

DT AT  
CARDINAL  
NEWMAN  
2020-2021





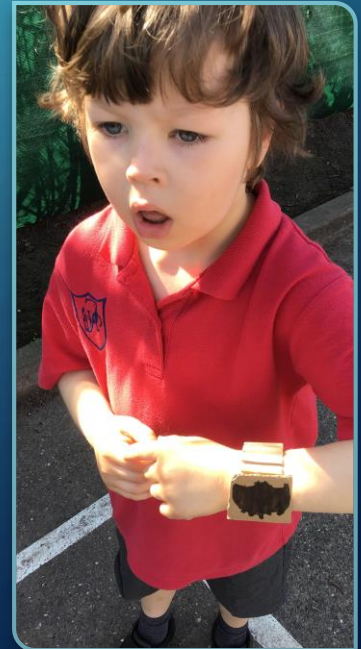
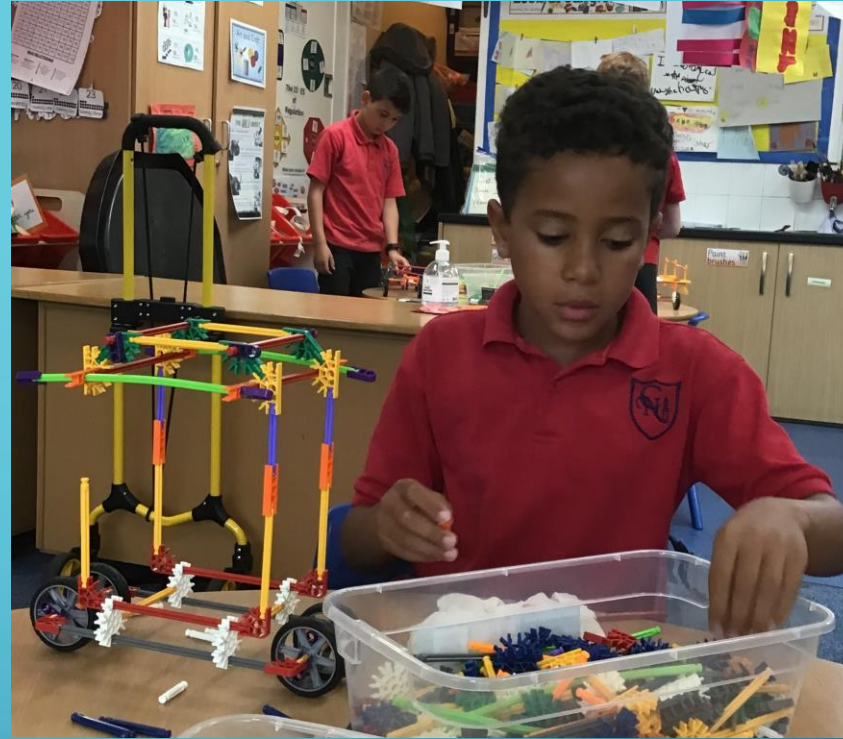


## KS2 CONTENT

- Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

# TIME ALLOCATION.

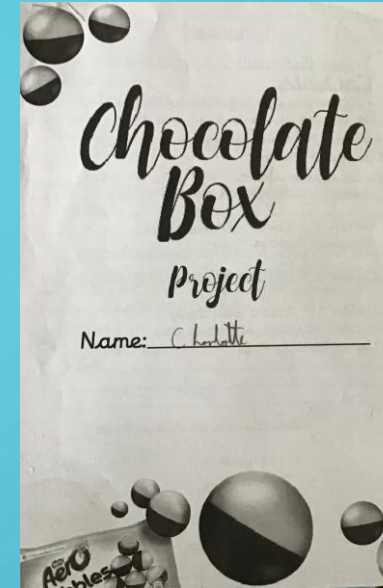
- A D & T project should have a time allocation of 8 -12 hours
- The minimum time allocation should be 6 hours on a project
- Teach one project a term in each class (3 per year, blocked with Art)
- One food topic per year
- A total of 18 projects across KS 1 & 2
- In YR taught continually throughout the year.



