DT coverage checker

Key Stage 1			
Statutory requirement	Programme of Study	Covered (Y /N)	Topic(s)/ Lessons
Design			
Design purposeful, functional, appealing products for themselves and other users based on design criteria.	Design criteria are the explicit goals that a project must achieve.		PCW DT1 /2 /3 Sup DT2
Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.	Ideas can be communicated in a variety of ways, including written work, drawings and diagrams, modelling, speaking and using information and communication technology.		SD DT3
Make			
Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].	Specific tools are used for particular purposes. For example, scissors are used for cutting and glue is used for sticking.		MB DT2
	Different tools have characteristics that make them suitable for specific purposes. For example, scissors are used for cutting paper because they have sharp, metal blades that can cut through thin materials.		Beach DT1
	Some ingredients need to be prepared before they can be cooked or eaten. There are many ways to prepare ingredients: peeling skins using a vegetable peeler, such as potato skins; grating hard ingredients, such as cheese or chocolate; chopping vegetables, such as onions and peppers and slicing foods, such as bread and apples.		SD DT2 W&C DT1
Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.	Different materials are suitable for different purposes, depending on their specific properties. For example, glass is transparent, so it is suitable to be used for windows.		MB DT2 EW DT1 /2
	Properties of components and materials determine how they can and cannot be used. For example, plastic is shiny and strong but it can be difficult to paint.		Beach DT2 SD DT1 TTT DT1
Evaluate			
Explore and evaluate a range of existing products.	Many key individuals have helped to shape the world. These include engineers, scientists, designers, inventors and many other people in important roles.		TTT DT
Evaluate their ideas and products against design criteria.	A strength is a good quality of a piece of work. A weakness is an area that could be improved.		PCW DT1 /2 /3
	Finished products can be compared with design criteria to see how closely they match. Improvements can then be planned.		TTT DT1 ,2 ,3

Technical Language			
Build structures, exploring how they can be made stronger, stiffer and more stable.	An axle is a rod or spindle that passes through the centre of a wheel to connect two wheels.		LA DT1
	A mechanism is a device that takes one type of motion or force and produces a different one. A mechanism makes a job easier to do. Mechanisms include sliders, levers, linkages, gears, pulleys and cams.		LA DT1
Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	Different materials can be used for different purposes, depending on their properties. For example, cardboard is a stronger building material than paper. Plastic is light and can float. Clay is heavy and will sink.		BLBC DT1 EW DT1/2
	Structures can be made stronger, stiffer and more stable by using cardboard rather than paper and triangular shapes rather than squares. A broader base will also make a structure more stable.		TTT DT3,4,5
Cooking and Nutrition			
Use the basic principles of a healthy and varied diet to prepare dishes.	Using non-standard measures is a way of measuring that does not involve reading scales. For example, weight may be measured using a balance scale and lumps of plasticine. Length may be measured in the number of handspans or pencils laid end to end.		BLBC DT2
	Fruit and vegetables are an important part of a healthy diet. It is recommended that people eat at least five portions of fruit and vegetables every day.		MB DT1 Sup DT1
	Some ingredients need to be prepared before they can be cooked or eaten. There are many ways to prepare ingredients: peeling skins using a vegetable peeler, such as potato skins; grating hard ingredients, such as cheese or chocolate; chopping vegetables, such as onions and peppers and slicing foods, such as bread and apples.		SD DT2 W&C DT1
	A healthy diet should include meat or fish, starchy foods (such as potatoes or rice), some dairy foods, a small amount of fat and plenty of fruit and vegetables.		MMM DT3
Understand where food comes from.	Food comes from two main sources: animals and plants. Cows provide beef, sheep provide lamb and mutton and pigs provide pork, ham and bacon. Examples of poultry include chickens, geese and turkeys. Examples of fish include cod, salmon and shellfish. Milk comes mainly from cows but also from goats and sheep. Most eggs come from chickens. Honey is made by bees. Fruit and vegetables come from plants. Oils are made from parts of plants. Sugar is made from plants called sugar cane and sugar beet. Plants also give us nuts, such as almonds, walnuts and hazelnuts.		MMM DT2

