Assessment in Design and Technology Skills and Knowledge

A Year 1 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.

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.

A Year 2 technologist

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.

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.

A Year 3 technologist

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 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.

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.	• 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.	• 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.	**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.	**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.

• I can create a design whilst following a plan. • I can learn to create different textural effects with materials. <u>Mechanisms</u> • I can measure, mark, cut and assemble with even more accuracy. • I can make a model based on a chosen design. <u>Electrical systems</u> • 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. <u>Cooking and Nutrition</u> • I can follow a baking recipe. • I can cook safely, following basic hygiene rules. I can change a recipe. <u>Textiles</u> • 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. **<u>EVALUATION</u>** • 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.	• I can identify where a structure needs reinforcement and use card corners for support. <u>Mechanisms</u> • 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. <u>Electrical systems</u> • 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. <u>Cooking and Nutrition</u> • 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. <u>Textiles</u> • 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. **<u>EVALUATION</u>** • 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.	<u>Mechanisms</u> • 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. <u>Electrical systems</u> • 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. <u>Cooking and Nutrition</u> • 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. <u>Textiles</u> • 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. **<u>EVALUATION</u>** • 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.