

Design and Technology

at Bank Lane Infant and Nursery School

Working together, nurturing excellence.

Subject Lead – Nicole Bailey

Under Construction – Nov 22



Curriculum plans – *How is learning across school sequenced?*

- EYFS – curriculum changes
 - Activities planned from our Narrative Immersion (Magic Story Box – Rebecca Bell) planning
 - Linked to the 7 areas of learning including Expressive Arts and Design
 - ‘D&T makes an important contribution to children’s development in all seven areas of learning.’ (Design and Technology Association)
 - Teachers know where the EYFS feeds into the DT national curriculum (particularly Physical Development and Expressive Arts and Design at ELG)
- KS1 – Projects on a Page
 - Learning in DT is planned around our themes throughout the year and projects take place in themes that lend themselves to good quality DT learning.
 - Teachers use Projects on a Page (DATA) to underpin their planning
 - DT projects follow the same sequence of learning (Investigative and Evaluative Activities, Focused Practical Tasks, Design, Make, Evaluate)
 - Children revisit and review previously taught learning in different projects and in different year groups.
- Concepts
 - All learning that takes place in DT feeds in to at least one of our identified concepts (Innovation, Functionality, Nutrition, Research, Evaluate, Design, Materials Tools and Components, Safety and Significant People).

Curriculum plans – *How are knowledge and skills built throughout school?*

- Concepts
 - Nine Concepts or ‘big ideas’ have been identified within our DT curriculum.
 - Teachers use these concepts to ensure that the curriculum is not one that teaches just subject specific content.
- Projects on a Page
 - Projects on a Page allows for us to plan a progressive curriculum for our children.
 - Children revisit and review previous learning throughout their DT education, allowing them to build on their prior learning.
- Skills
 - Skills are progressively developed in terms of the children’s confidence and independence when selecting and using tools of increasing complexity.
 - Children begin exploring the skills required for DT from a young age. In our EYFS, children explore the foundations of structures in a range of construction activities, they use real-life tools in our tinkering areas, our creative areas support the development of joining and fixing techniques and children begin to learn about food and nutrition.
 - EYFS skills are built upon throughout KS1.

Curriculum Plans – *What are the plans for progression of vocabulary?*

- Progression
 - Vocabulary is progressive in our DT curriculum
 - Subject wide vocabulary is revisited and reviewed in each unit of work e.g. design, make, evaluate, product, user, purpose.
- Vocabulary
 - Vocabulary is planned for in our DT Progression Model.
 - We develop vocabulary use, retention and recall of the meanings of words by co-constructing vocabulary cards with the children in KS1.

Curriculum plans – *What are the plans for retention of knowledge and skills? Linking learning and remembering learning.*

- Can You Still...?
- Vocabulary Cards
- Visual Aids to support retention (area of DT)
- 2/3 Day projects
 - Start with prior learning from previous projects
 - Learning is condensed into a block, allowing for deeper, high-quality learning to take place.
- Cross-curricular links (topic based) to enhance 'sticky knowledge'

Pedagogy – *How are lessons structured?*

- Lessons follow the iterative process of Design and Technology.
- DT Lessons are practical and allow for hands-on exploration.
- Investigative and Evaluative Activities
 - Children are given time to explore current products and evaluate them
 - These activities allow for children to be innovative thinkers
- Focused Practical Tasks
 - These tasks prepare children to make their project.
 - Children are given time to explore a range of skills and techniques required for their project.
 - Individual skills are often taught in small groups to support children in developing their confidence with a particular skill or technique.
- Design, Make and Evaluate
 - The iterative process (the relationship between a child's ideas and how they are communicated and clarified through activity) allows for children to continually evaluate and improve their product to achieve full functionality.

Concepts in Design and Technology


Concepts are revisited from Early Years through to the end of Year 2. This allows the children to build knowledge and make connections between their learning.

1. **Innovation** (The process of making something new or doing something in a new way. Innovation also has to include the concept of improvement; to innovate is not just to do something differently, but to do or make something better.)
2. **Functionality** (ensuring that all products are fit for purpose)
3. **Nutrition** (The nourishment or energy that is obtained from food consumed or the process of consuming the proper amount of nourishment and energy. Examples of nutrition are nutrients found in fruits and vegetables and eating a healthy diet.)
4. **Research** (To take inspiration from existing products in order to further develop them)
5. **Evaluate** (Reflecting on the design and final product to lead to further improvements.)
6. **Design** (A plan or drawing produced to show the look and function or workings of a product before it is made.)
7. **Materials, Tools and Components** (selecting and using the appropriate components and materials and developing the skills to use tools adequately)
8. **Safety** (including monitoring and managing risks and knowing why this is important)
9. **Significant People** (Learn about a diverse range of significant designers and inventors, including their contributions to advancements within Design and Technology)


