

St. Mary's C.E Primary School DT Progression of Technical Knowledge

| | EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|--|------|---|--|--|---|--|---|
| Technical Knowledge – Materials and Structures | | begin to measure and join materials, with some support describe differences in materials suggest ways to make material/product t stronger | measure materials describe some different characteristics of materials join materials in different ways use joining, rolling or folding to make it stronger use own ideas to try to make product stronger | use appropriate materials work accurately to make cuts and holes join materials begin to make strong structures | measure carefully to avoid mistakes attempt to make product strong continue working on product even if original didn't work make a strong, stiff structure | select materials carefully, considering intended use of product and appearance explain how product meets design criteria measure accurately enough to ensure precision ensure product is strong and fit for purpose begin to reinforce and strengthen a 3D frame | select materials carefully, considering intended use of the product, the aesthetics and functionality. explain how product meets design criteria reinforce and strengthen a 3D frame |
| Technical knowledge - Mechanisms | | begin to use levers or slides | use levers or slides begin to understand how to use wheels and axles | select appropriate tools / techniques alter product after checking, to make it better begin to try new/different ideas use simple lever and linkages | select most appropriate tools techniques explain alterations to product after checking it grow in confidence about trying new / different ideas. | refine product after testing grow in confidence about trying new / different ideas begin to use cams, pulleys or gears to create movement | refine product after testing, considering aesthetics, functionality and purpose incorporate hydraulics and pneumatics be confident to try new / different ideas |

| | | | • to create movement | use levers and linkages to create movement use pneumatics to create movement | | use cams, pulleys and gears to create movement |
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| Technical knowledge - Textiles | measure, cut and join textile to make a product, with some support choose suitable textiles | together to make a product, and explain how | join different textiles in different ways choose textiles considering appearance and functionality begin to understand that a simple fabric shape can be used to make a 3D textiles project | think about user when choosing textiles think about how to make product strong begin to devise a template explain how to join things in a different way understand that a simple fabric shape can be used to make a 3D textiles project | think about user and aesthetics when choosing textiles use own template think about how to make product strong and look better think of a range of ways to join things Begin to understand that a single 3D textiles project can be made from a combination of fabric shapes. | think about user's wants/needs and aesthetics when choosing textiles make product attractive and strong make a prototype use a range of joining techniques think about how product might be sold think carefully about what would improve product Understand that a single 3D textiles project can be made from a combination of fabric shapes. |
| Technical knowledge – Food and nutrition | Begin to understand some food preparation tools, techniques and processes describe textures wash hands & clean surfaces | explain hygiene and keep a hygienic kitchen describe properties of | carefully select ingredientsuse equipment safely | explain how to be safe/hygienic *think about presenting | explain how to be safe / hygienic and follow own guidelines | understand a recipe can be adapted by adding / |

- Practise stirring, mixing, pouring, blending
- Discuss how to make an activity safe and hygienic
- Discuss use of senses
- Understand need for variety in food
- Begin to understand that eating well contributes to good health

- think of interesting ways to decorate food
- say where some foods come
- from, (i.e. plant or animal)
- describe differences between
- some food groups (i.e. sweet, vegetable etc.)
- discuss how fruit and vegetables are healthy
- cut, peel and grate safely, with support

- ingredients and importance of varied diet
- sav where food comes from (animal, underground etc.)
- describe how food is farmed, home-grown, caught
- draw eat well plate; explain there are groups of food
- describe "five a day"

grate with

increasing

confidence

cut, peel and

- make product look attractive
- think about how to grow plants to use in cooking
- begin to understand food comes from UK and wider world
- describe how healthy diet= variety/balance of food/drinks
- explain how food and drink are needed for active/healthy bodies.
- prepare and cook some dishes safely and hygienically
- grow in confidence using some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking

- product in interesting/ attractive ways
- understand ingredients can be fresh, precooked or processed
- begin to understand about food being grown, reared or caught in the UK or wider world
- describe eat well plate and how a healthy diet=variety / balance of food and drinks
- explain importance of food and drink for active, healthy bodies
- prepare and cook some dishes safely and hygienically
- use some of the following techniques: peeling, chopping, slicing, grating, mixing,

- present product well interesting, attractive, fit for purpose
- begin to understand seasonality of foods
- understand food can be grown, reared or caught in the UK and the wider world
- describe how recipes can be adapted to change appearance, taste, texture, aroma
- explain how there are different substances in food / drink needed for health
- prepare and cook some savoury dishes safely and hygienically including, where appropriate, use of heat source

- substituting ingredients explain
 - seasonality of foods
- learn about food processing methods
- name some types of food that are grown, reared or caught in the UK or wider world
- adapt recipes to change appearance, taste, texture or aroma.
- describe some of the different
- substances in food and drink, and how they can affect health
- prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source.
- use a range of techniques confidently

| | | spreading, kneading and baking | use range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. | such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking |
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| Technical knowledge – Electrical systems | use simple circuit in product learn about how to program a computer to control product. | use number of components in circuit program a computer to control product | incorporate switch into product confidently use number of components in circuit begin to be able to program a computer to monitor changes in environment and control product | use different types of circuit in product think of ways in which adding a circuit would improve product program a computer to monitor changes in environment and control product |