D&T

	Cycle A		
	Autumn	**Spring**	**Summer**
Forest Class	Cooking and nutrition: Smoothies	Mechanisms: Making a moving story book	Textiles: Puppets
Meadow Class	Digital world: Mindful moments timer	Forest School	Textiles: Cross-stitch and appliqué
Hillside Class	Forest School: Using tools (half term 1)	Textiles: Stuffed Toy	Cooking and nutrition: Come Dine With Me (Forest school half term 2—lighting fires)
	Cycle B		
Forest Class	Mechanisms: Fairground wheel	Structures: Baby Bear's chair	Cooking and nutrition: A balanced diet
Meadow Class	Cooking and nutrition: Adapting	Forest School	Mechanisms: Pneumatic toy
Hillside Class	Forest School: Using tools (half term 1)	Mechanical systems: Pop-up book	Digital World: Monitoring devices Structure: Bridges (Forest school half term 2)

Design & Technology - Cycle A

	Autumn	Spring	Summer
Forest Class	**Cooking and nutrition:** **Smoothies** • Describe fruits and vegetables and explain how to identify fruits. • Name a range of places that fruits and vegetables grow. • Describe basic characteristics of fruit and vegetables. • Prepare fruits and vegetables to make a smoothie.	**Mechanisms:** **Making a moving story book** • Identify whether a mechanism is a side-to-side slider or an up-and-down slider and determine what movement the mechanism will make. • Clearly label drawings to show which parts of their design will move and in which direction. • Make a picture, which meets the design criteria, with parts that move purposefully as planned. • Evaluate the main strengths and weaknesses of their design and suggest alterations.	**Textiles:** **Puppets** • Join fabrics together using pins, staples or glue. • Design a puppet and use a template. • Join their two puppets' faces together as one. • Decorate a puppet to match their design.

Design & Technology - Cycle A

	Autumn	Spring	Summer
Meadow Class	**Digital world:** **Mindful moments timer** • State and/or describe the advantages and disadvantages of existing products (timers). • Understand how virtual micro:bit features could be used as part of a design idea. • Use research to inform design criteria. • Write a program that displays a timer on the virtual micro:bit based on their chosen seconds/minutes. • Suggest where the errors are, if testing is unsuccessful, by comparing the correct code to their own. • State key functions in the program editor (e.g. loops). • Evaluate the immediate appeal of the virtual micro:bit timer and how it might function. • Express which stages of the project they enjoyed or found more challenging. • Explain the need for a company to stand out against competition and/or state the importance of logos in business. • Recall and describe the name and use of key tools used in Sketchpad (CAD) software. • Fulfil the design requirements of the logo. • Evaluate the product using feedback from the user.	**Forest School** • Learn about the natural environment—learn the names of the flora and fauna inhabiting the setting via games and challenges • Observe seasonal changes • Develop the confidence and skill set to take risks whilst staying safe by making appropriate adjustments and judgements • Learn how to care for and show respect towards the environment • Learn a clove hitch, a timber hitch and a granny knot and then use these knots in practice • Learn how to use a fire lighter • Understand the fire triangle • Begin to use a limited selection of tools to whittle sticks • Promote self-esteem, confidence and a positive attitude to learning through small achievable tasks • Develop social interactions and team working skills • Enable participants to be independent, self-motivated and considerate • Build self-esteem, confidence, independence and self-control • Encourage resilience	**Textiles:** **Cross-stitch and appliqué** • Demonstrate their ability to use cross-stitch as a decorative feature or to join two pieces of fabric together. • Develop appliqué designs based on design criteria. • Design, cut and shape their template for an usekh/wesekh collar, with increasing accuracy. • Decorate their Egyptian collar using a variety of techniques such as appliqué, cross-stitch, beads, buttons and pinking. • Measure and attach a ribbon with a running stitch. • Recognise different types and qualities of fabrics. • Explain the aesthetic and/or functional properties of some of their material choices.

Design & Technology - Cycle A

	Autumn	Spring	Summer
Hillside Class	**Forest School** • Learn about the natural environment—learn the names of the flora and fauna inhabiting the setting via games and challenges • Develop the confidence and skill set to take risks whilst staying safe by making appropriate adjustments and judgements • Develop a solid understanding of the dangers associated with fires • Light and build a fire, for a purpose, and then keep the fire going • Put out a fire safely • Prepare and cook a variety of recipes on the fire • Use a variety of tools to make items such as swords or mallets • Use previously taught skills to complete challenges, such as the ladder challenge and the platform challenge • Promote self-esteem, confidence and a positive attitude to learning through small achievable tasks • Develop social interactions and team working skills • Enable participants to be independent, self-motivated and considerate • Build self-esteem, confidence, independence and self-control • Encourage resilience	**Textiles:** **Stuffed Toy** • Design a stuffed toy, considering the main component shapes of their toy. • Create an appropriate template for their stuffed toy. • Join two pieces of fabric using a blanket stitch. • Neatly cut out their fabric. • Use appliqué or decorative stitching to decorate the front of their stuffed toy. • Use blanket stitch to assemble their stuffed toy, repairing when needed. • Identify what worked well and areas for improvement.	**Cooking and nutrition:** **Come With Me** **(Forest School)** • Find a suitable recipe for their course. • Record the relevant ingredients and equipment needed. • Follow a recipe, including using the correct quantities of each ingredient. • Write a recipe, explaining the process taken. • Explain where certain key foods come from before they appear on the supermarket shelf.

