Design and Technology / Understanding the World Framework EYFS to Year 2 (Intent)

	Design and Technology
In EYFS	EYFS Statutory Educational Programme: Expressive Arts and Design - The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe. Early Learning Goal: Creating with Materials Children at the expected level of development will: • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • Share their creations, explaining the process they have used.
It is typical in Nursery to…	• use all their senses in hands-on exploration of natural materials • explore collections of materials with similar or different properties • talk about what they see, using a wide vocabulary • explore how things work • talk about the differences between materials and changes they notice • be introduced to forces
It is typical in Reception to…	Knowledge and Understanding of the World Explore different materials freely, to develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them. Join different materials and explore different textures Expressive Arts and Design • -Explore, use and refine a variety of artistic effects to express ideas and feelings.

	• -Return to and build on their previous learning, refining ideas and developing their ability to represent them. • -Create collaboratively, sharing ideas, resources and skills. • -ELG: Creating with materials- safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. • -ELG: Creating with materials- Share their creations, explaining the process they have used. Physical development -Develop small motor skills so that they can use a range of tools competently, safely and confidently. -ELG: Fine Motor Skills> Use a range of small tools, including scissors, paint brushes and cutlery.
The aims from the National Curriculum for Design and Technology	The national curriculum for design and technology aims to ensure that all pupils: ~develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world ~ build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users ~ critique, evaluate and test their ideas and products and the work of others ~understand and apply the principles of nutrition and learn how to cook. Subject content in Key stage 1 Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts When designing and making, pupils should be taught to: Design ~ design purposeful, functional, appealing products for themselves and other users based on design criteria ~generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology Make ~ select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] ~ select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics Evaluate ~ explore and evaluate a range of existing products ~ evaluate their ideas and products against design criteria Technical knowledge ~ build structures, exploring how they can be made stronger, stiffer and more stable ~ explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products Cooking and nutrition As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now

	and in later life. Key stage 1 pupils should be taught to: ~use the basic principles of a healthy and varied diet to prepare dishes ~understand where food comes from.
SEN Guidance specific to Design and Technology	According to OFSTED, pupils with special educational needs make better progress in D&T than in most other subjects. This is because designing and making usable products gives pupils a real sense of achievement. They benefit from experiencing their own progress and taking responsibility for their own learning. They enjoy the practical application of their ideas. Plus, their personal engagement with the task improves attention span, patience, persistence and commitment. All of which means special needs pupils can achieve results that compare or even exceed their peers. Design and Technology offers these pupils the chance to experience achievement at a level that may seldom occur elsewhere in their school life.. Knowledge and understanding is drawn from across the curriculum and helps to develop and enable numeracy, literacy and communication skills that can be applied in practical ways. This consolidates skills from other lessons and reinforces learning with positive outcomes. A broad spectrum of the D&T curriculum should be planned and delivered in order to accommodate and challenge pupils of all abilities. It may be necessary to provide specialist equipment, adapt room layouts, utilise adult helpers and allow additional time for tasks. Planning Design and Technology Sessions for children with SEN Pupils with SEN often find designing activities problematic. Therefore thought is required to ensure pupils can access and produce successful initial design work. For example, it's vital to offer a variety of methods of recording ideas quickly. In fact, teachers should be conscious of avoiding a rigid approach when it comes to recording and communicating design ideas and developments. Activities focused on the physical making of designs should be supported 'one to one'. Yet it is also important to encourage pupils to work as independently as possible. For example, by using key words sheets, flow charts and visual instruction sheets which explain a process in a step-by-step manner.

