

	EYFS	Year1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	suggested to them. <b>PD:</b> Use large-muscle movements	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  -Have own ideas Explain what I want to do Explain what my product is for, and how it will work Use pictures and words to Plan, begin to use models Design a product for myself following design criteria Research similar existing products.	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.  -Describe how I may do it Explain purpose of product, how it will work and how it will be suitable for the user Describe design using pictures, words, models, diagrams, begin to use ICT Design products for myself and others following design criteria Choose best tools and materials, and explain choices Use knowledge of existing products to produce ideas.	at particular individuals or groups. Generate, develop,		Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. Generate, develop, model and communicate their ideas through discussion, annotated sketches, crosssectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.  -Begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose Create own design criteria Have a range of ideas Produce a logical, realistic plan and explain it to others Use cross-sectional planning and annotated sketches Make design decisions considering time and resources Clearly explain how parts of product will work Model and refine design ideas by making prototypes and using pattern pieces.	Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. Generate, develop, model and communicate their ideas through discussion, annotated sketches, crosssectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.  -Identify features of design that will appeal to the intended user.  - Create own design criteria and specificationCome up with innovative design ideas Use annotated sketches, cross-sectional planning and exploded diagrams.  - Make design decisions, considering, resources and cost.  - Clearly explain how parts of design will work, and how they are fit for purpose.  - Independently model and refine design ideas by making prototypes and using pattern pieces.
Make	Develop their small motor skills so that they can use a range of tools competently, safely and confidently.      Use their core muscle strength to achieve a good posture when	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	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	and components, including	and components, including	Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. Select from and use a wider range of materials and components, including construction materials, textiles	Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. Select from and use a wider range of materials and components, including construction materials, textiles

sitting at a table or sitting on the floor. EAD: Explore, use and refine a variety of artistic effects to express their 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

## ELG: PD:

skills.

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

-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.

ingredients, according to their characteristics.

- -Explain what I'm making and why.
- Consider what I need to do next. select tools/equipment to cut, shape, join, finish and explain choices.
- Measure, mark out, cut and shape, with support. Choose suitable materials
- and explain choices. - Work in a safe and
- hygienic manner

ingredients, according to their characteristics.

- -Make suggestions as to what I need to do next.
- Join materials/ components together in different ways.
- Measure, mark out, cut and shape materials and components, with some support.
- Describe which tools I'm using and why, choose suitable materials and explain choices depending on characteristics.
- Use finishing techniques to make product look good. - Work safely and
- hygienically.

and ingredients, according to their functional properties and aesthetic qualities.

- Select suitable tools/equipment, explain choices; begin to use them accurately.
- Select appropriate materials, fit for purpose. -Work through plan in order Consider how good product will be.
- Begin to measure, mark out, cut and shape materials/components with some accuracy.
- · Begin to assemble, join and combine materials and components with some accuracy.
- Begin to apply a range of finishing techniques with some accuracy.

and ingredients, according to their functional properties and aesthetic qualities.

- Select suitable tools and equipment, explain choices in relation to required techniques and use accurately.
- Select appropriate materials, fit for purpose: explain choices.
- Work through plan in order.
- Realise if product is going to be good quality. Measure, mark out, cut
- and shape materials/ components with some accuracy.
- Assemble, join and combine materials and components with some accuracy.
- Apply a range of finishing techniques with some accuracy.

and ingredients, according to their functional properties and aesthetic qualities.

- Use selected tools/equipment with good level of precision.
- Produce suitable lists of tools, equipment/ materials needed.
- Select appropriate materials, fit for purpose; explain choices. considering functionality. -Create and follow detailed step by-step plan.
- Explain how product will appeal to an audience.
- Mainly accurately measure, mark out, cut and shape materials/ components. Mainly accurately
- assemble, join and combine materials/ components. - Mainly accurately apply a range of finishing
- techniques. Use techniques that involve a small number of
- Begin to be resourceful with practical problems.

and ingredients, according to their functional properties and aesthetic qualities.