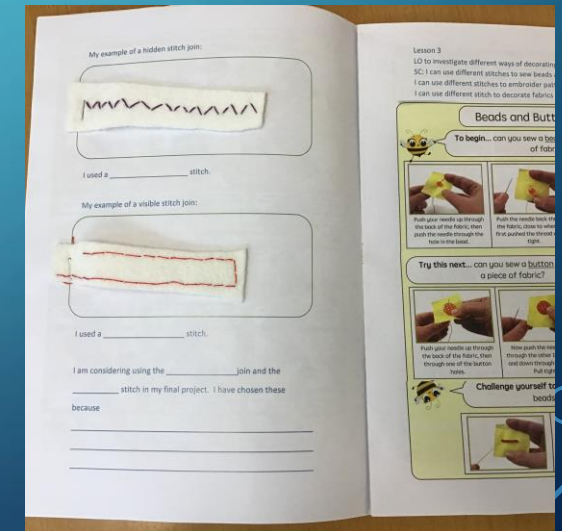
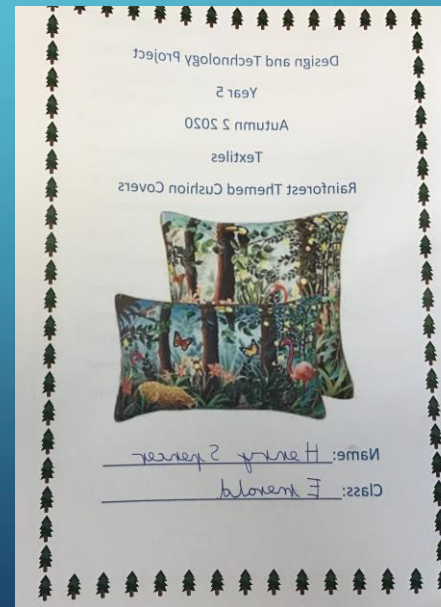
TOPIC	AUT 1	AUT 2	SP1	SP 2	SU 1	SU 2
Reception	<p><b>Media and Materials</b>  <b>Model making using mixed media. Create patterns.</b>  <b>Experimenting with modelling materials e.g. playdough = in separate groups;</b>  <b>Learning how to use a variety of fixing.</b></p>	<p><b>Media and Materials</b>  <b>Using own ideas to create pictures with mixed media</b>  <b>Choosing appropriate materials. Use a variety of fixings.</b>  <b>Christmas craft.</b>  <b>Soup making</b></p> <p><b>Creating objects to support role play</b>  <b>Evaluate object made and adapt / strengthen as necessary</b></p>	<p><b>Using tissue paper in a variety of ways;</b>  <b>folding paper - chinese lanterns</b>  <b>Printing and cutting</b></p> <p><b>Uses simple tools and techniques competently and appropriately.</b>  <b>Selects tools and techniques needed to shape, assemble and join materials</b></p>	<p><b>Constructs with a purpose in mind, using a variety of resources.</b>  <b>Evaluating real objects, Photo frames.</b>  <b>Compare sizes and discuss techniques, fixings, balance, strengthening and outcome.</b></p> <p><b>Manipulates materials to achieve a planned effect.</b>  <b>Adapts work where necessary</b></p>	<p><b>Represent their own ideas, thoughts and feelings through design and technology,</b></p> <p><b>Rocket making</b></p> <p><b>Experimenting with colour, design, texture, form and function.</b></p>	<p><b>Selects tools and techniques needed to shape, assemble and join materials</b></p> <p><b>Looking at their own work to say what could be done differently next time</b></p> <p><b>to offer opinions on what they have tried to do and what they have achieved, including problems.</b></p> <p><b>Making scones</b></p>
Y1	<p><b>Designing/making/ Evaluating fruit kebabs.</b></p>	<p><b>Blocked with Art</b></p>	<p><b>Puppets.</b>  <b>Joining fabric by sewing.</b>  <b>Evaluate, design and create puppet.</b>  <b>Christingles</b></p>	<p><b>Easter cards, mechanisms, sliders and levers.</b></p>	<p><b>Blocked with Art</b></p>	<p><b>Blocked with Art</b></p>
Y2	<p><b>Paper/fabric weaving</b>  <b>Clay pots/animals</b>  <b>Cooking; fruit crumble</b></p>	<p><b>Design and make tutor houses</b>  <b>Identifying suitable materials</b>  <b>Cooking; Christmas biscuit</b></p>	<p><b>DT based on Florence Nightingale</b>  <b>Paper lanterns</b>  <b>Make and design a boat out of different materials</b></p>	<p><b>Blocked with Art</b>  <b>Cooking; Muffins</b></p>	<p><b>Cooking</b>  <b>Pasta salad</b></p>	<p><b>Cooking</b>  <b>Pasta salad</b></p>