Assessment – *Measuring progress, knowledge, skills and challenge*

- EYFS – Development Matters / ELG's
 - Teachers in the Early Years use Teacher Assessment to assess whether children are meeting expected levels in Fine Motor Skills (ELG) and Creating with Materials (ELG)
 - Teachers use Development Matters to support assessment and coverage in the relevant areas to DT of the EYFS (PSED, PD, UtW and EAD)
- KS1 – End-Points taken from the NC
 - We have taken the end-points of learning from the KS1 DT National Curriculum which teachers assess against throughout the year to establish if a child is working at or below expected level.
 - We use this analysis to form focus groups and plug gaps if necessary.
 - These grids follow the children through school so their next teacher will know if a child has certain gaps in their prior learning that need to be pre-taught before a new unit is begun.

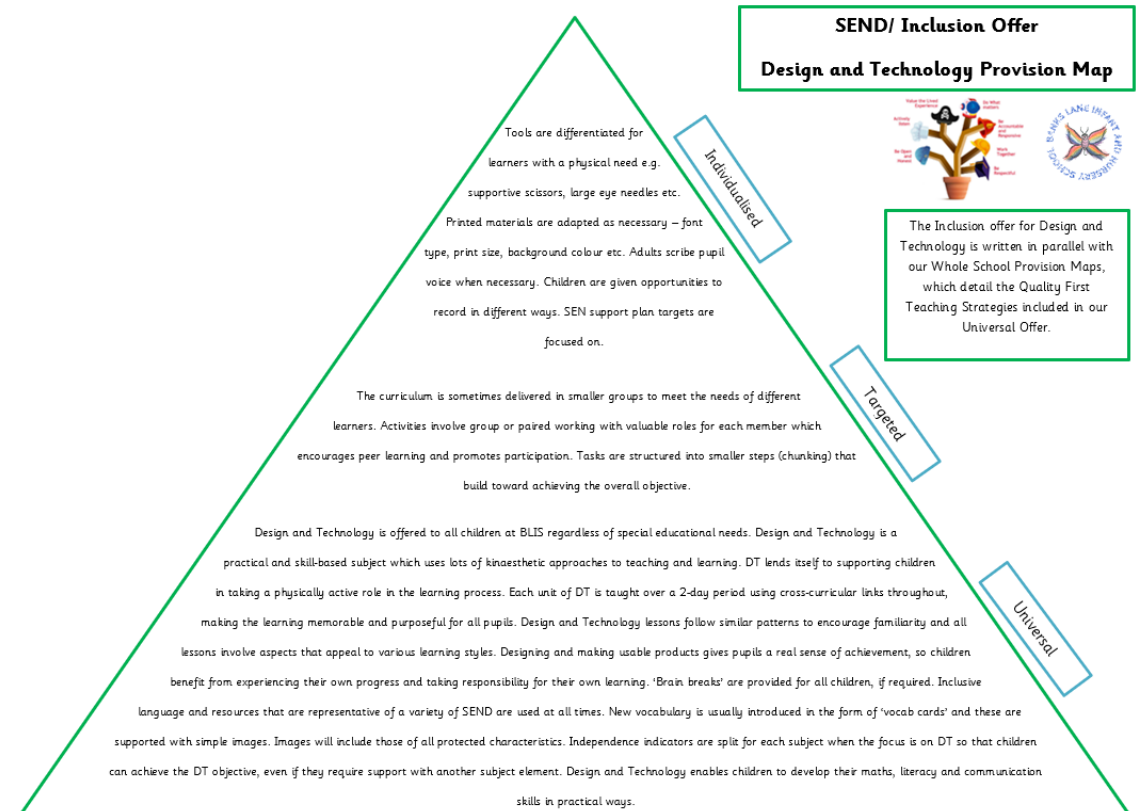
Inclusion – Challenge and adaptation



Design and Technology
SEND (Special Educational Needs & Disabilities)/inclusion offer



- Design and Technology is offered to all children at BLIS regardless of special educational needs.
- Design and Technology is a practical and skill-based subject which uses lots of kinaesthetic approaches to teaching and learning. DT lends itself to supporting children in taking a physically active role in the learning process.
- Each unit of DT is taught over a 2-day period using cross-curricular links throughout, making the learning memorable and purposeful for all pupils.
- Design and Technology lessons follow similar patterns to encourage familiarity and all lessons involve aspects that appeal to various learning styles.
- Designing and making usable products gives pupils a real sense of achievement, so children benefit from experiencing their own progress and taking responsibility for their own learning.
- 'Brain breaks' are provided for all children, if required.
- Inclusive language and resources that are representative of a variety of SEND are used at all times. New vocabulary is usually introduced in the form of 'vocab cards' and these are supported with simple images. Images will include those of all protected characteristics.
- The curriculum is sometimes delivered in smaller groups to meet the needs of different learners.
- Activities involve group or paired working with valuable roles for each member which encourages peer learning and promotes participation.
- Tasks are structured into smaller steps (chunking) that build toward achieving the overall objective.
- Independence indicators are split for each subject when the focus is on DT so that children can achieve the DT objective, even if they require support with another subject element.
- Tools are differentiated for learners with a physical need e.g. supportive scissors, large eye needles etc.
- Design and Technology enables children to develop their maths, literacy and communication skills in practical ways.