- Use selected tools and equipment precisely.
- Produce suitable lists of tools, equipment, materials needed, considering constraints.
- Select appropriate materials, fit for purpose; explain choices. considering functionality and aesthetics.
- · Create, follow, and adapt detailed step-bystep plans.
- Explain how product will appeal to audience; make changes to improve quality. · Accurately measure, mark out, cut and shape materials/ components.
- Accurately assemble, join and
- Combine materials/ components.
- Accurately apply a range of finishing techniques.
- Use techniques that involve a number of steps.
- Be resourceful with practical problems

Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria.

- it to what I was asked to do.
- Talk about existing be used.
- other people have made.

- Explore and evaluate a range their ideas and products
- thinking about design
- Talk about existing products considering use, materials, how they work, audience, where they might be used, express personal opinion.
- Evaluate how good about what I would do differently if I were to do it again and why.

Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.

Understand how key events and individuals in design and technology have helped shape the world.

- while designing and making.
- Use design criteria to

Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.

Understand how key events and individuals in design and technology have helped shape the world.

- Select suitable tools and equipment, explain choices in relation to required techniques and use accurately. Select appropriate materials, fit for purpose:
- explain choices. Work through plan in order.
- Measure, mark out, cut, and shape materials/components with

Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.

Understand how key events and individuals in design and technology have helped shape the world.

- Use selected tools/equipment with good level of precision.
- Produce suitable lists of tools, equipment/ materials needed.
- Select appropriate materials, fit for purpose; explain choices. considering functionality. Create and follow detailed
- step by-step plan. Explain how product will

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- Produce suitable lists of tools, equipment, materials needed, considering constraints.
- Select appropriate materials, fit for purpose; explain choices. considering functionality and aesthetics.
- Create, follow, and adapt detailed step-bystep plans.

## **Evaluate**

- products considering use, materials, how they work, audience, where they might
- Talk about existing products and say what is and isn't good. - Talk about things that
- Begin to talk about what could make product better.

of existing products. Evaluate against design criteria.

- -Talk about my work, linking |-Describe what went well, criteria.
  - existing products are. Talk

- Look at design criteria
- evaluate finished product. Say what I would change to make design better. -Begin to evaluate existing products, considering how well they have been made, materials, whether they work, how they have been

made, fit for purpose.

			- Begin to understand by whom, when and where products were designed Learn about some inventors/designers/ engineers/chefs/ manufacturers of ground-breaking products.	some accuracy.  - Assemble, join and combine materials and components with some accuracy.  - Apply a range of finishing techniques with some accuracy.	appeal to an audience.  - Mainly accurately measure, mark out, cut and shape materials/ components Mainly accurately assemble, join and combine materials/ components.  - Mainly accurately apply a range of finishing techniques.  - Use techniques that involve a small number of steps.  - Begin to be resourceful with practical problems and overcome with logical solutions.	- Explain how product will appeal to audience; make changes to improve quality Accurately measure, mark out, cut and shape materials/ components Accurately assemble, join and combine materials/components Accurately apply a range of finishing techniques Use techniques that involve a number of steps Be resourceful with practical problems and overcome with logical solutions.
Technical knowledge	exploring how they can be made stronger, stiffer, and more stable. Explore and use Mechanisms (for example, levers, sliders, wheels, and	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.	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. Apply their understanding of computing to program, monitor and control their products.	systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. Apply their understanding of computing to	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. Apply their understanding of computing to program, monitor and control their products.	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. Apply their understanding of computing to program, monitor and control their products.
Technical knowledge Materials /structures	-Begin to measure and join materials, with some support Describe differences in materials Suggest ways to make material/product stronger.	-Measure materials Describe some different characteristics of materialsJoin materials in different waysUse joining, rolling or folding to make it strongerUse own ideas to try to make product stronger.	-Use appropriate materials Work accurately to make cuts and holesJoin materialsBegin to make strong structures.	-Measure accurately using the correct tool Attempt to make product strongContinue working on product even if the original didn't workMake a strong, stiff structure.	-Select materials carefully, considering intended use of product and appearanceExplain how product meets design criteriaMeasure accurately enough to ensure precisionEnsure product is strong and fit for purposeBegin to reinforce and strengthen a 3D frame.	-Select materials carefully, considering intended use of the product, the aesthetics and functionalityExplain how product meets design criteriaReinforce and strengthen a 3D frame.
Technical Knowledge Mechanisms	-Begin to use levers or slides.	-Use levers or slidesBegin to understand how to use wheels and axles.	-Select appropriate tools / techniquesAlter product after checking, to make it better Begin to try new/different ideasUse simple lever and	-Select most appropriate tools/ Techniques Explain alterations to product after checking it Grow in confidence about trying new / different	-Refine product after testing Grow in confidence about trying new / different ideasBegin to use cams, pulleys or gears to create movement.	-Refine product after testing, considering aesthetics, functionality and purposeIncorporate hydraulics and Pneumatics Be confident to try new

