**DT progression grid FS and KS1**

**DT**

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others’ needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

**Aims**

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

**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 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.

Pupils should be taught to:

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

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|  | **FS1** | **FS2** | **Year 1** | **Year 2** |
| Developing, planning and communicating ideas  | Explain what they are making Select materials from a limited rangeSelect and name the tools neededTalk about their models or drawings  | Explain what they are making and which materials they are using. Select materials from a limited range that will meet a simple design criteria e.g. shiny.Select and name the tools needed to work the materials e.g. scissors for paper. Explore ideas by rearranging materials.  Describe simple models or drawings of ideas and intentions. Discuss their work as it progresses.  |  Begin to draw on their own experience to help generate ideas and research conducted on criteria. Begin to understand the development of existing products: Explain what they are for, how they work, what materials have been used. Start to suggest ideas and explain what they are going to do. Understand how to identify a target group for what they intend to design and make based on a design criteria. Begin to develop their ideas through talk and simple drawings. Make templates and mock ups of their ideas in card and paper or using ICT (if relevant) Begin to communicate with others about how they want to construct their product Begin to explain how they intend to fix simple materials | Start to generate ideas by drawing on their own and other people's experiences. Begin to develop their design ideas through discussion, observation, drawing and modelling. Identify a purpose for what they intend to design and make. Understand how to identify a target group for what they intend to design and make based on a design criteria. Develop their ideas through talk and drawings and label parts. Make templates and mock ups of their ideas in card and paper or using ICT (if relevant) Begin to explain why they chose a certain material Develop their own ideas from given starting pointsCommunicate with others about how they want to construct their product Explain how they intend to fix simple materials |
| Working with tools, equipment, materials and components to make quality product | Start to build, joining components togetherBegin to use some technical vocabulary. Begin to use scissors to cut straight and curved edges and hole pinches to punch holes. Explore using/ holding basic tools such as a saw, drill, hammer. Explore using adhesives to join material. | Begin to create their design using basic techniques. Start to build structures, joining components together. Explore turning wheels using split pins.Use technical vocabulary when appropriate. Learn to use hand tools such as a saw, drill, hammer safely and appropriately.Use scissors to cut straight and curved edges and hole pinches to punch holes. Use basic tools such as a saw or hammer. Use adhesives to join material. | Begin to make their design using appropriate techniques. Begin to build structures, exploring how they can be made stronger, stiffer and more stable.  Look at simple hinges, wheels and axles. Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. With help measure, mark out, cut and shape a range of materials. Explore using tools e.g. scissors and a hole punch safely. Begin to assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape. Begin to use simple finishing techniques to improve the appearance of their product. Make a product which moves Attempt to make their model stronger if it needs to be Select appropriate resources and tools for their building projects | Begin to select tools and materials; use correct vocabulary to name and describe them. Build structures, exploring how they can be made stronger, stiffer and more stable. Attach chosen mechanisms to structures(e.g. an axel and wheels to a vehicle) With help measure, cut and score with some accuracy. Start to assemble, join and combine materials in order to make a product – e.g. a pop up card ~~Demonstrate how to cut, shape and join fabric to make a simple product.~~ ~~Use basic sewing techniques.~~ Start to choose and use appropriate finishing techniques based on own ideas. ~~Select the best tools and maerials~~ ~~Be able to join things (materials/ components) together in different ways~~ Measure materials to use in a model or structure ~~Join fabric using a running stitch, glue and tape~~ |
| Evaluating processes and products | Say what they like and do not like about items they have made | Say what they like and do not like about items they have made and attempt to say why. Begin to talk about their designs as they develop and identify good and bad points. Start to talk about changes made during the making process. Discuss how closely their finished products meet their design criteria. | Start to evaluate their product by discussing how well it works in relation to the purpose (design criteria). When looking at existing products explain what they like and dislike about the Products and why. Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make next time.. | Evaluate their work against their design criteria. Look at a range of existing products explain what they like and dislike about Products and why. Start to evaluate their products as they are developed, identifying what went well and possible changes they might make next time. With confidence talk about their ideas  |
| Food and Nutrition | Talk about food using all their senses to exploreStir and spread a range of food and ingredients. Begin to work safely and hygienically. Start to talk about the need for a variety of foods in a diet.  | Begin to develop a food vocabulary using taste, smell, texture and feel.  Explore familiar food products e.g. fruit and vegetables. Stir, spread, knead and shape a range of food and ingredients. Begin to work safely and hygienically. Start to think about the need for a variety of foods in a diet. Start to talk about how everyone should eat at least five portions of fruit and vegetables every day (check current guidelines!) Measure and weigh food items, non-statutory measures e.g. spoons, cups  | Begin to understand that all food comes from plants or animals. Explore common food sources (e.g. from food or animals) Start to understand how to name and sort foods into the five groups in (e.g. could use the ‘The Eat well plate’) Know that everyone should eat at least five portions of fruit and vegetables every day (check current guidelines!) Know how to prepare simple dishes safely and hygienically, without using a heat source. Know how to use techniques such as cutting, peeling and grating. Measure and weigh food items using non-standard measures (e.g. spoons and cups) | Understand that all food comes from plants or animals. Develop understanding of where different foods come from (e.g. foods which are farmed, grown elsewhere (e.g. home) or caught) and also food from native to different countries. Understand how to name and sort foods into the five groups in (e.g. could use the ‘The Eat well plate’) Know that everyone should eat at least five portions of fruit and vegetables every day (check current guidelines!) Recognise the need for a variety of food in a diet Demonstrate how to prepare simple dishes safely and hygienically, without using a heat source. Demonstrate how to use techniques such as cutting, peeling and grating Make dishes from other countries (if relevant to learning theme) |