







### **EYFS**

#### EYFS - Expressive arts and design

ELG Creating with materials

- 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.
- Make use of props and materials when role playing characters in narratives and stories.

#### EYFS - Physical development

ELG Fine motor

Use a range of small tools, including scissors, paintbrushes and cutlery.

In foundation stage the children......

- Have daily opportunities to make their own creations using a wide range of different materials, fixings and tools which are freely available in continuous provision.
- Are taught how to use tools such as scissors, hole punch, string, sellotape, cutters etc.
- Are encouraged to talk about what they would like to make, how they will do it and what they think about it when it is finished.
- Are encouraged to evaluate what they have made and make changes as appropriate.
- Take part in whole school projects e.g. DT week. This involves designing and then making things linked to a particular theme and for a particular audience e.g. parents

### **KS1 – National Curriculum for Design and Technology**

### 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 [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. 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

### 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.

Pupils should be taught to:

### **Key Stage 1**

- ☐ use the basic principles of a healthy and varied diet to prepare dishes
- □ understand where food comes from.

	products.					
Year	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
1	Investigate where food comes	Christmas makes – Make a		Design a moving vehicle for a	Design a functional bird box	
	from by sorting a range of	range of products including		fantasy character communicating	communicating their ideas,	
	products into plant based foods	decorations, calendars and		ideas through the use of	based on existing products	
	and animal based foods as well	cards on a Christmas theme.		information and communication	through talk and the use of	









as what is healthy and what is a treat. Design a healthy pizza that appeals to their own tastes by trying different pizza toppings and creating a food vocabulary linked to these foods. Pizzas to be made and tasted to evaluate against design ideas and criteria.

- Can I generate ideas and recognise characteristics of familiar products?
- Can I use pictures and words to describe what I want to do?
- Can I explain what I am making?
- Can I talk about my own and other people's work in simple terms?

Products are to be made to appeal to themselves and other users.

Tools and equipment to be selected appropriately for each product in order to perform linked practical tasks such as cutting, shaping, joining and finishing.

Make a Christmas card with a

 Can I generate ideas and recognise characteristics of familiar products?

simple slider.

- Can I explain what I am making?
- Can I describe which tools I use?
- Can I use tools and materials with help, where needed?
- Can I talk about my own and other people's work in simple terms?

technology on Purple Mash software.

Make the vehicles by selecting appropriate tools to cut, shape and join materials. Explore the use of mechanisms by creating an axle which allows the vehicle to move. Evaluate the vehicle against design criteria and quality of product outcome.

- Can I generate ideas and recognise characteristics of familiar products?
- Can I explain what I am making?
- Can I describe which tools I use?
- Can I use tools and materials with help, where needed?
- Can I describe how a product works?
- Can I talk about my own and other people's work in simple terms?

#### **Engineering Week:**

The Egg drop challenge – Linked to science. Design and make a functional contraption, fit for purpose, to cushion an egg from a high drop to stop it breaking. Through the experience of science experiments and existing products to inform choices, materials are to be selected to aid shock absorption and air resistance. Products are to be made by selecting materials according to their characteristics, and the appropriate tools for these joining materials.

- Can I generate ideas and recognise characteristics of familiar products?
- Can I use pictures and words to describe what I want to do?
- Can I explain what I am making? Can I describe which tools I use?

a booklet to illustrate these design ideas and final designs. These ideas are to be made by selecting appropriate tools for cutting, shaping joining and finishing their product. The finished product will be evaluated against design criteria.

- Can I generate ideas and recognise characteristics of familiar products?
- Can I use pictures and words to describe what I want to do?
- Can I explain what I am making?
- Can I describe which tools I use?
- Can I use tools and materials with help, where needed?
- Can I describe how a product works?
- Can I talk about my own and other people's work in simple terms?