			linkages to create movement.	ideas Use levers and linkages to create movementUse pneumatics to create movement.		/different ideasUse cams, pulleys and gears to create movement.
Technical Knowledge Textiles	-Measure, cut and join textiles to make a product, with some supportChoose suitable textiles.	-Measure textiles using accurate measurements and toolsJoin textiles together to make a product, and explain how I did itCarefully cut textiles to produce accurate piecesExplain choices of textileUnderstand that a 3D textile structure can be made from two identical fabric shapes	-Join different textiles in different ways Choose textiles considering appearance and functionalityBegin to understand that a simple fabric shape can be used to make a 3D textiles project.	-Think about user when choosing textilesThink about how to make product strongBegin to devise a templateExplain how to join things in a different wayUnderstand that a simple fabric shape can be used to make a 3D textiles project.	-Think about user and aesthetics when choosing textilesUse and modify own templateThink about how to make product strong and look betterThink of a range of ways to join thingsBegin 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 strongMake a prototypeUse a range of joining techniquesThink about how product might be soldThink carefully about what would improve productUnderstand that a single 3D textiles project can be made from a combination of fabric shapes.
Technical knowledge Electrical systems			-Use simple circuit in productLearn about how to program a computer to control product.	-Use number of components in circuitProgram a computer to control product.	- Incorporate switch into product Confidently use number of components in circuitBegin to be able to program a computer to monitor changes in environment and control product.	-Use different types of circuit in productThink of ways in which adding a circuit would improve productProgram a computer to monitor changes in environment and control product.
Cooking and Nutrition	Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from.	Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from.	Understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.	Understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.	Understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.	Understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.
Technical knowledge Food and nutrition	-Describe textures Wash hands & clean surfacesThink of interesting ways to decorate food Say where some foods come from, (i.e. plant or animal).	-Explain hygiene and keep a hygienic kitchenDescribe properties of ingredients and importance of varied dietSay where food comes from	-Carefully select ingredients Use equipment safelyMake product look attractiveThink about how to grow plants to use in cookingBegin to understand food comes from UK and the wider world Describe how healthy	-Explain how to be safe/hygienicThink about presenting product in interesting/ attractive waysUnderstand ingredients can be fresh, precooked or processedBegin to understand about food being	-Explain how to be safe / hygienic and follow own guidelinesPresent product well interesting, attractive, fit for purposeBegin to understand seasonality of foodsUnderstand food can be grown, reared or caught in the	-Understand a recipe can be adapted by adding / substituting ingredients Explain seasonality of foodsLearn about food processing methodsName some types of food that are grown, reared or caught in the UK or wider world.

-Describe differences between some food groups (i.e. sweet, vegetable etc.). Discuss how fruit and vegetables are healthyCut, peel and grate safely, with support.	(animal, underground etc.)Describe how food is farmed, homegrown, caughtDraw eat well plate; explain there are groups of foodDescribe "five a day"Cut, peel and grate with increasing confidence.	of food/drinksExplain how food and drink are needed for active/healthy bodiesPrepare and cook some dishes safely and hygienicallyGrow in confidence using some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	worldDescribe eat well plate and how a healthy diet is a variety/ balance of food and drinksExplain importance of food and drink for active, healthy bodiesPrepare and cook some dishes safely and hygienically Use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.	different substances in food / drink needed for healthPrepare and cook some savoury dishes safely and hygienically including, where appropriate, use of heat sourceUse range of techniques such as peeling, chopping,	-Adapt recipes to change appearance, taste, texture or aromaDescribe some of the different substances in food and drink, and how they can affect healthPrepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source Use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking
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