Features At EYFS, the knowledge progression takes full account of the Early Learning Goals of: Creating with materials Fine motor skills At key stage 1 and 2, the knowledge progression takes full account of the national curriculum's strands of: Designing Making **Evaluating** Using technical knowledge Food technology **National Curriculum Subject Content** Strand **Creating with materials** Fine motor skills **EYFS** • Use a range of small tools, including scissors, paint brushes and cutlery 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 Strand Designing Making **Evaluating Technical Knowledge Food Technology** Design purposeful, functional, Select from and use a range of tools and Use the basic principles of a healthy and **Key Stage 1** • Explore and evaluate a range of existing · Build structures, exploring how they can appealing products for themselves and equipment to perform practical tasks [for be made stronger, stiffer and more varied diet to prepare dishes. products. other users based on design criteria. example, cutting, shaping, joining and stable Understand where food comes from. • Evaluate their ideas and products finishing]. Generate, develop, model and Explore and use mechanisms [for against design criteria. • Select from and use a wide range of example, levers, sliders, wheels and communicate their ideas through

axles], in their products.

materials and components, including

construction materials, textiles and

ingredients, according to their

characteristics.

talking, drawing, templates, mock-ups

and, where appropriate, information

and communication technology.

| Key Stage 2 | 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. | 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 and ingredients, according to their functional properties and aesthetic qualities. | | 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. | | Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical system 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. | range of cooking techniques. • Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed |
|---|---|---|---|---|--|--|--|
| Strand | Nursery | | Vocabulary | | ception | Vocabulary | |
| Creating with materials (Component knowledge and skills – leading to composite knowledge) | To know how to experiment with blocks, colours and marks To know how to explore different materials freely, in order to develop their ideas about how to use them and what to make To know how to develop their own ideas and then decide which materials to use to express them To know how to join different materials and explore different textures To know how to explore colour and colour-mixing To know that they can use their existing knowledge to talk about their ideas, products and construction process To know how to explore colour and how colours can be changed. To know how to show interest in and describe the | | Build Make Stack Built Made Used Balance Colours Like Dislike To know how to explain their product verbally To know how to use va To know how to explor materials To know how to join co balance To know how to select and join materials for the horizontally, making en To know how to return refining ideas and deve To know how to create and skills | | things. To know how to explain how their product verbally To know how to use various of To know how to explore reso materials To know how to join construct balance To know how to select tools a and join materials for their produced to the | urces for joining and combining ction pieces together to build and and techniques to shape, assemble roduct to be successful struct stacking blocks vertically and | Explain Product Materials Tools Join Shape Purpose Like Product Techniques Assemble Smell Taste Appearance Texture Sound |

product

texture of things

creating spaces

to build and balance

To know how to use various construction materials

To know how to begin to construct stacking blocks

vertically and horizontally, making enclosures and

To know how to join construction pieces together

To know that there is a purpose to their construction

To know that some products move.

To know that that they can explain how they will make or build a

To know how to describe different foods using their senses

To know that ingredients can be stirred, mixed and poured

To know that ingredients can be combined together to create a

Sweet

Sour

Salty

Shiny

Round

Soft

Hard

Smooth

| | To know how to talk about wh made To know how to talk about wh dislike | - | | | techniqu | y use and explore a variety of ma es, experimenting with colour, o and function eir creations, explaining the pro e of props and materials when ro in narratives and storic | design, texture, form cess they have used | Crunchy Ingredie Mixed Poured | ents |
|--|--|---|--|---|--|--|--|--|---|
| Developing fine motor skills (Component knowledge and skills – leading to composite knowledge) | To know how to use a fisted grasp or fist grip To know how to use a palmer grasp and four-finger grip To know how to use a five finger grasp and pincer grip To know how to use one-handed tools and equipment, for example, making snips in paper with scissors To know how to use a comfortable grip with good control when holding pens and pencils To know how to show a preference for a dominant hand To know how to pick up tiny objects using a fine pincer grasp To know that tools have a purpose To know how to use one-handed tools and equipment To know how to hold a pencil between thumb and two fingers, no longer using whole-hand grasp To know how to hold a pencil near the point between first two fingers and thumb and use it with good control | | Scissors Snip To be able Ionger usi To be able Ionger usi To be able Iongers an To be able Fork Spoon To be able Spade Pencil To be able To be able To be able Use a rang Suggested Scissors, k To be able | | ole to use one-handed tools and equipment, e.g. make paper with child scissors ole to rotate, move and turn objects ole to hold a pencil between thumb and two fingers, no using whole-hand grasp ole to hold a pencil near the point between first two and thumb and use it with good control. Ole to show a preference for a dominant hand ole to use a pincer grasp ole to develop their small motor skills so that they can onge of tools competently, safely and confidently. The ed tools: pencils for drawing and writing, paintbrushes, knives, forks and spoons ole to use a purposeful grip to manipulate objects ole to develop the foundations of a handwriting style fast, accurate and efficient outlery | | Cut Join Safely Accurat Turn Rotate Tripod | re | |
| Strand | Year 1 | Year 2 | | Year 3 | | Year 4 | Year 5 | | Year 6 |
| Designing | To know how to: use own ideas to design something describe how their own idea works design a product which moves | own ideas to design ething cribe how their own idea ks • think of an idea and plan w to do next • produce labelled diagrams • explain why they have chos | | criteria. • produce a step by step plan | | To know how to: use ideas from other people when designing produce a plan and explain it persevere and adapt work when original ideas do not work | To know how to: come up with a range after collecting inform from different sources produce a detailed, stestep plan use exploded diagram | ation s ep-by- | use market research to inform plans and ideas. follow and refine original plans |

