



St Newlyn East Design and Technology Long Term Plan



Logo	Autumn Term	Spring Term	Summer Term
Y1	<p>Mechanisms: Sliders and Levers Can I design, make and evaluate a moving puppet?</p> <ul style="list-style-type: none"> - Can you think of some ideas of your own? - Can you use pictures and words to plan? - Can you generate ideas for purposeful designs? - Can you explain what you want to do? - Can you explain what you are making and which tools are you using? - Can you describe how something works? - Can you talk about your own work and describe how something works? - Can you recognise features of familiar products? - Can you make a product which moves? - Can you cut materials using scissors? - Can you describe the materials using different words? - Can you say why you have chosen moving parts? 	<p>Textiles: Template and Joining Can I design, make and evaluate a story book character?</p> <p>Can you think of ideas based upon investigations of products?</p> <ul style="list-style-type: none"> - Can you plan what to do next based on experience of working with materials? - Can you describe your design by using pictures, diagrams, models and words? - Can you join things (materials/components) together in different ways to make a functional product? - What went well with your work? - If you did it again, what would you want to improve? - Can you measure textile? - Can you join textiles together to make something? - Can you cut textile? - Can you explain why you chose a certain textile? 	<p>Food: Preparing fruit and vegetables Can I design, make and evaluate a fruit/vegetable smoothie?</p> <ul style="list-style-type: none"> - Can you think of some ideas of your own? - Can you use pictures and words to plan? - Can you generate ideas for purposeful designs? - Can you explain what you want to do? - Can you explain what you are making and which tools are you using? - Can you describe how something works? - Can you talk about your own work and describe how something works - Can you recognise features of familiar products? - Can you cut food safely? - Can you describe the texture of foods? - Do you wash your hands and make sure that tools & surfaces are clean?
Y2	<p>Food Cooking and nutrition: Preparing fruit and vegetables Can I design, make and evaluate a healthy fruit snack?</p> <ul style="list-style-type: none"> - Knowledge, skills and understanding: - Can you think of some ideas of your own? - Can you use pictures and words to plan? - Can you generate ideas for purposeful designs? - Can you explain what you want to do? 	<p>Freestanding Structures Can I design, make and evaluate a chair for grandad?</p> <ul style="list-style-type: none"> -Can you think of ideas based upon investigations of products? - Can you plan what to do next based on experience of working with materials? - Can you describe your design by using pictures, diagrams, models and 	<p>Mechanisms: Sliders and Leavers Can I design, make and evaluate a moving dinosaur?</p> <ul style="list-style-type: none"> - Can you think of some ideas of your own? - Can you use pictures and words to plan? - Can you generate ideas for purposeful designs? - Can you explain what you want to do? - Can you explain what you are making and which tools are you using?



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	<ul style="list-style-type: none"> - Can you explain what you are making and which tools are you using? - Can you describe how something works? - Can you talk about your own work and describe how something works - Can you recognise features of familiar products? - Can you cut food safely? - Can you describe the texture of foods? - Do you wash your hands and make sure that tools & surfaces are clean? 	<p>words?</p> <ul style="list-style-type: none"> - Can you join things (materials/components) together? - Can you join things (materials/components) together in different ways? - Can you join materials together as part of a moving product? - Can you add some kind of design to your product? - What went well with your work? - If you did it again, what would you want to improve? 	<ul style="list-style-type: none"> - Can you describe how something works? - Can you talk about your own work and describe how something works? - Can you recognise features of familiar products? - Can you make a product which moves? - Can you cut materials using scissors? - Can you describe the materials using different words? - Can you say why you have chosen moving parts?
Y3	<p>Food: Cooking and nutrition: Can I design, make and evaluate a healthy cereal bar?</p> <ul style="list-style-type: none"> -Can you choose the best tools and materials? -Can you give a reason why these are best? - Can you describe your design using an accurately labelled sketch and words? - Can you join and combine materials and components in a variety of ways to make a functional product? - Can you use equipment and tools accurately? <p>What went well with your work?</p> <ul style="list-style-type: none"> - If you did it again, what would you want to improve? - Can you describe the properties of the ingredients you are using? - Can you explain what it means to be hygienic? - Are you hygienic in the kitchen? 	<p>Structures: Constructing Can I design, make and evaluate a lunchbox?</p> <ul style="list-style-type: none"> -Can you choose the best tools and materials? -Can you give a reason why these are best? - Can you describe your design using an accurately labelled sketch and words? - Can you join and combine materials and components in a variety of ways to make a functional product? -Can you use equipment and tools accurately? <p>What went well with your work?</p> <ul style="list-style-type: none"> - If you did it again, what would you want to improve - Can you measure materials to use in a model or structure? - Can you join material in different ways? - Can you join, fold or roll material to make it stronger? 	<p>Mechanical Systems: Pneumatic toys Can I design, make and evaluate a boat?</p> <ul style="list-style-type: none"> -Can you think of ideas based upon investigations of products? - Can you plan what to do next based on experience of working with materials? - Can you describe your design by using pictures, diagrams, models and words? - Can you join things (materials/components) together? - Can you join things materials/components) together in different ways? - Can you join materials together as part of a moving product? - Can you add some kind of design to your product? - What went well with your work?