Y3	Blocked with Art	<p><b>Volcanoes</b></p> <p>Scissors Balloons Washing up liquid Newspaper Bottles Bicarbonate of soda Foil Modroc Glue Paints</p> <p>Packaging for a Christmas Gift</p>	Blocked with Art	Blocked with Art	<p><b>Textiles</b></p> <p>Design and print a T-shirt representing Hersham.</p> <p>Plain t-shirts Printing Ink Tiles Fabric Pens</p>	<p><b>Cooking and Nutrition: Greek Salad</b></p> <p>Enough ingredients for taste testing and final versions.</p> <p>Salad ingredients Tomatoes Feta Cheese Olives Hummus / Pitta etc.</p> <p>Themed DT Project Day</p>
Y4	<p>Bridges Straws Masking tape Toy cars</p>	Blocked with Art	<p>Themed DT Project Day</p> <p>Shields Mosaics Clay lamps</p> <p>Resources; Clay Beans/pulses Cardboard Gold paint Yoghurt pots</p>	Blocked with Art	<p>Mayan 3d ceremonial Masks</p> <p>Balloons Newspaper, glue, paint</p> <p>Mayan Temples Pastels paper</p>	Blocked with Art
Y5	Blocked with Art	<p><b>Textiles-Rainforest themed cushion covers</b></p> <p>Resources: -Thread and needles -range of fabric strips -range of fabric colours and styles -assorted buttons -assorted beads</p> <p>Themed DT Project Day</p>	<p>Mechanisms with a Message- Pulleys and Gears (Linked to science)</p> <p>Resources: -toys containing cams -stiff sheet materials (card, foamboard, corrugated plastic) -MDF wheels, doweling, jumbo straws</p> <p>Themed DT Project Day</p>	Blocked with Art	<p><b>Cooking and Nutrition- Pottage</b></p> <p>Resources: Enough ingredients for taste testing and final making Carrots, parsnips, onions, turnips, leeks, veggie broth, mushrooms, green beans, cabbage, bay leaf, thyme, rosemary, sage, pepper, salt, rolled oats balsamic vinegar</p> <p>Themed DT Project Day</p>	Blocked with Art
Y6	Blocked with Art	Design and create a game which is powered by electricity	Cooking – create a savoury dish - carrot scones linked to healthy diet /rationing	Design and create an air-raid shelter using a wooden frame	Blocked with ART	Celebrating difference and seasonality focus on India

# THIS SCHOOL YEAR



- Due to Covid-19 and school closures most Year groups have completed two half termly DT projects this year.
- The Projects on a Page planning has been well used to aid planning topics across each half term.
- Year 5 and Year 3 have used the planning to produce Topic Booklets.



MAYAN MASKS

ANDERSEN  
SHELTERS





## THIS YEAR

- A new skills grid has been produced to ensure coverage and progression in skills in DT across the school
- The evaluation sheet has been updated and simplified to be used at the back of our ART /DT workbooks.
- All Year groups are assessing skills and highlighting the record sheet.
- An audit of staff skills and resources has been completed with a view to staff training early in the Autumn term



