

Curriculum Vocabulary. Design and Technology Y5.

	Objectives	Skills. National Curriculum.	Vocabulary and Curriculum Links
Autumn Farther (Read to Write story)	- Study, draw, label and analyse the flying machines from the story. - Discuss the moving parts and mechanisms of the flying machines. - To design own flying machine-using mechanical systems based on Farther Read to write story. - To study of Leonardi Da Vinci's drawings of flying machines. - Design and Make own flying machines	Designing – Understanding contexts, users and purposes - D1 work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment - D2 describe the purpose of their products - D3 indicate the design features of their products that will appeal to intended users - D4 explain how particular parts of their products work - D5 carry out research, using surveys, interviews, questionnaires and web-based resources - D6 identify the needs, wants, preferences and values of particular individuals and groups - D7 develop a simple design specification to guide their thinking Designing - Generating, developing, modelling and communicating ideas - D8 share and clarify ideas through discussion - D9 model their ideas using prototypes and pattern pieces - D10 use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas - D11 use computer-aided design to develop and communicate their ideas - D12 generate realistic ideas, focusing on the needs of the user - D13 make design decisions that take account of the availability of resources Evaluating – Own ideas and products - E1 identify the strengths and areas for development in their ideas and products - E2 consider the views of others, including intended users, to improve their work - E3 critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make - E4 evaluate their ideas and products against their original design specification Evaluating – Existing products Pupils will be taught to investigate and analyse: - E5 how well products have been designed and made - E6 why materials have been chosen	Autumn: Demonstrate, discussion, improvement, strength, structure, component, design criteria, mechanism, lever, movement, rotational, follower.
Spring Bread and packaging	- To study bread packaging and the nutritional value within it. - To investigate bread within supermarkets. - To make savoury and sweet bread.	Evaluating – Existing products Pupils will be taught to investigate and analyse: - E5 how well products have been designed and made - E6 why materials have been chosen	Spring: Food preparation, food hygiene, calories, nutritional value, saturated fat, seasonal food, produce, sauté, peel, dice and allergies,

Summer Bridges	- To design packaging with a label to show nutritional value. - To study the structure of bridges (in particular the Merseyside region-Runcorn bridges). - To understand how to build a complex structure for strength and with aesthetic qualities. - To design and make a bridge structure and test it for strength and stability.	- E7 what methods of construction have been used - E8 how well products work to achieve their purposes - E9 how well products meet user needs and wants - E10 how much products cost to make - E11 how innovative products are - E12 how sustainable the materials in products are - E13 what impact products have beyond their intended purpose Evaluating – Key events and individuals - E14 about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products Making - Planning - M1 select tools and equipment suitable for the task - M2 explain their choice of tools and equipment in relation to the skills and techniques they will be using - M3 select materials and components suitable for the task - M4 explain their choice of materials and components according to functional properties and aesthetic qualities - M5 produce appropriate lists of tools, equipment and materials that they need - M6 formulate step-by-step plans as a guide to making Making – Practical skills and techniques - M7 follow procedures for safety and hygiene - M8 use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components - M9 accurately measure, mark out, cut and shape materials and components - M10 accurately assemble, join and combine materials and components - M11 accurately apply a range of finishing techniques, including those from art and design - M12 use techniques that involve a number of steps - M13 demonstrate resourcefulness when tackling practical problems Technical knowledge – Making products work	valuation, success, recyclable, compostable, deconstruct, packaging, triangular prism, cuboid, cube, prototype, change, dislike, evaluate, design criteria, grate, measure, purpose, tongs, spread, ingredient, preparation, source, vegetarian, vegan, gluten free, Kosher. Summer: Equipment, investigate, problem-solve, technique, test, version, arch bridge, beam bridge, compare, material, suspension bridge, support, analysis, evaluation, improve,
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	Develop an electrical system to light the bridges.	- T1 how to use learning from science and maths to help design and make products that work - T2 that materials have both functional properties and aesthetic qualities - T3 that materials can be combined and mixed to create more useful characteristics - T4 that mechanical and electrical systems have an input, process and output - T5 the correct technical vocabulary for the projects they are undertaking - T6 how mechanical systems such as cams or pulleys or gears create movement - T7 how more complex electrical circuits and components can be used to create functional products - T8 how to program a computer to monitor changes in the environment and control their products - T9 how to reinforce and strengthen a 3D framework - T10 that a 3D textiles product can be made from a combination of fabric shapes - T11 that a recipe can be adapted by adding or substituting one or more ingredients Cooking and nutrition – Where food comes from - C1 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 - C2 that seasons may affect the food available - C3 how food is processed into ingredients that can be eaten or used in cooking Cooking and nutrition – Food preparation, cooking and nutrition - C4 how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source - C5 how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking - C6 that recipes can be adapted to change the appearance, taste, texture and aroma - C7 that different food and drink contain different substances – nutrients, water and fibre – that are needed for health	feedback, modelling, prototype, investigation.
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