



Design Technology 2020- 2022

Key Drivers		
21st Century Citizens Understanding of the Wider World	Independent Learners Independent Resilient Creative and Curious Able to think Critically	Healthy Living Healthy Eating

Design Technology Cycle A 2020-2021

Cycle B 2021-2022

Reception	<p>Creating with Materials ELG Children at the expected level of development will: - Draw and paint using a range of materials, tools and techniques, experimenting with colour, design, texture, form and function; - Share their creations, explaining the process they have used; - Make use of props and materials when role playing characters in narratives and stories.</p> <p><i>Core learning</i></p> <ul style="list-style-type: none"> To know how to select and access resources. To learn how to use scissors to cut with accuracy. To know how to use glue stick, PVA glue, sello-tape to join construction materials. To begin to explain why they chose a way of joining. To create with a purpose. To give simple evaluations of their creations. <p><i>Vocabulary</i></p> <p>scissors, cut, materials, join, joining, evaluate, evaluations, glue stick, PVA glue, sello-tape, select, choose, accurate.</p>
------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>Year 1</p>	<p>Mechanisms Sliders and lever Moving page from a story</p> <p><i>Core learning</i> To explore and use sliders and levers. To understand that different mechanisms produce different types of movement To plan by suggesting what to do next.</p> <p><i>Vocabulary</i> slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards, design, make, evaluate, user, purpose, ideas, design criteria, product, function</p>	<p>Food Preparing fruit and vegetables Fruit snack</p> <p><i>Core learning</i> To use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. To select from a range of fruit according to their characteristics e.g. colour, texture and taste to create a chosen product. To generate initial ideas and design criteria through investigating a variety of fruit. To communicate ideas through talk and drawings. To understand where a range of fruit and vegetables come from.</p> <p><i>Vocabulary</i> fruit and vegetable names, names of equipment and utensils, peeler, knife, sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard, flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, grating, taste, colour, texture, healthy diet, choosing, ingredients, planning, investigating tasting, arranging, popular, design, evaluate, criteria</p>	<p>Structures Freestanding structures Enclosures for farm or zoo animals/playground</p> <p><i>Core learning</i> To generate ideas based on simple design criteria and their own experiences To communicate ideas through talking, mock-ups and drawings. To explore a range of existing freestanding structures in the school and local environment To evaluate their product by discussing how well it works. To know how to make freestanding structures stronger, stiffer and more stable.</p> <p><i>Vocabulary</i> cut, fold, join, fix, structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved, metal, wood, plastic, circle, triangle, square, rectangle, cuboid, cube, cylinder, design, make, evaluate, user, purpose, ideas, design criteria, product, function.</p>
----------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>Year 2</p>	<p>Mechanisms Wheels and axels Boat with wheels</p> <p>Core learning To explore and evaluate a range of products with wheels and axles. To distinguish between fixed and freely moving axles To generate initial ideas and simple design criteria through talking and using own experiences. To develop and communicate ideas through drawings and mock-ups.</p> <p>Vocabulary vehicle, wheel, axle, axle holder, chassis, body, cab, assembling, cutting, joining, shaping, finishing, fixed, free, freely moving, moving, mechanism, names of tools, equipment and materials used, design, make, evaluate, purpose, user, criteria, mock-up, design criteria, functional</p>	<p>Food Preparing fruit and vegetables (including cooking and nutrition requirements for KS1) Salad and coleslaw</p> <p>Core learning To generate initial ideas and design criteria through investigating a variety of fruit and vegetables. To use simple utensils and equipment to prepare food. To evaluate ideas and finished products against design criteria, including intended user and purpose. To understand where a range of fruit and vegetables come from e.g. farmed or grown at home. To understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The eat well plate.</p> <p>Vocabulary 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, peeling, cutting, squeezing, healthy diet, choosing, ingredients, planning, investigating tasting, arranging, popular, design, evaluate, criteria</p>	<p>Textiles Templates and joining techniques Puppets</p> <p>Core learning To understand how simple 3-D textile products are made (puppets), using a template to create two identical shapes. To understand how to join fabrics using different techniques e.g. running stitch, glue, stapling. To explore and evaluate a range of existing textile products (puppets) To explore different finishing techniques e.g. stitching, sequins, buttons and ribbons.</p> <p>Vocabulary names of existing products (types of puppets), joining and finishing techniques, glue, stapling, stitching, running stitch, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish, features, suitable, quality mock-up, design brief, design criteria, make, evaluate, user, purpose, function</p>
----------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>Year 3 and 4 A</p>	<p>Structures Shell structures Christmas gift box</p> <p><i>Core learning</i> To develop ideas through the analysis of existing products. To order the main stages of making. To investigate and evaluate a range of existing shell structures. To develop and use knowledge of how to construct strong, stiff shell structures. To develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes.</p> <p><i>Vocabulary</i> shell structure, three-dimensional (3-D), shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity, marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating, font, lettering, text, graphics, decision, evaluating, design brief, design criteria, innovative, prototype</p>	<p>Food Healthy and varied diet Sandwiches</p> <p><i>Core learning</i> To learn to select and use a range of utensils and use a range of techniques as appropriate to prepare ingredients hygienically including the bridge and claw technique, grating, peeling, chopping, slicing, mixing, spreading, kneading and baking To use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas. To plan the main stages of a recipe, listing ingredients, utensils and equipment. To carry out sensory evaluations of a variety of ingredients and products. To know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught.</p> <p><i>Vocabulary</i> name of products, names of equipment, utensils, techniques and ingredients, texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet, planning, design criteria, purpose, user, annotated sketch, sensory evaluations</p>	<p>Textiles 2D to 3D Purse</p> <p><i>Core learning</i> To plan the main stages of making. To select and use a range of appropriate tools with some accuracy e.g. cutting, joining and finishing. To select fabrics and fastenings according to their functional characteristics. To investigate a range of 3-D textile products relevant to the project. To understand how a key event/individual has influenced the development of the chosen product and/or fabric. To understand how to securely join two pieces of fabric together.</p> <p><i>Vocabulary</i> fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance, user, purpose, design model, evaluate, prototype, annotated sketch, Velcro, functional, innovative, investigate, label, drawing, aesthetics, function, pattern pieces, back stitch, decorative techniques, backwards running stitch, over sew stitch, blanket stitch, running stitch</p>
