College Road Progression Skills in Design Technology – EYFS and KS1

Purpose of study

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.

Subject content Key stage 1 (*all covered through skills progression and project ideas)*

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
- 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

- explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

EYFS – Exploring and using media and materials	*EYFS - Physical Development*
EMM1. Begins to build a repertoire of songs and dances. EMM2. Explores the different sounds of instruments. EMM3. Explores what happens when they mix colours. EMM4. Experiments to create different textures. EMM5. Understands that different media can be combined to create new effects. EMM6. Manipulates materials to achieve a planned effect. EMM7. Constructs with a purpose in mind, using a variety of resources. EMM8. Uses simple tools and techniques competently and appropriately. EMM9. Selects appropriate resources and adapts work where necessary. EMM10. Selects tools and techniques needed to shape, assemble and join materials they are using. **Early Learning Goal Children sing songs, make music and dance, and experiment with ways of changing them.** **They safely use and explore a variety of materials, tools and techniques, experiment**	PD1. Eats a healthy range of foodstuffs and understands need for variety in food. PD2. Usually dry and clean during the day. PD3. Shows some understanding that good practices with regard to exercise, eating, sleeping and hygiene can contribute to good health. PD4. Shows understanding of the need for safety when tackling new challenges, and considers and manages some risks. PD5. Shows understanding of how to transport and store equipment safely. PD6. Practices some appropriate safety measures without direct supervision. **Early Learning Goal Children know the importance for good health of physical exercise, and a healthy diet, and talk about ways to keep healthy and safe. They manage their own basic hygiene and personal needs successfully, including dressing and going to the toilet independently.**

	EYFS	Year 1	Year 2
Developing, planning and communicating ideas.	DPC1. Manipulates materials to achieve a planned effect.	DPC1. Begin to draw on their own experience to help generate ideas and decide on success criteria. DPC2. Begin to understand the development of existing products: What they are for, how they work, materials used. Start to suggest ideas and explain what they are going to do. DPC4. Begin to develop their ideas through talk and drawings.	DPC1. Start to generate ideas by drawing on their own and other people's experiences. DPC2. Begin to develop their design ideas through discussion, observation, drawing and modelling. DPC3. Identify a purpose for what they intend to design and make. **DPC4. Understand how to identify a target group for what they intend to design and make based on a design criteria.** DPC5. Develop their ideas through talk and drawings and label parts. DPC6 Make templates for their idea in card/paper or using ICT.
Working with tools, equipment, materials and components	WT1. Constructs with a purpose in mind, using a variety of resources. WT2. Uses simple tools and techniques competently and appropriately. WT3. Selects tools and techniques needed to shape, assemble and join materials they are using. WT4. Shows understanding of the need for safety when tackling new challenges and considers and manages some risks. (scissors, hole punch, staplers and hammers) WT5. Shows understanding of how to transport and store equipment safely. WT6 Practices some appropriate safety measures without direct supervision.	WT2. Begin to build structures, exploring how they can be made stronger, stiffer, and more stable. WT3. Explore and use **levers and sliders** mechanisms in their products. WT4. With help measure, mark out, cut and shape a range of materials. WT5. Explore using tools e.g. scissors, a hole punch, staplers and safely. WT6. Begin to assemble, join and combine materials and components together using a variety of temporary methods e.g. glues, ties, split pins or masking tape. WT7. Begin to use simple finishing techniques to improve the appearance of their product.	WT1. Begin to select tools and materials; use correct vocabulary to name and describe them.. WT3. Explore and use **wheels and axles** mechanisms in their products. WT4. With help measure, cut and score with some accuracy. WT5 Independently use in safe way scissors, hole punch, staplers, hammers, needles, and pins WT6. With support, assemble, join and combine materials in order to make a product. WT7. With support, cut, shape and join fabric to make a simple product using basic sewing techniques.
Evaluating processes and products	EPP1. Selects appropriate resources and adapts work where necessary.	EPP1. When looking at existing products explain what they like and dislike about products and why. EPP2. Start to evaluate their product by discussing how well it works in relation to the purpose (design criteria). EPP3. Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make.	EPP1. Look at a range of existing products explain what they like and dislike about products and why. EPP2. Start to evaluate their products as they are developed, identifying strengths and possible changes they might make. EPP3. Evaluate their work against their design criteria. EPP4. Talk with confidence about their ideas, saying what they like and dislike about them.
Food and Nutrition	FN1. Eats a healthy range of foodstuffs and understands need for variety in food. FN2. Shows some understanding that good practices with regard to exercise, eating, sleeping and hygiene can contribute to good health.	FN1. Begin to understand that all food comes from plants or animals. FN2. Explore understanding that food has to be farmed, grown elsewhere (e.g. home) or caught. FN3. Start to understand how to name and sort foods into the five groups in *'The Eat Well plate' FN4. Begin to understand that everyone should eat at least five portions of fruit and vegetables every day. FN5. Know how to prepare simple dishes safely and hygienically, ***without using a heat source.*** FN6. Begin to experiment with using techniques such as cutting, peeling, grating, spreading and mashing.	FN1. Understand that all food comes from plants or animals. FN2. Know that food has to be farmed, grown elsewhere (e.g. home) or caught. FN3. Understand how to name and sort foods into the five groups in *'The Eat Well plate' FN4. Know that everyone should eat at least five portions of fruit and vegetables every day. FN5. Demonstrate how to prepare simple dishes safely and hygienically, ***without using a heat source.*** FN6. Demonstrate how to use techniques such as cutting, peeling, grating, spreading and mashing.

Design Projects/Ideas

	EYFS	Year 1	Year 2
D&T project 1	Create a poppy – using simple joins Make an owl using egg cartons, feathers and split pins for moving wings	T1 – junk model space ship	London topic Make vehicles – axels and strengthening structures- Term 4
D&T project 2	Investigate and experiment with different ways to join. Design and create a tractor from junk modelling	T3- sliding lever and moving picture	Sewing linked to minibeasts learning - Term5
Food Project	Chocolate apples for fireworks night	T6- beach café food	Healthy living term – food. Term 1
Additional	Junk Modelling	T1 Junk modelling a space rocket/space craft T2 Shadow puppets, Christmas decorations T4 cardboard & paper mini-projects, joining techniques (newspaper basket etc) T4 recap 'moving picture' magnet Fairytale/ Everyday materials) T5 Tower/tunnel/bridge building using different construction toys T6 investigating boat shapes & floating and sinking – make and test boats using plasticine/3D modelling and junk modelling Construction toys/materials all year round. KS1 Lego club	Junk modelling boat linked to science materials learning, but using lots of DT objectives.