Enrichment		Christmas cards and decorations to take home to families.		<ul> <li>Can I use tools and materials with help, where needed?</li> <li>Can I describe how a product works?</li> <li>Can I talk about my own and other people's work in simple terms?</li> <li>Teddy's House competition – Homework (School/home collaboration)</li> <li>Egg Drop challenge competition (Parent event)</li> <li>Engineering week – Egg Drop Challenge</li> </ul>	Take bird boxes home to be put up in gardens to create a new habitat for a family of birds.	
ingr com Mak and tool prac item choj mea	redients and where they ne from, for making soup. ke a variety of healthy soups d bread, selecting appropriate ls to use for a range of actical skills to prepare food ms such as cutting, peeling, apping, grating and asuring.  Can I cut, peel, grate & chop a range of ingredients? Can I measure and weigh food items (non-standard measures) eg spoons, cups etc)? Can I select appropriate tools, techniques and materials & explain my choices?	Christmas makes – Make a range of products including decorations, calendars and cards on a Christmas theme. Products are to be made to appeal to themselves and other users.  Tools and equipment to be selected appropriately for each product in order to perform linked practical tasks such as cutting, shaping, joining and finishing.  Design a Christmas biscuit that appeals to their own tastes after trying different existing biscuits. Make biscuits selecting appropriate tools.  Biscuits to be made and tasted to evaluate against design ideas and criteria.  Make a Christmas card with a pivot slider.  Can I use models, pictures and words to describe my designs?  Can I select appropriate tools, techniques and materials & explain my choices?  Can I suggest things I could do better in the future?	Design a functional puppet using textiles skills with links to dinosaurs topic in the design brief, communicating their ideas, based on existing products through talk and the use of a booklet to illustrate these design ideas and final designs. These ideas are to be made by selecting appropriate tools for cutting, shaping joining and finishing their product.  Research and experiments to take place throughout the process to examine how to make the puppet stronger/stiffer. The finished product will be evaluated against design criteria.  Can I generate ideas and plan what to do next, based on my experience of working with materials and components?  Can I use models, pictures and words to describe my designs?  Can I select appropriate tools, techniques and materials & explain my choices?  Can I use tools and assemble, join and combine materials and components in a variety of ways?	Make a pop-up Mother's day card with a pop-up mechanism.  Engineering Week:  Can I generate ideas and plan what to do next, based on my experience of working with materials and components?  Can I use models, pictures and words to describe my designs?  Can I select appropriate tools, techniques and materials & explain my choices?  Can I use tools and assemble, join and combine materials and components in a variety of ways?  Can I recognise what I have done well as my work progresses?  Can I suggest things I could do better in the future?		Design a healthy dish to meet the needs of a specific character from a traditional tale with a twist.  Make planned dish selecting appropriate tools to prepare food items such as cutting, peeling, chopping, grating and measuring.  Dish to be made and tasted to evaluate against design ideas and criteria.  Can I use models, pictures and words to describe my designs?  Can I select appropriate tools, techniques and materials & explain my choices?  Can I suggest things I could do better in the future?