------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>Year 3 and 4 B</p>	<p>Mechanical systems Levers and linkages Mechanical poster</p> <p><i>Core learning</i> To investigate and analyse products with lever and linkage mechanisms. To understand and use lever and linkage mechanisms. To distinguish between fixed and loose pivots.</p> <p><i>Vocabulary</i> mechanism, lever, linkage, pivot, fixed, loose, slot, bridge, guide system, input, process, output, analyse, linear, rotary, oscillating, reciprocating, user, purpose, function, prototype, design criteria, innovative, appealing, design brief</p>	<p>Structures Freestanding structures Topic related building</p> <p><i>Core learning</i> To order the main stages of making. To investigate and evaluate a range of existing shell structures. To use knowledge of how to construct strong, stiff shell structures. To use knowledge of nets of cubes and cuboids and more complex 3D shapes. To research key events and individuals relevant to structures.</p> <p><i>Vocabulary</i> shell structure, three-dimensional (3-D), shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity, marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating, font, lettering, text, graphics, decision, evaluating, design brief, design criteria, innovative, prototype</p>	<p>Food Healthy and varied diet Seasonal tart</p> <p><i>Core learning</i> To learn to select and use a range of utensils and use a range of techniques as appropriate to prepare ingredients hygienically including the bridge and claw technique, grating, peeling, chopping, slicing, mixing, spreading, kneading and baking To use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas. To plan the main stages of a recipe, listing ingredients, utensils and equipment. To carry out sensory evaluations of a variety of ingredients and products. To know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught.</p> <p><i>Vocabulary</i> name of products, names of equipment, utensils, techniques and ingredients, texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet, planning, design criteria, purpose, user, annotated sketch, sensory evaluations</p>
------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>Year 4 and 5 A</p>	<p>Electrical Systems Simple circuits and switches Torch</p> <p><i>Core learning</i> To order the main stages of making. To investigate and analyse a range of existing battery-powered products. To evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work. To understand and use electrical systems in their products.</p> <p><i>Vocabulary</i> series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device, user, purpose, function, prototype, design criteria, innovative, appealing, design brief</p>	<p>Structures Shell structures using computer aided design Lunch Box</p> <p><i>Core learning</i> To develop ideas through the analysis of existing shell structures and use computer-aided design to model and communicate ideas. To use computer-generated finishing techniques suitable for the product they are creating. To investigate and evaluate a range of shell structures including the materials, components and techniques that have been used. To develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes.</p> <p><i>Vocabulary</i> shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity, marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating, font, lettering, text, graphics, decision, evaluating, design brief design criteria, innovative, prototype</p>	<p>Food Celebrating culture and seasonality Pasta sauce</p> <p><i>Core learning</i> To begin to write a step-by-step recipe, including a list of ingredients, equipment and utensils To learn how to select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. To make and decorate the food product appropriately for the intended user and purpose. To evaluate the final product with reference back to the design brief and design specification. To understand how key chefs have influenced eating habits to promote varied and healthy diets. To know how to use utensils and equipment including heat sources to prepare and cook food. To understand about seasonality in relation to food products and the source of different food products.</p> <p><i>Vocabulary</i> ingredients, spice, herbs, fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality, utensils, combine, stir, pour, mix, sprinkle, crumble, design specification, innovative, research, evaluate, design brief</p>
------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>Year 4 and 5 B</p>	<p>Mechanical systems Pulleys or gears</p> <p>Core learning: To develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views. To consider the views of others to improve their work. To investigate famous manufacturing and engineering companies relevant to the project. To understand that mechanical and electrical systems have an input, process and an output. To understand how gears and pulleys can be used to speed up, slow down or change the direction of movement.</p> <p>Vocabulary: pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams, mechanical system, electrical system, input, process, output, design decisions, functionality, innovation, authentic, user, purpose, design specification, design brief</p>	<p>Food Celebrating culture and seasonality Bread - Warburtons</p> <p>Core learning To find out about important people and events in the past that have shaped the way bread is made and sold today. To generate ideas for design criteria based on research. To select ingredients and kitchen equipment to help me follow a bread making recipe To evaluate the final product with reference back to the design specification. To know how to use utensils and equipment to prepare and cook food. To understand about the source of different food products.</p> <p>Vocabulary ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs, fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality, utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble, design specification, innovative, research, evaluate, design brief, product, market research. texture, appearance, flavour, pioneer, design, brand, industry, design criteria, shape, knot, original, annotated, ingredients, yeast, knead, dough, rise.</p>	<p>Textiles Combining different fabric shapes (including computer aided design)</p> <p>Core learning: To generate ideas by carrying out research such as surveys, interviews and questionnaires. To develop, model and communicate ideas through talking, drawing, templates, mock-ups and prototypes and, where appropriate, computer aided design. To investigate and analyse textile products linked to their final product. To know that a 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics. To know that fabrics can be strengthened, stiffened and reinforced where appropriate.</p> <p>Vocabulary: seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings, iron transfer paper, design criteria, annotate, design decisions, functionality, innovation, authentic, user, purpose, evaluate, mock-up, prototype</p>
------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