DT	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Designing Contexts/users and purposes</b>  Generate, develop, model, and communicate ideas	<ul style="list-style-type: none"> <li>-Recognise that technology is used in a range of places including home and school.</li> <li>-Know about similarities and differences between objects and materials.</li> </ul> <p>talk about what they want to make</p> <ul style="list-style-type: none"> <li>-think about materials required</li> </ul>	<ul style="list-style-type: none"> <li>-Work confidently within a range of contexts, such as imaginary, story-based, home, school.</li> <li>-state what products they are designing and making, describe what their products are for, say how their products will work.</li> <li>-Generate ideas by drawing on their own experiences. R</li> <li>-Develop and communicate ideas by talking and drawing, plan by suggesting what to do next,</li> </ul>	<ul style="list-style-type: none"> <li>-Work within a range of contexts, gardens, playgrounds, local community, etc</li> <li>-Say who products are for</li> <li>-Say how they will make their products suitable for their intended users.</li> <li>-Use simple design criteria to help develop their idea.</li> <li>-Use knowledge of existing products to come up with ideas.</li> <li>-Model ideas by exploring materials, components, and construction kits</li> </ul>	<ul style="list-style-type: none"> <li>-Describe the purpose of their prods.</li> <li>-Generate ideas,</li> <li>-Make design decisions based on availability of resources.</li> <li>-Select tools and equipment.</li> <li>-Explain their choice of tools and equipment</li> <li>-Select materials and components suitable for the task</li> <li>-Explain their choice of materials and components according to functional properties</li> <li>-Identify the strengths and areas for dev in their products</li> </ul>	<ul style="list-style-type: none"> <li>-Gather information about the needs and wants of individuals and groups.</li> <li>-Develop their own design criteria and use these to inform their ideas.</li> <li>-Model their ideas using prototypes and pattern pieces.</li> <li>-Explain their choice of materials and components according to aesthetic qualities.</li> </ul>	<i>textiles project day</i> <ul style="list-style-type: none"> <li>-Indicate the design features of their products that will appeal to intended users.</li> <li>-Explain how particular parts of their products work.</li> <li>-Carry out research, using surveys, interviews, questionnaires, and web-based resources</li> </ul>	<i>Exploring other cultures</i> <ul style="list-style-type: none"> <li>-Identify the needs, wants, preferences and values of groups.</li> <li>-Develop a simple design specification</li> <li>-Explain how particular parts of their products work.</li> <li>-Use computer-aided design to develop and com. their ideas</li> <li>-Make design decisions, based on time, resources and cost.</li> </ul>
<b>Making Planning</b>  Skills and Techniques	<ul style="list-style-type: none"> <li>-Explore a range of materials, and techniques. -experiment with colour, design, texture,</li> <li>-Safely use a wide range of tools and techniques.</li> <li>-Know how to use a range of fixings, tape, glue, paper clips, paper fasteners, staples and hole punch and treasury tags.</li> <li>-Use scissors accurately to cut card and paper.</li> </ul>	<ul style="list-style-type: none"> <li>-select from a range of tools and equipment, and from a range of materials.</li> <li>-Follow procedures for safety and hygiene, use construction materials and kits, textiles, - and food ingredients, - assemble, join and combine materials and components.</li> </ul>	<ul style="list-style-type: none"> <li>-make templates and mock-ups.</li> <li>-Use ICT, to develop and communicate their ideas.</li> <li>-Explain their choices of materials.</li> <li>-Select from a range of materials and components according to their characteristics, include mech components:</li> <li>-measure, mark out, cut, shape materials -use finishing techniques,</li> </ul>	<ul style="list-style-type: none"> <li>Follow rules for safety and hygiene</li> <li>-Use a wider range of materials and components than KS1,</li> <li>-use construction materials and kits, textiles, food ingredients</li> <li>-Measure, mark out, cut and shape materials and components with some accuracy</li> <li>-Apply a range of finishing techniques, including those from art and design</li> </ul>	<ul style="list-style-type: none"> <li>-Use a wider range of materials including mechanical components and electrical components.