St Anne's C of E Primary School Curriculum Plan

Subject: Design and Technology | Year: 6 | Term: Autumn

Unit: Playgrounds (Structure)

Vocabulary	Knowledge	Understanding	Skills
	Children will know (that)	Children will understand (that)	Children will be able to
apparatus – equipment designed for recreation and play, such as seesaws and swings. **bench hook –** a tool which hooks onto the edge of the workbench. It's used to hold woodwork still when sawing. **coping saw –** a saw with a narrow D-shaped metal blade, used for cutting curves in wood. **dowel –** wood in the shape of a cylinder that come in different sizes and thicknesses. **Jelutong –** a type of softwood that is lightweight and easy to cut and shape.	Structures can be strengthened by manipulating materials and shapes. A prototype is a cheap model to test a design idea. Different types of structures used in playground apparatus. How structures can be used. What makes a successful structure. The different features of a landscape.	**Technical** What a 'footprint plan' is. In the real world, design, can impact users in positive and negative ways. How structures can be strengthened by manipulating materials and shapes. Why the surrounding environment is important to the safety of the playground. How to use a variety of tools and equipment safely.	**Design** Design a playground featuring a variety of different structures, giving careful consideration to how the structures will be used. Consider effective and ineffective designs. **Make** Build a range of play apparatus structures drawing upon new and prior knowledge of structures. Measure, mark and cut wood to create a range of structures.

mark out – to measure and mark where a piece of material needs to be cut or shaped. **modify –** to change something to improve or fix it. **plan view –** a two-dimensional diagram used to describe a place or object from above with annotations and other details such as measurements. **playground –** an outdoor area for children to play in which usually have different apparatus to play on. **prototype –** a simple model which lets you test out your idea and see how it will look and work. **reinforce –** to make a structure or material stronger, especially by adding another material or element to it. **Tenon saw –** a saw with a flat blade, used for cutting wood on straight lines or angles. **vice –** a piece of equipment used to hold an object still while you work on it.			Use a range of materials to reinforce and add decoration to structures. **Evaluate** Evaluate pre-existing products to inform their own design. Improve a design plan based on peer evaluation. Test and adapt a design to improve it as it is developed. Identify what makes a successful structure.

St Anne's C of E Primary School Curriculum Plan

Subject: Design and Technology | Year: 6 | Term: Spring

Unit: Automata toys (Mechanisms)

Vocabulary	Knowledge	Understanding	Skills
	Children will know (that)	Children will understand (that)	Children will be able to
assembly-diagram – an exploded view diagram of an object, that shows you how to construct an object or order of assembly of various parts. **automata –** automata toys are sometimes known as mechanical toys or kinetic art. They use hand-powered mechanisms to create movement in a scene of characters. **axle –** in an automata the axle rotates, turning the cam with it. It is attached to the handle. **bench hook –** a tool which hooks onto the edge of the workbench. It's used to hold woodwork still when sawing.	An automata is a hand powered mechanical toy. A cross-sectional diagram shows the inner workings of a product. A set square can be used to help mark 90° angles. How to measure, mark and cut accurately. How to use design criteria to fulfil a design brief. Different shaped cams produce different outputs.	**Technical** The mechanism in an automata uses a system of cams, axles and followers. How to use a bench hook and saw safely. Components must be cut accurately for a frame to function. That the cam profile causes a follower to rise, fall or remain static at different points depending on its shape.	**Design** Experiment with a range of cams, creating a design for an automata toy based on a choice of cam to create a desired movement. Understand how linkages change the direction of a force. Make things move at the same time. Draw cross-sectional diagrams to show the inner-workings of their design. **Make**

cam – a cam is a rotating or sliding piece in a mechanism. It changes rotary motion to linear motion. **component –** one of several parts of which something is made. **cutting list –** an outline drawn true to size on paper, which shows the size and how many of each piece you need to make for the project. **dowel –** wood in the shape of a cylinder that come in different sizes and thicknesses. drill bits – **exploded-diagram –** a diagram which shows all of the parts of a product, including the internal and external parts. **follower –** the post which traces the shape of the cam, rising and falling in a linear or reciprocating motion. **frame –** the rectangular structure which holds the automata together. **Jelutong –** a type of softwood that is lightweight and easy to cut and shape. **linkage -** lengths of material that are joined together by pivots, so that the links can move as part of a mechanism.	How to conceal the inner workings of an automata.	Why concealing the inner workings improves the aesthetics of the mechanism.	Measure, mark and check the accuracy of the Jelutong and dowel pieces required. Measure, mark and cut components accurately using a ruler and scissors. Assemble components accurately to make a stable frame. Understand that for the frame to function effectively the components must be cut accurately and the joints of the frame secured at right angles. Select appropriate materials based on the materials being joined and the speed at which the glue needs to dry/set. **Evaluate** Evaluate pre-existing products to inform their own design. Evaluate the work of others and receive feedback on their own work. Apply points of improvement to their toys. Describe changes they would make/do if they were to do the project again.

mark out – to measure and mark where a piece of material needs to be cut or shaped. **set square or engineers square –** a right-angle triangular plate, wood or metal tool used for drawing lines at 90, 45, 60 or 30 degrees. **Tenon saw –** a saw with a flat blade, used for cutting wood on straight lines or angles.			

St Anne's C of E Primary School Curriculum Plan

Subject: Design and Technology | Year: 6 | Term: Summer

Unit: Come dine with me (Cooking and Nutrition)

Vocabulary	Knowledge	Understanding	Skills
	Children will know (that)	Children will understand (that)	Children will be able to
accompaniment – something which goes well together with other foods and drinks. **cookbook –** a book which contains recipes to make various dishes or foods. **cross-contamination –** when something harmful spreads from one food to another. It happens when liquid from raw meat or germs from unclean objects touch cooked or ready to eat foods. **method –** a way of carrying out a certain process, following a list of instructions.	Flavour is how a food or drink tastes. Many countries have national dishes which are recipes associated with that country. Processed food means food that has been put through multiple changes in a factory. It is important to wash fruit and vegetables before eating to remove any dirt and insecticides. What happens to a certain food before it appears on the supermarket shelf (Farm to Fork).	**Technical** Different foods and drinks have different flavours and some have more than one flavour. The different processes food can undergo in a factory. Why food is processed. Why it is important to wash fruits and vegetables before using them. That food undergoes different stages of preparation before it reaches the plate.	**Design** Write a recipe, explaining the key steps, method and ingredients. Include facts and drawings from research undertaken. **Make** Follow a recipe, including using the correct quantities of each ingredient. Adapt a recipe based on research. Work to a given timescale. Work safely and hygienically with independence.

nationality – belonging to a certain group of people in a particular country. **preparation –** the process of getting ready to make something. **processed –** when foods are passed through multiple processes in a factory to change or preserve it so it keeps for longer. **reared –** to breed and raise livestock. **recipe –** a set of instructions for making or preparing a food item or dish. **target audience –** a particular group or person whoa product is aimed at. **unit of measurement –** the unit which you use to measure quantity.		The importance of good hygiene and safety when working with food. Why it is important to prevent cross contamination when working with food.	**Evaluate** Evaluate pre-existing products to inform their own design. Evaluate a recipe, considering taste, smell, texture and origin of the food group. Taste test and score final products. Suggest and write up points of improvements when scoring others' dishes, and when evaluating their own throughout the planning, preparation and cooking process. Evaluate health and safety in production to minimise cross contamination.