Key Stage 2			
Statutory requirement	Programme of Study	Covered (Y/N)	Topic(s)/ Lessons
Design			
Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.	Design criteria are the exact goals a project must achieve to be successful. These criteria might include the product's use, appearance, cost and target user.		TT DT1
	Annotated sketches and exploded diagrams show specific parts of a design, highlight sections or show functions. They communicate ideas in a visual, detailed way.		T & R DT2
	A pattern piece is a drawing or shape used to guide how to make something. There are many different computer-aided design packages for designing products.		SM DT1
	Design criteria should cover the intended use of the product, age range targeted and final appearance. Ideas can be communicated in a range of ways, including through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.		BH DT1
Make			
Select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing), accurately.	Specific tools can be used for cutting, such as saws. Wood can be joined using glue, nails, staples, or a combination of these. Safety rules must be followed to prevent injury from sharp blades. These rules include using a bench hook to keep the wood still, using a junior hacksaw with a pistol grip and working under adult supervision.		G&M DT 1/2/3
	There are many rules for using tools safely and these may vary depending on the tools being used. For example, someone using a chisel should chip or cut with the cutting edge pointing away from their body. All tools should be cleaned and put away after use, and should not be used if they are loose or cracked.		Ph DT2
Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.	Materials for a specific task must be selected on the basis of their properties. These include physical properties as well as availability and cost.		G&M DT 1/2/3 MM DT2/3/4
	Different materials and components have a range of properties, making them suitable for different tasks. It is important to select the correct material or component for the specific purpose, depending on the design criteria. Recipe ingredients have different tastes and appearances. They look and taste better and are cheaper when in season.		BBB DT 3/4 War DT1 PL DT3.1 T&R
	Materials should be cut and combined with precision. For example, pieces of fabric could be cut with sharp scissors and sewn together using a variety of stitching techniques.		AL BC Ph DT2 St DT1
	It is important to understand the characteristics of different materials to select the most appropriate material for a purpose. This might include flexibility, waterproofing, texture, colour, cost and availability.		CW DT3 HM DT5

Evaluate			
Investigate and analyse a range of existing products.	Particular products have been designed for specific tasks, such as nail clippers, the spinning top and the cool box.		P1 DT1/2
	A comparison table can be used to compare products by listing specific criteria on which each product can be judged or scored.		BBB DT2
	Design features are the aspects of a product's design that the designer would like to emphasise, such as the use of a particular material or feature that makes the product easier to use or more durable.		P1 DT 1/2
	People's lives have been improved in countless ways due to new inventions and designs. For example, the Morrison shelter, designed by John Baker in 1941, was an indoor air-raid shelter used in over half a million homes during the Second World War. It saved the lives of many people caught in bombing raids.		TW DT 2/4
Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.	Asking questions can help others to evaluate their products, such as asking them whether the selected materials achieved the purpose of the model.		TT DT1 P1 DT 3.2
	Evaluation can be done by considering whether the product does what it was designed to do, whether it has an attractive appearance, what changes were made during the making process and why the changes were made. Evaluation also includes suggesting improvements and explaining why they should be made.		P1 DT 3.2
	Testing a product against the design criteria will highlight anything that needs improvement or redesign. Changes are often made to a design during manufacture.		St DT1
	Design is an iterative process, meaning alterations and improvements are made continually throughout the manufacturing process. Evaluating a product while it's being manufactured, and explaining these evaluations to others, can help to refine it.		TW DT5
Understand how key events and individuals in design and technology have helped shape the world.	The significance of a designer or inventor can be measured in various ways. Their work may benefit society in health, transport, communication, education, the built environment or technology. It may enhance culture in different areas, such as fashion, ceramics or computer games.		TW DT6