</li> <li>-Assemble, join and combine materials and components with some accuracy.</li> <li>-Apply a range of finishing techniques, including those from art and design, with some accuracy.</li> <li>-Refer to their design criteria as they design and make</li> </ul>	<ul style="list-style-type: none"> <li>-Use sketches, cross-sectional drawings and exploded diagrams</li> <li>-Generate ideas, drawing on research</li> <li>-Produce lists of tools, equip and materials that they need</li> <li>-Accurately measure, mark out, cut, and shape materials</li> <li>-Accurately assemble, join, and combine components</li> </ul>	<ul style="list-style-type: none"> <li>-Use techniques that involve a no of steps</li> <li>-Formulate step-by-step plans as a guide to making.</li> <li>-Accurately apply a range of finishing techniques, including those from art and design.</li> </ul>
<b>Evaluating Own products</b>	<ul style="list-style-type: none"> <li>Use various construction materials. -Begins to construct, stacking blocks vert and horizontally, makes enclosures and creates spaces.</li> <li>-Joins construction pieces together to build and balance.</li> </ul>	<ul style="list-style-type: none"> <li>-Talk about their design ideas and what they are making, suggest how their products could be improved.</li> </ul>	<ul style="list-style-type: none"> <li>-Make simple judgements about their products and ideas against design criteria.</li> </ul>	<ul style="list-style-type: none"> <li>-Make judgements about their products and ideas against the design criteria.</li> </ul>	<ul style="list-style-type: none"> <li>-Use their design criteria to evaluate their completed products</li> </ul>	<ul style="list-style-type: none"> <li>-Critically evaluate the quality of the design, manufacture, and fitness for purpose of their products as they design and make.</li> </ul>	<ul style="list-style-type: none"> <li>-Demonstrate resourcefulness when tackling practical problems.</li> <li>-Evaluate their ideas and products against their original design specification.</li> </ul>
<b>Existing products</b>	<ul style="list-style-type: none"> <li>- Photo frame eval. Easter baskets</li> </ul>	<ul style="list-style-type: none"> <li>-Explore what products are, who products are for, what materials are for and how products work. Puppets</li> </ul>	<ul style="list-style-type: none"> <li>Explore what products are, how products are used, where products might be used, what materials products are made from and what they like and dislike about products.</li> </ul>	<ul style="list-style-type: none"> <li>- investigate: how well products have been designed, and made, why materials have been chosen, what methods of construction have been used and how well products work.</li> <li>-Pupils should investigate and analyse who designed and made the product.</li> </ul>	<ul style="list-style-type: none"> <li>- investigate and analyse: how well products achieve their purposes, and how well products meet user needs.</li> <li>- investigate and analyse where products and when products were designed and made and whether products can be recycled or reused.</li> </ul>	<ul style="list-style-type: none"> <li>-Pupils should investigate and analyse: how well products achieve their purposes and how well products meet user needs and wants.</li> </ul>	<ul style="list-style-type: none"> <li>-Investigate and analyse: how much products cost to make , how innovative products are, how sustainable the materials in products are and what impact products have.</li> </ul>
<b>Key event/ People</b>	NA	NA	NA				
<b>Technical Knowledge</b> Making products work	<ul style="list-style-type: none"> <li>-Show interest in toys with knobs, pulleys, cameras and mobile phones.</li> <li>-Shows skill in making toys work.</li> </ul>	<ul style="list-style-type: none"> <li>-Know about the simple working characteristics of materials and components, about the movement of simple mechanisms such as levers and sliders, how freestanding structures can be made stronger, stiffer and more stable</li> </ul>	<ul style="list-style-type: none"> <li>-Know about the movement of simple mechanisms such as wheels and axles.</li> <li>-Know that a 3-D textiles product can be assembled from two identical fabric shapes and the correct technical vocabulary for the projects they are undertaking.