch mechanism to provide kinetic energy.</p> <p>3. Know how to design a shape that reduces air resistance (Ref 2) Know how to draw a net to create a structure from. Know that air resistance can slow down a moving object and the shape of the object can reduce air resistance. Know which shapes increase or decrease the speed of the car as a result of air resistance.</p> <p>4. Know how to make a model based on a chosen design (Ref 3) Know that nets are flat shapes that can be turned into 3D structures. Know how to measure, mark and cut panels against the dimensions of a chassis.</p> <p>5. Know how to assemble and test my completed product. (Ref 4) Know how to test the speed of the car. Know how to test other aspects of their design (How straight a line it travels in - if the axle/chassis isn't straight it will travel in a curve)</p> <p>6. Know that it is important to assess and evaluate design ideas and models against a list of design criteria. KSH – Kind, specific, helpful) (Ref 4) Know that smaller shapes create less air resistance and can move faster through the air when evaluating a product. Know how to evaluate the speed of my design based on the understanding that some cars are faster than others as a result of: Body shape, stored energy in the elastic band and accuracy of the angle in the chassis and axle.</p>
<b>Wider Knowledge</b>	<p>Know that cars (formula one) designs have developed over many years.</p>
<b>Skills</b>	<ol style="list-style-type: none"><li>1. Build a Chassis structure following a model.</li><li>2. Create a launch mechanism and explain how it works.</li><li>3. Designing a shape that reduces air resistance.</li><li>3. Drawing a net to create a structure from.</li><li>3. Choosing shapes that increase or decrease speed as a result of air resistance.</li><li>4. Measuring, marking, cutting and assembling with increasing accuracy.</li><li>5. Making a model based on a chosen design.</li><li>6. Evaluating the speed of a final product based on: the effect of shape on speed and the accuracy of work-person-ship on performance.</li></ol>
<b>Diversity Links</b>	<p>Lewis Hamilton's father is black and Grenadian descent, his mother is White British. Hamilton was raised as a Catholic and is guided by his faith. He went with different makes of car based on their design and achieved four titles in a row (2017 – 2020) He is a prominent advocate against racism and for increased diversity in motorsport.</p>
<b>Vocabulary</b>	<p>Chassis, energy, kinetic, mechanism, air resistance, design, structure, graphics, research, model, template.</p>



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Knowledge in red aimed at Y5, Knowledge in green aimed at Y6, Knowledge in black aimed at both Y5 and Y6.

Y5/6 Cycle A Topic	<b>Textiles: Waistcoats-Compare modern Islamic clothing (History Early Islamic Civilization)</b> <i>Learn how to measure, cut and assemble fabric to create a waistcoat. They will draw a design in accordance with their own design criteria.</i>
<b>National Curriculum</b>	<p><b>Design</b> Generate, develop, model and communicate their ideas through <b>discussion</b>, <b>annotates sketches</b>, cross-sectional and exploded diagrams, prototypes, <b>patterns pieces</b> and computer aided design.</p> <p><b>Make</b> Select from and use a wider range of tools and equipment to perform practical tasks.</p> <p><b>Evaluate</b>  Understand how key events and individuals in design and technology have helped shape the world. Evaluate their ideas and products against their own design criteria and consider the views of others.</p>
<b>Core Knowledge</b>	<p>1. Know the importance of designing clothing with the target customer in mind. Know that a template is a stencil made of metal, plastic or paper used for making many copies of a shape which helps to accurately mark out a design on fabric. Know that they will be designing a waistcoat (a formal vest- type jacket with no arms, usually worn over a shirt and under a jacket. They sometimes have buttons or pocket detailing) using a template. (Teacher Planning)</p> <p>2. Know how design a waistcoat. (Ref 1) Know how to annotate their design. Know how to add extra details to their designs with reasons for their choices of decorations, materials, colours and where they will join the fabric.</p> <p>3. Know how to mark and cut fabric according to a design. (Ref 2) Know how to draw accurately around parts of the template onto the fabric. Know the importance of accuracy when marking and cutting out.</p> <p>4. Know how to assemble a waistcoat. (Ref 3) Know what a running stitch is and how to use it to join two pieces of fabric together. Know how to make sure stitches are small, consistent in size, neat and follow the edge. Know how to tie strong knots to secure the thread in place.</p> <p>5. Know how to decorate your waistcoat. (Ref 4) Know how to attach a secure fastening. Know how to attach objects for decoration using thread.</p>



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	<p>6. Know how to evaluate my work according to my design criteria. (KSH – Kind, specific, helpful) (Teacher Planning)</p> <p>Know how to reflect on things they would change or modify on their design.</p> <p>Know how to justify reasons for choices of colour/material/design.</p>
<b>Wider Knowledge</b>	<p>Know how create patterns from Islamic Art.</p> <p>Know about the use of geometric patterns in Early Islamic art.</p> <p>Know how to create a tessellating pattern and describe its 'code' to recreate on waistcoat.</p> <p>Know about early civilisation (Enrichment - Islamic speaker)</p>
<b>Skills</b>	<p>2. Designing a waistcoat in accordance to specification linked to set of design criteria to fit a specific theme.</p> <p>2. Annotating designs.</p> <p>3. Using a template when pinning panels onto fabric.</p> <p>3. Marking and cutting fabric accurately, in accordance with a design.</p> <p>4. Sewing a strong running stitch, making small, neat stitches and following the edge.</p> <p>4. Tying strong knots.</p> <p>5. Decorating a waistcoat -attaching objects using thread and adding a secure fastening.</p> <p>5. Learning different decorative stitches.</p> <p>5.Sewing accurately with even regularity of stitches</p> <p>6. Evaluating work continually as it is created.</p>
<b>Diversity Links</b>	<p>Islamic art includes architecture, calligraphy, painted glass, illustrated patterns, pottery, and textile arts. (Link to History)</p>
<b>Vocabulary</b>	<p>accurate, adapt, annotate, design, design criteria, detail, fabric, fastening, knot, properties, running-stitch, seam, sew, shape, target audience, target customer, template, thread, unique, waistcoat, waterproof</p>