Reception	**Nutrition**	**Mechanisms/ mechanical systems**	**Textiles**	**Structures**
	Making a Fruit Salad **To explore and investigate different fruits using the sense**		**Making a boat** **To understand what waterproof means and to**	**Junk Modelling – Creating a house for the three little pigs**

	of smell and touch. Children to taste the different fruits, talking about how they taste. Children to use a knife to cut the different fruit. Children to create a fruit salad recipe and create their fruit salads to share with the group. <u>Cross Curricular links-</u> <u>ELG: Speaking:</u> Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. <u>Personal, social and emotional development</u> Know and talk about the different factors that support their overall health and wellbeing: healthy eating. <u>ELG: Managing self:</u> Manage their own basic hygiene and personal needs, including…understanding the importance of healthy food choices <u>ELG: The Natural World:</u> Explore the natural world around them, making		test whether materials are waterproof. To test and make predictions for which materials float or sink. To compare the uses of boats. To investigate how the shape and structure of boats affects the way they move. Applying what they have learnt, the children discuss what would make a successful boat. They sketch, and discuss with their peers, their design ideas for their own boats. Pupils build the boat models they designed. Test and evaluate their boats on the water, with increasing cargo and reflect on what could have been improved about the design. <u>Cross Curricular links</u> Expressive arts and design Explore, use and refine a variety of artistic effects to express ideas and feelings.	To explore and investigate the tools and materials in the junk modelling area. To develop scissor skills and investigate cutting different materials. To learn how to plan and select the correct resources needed to make a model. Pupils put all of the skills and decisions into practice by developing their own unique junk model house plan, which includes which tools, materials and components they will need to make it possible. Following their plan, pupils continue to build their junk models, sticking as closely to their decisions as possible. When complete, pupils discuss and evaluate their finished model and present it to the rest of the class.

	observations and drawing pictures of animals and plants. **Characteristics of effective learning** **> Playing and exploring** **<u>Making Soup</u>** **To explore fruits and vegetables and the differences between them.** **To use adjectives to describe how fruits and vegetables look, feel, smell and taste.** **The children work in groups to practise their fine motor skills to slice and chop play dough, ready to help prepare their vegetables next lesson.** **To observe and help (where appropriate) with the use of tools to prepare ingredients.** **To describe the finished product and evaluate the process.** **The children become packaging designers in this lesson and look at existing soup packaging before**		**ELG: Creating with Materials: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.** **Characteristics of effective learning** **Playing and exploring.** **Active learning.**	**<u>Cross Curricular links</u>** **<u>Physical development</u>** **Develop small motor skills so that they can use a range of tools competently, safely and confidently.** **ELG: Fine Motor Skills: Use a range of small tools, including scissors, paint brushes and cutlery.** **<u>Expressive arts and design</u>** **Explore, use and refine a variety of artistic effects to express ideas and feelings.** **<u>ELG: Creating with Materials</u>: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.** **<u>Characteristics of effective learning</u>** **Playing and exploring.**

	generating their own ideas and designs for the class soup. **<u>Communication and language</u>** **Learn new vocabulary.** **<u>ELG: Speaking:</u> Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.** **<u>Personal, social and emotional development</u>** **Know and talk about the different factors that support their overall health and wellbeing: healthy eating.** **<u>ELG: Managing self:</u> Manage their own basic hygiene and personal needs, including…understanding the importance of healthy food choices** **<u>Characteristics of effective learning</u>** **> Playing and exploring** **> Active learning**			**Active learning.**
KS1 National Curriculum	**Nutrition**	**Mechanisms/ mechanical systems**	**Textiles**	**Structures**

(Statutory Requirements / strands)				
	Tasting fruits and vegetables- Making a smoothie To understand the difference between fruits and vegetables. To understand that some foods typically known as vegetables are actually fruits (e.g. cucumber). To know that a blender is a machine which mixes ingredients together into a smooth liquid. To know that a fruit has seeds and a vegetable does not. To know that fruits grow on trees or vines. To know that vegetables can grow either above or below ground. To know that vegetables can come from different parts of the plant. **Cross Curricular** Science- What do fruits and vegetables need to grow? Where in the world do vegetables and fruits grow?	**Moving Story Books** Design purposeful, functional, appealing products for themselves and other users based on design criteria. Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria **Cross Curricular-** English- Reading - appreciating rhymes such as Humpty Dumpty Art and Design- Drawing the	**Making Puppets** Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their puppet. Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria	

