



Clyst St Mary Primary School DT Progression Framework



Knowledge						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Represent their own ideas, thoughts and feelings, through art and design. Return to and build on previous learning and refine ideas. Constructs with a purpose in mind using a variety of resources.	Pupils should know: • that all food comes from plants or animals pupils should know: • about the simple working characteristics of materials and components • about the movement of simple mechanisms such as levers, sliders, wheels and axles • how freestanding structures can be made stronger, stiffer and more stable	Pupils should know: • that food has to be farmed, grown elsewhere (e.g. home) or caught Pupils should know: • how to name and sort foods into the five groups in The eatwell plate • that everyone should eat at least five portions of fruit and vegetables every day • that a 3-D textiles product can be assembled from two identical fabric shapes • that food ingredients should be combined according to their sensory characteristics • the correct technical vocabulary for the projects they are undertaking	Pupils should also know: • how mechanical systems such as levers and linkages or pneumatic systems create movement • how to make strong, stiff shell structures • that a single fabric shape can be used to make a 3D textiles product • that food ingredients can be fresh, pre-cooked and processed • the correct technical vocabulary for the projects they are undertaking • that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world • that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The eatwell plate • that to be active and healthy, food and drink are needed to provide energy for the body • how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking	Pupils should also know: • how to program a computer to control their products • how simple electrical circuits and components can be used to create functional products • that materials can be combined and mixed to create more useful characteristics • how to use learning from science to help design and make products that work • how to use learning from mathematics to help design and make products that work • how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source	Pupils should know: • about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products • how mechanical systems such as cams or pulleys or gears create movement • how to reinforce and strengthen a 3D framework • that a 3D textiles product can be made from a combination of fabric shapes • that a recipe can be adapted by adding or substituting one or more ingredients • that materials have both functional properties and aesthetic qualities • that mechanical and electrical systems have an input, process and output • that recipes can be adapted to change the appearance, taste, texture and aroma	• how to program a computer to monitor changes in the environment and control their products • how more complex electrical circuits and components can be used to create functional Products • that seasons may affect the food available • how food is processed into ingredients that can be eaten or used in cooking • that different food and drink contain different substances – nutrients, water and fibre – that are needed for health

Skills						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Designing						
Use materials and equipment with increasing control. Drawing simple pictures to represent their ideas and giving meaning to the marks they make. Use available resources to create props to support role play. Begin to show accuracy and care when drawing and constructing.	- generate ideas by drawing on their own experiences - use knowledge of existing products to help come up with ideas - work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment - state what products they are designing and making - say whether their products are for themselves or other users - describe what their products are for	- develop and communicate ideas by talking and drawing - model ideas by exploring materials, components and construction kits and by making templates and mock-ups - say how their products will work - say how they will make their products suitable for their intended users - use simple design criteria to help develop their ideas - use information and communication technology, where appropriate, to develop and communicate their ideas	- develop their own design criteria and use these to inform their ideas • describe the purpose of their products • explain how particular parts of their products work • generate realistic ideas, focusing on the needs of the user • share and clarify ideas through discussion	• gather information about the needs and wants of particular individuals and groups • indicate the design features of their products that will appeal to intended users • make design decisions that take account of the availability of resources • model their ideas using prototypes and pattern pieces	- identify the needs, wants, references and values of particular individuals and groups • develop a simple design specification to guide their thinking • work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment • use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas	- carry out research, using surveys, interviews, questionnaires and web-based resources • generate innovative ideas, drawing on research • make design decisions, taking account of constraints such as time, resources and cost • use computer-aided design to develop and communicate their ideas
Making						
Assemble, join and combine materials and components together.	• plan by suggesting what to do next • use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components	• select from a range of tools and equipment, explaining their choices • follow procedures for safety and hygiene • measure, mark out, cut and shape materials and components • use finishing techniques,	• order the main stages of making • select tools and equipment suitable for the task • measure, mark out, cut and shape materials and components with some accuracy • assemble, join and combine materials and	• select materials and components suitable for the task • apply a range of finishing techniques, including those from art and design, with some accuracy	• produce appropriate lists of tools, equipment and materials that they need • explain their choice of tools and equipment in relation to the skills and techniques they will be using • accurately measure, mark out, cut and shape materials	• formulate step-by-step plans as a guide to making • explain their choice of materials and components according to functional properties and aesthetic qualities • accurately apply a range of finishing techniques, including those from art and

	• select from a range of materials and components according to their characteristics • assemble, join and combine materials and components - prepare simple dishes safely and hygienically, without using a heat source • use techniques such as cutting, peeling and grating	including those from art and design	components with some accuracy • follow procedures for safety and hygiene • use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components		and components • accurately assemble, join and combine materials and components • use techniques that involve a number of steps	design • demonstrate resourcefulness when tackling practical problems
Evaluating						
Share their creations, explaining the processes they have used. Participate in small group and class discussions offering their own ideas, using recently introduced vocabulary. Listen attentively and respond to what they hear with relevant questions and comments.	• talk about their design ideas and what they are making • make simple judgements about their products and ideas against design criteria - explore: • what products are • who products are for • how products work • how products are used	• talk about their design ideas and what they are making • make simple judgements about their products and ideas against design criteria • suggest how their products could be improved - Explore: • where products might be used • what materials products are made from • what they like and dislike about products	• refer to their design criteria as they design and make • identify the strengths and areas for development in their ideas and products • who designed and made the products • where products were designed and made • when products were designed and made • how well products work	• use their design criteria to evaluate their completed products • consider the views of others, including intended users, to improve their work • whether products can be recycled or reused • why materials have been chosen • what methods of construction have been used • how well products achieve their purposes	- evaluate their ideas and products against their original design specification • how much products cost to make • how sustainable the materials in products are • how well products have been designed • how well products have been made • how well products meet user needs and wants	• critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make • how innovative products are • what impact products have beyond their intended purpose
Vocabulary						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
All Topics						
Think, draw, build, construct, fix, join, cut, stick, glue, cellotape, idea, research.	design materials tools design, make, user, ideas, product,	designer planning, investigating Purpose, Construct evaluate,	design designer materials tools product evaluate label sketch component design criteria	brief technology problem-solving Design technology product intended user annotated	Design technology product intended user design exploded diagram innovation	criteria Cross-section al diagram

			computer-aided design			
Construction						
Build, cut, fix, join, construct, make, glue, stick.	Make Cut Join strong fix	Make Cut Join strong fix bond	boat water-proof (DT) stable net scoring tab packaging product designer battery circuit switch bulb	electrical engineer buoyant (DT) shelf-appeal graphic designer accuracy		
Food						
Cut, slice, spread, eat, knife, spoon, fork, roll,, fruit, vegetables, healthy, unhealthy, mix, crunchy, soft,	fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, Peeling, chopping, squeezing	fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, cutting, grating healthy diet, choosing, ingredients,	balanced appealing produce Peeling, chopping, slicing, grating, mixing Hygine.	Nutritious hygiene grown reared Local producer seasonal dough knead bake Using a heat source.	hygiene local produce cooking technique mixing, rubbing, kneading.	cross contamination deconstructed food seasonality Substance
Textiles						
Soft, rough, material, print, dye		Applique, textiles needle thread pin pattern piece applique William Morris joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish	Patter Piece Running stitch Cross stitch Applique Embroidery Textile designer			tension allowance ethical product corporate pattern pieces back stitch seam turn out fastener fashion designer

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