DESIGN TECHNOOGY CURRICULUM AUDIT

FOCUS AREA: CURRICULUM PROVISION

SECTION 1: National Curriculum Strands of Learning

Key Questions:

- Does the current curriculum provision meet the requirements of the National Curriculum in design technology?
- Is there a long-term plan / curriculum overview for design technology?
- Is provision for design technology clearly identified within a cross-curricular approach?
- Is there a rationale for the curriculum in design technology?
- Do the key stage end points match the ambition of the National Curriculum?
- Are the six strands of learning covered in sufficient depth to ensure coverage matches the ambition of the National Curriculum?
- Is there evidence that any scheme of work has been adapted to meet the context of the school and reflect the school community?

Strengths	**Weaknesses**

Improvement Actions:

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SECTION 2: Design Technology in EYFS

Key Questions:

- Does the Key Stage 1 curriculum in design technology build upon children's experiences in EYFS?
- Does the children's experiences in EYFS prepare them for future learning in design technology?
- How do practitioners lead and support learning in design technology in EYFS?

Are there opportunities for children in EYFS to:

- Explore and investigate objects and products?
- Construct and make using a range of materials and resources ?
- Experience and use a range of tools to carry out practical tasks?
- Cook with food using utensils and demonstrate simple skills in cooking?
- Talk, discuss and extend their vocabulary related to design technology?

Strengths	Weaknesses

Improvement Actions:

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SECTION 3a: Principles of Effective Design Technology – Designing and Making a Product

Key Questions:

In each unit of work, do children design and make a product ?

- Does the product have a purpose or a function?
- Does it fulfil a need?
- Is it meaningful?
- Does it have an intended user? (client)
- Is it real life and relevant?
- Can it be easily tested?
- In each unit of work, are there opportunities for children to design, make and evaluate products?
- Is there evidence in children's learning in DT of them evaluating during the creative process and the re-designing or changing their product whilst making it? (The iterative process)
- How much learning time in DT is devoted to the children taking part in creative and practical activities?

Strengths	Weaknesses

SECTION 3b: Principles of Effective Design Technology – Knowledge Building

Key Questions:

- Has the curriculum identified the key knowledge that children should learn at each stage of their learning?
- How do teachers and children know the key knowledge and skills they should know and remember?
- Is knowledge carefully sequenced and coherent (makes sense – no gaps in knowledge)?
- Are opportunities built into the curriculum for children to revisit and consolidate previous learning?
- Are opportunities built into the curriculum for children to link existing knowledge with new knowledge to create better understanding in the subject?

Strengths	Weaknesses

Improvement Actions:

SECTION 3c: Principles of Effective Design Technology – Design Decisions

Key Questions:

- Does the curriculum provide opportunities for children to acquire knowledge of existing and similar products as part of the creative process of designing?
- Is the curriculum based on providing children with the technical knowledge they need to make design decisions when creating a product?
- Are children challenged to create products in which they make decisions about the design that results in a product that is authentic and innovative?

Strengths	Weaknesses

SECTION 3d: Principles of Effective Design Technology – Real Life and Relevant

Key Question:

Do units of work in the design technology curriculum allow children to work and learn within relevant and real-life contexts? Highlight the boxes that apply:

Home | **School** | **Garden** | **Playground** | **Leisure** | **Culture**

Local Community | **Industry** | **Wider Environment** | **Enterprise**

Other:

Strengths	Weaknesses

Improvement Actions:

SECTION 4: Disciplinary Knowledge: Designing

Key Questions:

- Does each unit of work have a design brief and design specifications that act as a driver for learning throughout the unit?
- Are a range of designing skills developed as children progress through the DT curriculum?
- Is the development of children's drawing skills and techniques systematically planned for as they progress through the DT curriculum?
- Are their opportunities for children to use computer software as part of the design process?
- What other designing skills and techniques are taught and developed through the DT curriculum?

Strengths	**Weaknesses**

Improvement Actions:

SECTION 5: Disciplinary Knowledge: Making

Key Questions:

- Does the curriculum identify the key skills (practical knowledge) that children will learn at each stage of their learning journey in design technology?
- Are there opportunities for children to re-visit these skills and to get better at them as they progress through the curriculum?
- Are children taught how to perform these skills whilst keeping themselves safe and healthy?

Strengths	**Weaknesses**

Improvement Actions:

SECTION 6: Disciplinary Knowledge: Evaluating

Key Questions:

- Does the curriculum provide opportunities for children to investigate and evaluate existing products?
- Does the curriculum encourage children to evaluate their work whilst designing and making as part of the iterative process?
- Are children provided with a range of activities and processes that allow them, to evaluate products that they have designed and made themselves?

Strengths	Weaknesses

Improvement Actions:

SECTION 7: Disciplinary Knowledge: Designs and Designers

Key Questions:

- Where in the curriculum do children have the opportunity to learn about designs and designers that have helped shape the world?

Strengths	Weaknesses

Improvement Actions:

SECTION 8: Disciplinary Knowledge: Vocabulary

Key Questions:

- Is the teaching of vocabulary carefully planned to ensure that children build up a repertoire and understanding of technical words in design technology?
- Are there planned opportunities to teach and develop technical vocabulary in each lesson?