			<ul> <li>Can I recognise what I have done well as my work progresses?</li> <li>Can I suggest things I could do better in the future?</li> </ul>			
Enrichment	Parents in to taste soup.	Christmas cards and decorations to take home to families.		Engineering week – Design and make a dinosaur enclosure.		
		KS2 ·	sign and Technology			
	understanding and skills needed to should work in a range of relevant enterprise, industry and the wide. When designing and making, pup Design. Use research and develop design products that are fit for purpose, generate, develop, model and cross-sectional and exploded diagonal make. Select from and use a wider rangulating, shaping, joining and finis select from and use a wider rangulates and ingredients, according Evaluate. Investigate and analyse a rangulate evaluate their ideas and product to improve their work. Understand how key events and Technical knowledge. Apply their understanding of helevers and linkages. Understand and use mechanical levers and linkages. Understand and use electrical symitches, bulbs, buzzers and mote.	gn criteria to inform the design of in aimed at particular individuals or gommunicate their ideas through durams, prototypes, pattern pieces and grams, accurately grams of materials and components, in grams of their functional properties and grams of existing products cts against their own design criteria did individuals in design and technology to strengthen, stiffen and reinform of their products are grams.	idesigning and making. They school, leisure, culture, annovative, functional, appealing roups iscussion, annotated sketches, and computer-aided design form practical tasks [for example, ancluding construction materials, aesthetic qualities  a and consider the views of others and consider the views of others apple, gears, pulleys, cams, aple, series circuits incorporating	Cooking and nutrition As part of their work with food, pupils nutrition and healthy eating. Instilling great expressions of human creativity to feed themselves and others affordate Pupils should be taught to:  Key Stage 2  understand and apply the principle prepare and cook a variety of predunderstand seasonality, and know caught and processed.	g a love of cooking in pupils will y. Learning how to cook is a cruably and well, now and in later as of a healthy and varied diet ominantly savoury dishes using	l also open a door to one of the icial life skill that enables pupils life.  g a range of cooking techniques
Year	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
3		Christmas makes – Make a range of products including decorations, calendars and cards on a Christmas theme. Products are to be made to appeal to themselves and other users.  Tools and equipment to be selected appropriately for each product in order to perform		Engineering Week: Design a moving cart that is capable of supporting and carrying a 1KG and moves with a mechanism. Designs to be generated through discussion and illustrated through a booklet that includes annotated sketches showing evidence of evaluation taking place throughout the design		Research and design a healthy savoury dish.  Make the dish using a range of cooking techniques.  Evaluate the dish paying attention to taste and how healthy it is and other design criteria.  Can I generate ideas and recognise that my designs









cutting, shaping, joining and
finishing with increasing
accuracy.

Evaluate existing products and build upon previous learning to design a pop up toy with at least 2 moving parts that is fit for purpose to be used by a consumer or group of consumers. Designs to be generated through discussion and illustrated through a booklet that includes annotated sketches.

Make a pop up toy selecting from a wide range of tools to perform practical tasks such as cutting, shaping, joining and finishing.

Select materials according to their functional properties and aesthetic qualities.

Evaluate their ideas and product against their own design criteria and consider the views of others to improve their work in the future.

- Can I generate ideas and recognise that my designs have to meet a range of different needs?
- Can I make realistic plans for achieving my aims?
- Can I clarify ideas when asked and use words, labelled sketches and models to communicate the details of my designs?
- Can I use tools and equipment with increasing accuracy to cut and shape materials and to put together components?
- Can I think ahead about the order of my work, choosing appropriate tools, equipment, materials, components and techniques?

Make carts selecting from a wide range of tools to perform practical tasks. Select materials according to their functional properties and aesthetic qualities.

Evaluate their ideas and product against the design criteria and consider the views of others to improve their work in the future.

- Can I generate ideas and recognise that my designs have to meet a range of different needs?
- Can I make realistic plans for achieving my aims?
- Can I clarify ideas when asked and use words, labelled sketches and models to communicate the details of my designs?
- Can I think ahead about the order of my work, choosing appropriate tools, equipment, materials, components and techniques?
- Can I use tools and equipment with increasing accuracy to cut and shape materials and to put together components?
- Can I identify where evaluation of my design, make process and my final products has led to improvements?

have to meet a range of different needs?

- Can I make realistic plans for achieving my aims?
- Can I think ahead about the order of my work, choosing appropriate tools, equipment, materials, components and techniques?
- Can I use tools and equipment with increasing accuracy to cut and shape materials and to put together components?
- Can I make healthy eating choices from an understanding of a balanced diet?
- Can I join and combine a range of ingredients?