<p>Year 6</p>	<p>Structures Frame structures Shelter</p> <p>Core learning To generate, develop and model ideas through prototypes and annotated sketches. To select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks. To use finishing and decorative techniques suitable for the product they are designing and making. To investigate and evaluate a range of existing frame structures. To research key events and individuals relevant to frame structures. To understand how to strengthen, stiffen and reinforce 3-D frameworks.</p> <p>Vocabulary frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent, design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional</p>	<p>Food Celebrating culture and seasonality Spring vegetables</p> <p>Core learning To write a step-by-step recipe, including a list of ingredients, equipment and utensils To select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. To make, decorate and present the food product appropriately for the intended user and purpose. To evaluate the final product with reference back to the design specification, taking into account the views of others when identifying improvements. To understand how key chefs have influenced eating habits to promote varied and healthy diets. To know how to use utensils and equipment including heat sources to prepare and cook food. To understand about seasonality in relation to food products and the source of different food products.</p> <p>Vocabulary ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs, fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality, utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble, design specification, innovative, research, evaluate, design brief</p>	<p>Mechanical Systems Cams Moving toy</p> <p>Core learning To generate ideas by carrying out research To develop and communicate ideas annotated drawings, exploded drawings and drawings from different views. To formulate step-by-step plans To compare the final product to the original design specification. To understand how cams can be used to produce different types of movement and change the direction of movement.</p> <p>Vocabulary cam, snail cam, off-centre cam, follower, axle, shaft, crank, handle, housing, framework, rotation, rotary motion, oscillating motion, reciprocating motion annotated sketches, exploded diagrams mechanical system, input movement, process, output movement design decisions, functionality, innovation, authentic, user, purpose, design specification, design brief</p>
----------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