</li> </ul>	<ul style="list-style-type: none"> <li>- design and make products that work, Know -materials can be combined and mixed to create useful characteristics, -that mechanical systems have an input, process and output, - tech vocabulary for their project. Understand how levers and linkages or pneumatic systems work</li> <li>Know how to make strong, structures</li> </ul>	<ul style="list-style-type: none"> <li>- know that materials have functional properties and aesthetic qualities, -elect systems have an input, process and output, the technical vocab</li> <li>-how levers/ linkages/pneumatic systems create movement.</li> <li>-Know about simple electrical circuits.</li> <li>-Know that a single fabric shape can be used to make a 3D textiles product.</li> </ul>	<ul style="list-style-type: none"> <li>Know the correct tech vocabulary for the projects they are doing,</li> <li>-Pupils should know how mechanical systems such as cams or pulleys or gears create movement, -how to strengthen a 3D framework, that a 3D textiles product can be made from a combination of fabric shapes.</li> </ul>	<ul style="list-style-type: none"> <li>-Pupils should know: how more complex electrical circuits and components can be used to create functional products, -how to program a computer to monitor changes in the environment and control their products,</li> </ul>
<b>Cooking and nutrition</b> Where food comes from Food prep, cooking, and nutrition	<ul style="list-style-type: none"> <li>- know where some foods come from e.g. tomatoes apples etc.</li> </ul> <p>Make a simple cold dish            Bake scones</p> <ul style="list-style-type: none"> <li>-Know the importance of a healthy diet</li> <li>- talk about ways to stay healthy.</li> </ul>	<ul style="list-style-type: none"> <li>-know that food ingredients are combined according to their sensory characteristics.</li> <li>-Know how to name and sort foods into the five groups <u>in The Eatwell plate</u>, that everyone should eat at least five portions of fruit and vegetables every day</li> </ul>	<ul style="list-style-type: none"> <li>-Know that food must be farmed, grown elsewhere (e.g. home) or caught.</li> <li>-Know how to prepare simple dishes safely and hygienically, without using a heat source.</li> <li>-Know how to use techniques such as cutting, peeling, and grating.</li> </ul>	<ul style="list-style-type: none"> <li>-know that food ingredients can be fresh, pre-cooked and processed.</li> <li>-Know that food is grown; reared and caught (such as fish) in the UK.</li> <li>-Know how to prep and cook 2 savoury dishes safely and hygienically with a heat source and how to do chopping, slicing, grating, mixing, spreading.</li> <li>-Know that a healthy diet is a variety and balance of dif food and drink, as in The Eatwell plate.</li> </ul>	<ul style="list-style-type: none"> <li>-Know that food is grown /, reared/ and caught in the UK, Europe, and the world.</li> <li>-Know how to prepare and cook a variety of savoury dishes safely and hygienically including, the use of a heat source.</li> <li>-Know how to use a range of techniques, including kneading and baking nutrition.</li> <li>-Know that to be active and healthy, food and drink are needed to provide energy for the body</li> </ul>	<ul style="list-style-type: none"> <li>-Know that seasons may affect the food available.</li> <li>-Know that recipes can be adapted to change the appearance, taste, texture, and aroma.</li> </ul>	<ul style="list-style-type: none"> <li>-know that a recipe can be adapted by adding or substituting ingredients.</li> <li>-Know how food is processed into ingredients that can be eaten or used in cooking.</li> <li>-Know that different food and drink contain different substances – nutrients, water, and fibre – that are needed for health.</li> </ul>

# DATA

	Working below	Working at or above
Year 1	5%	95%
Year 2	5%	95%
Year 3	3%	97%
Year 4	3%	97%
Year 5	2%	98%
Year 6	3%	97%

# A SOFA FOR FOUR, DRUMS AND A BOAT



## Examples from Pupil Voice

I have learned different sewing techniques

In DT we learn how to make things and be creative.

I designed a logo for my sustainable bag

I liked working in a team to build a bridge. We learned how triangles make things stronger.

Now I want to become a designer!

I measured and used a hack saw and reinforced my model with triangles

I liked tasting Tudor pottage and making my own

## NEXT STEPS

- Guidance provided for staff members new to Cardinal Newman.
- CPD arranged to cover areas highlighted in Staff Knowledge Audit.  
e.g. Mechanical systems, structures and using computers to control products.
- Children showed the link between RE and DT, particularly in the importance of textiles and use of materials in Church.
- CTs Select a project in each year group to display on rotation in Class and in corridors when permitted.