| | explain to someone else how they want to make their product make a simple plan before making Know that there are similar existing products relating to what is being made | Know that products serve a purpose. | Know that a design must meet a range of requirements. | communicate ideas in a range of ways, including by sketches and cross-sectional drawings which are annotated Know that a design can be based upon research. | explain how a product will appeal to a specific audience design a product that requires pulleys or gears Know that design criteria can be developed. | justify planning in a convincing way show that culture and society is considered in plans and designs Know that a design specification is used to guide thinking. |
|------------|--|--|--|---|---|---|
| Vocabulary | plan picture product words construct | design research diagrams label model list equipment tools | Accurate criteria suitability appearance step-by-step | Annotate cross-sectional drawings adapt | Exploded diagrams develop Sources Audience Pulleys gears | Market research culture society Constraints refine justify |
| Making | To know how to: • use own ideas to make something • make a product which moves • choose appropriate materials, components and tools • use tools safely to cut, shape and join materials Know that tools / equipment can be used to cut, shape, join and finish. | To know how to: • choose tools and materials and explain why they have chosen them • join materials and components in different ways • measure materials to use in a model or structure • begin to consider finishing techniques Know that there is a purpose for what is being made. | To know how to: • follow a step-by-step plan, choosing the right equipment and materials • select the most appropriate tools and techniques for a given task • make a product which uses both electrical and mechanical components • work accurately to measure, make cuts and make holes Know that there are appropriate tools / materials chosen which are fit for purpose. | To know how to: • know which tools to use for a particular task and show knowledge of handling the tool • know which material is likely to give the best outcome • measure accurately Know that there are explanations behind choosing the appropriate tools / materials. | To know how to: • use a range of tools and equipment competently • make a prototype before making a final version • make a product that relies on pulleys or gears Know that appropriate tools / materials are used with precision. | To know how to: • know which tool to use for a specific practical task • know how to use any tool correctly and safely • know what each tool is used for • explain why a specific tool is best for a specific action Know that functionality and aesthetics are considered when selecting the appropriate tools / materials. |
| Vocabulary | finish Components construct safely | measure finishing techniques | Electrical Mechanical Accurate Appropriate Fit for purpose | Explanations outcome | Competently Prototype Needs wants | Specific Practical consider functionality aesthetics |