Subject evaluation - *How do I find out about what's going well and what needs to improve?*

- Learning Walks
 - Is DT evident on Working Walls?
 - Are children engaged in their learning?
 - Are the needs of all learners being met?
 - Is the teacher using a DT specific, language-rich environment?
- Book Looks
 - All KS1 children have their own DT Sketch Book which they use to showcase their learning throughout KS1 DT Units.
 - Is the whole DT process evidenced, not just the outcome?
 - Have children used correct DT vocabulary?
 - Is learning progressive?
- Pupil Voice
 - Can children articulate their learning?
 - Using their sketch book as a prompt, can they talk about their learning in previous units, using the correct terminology?
 - Can children use and understand DT vocabulary in the correct context?

Policy

Design and Technology Risk Assessment 2022-2023

Below are risks that could occur specifically during Mechanisms, Textiles, Structures and Food & Nutrition projects.

Please also adhere to the General School Risk Assessment for more generalised risks.

Task, Activity, Tool or Environment	Hazards	Who is at risk	Actions taken to reduce or eliminate risk	Probability	Risk
Using PVA Glue	Contact with skin, hair, eyes etc Ingestion	All	Children instructed not to use excessive amounts and avoid spillages. Spillages should be cleaned up promptly. Adhesives should be water-based, not solvent-based and be non-toxic. Children should wash their hands after use. Remind young or SEN children to not eat the glue. Children to be monitored when using PVA. Seek the assistance of a First Aider if necessary. See also COSHH risk assessment in the staff room.	Possible	Low
Scissors	Cuts and nips	All	Only children's scissors should be used. Pupils are appropriately supervised during the activity and given instructions on the safe use of equipment. Scissors should be properly stored (handles up). Any faulty or damaged scissors are disposed of. Seek the assistance of a First Aider if necessary.	Possible	Low
Using junior hacksaws	Cuts and abrasions	All	Pupils are appropriately supervised during the activity and given instructions on the safe use of equipment. Demonstrate the safe use, carrying and storage of hacksaws. Children should stand up when using junior hacksaws. Ensure that children use bench hooks correctly.	Possible	Medium
			Hacksaws are stored in Class 3 Stock Room and signed in and out by a member of staff. Any faulty or damaged hacksaws are disposed of. Seek the assistance of a First Aider if necessary.		
Sewing	Needle injury	All	Pupils are appropriately supervised during the activity and given instructions on the safe use of equipment. Count the needles in and out. Check the floor and work surfaces for any stray needles. Needles should be returned or pinned to a needle cushion when not in use. Seek the assistance of a First Aider if necessary.	Possible	Low
Making holes in paper and card	Stabbing injuries and cuts	All	Demonstrate the correct use of hole punchers. When using a pencil to punch holes, point them away from the face and take care of fingers, using blue tac if necessary. Seek the assistance of a First Aider if necessary.	Possible	Low
Knives	Cuts from contact with blades	All	Pupils are appropriately supervised during the activity and given instructions on the safe use of equipment. Demonstrate the safe use, carrying and storage of paring knives. Paring Knives are stored in Class 3 Stock Room and signed in and out by a member of staff. Any faulty or damaged knives are disposed of. Use a claw grip when cutting fruit and vegetables. Seek the assistance of a First Aider if necessary – First Aid box in Science Room.	Possible	Medium
Graters	Cuts from contact with sharp edge	All	Demonstrate the correct use of a grater, ensuring that only the vegetable touches the sharp edge and the grater is held still for stability. Seek the assistance of a First Aider if necessary – First Aid box in Science Room.	Possible	Low

- Risk Assessment
 - Forms part of the Health and Safety Policy

Peelers	Cuts from contact with blades	All	Demonstrate the correct use of a peeler. When carrying a peeler, hold the blade away from others. Seek the assistance of a First Aider if necessary – First Aid box in Science Room.	Possible	Medium
Oven	Scalding or burns	Staff	Only adults to use the oven. Adults to warn children not to go near / touch hot surfaces. Food preparation area is away from the hot surface.	Possible	Medium
Hob – using a wok	Scalding or burns	Staff	Only adults to use the hob. Adults to warn children not to go near / touch hot surfaces. Food preparation area is away from the hot surface.	Possible	Medium

Date of Assessment: 17/11/2022

Assessed by: N. Bailey **Role:** Class Teacher and DT Coordinator

Date of Review: November 2023