	Can I identify where evaluation of my design, make process and my final products has led to improvements?		
Enrichment		Engineering Week – Design and make a moving cart.	Having a healthy picnic to celebrate the food designed and created by the children.
	Christmas makes – Make a range of products including decorations, calendars and cards on a Christmas theme. Products are to be made to appeal to themselves and other users.  Tools and equipment to be selected appropriately for each product in order to perform linked practical tasks such as cutting, shaping, joining and finishing with increasing accuracy.  Research, investigate and analyse a range of existing products to design original witches biscuit to appeal to their own tastes.  Select from a wider range of ingredients to make the biscuits with the consumer in mind.  Understand the seasonality of the ingredients and research where they come from and how they are grown or processed. Evaluate the dish paying attention to the view of the parent consumer in order to improve future work.  Make a xmas tree using textiles and sewing skills.  • Can I generate ideas by researching, collecting and using information?  • Can I take users' views into account when developing designs and produce plans?  • Can I communicate alternative ideas using	Engineering Week:  Can I generate ideas by researching, collecting and using information?  Can I take users' views into account when developing designs and produce plans?  Can I communicate alternative ideas using words, labelled sketches and models?  Can I reflect on my designs as they develop?  Can I identify what is working well and what could be improved?	Research and investigate a shaduf and the mechanism they use.  Make a shaduf and the mechanism required  • Can I work with a variety of materials and components with increasing accuracy?  • Can I select and work with a range of tools and equipment?









	words, labelled sketches and		
	models?		
	Can I select and work with a		
	range of tools and		
	equipment?		
	Can I select & prepare foods		
	for a particular purpose?		
	Can I reflect on my designs		
	as they develop?		
	Can I identify what is		
	working well and what could		
	be improved?		
Enrichment	Sharing saturnalia biscuits with	Engineering Week- Design and	
	parents to help with evaluation.	make a bug hotel.	
5	Christmas makes – Make a	Engineering Week:	Research, investigate and
	range of products including	Design a product to provide a	analyse a range of existing
	decorations, calendars and	functioning, purposeful safety	products to design savoury
	cards on a Christmas theme.	accessory for dog walking in poorly	South American dishes that are
	Products are to be made to	lit or hazardous areas. Illustrate the	appealing to parent consumers.
	appeal to themselves and other	research and design process in a	Understand the seasonality of
	users.	booklet or mood boards including	the ingredients and research
	Tools and equipment to be	annotated sketches, cross-sectional	where they come from and how
	selected appropriately for each product in order to perform	diagrams and exploded diagrams to explain ideas after analysing and	they are caught, reared, grown
	linked practical tasks such as	critiquing existing products.	or processed.  Prepare the dishes selecting
	cutting, shaping, joining and	Make the product by selecting from	appropriate tools to complete
	finishing accurately.	a wide range of tools to perform	practical tasks.
	mishing decarately.	practical tasks such as cutting,	Evaluate their ideas and
		shaping, joining and finishing.	products throughout the process
		Select from a wide range of	and make adjustments and
		materials and components,	improvements as necessary
		including construction materials and	considering the views of others
		textiles according to their functional	to improve their work.
		properties and aesthetic qualities.	Can I generate ideas by
		Apply their understanding of how to	researching, collecting and
		strengthen, stiffen and reinforce	using information?
		more complex structures.	Can I take users' views into
		Evaluate their ideas and products	account when developing
		throughout the process and make	designs and produce step-
		adjustments and improvements as	by-step plans?
		necessary considering the views of	Can I communicate
		others to improve their work.	alternative ideas using
		Can I generate ideas by	words, labelled sketches and
		researching, collecting and using	models, showing that I am
		information?	aware of constraints?
		Can I take users' views into	Can I select and work with a
		account when developing	range of tools and
		designs and produce step-by-	equipment?
		step plans?	equipment:
		Can I communicate alternative     ideas using words, labelled	
		ideas using words, labelled	