Strengths	Weaknesses

Improvement Actions:

SECTION 9: Technical Knowledge Overview

Highlight areas that are currently covered in the DT curriculum

Cooking and Nutrition

MAJORITY SAVOURY DISHES

RECIPES
- Following & Understand Recipes
- Writing recipes
- Knowing some basic recipes
- Adapting recipes
- Planning meals

TASTE TESTING
- Participating in a taste test
- Developing use of senses
- Taste vocabulary

FOOD ORIGINS
- Where do we get our food?
- Farming: Grown, Caught or Reared
- Processed food: Farm to Fork, Plough to Plate
- Seasonality

Market Research
Fair Trade Food
Food labelling & packaging

HEALTHY EATING
- Key Messages – Healthy & Balanced Diet
- Five a Day (Key Stage 1)
- Eatwell Guide (Key Stage 2)
- Cutting down on sugar and salt
- Drinking 8 cups of water a day
- Designing a healthy, balanced diet

FOOD PREPARATION TECHNIQUES
- Healthy and Hygienic practices

Cutting, slicing, chopping, grating, juicing, baking, kneading

DIFFERENT DIETS
- Allergies and intolerances
- Vegetarian and veganism
- Religious & cultural food

FOOD ENTREPRENEURSHIP

Strengths

Weaknesses

Materials/Textiles

WORKING WITH A RANGE OF MATERIALS
- Paper
- Card
- Cardboard
- Wood
- Plastic,
- Metal & glass (ready-made shapes & component parts)

UNDERSTANDING PROPERTIES OF MATERIALS & USING THESE WHEN DESIGNING AND MAKING

Using a range of techniques to:
- Cut materials
- Shape material
- Join materials
- Combine materials

Knowing the names of a range of tools and equipment
Selecting and using the correct tools and techniques
Working safely

WORKING WITH TEXTILES (Sheet Material)
- Cutting textiles
- Joining textiles (sewing, gluing, stapling)
- Properties of different materials

Fastenings (buttons, toggles, zips, press studs..)

Using a needle threader and thimble

Choosing and Using Stitch Techniques
Running stitch, Overstitch, Back stitch, Blanket stitch

Embroidery and other decorative techniques when working with fabrics
- Fabric paint and pens
- Appliqué
- Knotting and braiding
- Tie Dye, Batik, Block Printing

Using and making pattern templates
Seam allowance when joining textiles

Strengths

Weaknesses

Structures

TYPES OF STRUCTURES
- Frame structures
- Shell structures
- Weight-bearing (not primary)

STRONGER, STIFFER, MORE STABLE

Choosing appropriate materials

Combining and layering materials
- Cardboard (lamination)
- Papier Mache (layering)

Frame Structure Techniques
- Triangulation
- Heavy, wider base
- Buttress
- The Jinks Method – Frame Structures

JOINING MATERIALS TO CREATE STRUCTURES (Techniques)
- Junk modelling
- Nets from shapes
- Cardboard engineering skills
- Wooden frameworks

Choosing the correct technique (gluing, Sellotape, staples...)

Construction kits to try things out – making models (the iterative process)

Strengths

Weaknesses

Mechanical Systems

ALL SYSTEMS HAVE AN INPUT AND AN OUTPUT
KNOWING THAT MECHANICAL SYSTEMS PRODUCE MOVEMENT
DESIGN AND MAKE PRODUCTS THAT HAVE A MECHANICAL SYSTEM

KNOWING & UNDERSTANDING SPECIFC MECHANICAL SYSTEMS
- Sliders
- Pop up mechanisms
- Levers and linkages
- Wheels and axles
- Pulley systems
- Cams
- Gears

Pneumatics – not mentioned in the National Curriculum – good for practical models (syringes) Input and Output.

TYPES OF MOVEMENT
- Linear movement
- Rotational movement
- Reciprocating movement
- Oscillating movement

Knowing and identifying different types of movement in different mechanical systems

Strengths

Weaknesses

Electrical & Program Systems

UNDERSTANDING AND MAKING SIMPLE CIRCUITS USING A RANGE OF COMPONENTS
- Batteries, Wires, Bulbs
- Buzzers, Motors, Switches

USING ELECTRICAL CIRCUITS IN PRODUCTS

CONTROLLING ELECTRICAL SYSTEMS (INPUTS & OUTPUTS)

Switches – on or off (choosing the right switch)

CONTROLLING ELECTRICAL SYSTEMS (INPUTS & OUTPUTS)
- More complex inputs and outputs controlled by computing (Block Coding)
- Inputs and outputs controlled by using sensors in a system.

Strengths

Weaknesses

Improvement Actions:

SECTION 10: Progression in Design Technology

Key Questions:

- Is there a progression document that details the knowledge that children will learn at each stage of the curriculum journey?
- Is the curriculum/scheme of work based on delivering this progression of knowledge.
- Is it clearly demonstrable the link between the progression document and the scheme of work?
- Are there strategies to track the progress of children to ensure that they are 'keeping up' with the curriculum?

Strengths	Weaknesses

Improvement Actions:

SECTION 11: Other Curriculum Considerations

Key Questions:

- Time allocation: Is enough time allocated for children to reach expected standard?
- How is the curriculum delivered? Is there room for flexibility?
- Does the delivery method allow children to recall previous learning / layered curriculum, spaced repetition?
- Is there a rationale for the curriculum choices that have been made?

Strengths	Weaknesses

Improvement Actions: