



Sea Mills Primary School – Engineers (Design and Technology) Skills Progression **EYFS AND KS1**

EYFS

Children will either be 'on track' or 'not on track' at the end of the year. This will be the same judgement for all areas of learning including expressive arts and design. For D.T, the focus will be placed upon children repeatedly and consistently improving their skills when designing and making creations and also when exploring, making and trying different foods.

Early Learning Goals:

ELG 1: Creating with Materials

Children at the expected level of development will:

- Safely use and explore a variety of materials,
- Safely use different tools and techniques,
- Experiment with colour, design, texture, form and function;
- Share their creations, explaining the process they have used.

Year 1

What is my hat made of?

Design purposeful products, based on criteria, using tools and equipment. All children to design and make their own hat.

What grows near me?

Understand where food comes from and use tools to plant and prepare vegetables/plants. For example: Cut carrots and vegetables.

How do we move around?

Evaluate, design and make a pop-up book.

Characteristics of effective learning:

Show curiosity about objects, events and people
 Questions why things happen.
 Engage in open-ended activity.
 Thinking of ideas.
 Find ways to solve problems / find new ways to do things / test their ideas.
 Use senses to explore the world around them
 Planning, making decisions about how to approach a task, solve a problem and reach a goal.
 Checking how well their activities are going.
 Changing strategy as needed.
 Reviewing how well the approach worked.

Year 2

What could my classroom be made of?

Use tools and materials to design and make a classroom out of a shoebox.

What did Brunel do for Great Britain?

Design, make and evaluate a model bridge.

How do we live a healthy life?

Prepare a healthy dish.

<u>National Curriculum Skills</u> In KS1 children 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.	In Year 1... I can talk about what I eat at home. I can say where some food comes from and give examples of food that is grown. I can use simple tools to help prepare food safely. I can create a simple design for my product. I can use pictures and words to describe what I want to do. I can select from and use a range of equipment to perform practical tasks e.g. cutting, shaping, joining and finishing. I can use a range of simple tools to cut, join and combine materials. I can ask simple questions about existing products. I can build simple structures. I can use wheels and axles in a product.	In Year 2... I can understand the need for a variety of food in a diet. I can understand that all food has to be farmed, grown or caught. I can use a wider range of cookery techniques to prepare food safely. I can design useful, pleasing products for myself and other users. I can generate, develop, model and communicate my ideas through drawing. I can choose tools I would like to use and select materials. I can safely measure, mark out, cut and shape materials. I can evaluate and assess existing products. I can investigate different techniques for stiffening a variety of materials. I can explore and use mechanisms such as levers, sliders, wheels and axles in products.
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Experiment, invent and create own work	• In Year 1, children experiment, create and invent in different ways. Through being Engineers, they are able to build models i.e. out of construction materials (Lego). They are also able to design and make a hat as well as a pop up book. • Focus in year 1 is about children building 'simple' structures.	• In Year 2, children build upon their skills in Year 1. They experiment further with different designs. In their first D.T enquiry, children build a 'shoe box classroom' using different materials. They then use these skills to make a bridge in their term 6 enquiry linked to the trip to SS great Britain. • Focus in Year 2 is about children building on key skills learnt in Year 1 to create more sophisticated designs and structures.
Think critically about Design	• In year 1, Children are encouraged to think critically about their designs and evaluate what has gone well and what would be 'even better if.' We encourage children to be reflective of their designs.	• In year 2, Children are encouraged to think critically about their designs and evaluate what has gone well and what would be 'even better if.' They go a step further and consider the pros and cons of a design brief.
Learning about different cultures	• In year 1, we explore the concept of what 'healthy' means. Children learn about what makes a healthy diet and we discuss different cultures in PSHE lessons during circle times.	• In Year 2, children explore a range of healthy dishes. The children may have visits from those within different cultures and experiment with making different food dishes.
School Trips/Visitors	• Visit from Chart well food company – cooking workshops (How to make a healthy meal) • Visit to allotment in Year1 or visit from a farmer for enquiry 'what grows near me?' • Trip to SS Great Britain in Year 2 for enquiry 'What did Brunel do for Great Britain?' • Diversity Month: Visit from Parent in Year 2: Discussion about life in Kenya and opportunities to taste different foods such as mandazi.	
Vocabulary bank	• Food, eating, healthy, grown, design, draw, make, cut, shape, join, model, build, tools, ingredients, cooking, prepare, finish.	• Diet, caught, prepare, safely, develop, model, tools. materials, measure, shape, wheels, axels, construct, mock-up,

Target Tracker Statements:	<u>Year 1:</u> I can talk about what I eat at home and begin to discuss what healthy foods are. I can say where some food comes from. I can use simple tools with help to prepare food safely. I can create a simple design for a product. I can use pictures and words to describe what I want to do. I can select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing. I can use simple tools to cut and join safely. I can ask simple questions about existing products and those that I have made. I can build structures, exploring how they can be made stronger, stiffer and more stable. I can use wheels and axles in a product.	recipe, make, models. <u>Year 2</u> I can understand the need for a variety of food in a diet. I can understand that all food has to be farmed, grown or caught I can use wider range of cookery techniques to prepare food safely. I can design useful, pleasing products for myself and others based on a design brief. I can generate, develop and model and communicate ideas through talking, drawing, templates, mock-ups and I.T. I can choose tools I would like to use and select materials based on my knowledge of their properties. I can safely measure, mark out, cut and shape materials and components using a range of tools. I can evaluate and assess existing products and those that I have made using a design criteria. I can investigate different techniques for stiffening a variety of materials and explore different methods. I can explore and use mechanisms such as levers; sliders; wheels and axles.
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