Long Term Subject Map of skills – 2014 and 2015

Subject: Design Technology

Vision:

Design and Technology gives children the opportunity to develop skill, knowledge and understanding of designing and making functional products. We feel it is vital to nurture creativity and innovation through design, and by exploring the designed and made world in which we all live and work.

There are three core activities children engage with in design and technology:

- Activities which involve investigating and evaluating existing products
- Focused practical tasks in which children develop particular aspects of knowledge and skills
- Designing and making activities in which children design and make 'something' for 'somebody' for 'some purpose'

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
These skills will be achieved through using textiles, mouldable materials and structures (cardboard and wood). They should be taught in a range of relevant contexts, including home and school, garden and playgrounds, community, industry and the wider environment. Children should take inspiration from architects and designers.						
Design	Talk about existing products and how they work. Talk about your ideas and draw a picture of what you will make. Use drawing and simple labels to plan a purposeful product.	Compare existing products and how they work. Use pictures, words and ICT to plan a purposeful product. Make a list of equipment I need. Plan how to make my product look appealing. Make a template to help me.	Compare existing products and consider how they work and why they have these features. As a class, create success criteria for their product. Develop their ideas through computer aided design and annotated sketches of different parts of the product.	Research existing products and evaluate their functionality. In groups, create success criteria for their product. Develop their ideas through computer aided design and exploded diagrams.	Research existing products and evaluate their functionality and their audience. Talk about a famous designer/architect and their work. In pairs, create success criteria for their product. Develop their ideas through cross sectional diagrams.	Widely research existing products and compare their functionality and how appealing they are. Understand how a designer has effected the world. Independently create success criteria for their product. Develop their ideas through computer aided design and by making prototypes (evaluate the prototype & modify

						designs if needed).
Make	Practise the skills of cutting and joining before making final product, use construction materials and recyclable materials (wooden blocks, boxes, etc).	Practise the skills of cutting, shaping, joining and finishing before making final product using recyclable materials (boxes, etc). Choose appropriate equipment and materials from a given range.	Practise the skills of cutting, shaping, joining and finishing before making final product using mouldable materials (plasticine, etc.) Choose appropriate equipment and materials for their functional properties.	Practise the skills of cutting, shaping, joining and finishing before making final product use textiles. Choose appropriate equipment and materials for their functional properties and aesthetic qualities.	Demonstrate the skills of cutting, shaping, joining and finishing before making final product using wood. Choose the best materials and equipment.	Demonstrate the skills of cutting, shaping, joining and finishing before making final product use all materials taught to date. Use this to inform which skills they need to use to make their product. Choose the materials that are in budget and appealing. Use equipment skilfully.
Evaluate	Talk about their product and what they did well.	Use the success criteria to record what they did well and what they could improve.	Use the success criteria to record what they did well and what they could improve.	Discuss in a group how the product meets the success criteria and act on suggestions on how to improve their work.	Present their product to others and evaluate it against the functionality, marketability and how appealing it is.	Persuade others to buy their product.
Technical knowledge	Understand that a structure needs to be strong. Explore mechanisms (levers, sliders, wheels and axels)	Explore how to make a structure stronger. Use mechanisms (wheels and axels) in my products.	Apply their knowledge of how to strengthen complex structures. Use a slider mechanism in my product. Use a simple electrical circuit, including a bulb, in my product.	Use a lever and/or pulley mechanism. Use an electrical circuit, including a bulb, buzzer, or motor in my product.	Use a pulley mechanism in my product. Use a series circuit, with a range of components in my product. Using a computer, create a basic program to control your model.	Use a cam mechanism. Use a series circuit, with a range of components (including a switch) in my product. Create a program to control your model, include lights, buzzers and motors. Test your program before connecting it.
Cooking and nutrition	Understand what makes a healthy diet. Work safely and hygienically to prepare	Design and prepare healthy dishes and know where the food comes from.	Design a healthy dish, considering how the ingredients are grown or processed.	Design a healthy dish, considering how the ingredients are sourced.	Design a healthy dish, choosing appropriate ingredients that are in season.	Design a healthy dish to meet the need of others, e.g. vegetarian, using in

food.	Work safely and hygienically.	Prepare a cold dish, using: washing, chopping, stirring and spreading skills, e.g. salad.	Prepare a hot savoury dish using a range of skills., e.g. pasta	Make a hot savoury dish that has different parts, e.g. sausage roll	season ingredients. Design packaging for my product.