Enrichment 6	Christmas makes – Make a range of products including decorations, calendars and cards on a Christmas thomas	Enterprise based project TBC to fundraise for school trip.  Research and design an open ended, functioning, fit for purpose product to solve a real life problem.	Engineering Week – Design and make an item of dog clothing with safety features.  Research, investigate and analyse historical and existing products to design a new product including a	CAD – tinker CAD  Design a Mayan inspired	<ul> <li>linked practical tasks such as cutting, shaping, joining and finishing accurately.</li> <li>Can I generate ideas by researching, collecting and using information?</li> <li>Can I select and work with a range of tools and equipment?</li> <li>Can I reflect on my designs as they develop, bearing in mind the way the product will be used?</li> <li>Can I identify what is working well and what could be improved? Can I communicate alternative ideas using words, labelled sketches and models, showing that I am aware of constraints? Can I work with a variety of materials and components with accuracy, paying attention to quality of finish and to function?</li> <li>North African feast and work exhibition with parents.</li> </ul>
6	range of products including	Research and design an open ended, functioning, fit for	make an item of dog clothing with safety features.  Research, investigate and analyse historical and existing products to		









cutting, shaping, joining and finishing accurately.

Research, investigate and analyse a range of historical and existing products to design savoury war time, under rationing, dishes that are appealing to parent consumers. Understand the seasonality of the ingredients and research where they come from and how they are caught, reared, grown or processed.

Prepare the dishes selecting appropriate tools to complete practical tasks. Evaluate their ideas and products throughout the process improvements as necessary and make adjustments and improvements as necessary considering the views of others to improve their work.

- Can I draw on and use various sources of information?
- Can I clarify my ideas through discussion and drawing?
- Can I use my understanding of the characteristics of familiar products when developing and communicating my own original ideas?
- Can I develop food products for a range of particular purposes?
- Can I describe clearly the choices I have made, in relation to a healthy and balanced diet, in developing and preparing foods?
- Can I evaluate my use of information sources?
- Can I evaluate my final product and communicate my conclusions?

Make a textiles product by selecting from a wide range of tools to perform practical tasks such as cutting, shaping, joining and finishing.

Select from a wide range of sustainable materials and components, including construction materials and textiles according to their functional properties and aesthetic qualities. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Evaluate their ideas and products throughout the process and make adjustments and considering the views of others to improve their work.

- Can I draw on and use various sources of information?
- Can I clarify my ideas through discussion, drawing and modelling?
- Can I use my understanding of the characteristics of familiar products when developing and communicating my own original ideas?
- Can I work from my own detailed plans, modifying them where appropriate?
- Can work with a range of tools, materials, equipment, components and processes with precision?
- Can I check my work as it develops and modify my approach in the light of progress?
- Can I test and evaluate my products, showing that I understand the situations in which my designs will have to function and are aware of resources as a constraint?
- Can I evaluate my use of information sources?

and exploded diagrams to explain

Make the product by selecting from a range of tools to perform practical tasks such as cutting, shaping, ioining and finishing. Select from a wide range of materials and components, including construction materials and textiles according to their functional properties and aesthetic qualities.

Evaluate their ideas and products throughout the process and make adjustments and improvements as necessary considering the views of others to improve their work. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures during this process.

Products to show understanding and use of electrical systems [for example, series circuits incorporating switches, bulbs, buzzers and motors]

- Can I draw on and use various sources of information?
- Can I clarify my ideas through discussion, drawing and modelling?
- Can I use my understanding of the characteristics of familiar products when developing and communicating my own original ideas?
- Can I work from my own detailed plans, modifying them where appropriate?
- Can work with a range of tools, materials, equipment, components and processes with precision?
- Can I check my work as it develops and modify my approach in the light of progress?
- Can I test and evaluate my products, showing that I understand the situations in which my designs will have to function and are aware of resources as a constraint?









		Can I evaluate my final product and communicate my conclusions?	<ul> <li>Can I evaluate my use of information sources?</li> <li>Can I evaluate my final product and communicate my conclusions?</li> </ul>	
Enrichment	VE Day Feast			