Technical Knowledge			
Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.	A prototype is a mock-up of a design that will look like the finished product but may not be full size or made of the same materials. Shell and frame structures can be strengthened by gluing several layers of card together, using triangular shapes rather than squares, adding diagonal support struts and using 'Jinks' corners (small, thin pieces of card cut into a right-angled triangle and glued over each joint to straighten and strengthen them).		T&R DT2
	Strength can be added to a framework by using multiple layers. For example, corrugated cardboard can be placed with corrugations running alternately vertically and horizontally. Triangular shapes can be used instead of square shapes because they are more rigid. Frameworks can be further strengthened by adding an outer cover.		CW DT2
Understand and use mechanical systems in their products (for example, gears, pulleys, cams, levers and linkages).	Levers consist of a rigid bar that rotates around a fixed point, called a fulcrum. They reduce the amount of work needed to lift a heavy object. Sliders move from side to side or up and down, and are often used to make moving parts in books. Axles are shafts on which wheels can rotate to make a moving vehicle. Cams are devices that can convert circular motion into up-and-down motion.		F1DT1
	Mechanisms can be used to add functionality to a model. For example, sliders or levers can be used in moving pictures, storybooks or simple puppets; linkages in moving vehicles or puppets; gears in motorised vehicles or spinning toys; pulleys in cable cars or transport systems and cams in 3-D moving toys or pictures.		SM DT3
	Pneumatic systems use energy that is stored in compressed air to do work, such as inflating a balloon to open a model monster's mouth. These effects can be achieved using syringes and plastic tubing.		SM DT3
Understand and use electrical systems in their products (for example, series circuits incorporating switches, bulbs, buzzers and motors).	Electrical circuits can be controlled by a simple on/off switch, or by a variable resistor that can adjust the size of the current in the circuit. Real-life examples are a dimmer switch for lights or volume control on a stereo.		AI DT1
Apply their understanding of computing to program, monitor and control their products.	Remote control is controlling a machine or activity from a distance. Computers can be used to remotely control a device, such as a light, speaker or buzzer.		SM DT2
	Equipment and devices can be controlled by pressing buttons on a control panel, such as on a washing machine or microwave.		SM DT2
	Computer monitoring uses sensors as a scientific tool to record information about environmental changes over time. Computer monitoring can also log data from sensors and record the resulting information in a table or graph.		TW DT3

Cooking and Nutrition			
Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.	Cooking techniques include baking, boiling, frying, grilling and roasting.		USA DT1
	Sweet dishes are usually desserts, such as cakes, fruit pies and trifles. Savoury dishes usually have a salty or spicy flavour rather than a sweet one.		A1 DT1 /4
	Ingredients can usually be bought at supermarkets, but specialist shops may stock different items. Greengrocers sell fruit and vegetables, butchers sell meat, fishmongers sell fresh fish and delicatessens usually sell some unusual prepared foods, as well as cold meats and cheeses.		CW DT1 BH DT2 HM DT1 /2 /3
Understand and apply the principles of a healthy and varied diet.	There are five main food groups that should be eaten regularly as part of a balanced diet: fruit and vegetables; carbohydrates (potatoes, bread, rice and pasta); proteins (beans, pulses, fish, eggs and meat); dairy and alternatives (milk, cheese and yoghurt) and fats (oils and spreads). Foods high in fat, salt and sugar should only be eaten occasionally as part of a healthy, balanced diet.		BBB DT1
	Healthy snacks include fresh or dried fruit and vegetables, nuts and seeds, rice cakes with low-fat cream cheese, homemade popcorn or chopped vegetables with hummus. A healthy packed lunch might include a brown or wholemeal bread sandwich containing eggs, meat, fish or cheese, a piece of fresh fruit, a low-sugar yoghurt, rice cake or popcorn and a drink, such as water or semi-skimmed milk.		BBB DT1
	A balanced diet gives your body all the nutrients it needs to function correctly. This means eating a wide variety of foods in the correct proportions.		A1 DT5
	Eating a balanced diet is a positive lifestyle choice that should be sustained over time. Food that is high in fat, salt or sugar can still be eaten occasionally as part of a balanced diet.		HM DT4
Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	The types of food that will grow in a particular area depend on a range of factors, such as the rainfall, climate and soil type. For example, many crops, such as potatoes and sugar beet, are grown in the south-east of England. Wheat, barley and vegetables grow well in the east of England.		UP DT1
	Particular areas of the world have conditions suited to growing certain crops, such as coffee in Peru and citrus fruits in California in the United States of America.		USA G4 /DT
	Seasonality is the time of year when the harvest or flavour of a type of food is at its best. Buying seasonal food is beneficial for many reasons: the food tastes better; it is fresher because it hasn't been transported thousands of miles; the nutritional value is higher; the carbon footprint is lower, due to reduced transport; it supports local growers and is usually cheaper.		A1 DT3 Ph DT1