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| Evaluating | To know how to: | To know how to: | To know how to: | To know how to: | To know how to: | To know how to: |
| | describe how something works | explain what went well with | explain what changes they | evaluate and suggest | suggest alternative plans; | know how to test and evaluate |
| | explain what works well and | their work and how they could | made and why | improvements for designs | outlining the positive features | designed products |
| | not so well in the model they | improve it | explain how to improve a | evaluate products for both | and draw backs | explain how products should |
| | have made | | finished model | their purpose and appearance | evaluate appearance and | be stored and give reasons |
| | | Know that there are strengths | know why a model has or has | explain how the original design | function against original | evaluate product against clear |
| | Know that a final product is | and weaknesses of products | not been successful | has been improved | criteria | criteria |
| | linked to what has been | made. | | present a product in an | Know that the purpose and | Know that a product can be |
| | asked. | | Know that a design can be | interesting way | appearance of a product can | evaluated against the design |
| | | | changed to improve it if the | Know that existing products can | be evaluated. | specification. |
| | | | product were to be created | be evaluated | | |
| | | | again. | | | |
| Vocabulary | explain | Explore | Changes | Design criteria | Alternative | Test |
| | dislike | Evaluate | Analyse | Improvements | critically | Ongoing |
| | | improve | reasons | Recycled | Positive features | Innovative |
| | | | Successful | reused | Drawbacks | Impact |
| | | | unsuccessful | | Function | Intended purpose |
| | | | | | sustainability | specification |
| Technical | To know how to: | To know how to: | To know how to: | To know how to: | To know how to: | To know how to: |
| | make their own model | make a model stronger and | strengthen a product by | link scientific knowledge by | link scientific knowledge to | use electrical systems correctly |
| Knowledge | stronger | more stable | stiffening a given part or | using lights, switches or | design by using pulleys or | and accurately to enhance a |
| | - C | | | | | |
| | Know that there are ways to | use wheels and axles, when | reinforce a part of the | buzzers | gears | given product, e.g. using |
| | make a product stronger. | appropriate to do so | structure | use electrical systems (series or | explore more complex | transistors or chips |
| | | Know that materials can be | create simple electrical circuits | parallel) to enhance the quality | electrical circuits and | know which IT product would |
| | Know that levers can be used to | measured. | and components, e.g. bulbs, | of the product | components, e.g. resistors or | further enhance a specific |
| | create movement. | | switches or buzzers, can be | use IT where appropriate to | LEDs, to create functional | product |
| | | Know that wheels and axles can | used to create functional | add to the quality of the | products. | use knowledge to improve a |
| | | be used to create movement. | products. | product | use more complex IT program | made product by |
| | Know that textiles can be cut | | use a simple IT program within | Know that mistakes can be | to help enhance the quality of | strengthening, stiffening or |
| | and joined to make a product. | Know that textiles can be joined | the design | avoided by measuring carefully. | the product produced | reinforcing |
| | | to make a product. | | | | Know that a 3D frame can be |
| | | | Know that cuts and holes can be | Know that pneumatics can be | Know that products need to be | reinforced and strengthened. |
| | | | made accurately. | used to create movement. | strong and fit for purpose by | |
| | | | | Know that there are ways to join | being precise. | Know that pulleys and gears can |
| | | | Know that simple linkages can | textiles in order to make the | | be used to create movement. |
| | | | be used to create movement. | product strong. | Know that cams can be used to | Know that a 3D textiles product |
| | | | | | create movement. | can be made by joining a |
| | | | Know that textiles can be joined | | | combination of fabric shapes. |
| | | | in different ways. | | Know that user and aesthetics | |
| | | | | | are considered when choosing | |
| | | | | | and joining textiles. | |
| Vocabulary | mechanisms | Stable | CAD | scientific | Pulleys | Transistors |
| | Levers | Wheels | Linkages | Series | Gears | Chips |
| | Sliders | Axles | Component | Parallel | Complex | 3D |
| | Stronger | sew | Electrical | Motor | Cams | |
| | textiles | | Circuit | Buzzer | Resistors | |
| | | | Bulb (lamp) | Switch | LEDS | |
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| | | | Cell | Enhance | | |
| | | | Strengthen | pneumatics | | |
| | | | Stiffen | | | |
| | | | reinforce | | | |
| | | | | | | |
| Food | To know how to: | To know how to: | To know how to: | To know how to: | To know how to: | To know how to: |
| Technology | cut food safely | weigh ingredients to use in a | describe how food ingredients | know how to be both | be both hygienic and safe in | explain how food ingredients |
| recimology | use equipment to cut, peel and | recipe | come together | hygienic and safe when using | the kitchen | should be stored and give |
| | grate to prepare a simple dish | describe the ingredients used | weigh out ingredients and | food | know how to prepare a meal | reasons |
| | • | when making a dish or cake | follow a given recipe to create | bring a creative element to | by collecting the ingredients in | work within a budget to create |
| | Know that food comes from | work safely and hygienically | a dish | the food product being | the first place | a meal |
| | plants or animals. | (without a heat source) when | can talk about which food is | designed | know which season various | adapt an aspect of a recipe |
| | pranto en animator | preparing a range of dishes, | healthy and which food is not | use a variety of techniques | foods are available for | understand the difference |
| | Know that with support, food | using techniques, e.g. | know when food is ready for | Know that food is grown in the | harvesting | between a savoury and sweet |
| | can be cut, peeled and grated. | chopping | harvesting | UK, Europe and wider world. | Know that food is grown, reared | dish |
| | can be cut, peeled and grated. | chopping | Know that food comes from the | ok, Europe and wider world. | and caught in the UK, Europe | Know that the seasons affect the |
| | | Know that food has to be | | Karamathat with amount food | and wider world. | food available. |
| | | | UK or wider world. | Know that with support, food | and wider world. | 1000 available. |
| | | farmed, grown or caught. | | can be prepared in a variety of | | |
| | | | Know that there are a wide | ways. | Know that different preparation | Know that recipes can be |
| | | Know that with safety and good | range of food preparation | | techniques are used depending | adapted to change appearance, |
| | | hygiene, food can be cut, | techniques. | | on the food type. | taste, texture and aroma. |
| | | peeled and grated. | | | | |
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| Vocabulary | Cutting | Safely | Savoury | Techniques | Harvesting | Adapt |
| 7 | Peeling | Hygienically | Mixing | creative | Reared | Taste |
| | grating | chopping | Spreading | sweet | Preparation | Texture |
| | | | Kneading | | Seasonal | Aroma |
| | | | baking | | Fresh | appearance |
| | | | | | | Processed |
| | | | | | | Budget |
| | | | | | | stored |
| | | | | | <u> </u> | Stored |