



Design and Technology Knowledge Progression Grid

| | EYFS | Years 1 & 2 | Years 3 & 4 | Years 5 & 6 |
|---|---|--|--|--|
| Cooking and Nutrition Food Preparation Healthy Diet Origins of Food | <ul style="list-style-type: none"> Begin to understand some of the tools, techniques and processes involved in food preparation Know the importance of a healthy diet and can talk about some of the ways to keep healthy | <ul style="list-style-type: none"> Understand where food comes from Understand if food is a fruit or a vegetable and explain where they grow Name the four main food groups and identify foods that belong to each group. Understand the basic principles of a healthy and varied diet Understand which food combinations work well Understand the importance of hygiene, including clean surfaces, equipment and hands before food preparation. | <ul style="list-style-type: none"> Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed Consider hygiene when preparing food Understand that not all fruits and vegetables can be grown in the UK and that each country has its own climate which enables different fruits and vegetables to grow Understand that 'seasonal' fruits and vegetables are those that grow in a given season and taste best then. – Understand that eating seasonal fruit and vegetables has a positive effect on the environment. To know the basic rules of food contamination | <ul style="list-style-type: none"> Understand that not all courses complement one another Understand and apply the principles of a healthy and varied diet Continue to develop knowledge of where and how a variety of ingredients are g Describe the process of 'Farm to Fork' for a given ingredient using a storyboard, explaining what impact different methods of farming have on the wider world. Understand potential dangers of the equipment they are using and any possible cross-contamination issues when preparing and cooking food. |
| Textiles Fabrics Joining and Fastening Product Suitability Aesthetics | <ul style="list-style-type: none"> To understand how fabric is made To understand the skills of weaving | <ul style="list-style-type: none"> Name the equipment needed in order to sew (needle, thread, needle threader tool) Knowledge of how to sew, regardless of the type of stitch Understand how pieces of fabric are joined together Understand which joining technique is most appropriate for their design (glue, sewing, etc.) To explain what a running stitch looks like and correct stitches when they go wrong. | <ul style="list-style-type: none"> Understand what textiles are and what their purpose is Understand how to create a balance between functionality and pleasing aesthetics when choosing textiles and fastenings Understand the definition of 'applique' (applied) Understand space should be left to sew a seam around the edge of fabric Understand how to make stitches stronger by 'double stitching' Understand the main types of fastenings (zips, poppers, Velcro, toggles and buttons). | <ul style="list-style-type: none"> When designing, take into account who the garment is for, what materials would work best and how practical it would be to wear Understand how to hide stitches and give a neater finish |

Abram Bryn Gates Design and Technology Knowledge Progression Grid

| | | | | |
|--|---|---|--|--|
| | | | <ul style="list-style-type: none"> Understand the benefits and disadvantages of different fastenings | |
| <p>Mechanisms</p> <p>Movement</p> <p>Construction</p> <p>Forces</p> | <ul style="list-style-type: none"> To understand how simple things move- push/pull/turn/spin To describe how split pins create movement | <ul style="list-style-type: none"> Identify what mechanism makes a toy or vehicle move forward To know that a wheel is a circular disc that is attached To know that in order for a wheel to move it must be attached to an axle To know that wheels and axles are used in everyday life Identify what stops wheels from turning To know that round wheels balance a vehicles body Understand that a vehicles body is called a chassis | <ul style="list-style-type: none"> To know that mechanisms are a system of parts that work together to create motion To know that pneumatic systems can be used as part of a mechanism To know that pneumatics are used in a range of everyday objects To know that pneumatic systems force air over a distance to create movement To know that 'pneu' is connected with 'air' To understand what compressed air is Know that syringes and balloons can be used to create different types of pneumatic systems Know how to manipulate materials to create different effects by cutting, creasing, folding, weaving, etc. | <ul style="list-style-type: none"> To know that mechanisms control movement To know that input is the motion used to start a mechanism To know that output is the motion that happens as a result of starting the input To understand the difference between structures and mechanisms Identify different types of mechanisms- sliders, pivots, folds |
| <p>Structures</p> <p>Design</p> <p>Materials</p> <p>Joining</p> <p>Measurement</p> | <ul style="list-style-type: none"> To name different types of materials- paper, card, cardboard, plastic, metal To know which material is most effective when constructing and describe their properties To choose suitable joining materials and techniques and | <ul style="list-style-type: none"> Describe the purpose of structures Understand what a net is Describe the functions of supporting structures, axles and turbines Know that that the shape of materials can be changed to improve the strength and stiffness of structures- Know that cylinders are a strong type of structure | <ul style="list-style-type: none"> Identify and label different features of structures Describe which 3D shapes make the various features of structures Know that a net is what a 3D shape would look like if it were opened out flat Understand that any designs/colours they want to add to a structure should be done before the cutting and construction Identify specific details of their own structure designs, eg: materials, colours | <ul style="list-style-type: none"> Identify arch and beam structures Articulate the definition of 'tension and compression' Identify stronger and weaker shapes and points where structures typically failed Understand why using 'triangles' are so important in construction, to support structures Understand and explain the definition of 'suspension', linked to tension and compression Understand how to use and handle a saw safely to prevent injury |

Abram Bryn Gates Design and Technology Knowledge Progression Grid

| | | | | |
|--|-----------------------|---|---|---|
| | explain their reasons | <ul style="list-style-type: none"> • Understand what stable means and ensure own structures have this property • Know that axles are used in structures and mechanisms to make parts turn in a circle | | <ul style="list-style-type: none"> • Understand that some frames need cladding before assembling |
| <p>Electrical Systems</p> <p>Circuitry</p> <p>Forces</p> | N/A | N/A | <ul style="list-style-type: none"> • Understand what electrical insulators and conductors are • Understand that a battery contains stored electricity and can be used to power products • Understand what electricity is and name objects that are powered by it • Identify the features of a torch and understand how it works • Understand what is important in torch design | <ul style="list-style-type: none"> • Understand that batteries contain acid, which can be dangerous if they leak • Understand when electricity enters a magnetic field it can make a motor • Identify and name different electrical components • Name electrical components |