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Y4	<p>Food: Cooking and Nutrition Adapting a recipe Can I design, make and evaluate different types of bread?</p> <ul style="list-style-type: none"> -Can you describe your design using an accurately labelled sketch and words? - Can you show that your design meets a range of requirements? - How realistic is your plan? - Can you put together a step-by-step plan which shows the sequence and also what equipment and tools you need? -Can you use equipment and tools accurately? - What did you change which made your design even better? - Can you choose the right ingredients for a product? - Can you use equipment safely? - Can you make sure that your product looks attractive? - Can you describe how your combined ingredients come together? 	<p>Electrical Systems: Simple circuits and switches Can I design, make and evaluate a torch?</p> <ul style="list-style-type: none"> -Can you describe your design using an accurately labelled sketch and words? - Can you show that your design meets a range of requirements? - How realistic is your plan? - Can you put together a step-by-step plan which shows the sequence and also what equipment and tools you need? -Can you use equipment and tools accurately? - What did you change which made your design even better? - Do you select the most appropriate tools & techniques? - Can you make a product which uses both electrical & mechanical components? - Can you use a simple circuit? - Can you use a number of components? 	<p>- If you did it again, what would you want to improve?</p> <p>Textiles: Fastenings 2-D shape to 3-D product Can I design, make and evaluate a piece of ancient Greek clothing?</p> <ul style="list-style-type: none"> - Can you describe your design using an accurately labelled sketch and words? - Can you show that your design meets a range of requirements? - How realistic is your plan? - Can you put together a step-by-step plan which shows the sequence and also what equipment and tools you need? -Can you use equipment and tools accurately? - What did you change which made your design even better? - Can you join textiles of different types in different ways? - Can you choose textiles both for their appearance and their qualities?
Y5	<p>Electrical systems: More complex switches and circuits Can I design, make and evaluate a doodler?</p> <ul style="list-style-type: none"> - Can you follow and refine your plan if necessary? - Can you justify your plan to someone else? - Can you use a range of data to inform your design? 	<p>Cooking and nutrition: Developing a recipe Can I design, make and evaluate a meal suitable for a family?</p> <ul style="list-style-type: none"> - Can you put together a step-by-step plan which shows the sequence and also what equipment and tools you need? - Can you come up with a range of ideas after you have collected information? 	<p>Mechanical Systems: Cams Can I design, make and evaluate a moving message?</p> <ul style="list-style-type: none"> -What is a cam and how does it work? Research different cam movements by making a prototype. -Can you design your own moving message?



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	<ul style="list-style-type: none"> - Can you use market research to inform plans? - Can you work within constraints? - Do you consider cultural & societal factors in your designs? - Can you use a range of tools, ingredients, equipment, components and materials precisely? - Do you change the way you are working if needed? <p>How well do you test and evaluate your final product?</p> <ul style="list-style-type: none"> - Can you show that it is fit for purpose? - What would improve it? - Would different resources have improved your product? - Would you need more or different information to make it even better? - Do you select the most appropriate tools & techniques? - Can you make a product which uses both electrical & mechanical components? - Can you use a simple circuit? - Can you use a number of components? - Can you use different kinds of circuit in your product? 	<ul style="list-style-type: none"> - Can you use equipment and tools accurately? - Is your finished product going to be of good quality? - Do you keep checking that your design is the best it can be? - Can you choose the right ingredients for a product? - Can you use equipment safely? - Can you make sure that your product looks attractive? - Can you describe how your combined ingredients come together? - Can you explain how your product should be stored with reasons? 	<p>Decide on their target audience and message they want to get across, then design their own moving message (ensuring they've included measurements).</p> <ul style="list-style-type: none"> -Can you create your own moving message? Build their moving message. -Can you evaluate your work? Evaluate their work deciding on what they would improve if they were to do it again.
Y6	<p>Food: Cooking and Nutrition. Balanced diet Can I design, make and evaluate a protein bar for a mountaineer?</p> <ul style="list-style-type: none"> - Can you put together a step-by-step plan which shows the sequence 	<p>Electrical systems Can I design, make and evaluate a steady hand game?</p> <ul style="list-style-type: none"> - Can you follow and refine your plan if necessary? 	<p>Structure and Materials, inc Textiles Can I design, make and evaluate a fabric book sleeve?</p> <ul style="list-style-type: none"> - Can you put together a step-by-step plan which shows the sequence and also what



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	<p>and also what equipment and tools you need?</p> <ul style="list-style-type: none"> - Can you come up with a range of ideas after you have collected information? - Can you use equipment and tools accurately? - Is your finished product going to be of good quality? - Do you keep checking that your design is the best it can be? - Can you choose the right ingredients for a product? - Can you use equipment safely? - Can you make sure that your product looks attractive? - Can you describe how your combined ingredients come together? - Can you explain how your product should be stored with reasons? 	<ul style="list-style-type: none"> - Can you justify your plan to someone else? - Can you use a range of data to inform your design? - Can you use market research to inform plans? - Can you work within constraints? - Do you consider cultural & societal factors in your designs? - Can you use a range of tools, ingredients, equipment, components and materials precisely? - Do you change the way you are working if needed? <p>How well do you test and evaluate your final product?</p> <ul style="list-style-type: none"> - Can you show that it is fit for purpose? - What would improve it? - Would different resources have improved your product? - Would you need more or different information to make it even better? - Do you select the most appropriate tools & techniques? - Can you make a product which uses both electrical & mechanical components? 	<p>equipment and tools you need?</p> <ul style="list-style-type: none"> - Can you come up with a range of ideas after you have collected information? - Can you use equipment and tools accurately? - Is your finished product going to be of good quality? - Do you keep checking that your design is the best it can be? - Can you join textiles of different types in different ways? - Can you choose textiles both for their appearance and their qualities? - Could your product be sold? - What would improve it even more?
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