	Understanding the different part of a plant. **RSE- What constitutes a healthy diet (including understanding calories and other nutritional content).** **The principles of planning and preparing a range of healthy meals.'**	**background of their design along with the moving parts** **<u>Wheels and Axes</u>** **Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.** **<u>Cross Curricular-</u>** **Maths- Identifying lengths on their design, considering how wheels work** **Computing- Digitally painting a flag for their car**	**<u>Cross Curricular-</u>** **Art and Design- Designing, drawing a design for the Bog Baby.**	
Year 2	**<u>Making fruit Kebabs</u>** **Design purposeful, functional, appealing products for themselves and other users based on design criteria.** **Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology** **Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and**		**<u>Making a Bog Baby</u>** **Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products** **Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology** **Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping,**	**<u>Building a Ferris Wheel-</u>** **Build structures, exploring how they can be made stronger, stiffer and more stable.** **Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.** **<u>Cross Curricular</u>** **<u>Maths-</u> Talking about 3d shapes and naming them correctly**

	finishing]. **Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.** **Evaluate their ideas and products against design criteria** **<u>Cross Curricular-</u>** **<u>Science-</u> Discussing the senses that humans have, having an awareness of food hygiene**		**joining and finishing].** **Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.** **Explore and evaluate a range of existing products** **Evaluate their ideas and products against design criteria** **<u>Cross Curricular-</u>** **<u>Art and Design</u>-Designing the Bog Baby**	**<u>Science</u>- Discussing the properties of materials when choosing materials for their fairground wheel** **<u>Computing</u>- Practising drag and drop skills by creating an inspiration board**

Spiritual, Moral, Social and Cultural Development: Design and Technology

Pupils at Great Moor Infant School will analyse, engage with and question their own and others work, identify how values and meanings are expressed and shared. Pupils are encouraged to explore the world around them and express their ideas, which is supported by strong research into the wider world around them.

Spiritual Development	Moral Development	Social Development	Cultural Development	British Values
Pupils' spiritual development is shown by their: • Ability to be reflective about their own beliefs, religious or otherwise, that inform their perspective on	Pupils' moral development is shown by their: • Ability to recognise the difference between right and wrong readily apply this understanding in their	Pupils' social development is shown by their: • Use a range of social skills in different contexts, including working and socialising with pupils from	Pupils' cultural development is shown by their: • Understanding and appreciation of the side range of cultural influences that have shaped their own	• Acceptance and engagement with the fundamental British values of democracy, the rule of law, individual liberty and mutual respect and tolerance of those with

life and their interest in and respect for different people's faiths, feelings and values. • Sense of enjoyment and fascination in learning about themselves, others and the world around them. • Use of imagination and creativity in their learning. • Willingness to reflect on their experiences	own lives and, in so doing, respect the civil and criminal law of England • Understanding of the consequences of their behaviour and actions. • Interest in investigating and offering reasoned views about moral and ethical issues, and being able to understand and appreciate the viewpoints of others on these issues.	different religious, ethnic and socioeconomic backgrounds. • Willingness to participate in a variety of communities and social settings, including by volunteering, cooperating well with others and being able to resolve conflicts effectively.	heritage and that of others. • Understanding and appreciation of the range of different cultures within school and further afield as an essential element of their preparation for life in modern Britain. • Knowledge of Britain's democratic parliamentary system and its central role in shaping our history and values, and in continuing to develop Britain. • Willingness to participate in and respond positively to artistic, sporting and cultural opportunities. • Interest in exploring, improving understanding of and showing respect for different faiths and cultural diversity, and the extent to which they understand, accept, respect and	different faiths and beliefs; the pupils develop and demonstrate skills and attitudes that will allow them to participate fully in and contribute positively to life in modern Britain.

			celebrate diversity, as shown by their tolerance and attitudes towards different religious, ethnic and socio-economic groups in the local, national and global communities.	