|  |
| --- |
| **Assessment in Design and Technology Skills and Knowledge**  |
| **A Year 1 technologist**  | **A Year 2 technologist** | **A Year 3 technologist** |
| **DESIGN**Structures* I know it is important to have a clear design success criteria.
* I can include my own choices and suggestions in a design.

Mechanisms* I can explain how to change a bridge or guide to control movement.
* I can design a moving story book for an audience.
* I can design a vehicle that has wheels, axles and axle holders so the wheels can move.
* I can make labelled drawings which show movement.

Textiles* I can use a template to design a puppet.
* I can choose suitable materials to create my puppet.
 | **DESIGN**Structures* I can share ideas using sketching and modelling.
* I can learn about different types of shapes found in the natural world and in everyday objects.

Mechanisms* I can create a design criteria for a D.T project.
* I can design a moving object, checking the design criteria.
* I can design a system to make pushes/pulls.
* I can choose suitable materials based on their properties.

Cooking and nutrition * I can design a healthy meal based on foods which work well together.

Textiles* I can design a product using a design criteria.
 | **DESIGN**Structures* I can design a castle with features which are appealing.
* I can draw and label a castle design using 2D shapes and labelling the 3D shapes.

Mechanisms* I can think of a design criteria from a design brief.
* I can think of ideas using thumbnail sketches and exploded diagrams.
* I can learn that different types of drawings are used in design to explain ideas clearly.

Cooking and nutrition * I can create healthy recipes considering the taste, texture, smell and appearance of the dish.

Textiles* I can design a template from an existing product.
* I can apply my individual style to the design criteria.
 |
| **MAKE**Structures* I can make a stable structure from card, tape and glue.
* I can follow instructions to cut and make 2D and 3D shapes.
* I can make turbines and axles.

Mechanisms * I can follow a design to create models that use levers and sliders.
* I can change levers and sliders if needed.

Cooking and Nutrition* I can chop fruit and vegetables safely.
* I can identify if a food is a fruit or a vegetable.
* I can learn where and how fruits/vegetables grow.

Textiles* I can cut fabric neatly with scissors.
* I can use joining methods to decorate a product.
* I can order steps for how to make something.
 | **MAKE**Structures* I can make a structure according to the design criteria.
* I can create joins and structures from paper/card and tape.

Mechanisms* I can make push and pull forces using card for levers and split pins for pivots.
* I can change the widths, lengths and thicknesses of card.
* I can select materials according to their characteristics.
* I can cut parts of my work neatly.

Cooking and Nutrition* I can slice food safely using the bridge or claw grip.
* I can construct a healthy meal that meets a design brief.

Textiles* I can select and cut fabrics for sewing.
* I can decorate a pouch using fabric glue or running stitches.
 | **MAKE**Structures* I can construct a range of 3D geometric shapes using nets.
* I can create special features for individual designs.
* I can make facades from a range of recycled materials.

Mechanisms* I can create a system to enable a motion.
* I can select materials due based on what they look like and how useful they are.
* I can manipulate materials to create different effects by cutting, creasing, folding and weaving.

Cooking and Nutrition* I know how to prepare a work space to cook safely in.
* I can learn the basic rules to avoid food contamination.
* I can follow the instructions within a recipe.

Textiles* I can follow a design criteria to create a cushion
* I can select and cut fabrics with ease using fabric scissors.
* I can sew a cross stitch to join fabric.
* I can decorate fabric using appliqué.
 |
| **EVALUATION*** I can think about my finished product, explaining likes and dislikes.
* I can look at a range of existing products.
* I can evaluate my ideas and work against design criteria.
 | **EVALUATION*** I can evaluate how good the stitching on others’ work is.
* I can talk about, as a class, the success of their stitching against the success criteria.
* I can find parts of my peers’ work and say why I like it.
 | **EVALUATION*** I can investigate a range of existing products.
* I can evaluate my ideas and products against design criteria.
* I can consider the views of others to improve my work.
* I can understand how key events and individuals in design and technology have helped shape the world.
 |

|  |  |  |
| --- | --- | --- |
| **A Year 4 technologist** | **A Year 5 technologist** | **A Year 6 technologist** |
| **DESIGN****Structures*** I can design a structure that is visually pleasing, selecting materials to create the effect I want.
* I can build frame structures designed to support weight.

**Mechanisms*** I can design a shape that reduces air resistance.
* I can draw a net to create a structure from.
* I can choose shapes that increase or decrease speed as a result of air resistance.
* I can personalise my designs.

**Electrical Systems*** I can design a product based around a specific target audience.
* I can create both design and success criteria focusing on individual ideas.

**Cooking and nutrition** * I can design a recipe/meal, thinking about previous taste testing.

**Textiles*** I can write a design criteria for a product, explaining the decisions I have made.
* I can design a personalised product.
 | **DESIGN****Structures*** I can design a stable structure that is able to support weight.
* I can create a frame structure with focus on triangulation.