Design & Technology - Cycle B

	Autumn	Spring	Summer
Forest Class	**Mechanisms:** **Fairground wheel** • Design and label a wheel. • Consider the designs of others and make comments about their practicality or appeal. • Consider the materials, shape, construction and mechanisms of their wheel. • Label their designs. • Build a stable structure with a rotating wheel. • Test and adapt their designs as necessary. • Follow a design plan to make a completed model of the wheel.	**Structures:** **Baby Bear's chair** • Identify man-made and natural structures. • Identify stable and unstable structural shapes. • Contribute to discussions. • Identify features that make a chair stable. • Work independently to make a stable structure, following a demonstration. • Explain how their ideas would be suitable for Baby Bear. • Produce a model that supports a teddy, using the appropriate materials and construction techniques. • Explain how they made their model strong, stiff and stable.	**Cooking and nutrition:** **A balanced diet** • Name the main food groups and identify foods that belong to each group. • Describe the taste, texture and smell of a given food. • Think of four different wrap ideas, considering flavour combinations. • Construct a wrap that meets the design brief and their plan.

Design & Technology - Cycle B

	Autumn	Spring	Summer
Meadow Class	**Cooking and nutrition:** **Adapting a recipe** • Describe features of biscuits using taste, texture and appearance. • Follow a recipe with support. • Use a budget to plan a recipe. • Adapt a recipe using additional ingredients.	**Forest School** • Learn about the natural environment—learn the names of the flora and fauna inhabiting the setting via games and challenges • Observe seasonal changes • Develop the confidence and skill set to take risks whilst staying safe by making appropriate adjustments and judgements • Learn how to care for and show respect towards the environment • Learn lashing and square lashing and then use this in practice • Learn how to build a fire, gather kindling and put a fire out safely • Put up a hammock safely • Promote self-esteem, confidence and a positive attitude to learning through small achievable tasks • Develop social interactions and team working skills • Enable participants to be independent, self-motivated and considerate • Build self-esteem, confidence, independence and self-control • Encourage resilience	**Mechanisms:** **Pneumatic toy** • Draw accurate diagrams with correct labels, arrows and explanations. • Correctly identify definitions for key terms. • Identify five appropriate design criteria. • Communicate two ideas using thumbnail sketches. • Communicate and develop one idea using an exploded diagram. • Select appropriate equipment and materials to build a working pneumatic system. • Assemble their pneumatic system within the housing to create the desired motion. • Create a finished pneumatic toy that fulfills the design brief.

Design & Technology - Cycle B

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Hillside Class	**Forest School** • Learn about the natural environment—learn the names of the flora and fauna inhabiting the setting via games and challenges • Develop the confidence and skill set to take risks whilst staying safe by making appropriate adjustments and judgements • Develop a solid understanding of the dangers associated with fires • Light and build a fire, for a purpose, and then keep the fire going • Put out a fire safely • Prepare and cook a variety of recipes on the fire • Use a variety of tools to make items such as swords or mallets • Use previously taught skills to complete challenges, such as the ladder challenge and the platform challenge • Promote self-esteem, confidence and a positive attitude to learning through small achievable tasks • Develop social interactions and team working skills • Enable participants to be independent, self-motivated and considerate • Build self-esteem, confidence, independence and self-control • Encourage resilience	**Mechanical systems:** **Pop-up book** • Produce a suitable plan for each page of their book. • Produce the structure of the book. • Assemble the components necessary for all their structures/mechanisms. • Hide the mechanical elements with more layers using spacers where needed. • Use a range of mechanisms and structures to illustrate their story and make it interactive for the users. • Use appropriate materials and captions to illustrate the story.	**Digital world:** **Monitoring devices** • Describe what is meant by monitoring devices and provide an example. • Explain briefly the development of thermometers from thermoscopes to digital thermometers. • Research a chosen animal's key information to develop a list of design criteria for an animal monitoring device. • Write a program that monitors the ambient temperature and alerts someone when the temperature moves from a specified range. • Identify errors (bugs) in the code and ways to fix (debug) them. • State one or two facts about the history and development of plastic, including how it is now affecting planet Earth. • Build a variety of brick models to invent Micro:bit case, housing and stand ideas, evaluating the success of their favourite model. • Explain key pros and cons of virtual modelling vs physical modelling. • Recall and describe the name and use of key tools used in Tinkercad (CAD) software.