**Mechanisms*** I can design a product which uses a mixture of structures and mechanisms.
* I can name each mechanism, input and output accurately.
* I can storyboard ideas for a product.

**Cooking and nutrition** * I can make a traditional recipe.
* I can understand that the nutritional value of a recipe changes if you remove, substitute or add ingredients.
* I can write a method for a recipe making relevant changes to ingredients.
* I can design appealing packaging to reflect a recipe.

**Textiles*** I can create a suitable cross-stitch template considering the key shapes required.
* I can consider proportions of materials.
 | **DESIGN****Structures*** I can design an outdoor area featuring a variety of different structures.
* I can consider how the structures will be used and comment on effective and ineffective designs.

**Mechanisms*** I can experiment with a range of cams.
* I can create a design based on a choice of cam to create a desired movement.
* I can understand how linkages change the direction of a force.
* I can make things move at the same time.

**Electrical Systems*** I can design a steady-hand game identifying and naming the mechanisms required.
* I can draw a design from three different perspectives.
* I can generate ideas through sketching and discussion.
* I can model my ideas through prototypes.

**Cooking and nutrition** * I can write a recipe, explaining: key steps, method and ingredients.
* I can include facts and drawings from research undertaken.

**Textiles*** I can design a product linked to set of design criteria to fit a specific theme.
* I can annotate my designs appropriately.
 |
| **MAKE****Structures*** I can create a range of different shaped frame structures.
* I can make a variety of free standing frame structures using different shapes and sizes.
* I can select appropriate materials to build a strong structure.
* I can reinforce corners to strengthen a structure.
* I can create a design whilst following a plan.
* I can learn to create different textural effects with materials.

Mechanisms* I can measure, mark, cut and assemble with even more accuracy.
* I can make a model based on a chosen design.

Electrical systems* I can make a working electrical circuit and switch.
* I can use the right equipment to cut and attach materials.
* I can make an electrical circuit according to the success criteria.

Cooking and Nutrition* I can follow a baking recipe.
* I can cook safely, following basic hygiene rules. I can change a recipe.

Textiles* I can make and test a paper template in keeping with the design criteria.
* I can measure, mark and cut fabric using a paper template.
* I can select a stitch style to join fabric, working neatly.
* I can sew small neat stitches.
* I can use fastening in a design.

**EVALUATION*** I can test my final product against the design criteria.
* I can decide how many of the criteria should be met so the product is considered successful.
* I can suggest changes for improvement in my work.
* I can consider the views of others to improve my work.
 | **MAKE****Structures*** I can make a range of different shaped beam bridges.
* I can independently measure and mark wood accurately.
* I can select appropriate tools and equipment for tasks.
* I can use the correct techniques to saw safely.
* I can identify where a structure needs reinforcement and use card corners for support.

Mechanisms* I can follow a design brief to make a product neatly with focus on accuracy.
* I can make mechanisms using sliders, pivots and folds to produce movement.
* I can use layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result.

Electrical systems* I can make a working circuit.
* I can make an electronics greeting card, referring to a design criteria.
* I can map out where different components of the circuit will go.

Cooking and Nutrition* I can cut and prepare food safely.
* I can use equipment safely, including knives, hot pans and hobs.
* I know how to avoid cross-contamination.
* I can follow a step-by-step method carefully to make a recipe.

Textiles* I can measure, mark, and cut fabric using a paper template.
* I can create strong and secure blanket stitches when joining fabric.
* I can use applique to attach pieces of fabric decoration.

**EVALUATION*** I can test my final product against the design criteria.
* I can decide how many of the criteria should be met so the product is considered successful.
* I can suggest changes for improvement in my work.
* I can consider the views of others to improve my work.
 | **MAKE****Structures*** I can build a range of apparatus structures drawing upon new and prior knowledge of structures.
* I can measure, mark and cut wood to create a range of structures.
* I can use a range of materials to reinforce and add decoration.

Mechanisms* I can check the accuracy of the jelutong and dowel pieces required.
* I can assemble components accurately to make a stable frame.
* I know for the frame to function effectively the components must be cut accurately and the joints of the frame secured at right angles.
* I can select appropriate materials based on the joins and the speed at which the glue needs to dry/set.

Electrical systems * I can make electromagnetic motors and tweak the motor to improve its function .
* Constructing a stable base for an electromagnetic game.
* I can cut, fold and assemble a net.
* I can make and test a circuit.

Cooking and Nutrition* I can follow a recipe, including using the correct quantities of each ingredient.
* I can adapt a recipe based on research.
* I can work to a given timescale.
* I can independently work safely and hygienically.

Textiles* I can use a template, pinning panels onto fabric.
* I can use marking and cutting fabric accurately.
* I can sew a strong running stitch, making small, neat stitches and follow the edge.
* I can tie strong knots.
* I can attach various objects using thread and adding a secure fastening.

**EVALUATION*** I can test my final product against the design criteria.
* I can decide how many of the criteria should be met so the product is considered successful.
* I can suggest changes for improvement in my work.
* I can consider the views of others to improve my work.
 |