Design Technology – Statement of Intent, Implementation and Impact.

Intent

At Acomb First School, we intend to build a high quality Design Technology curriculum, which is inspiring, creative and practical. We believe that our DT lessons will give children the willingness and mind-set to take creative risks and think outside the box. Our DT curriculum will enable children to carry out thorough research, show initiative and to ask questions to further their knowledge and understanding. We want our children to use creativity and imagination, to design and make innovative products and prototypes. We intend for all children to acquire appropriate subject knowledge, skills and understanding as set out in the National Curriculum. It is our aim to create strong cross-curricular links with other subjects, such as Mathematics, Science, Computing, and Art. We want Design and Technology to prepare our children, to give them the opportunities, responsibilities, and experiences they need to be successful in later life and go on to have careers within Design and Technology.

In DT, children will have an excellent attitude to independent learning as well as the ability to use time efficiently in order to work productively together. The children will also be given opportunities to reflect upon and evaluate past and present design technology, its uses and its effectiveness.

Our children will be taught Design and Technology in a way that ensures progression of skills, and follows a sequence to build on previous learning.
Our children will gain experience and skills of a wide range of formal elements of design and concepts of technology in a way that will enhance their learning opportunities, enabling them to use design and technology across a range of subjects to be creative and solve problems, ensuring they make progress.

Implementation

As a school, we are dedicated to the teaching and delivery of a high-quality Design and Technology curriculum.
This is implemented through:

- A broad and balanced Design and Technology curriculum that builds on previous learning and provides both support and challenge for learners.
- To meet the national curriculum objectives and to ensure clear progression, concepts are broken down into year groups, which measure the progression of the skill throughout school.
- Progression documents are mapped rigorously ensuring there is a clear sequence of Substantive Knowledge, and Disciplinary Knowledge.
- We follow a Design and Technology scheme (Kapow) that ensures a progression of skills and covers all aspects of the Design and Technology curriculum.
- All classes will have a scheduled Design and Technology lesson every two weeks.
- Well planned and resourced projects providing children with a hands-on and enriching experience.
- Each project from Year 1 to Year 4 addresses the principles of designing, making, and evaluating and incorporating relevant technical knowledge and understanding in relevant contexts.
- In partnership with Art and Design, the research, design and evaluation of products will be shared in a sketchbook.
- Projects make links to other curriculum subjects, for example, Year 4 will make an electric poster whilst learning about electricity.
- We have strong links with Middle Schools, ensuring all children learn skills that will directly impact upon their future learning.

We want to ensure that Design and Technology is embedded in our whole school curriculum and that opportunities for enhancing learning by using Design and Technology are always taken.

Impact

Our Design and Technology Curriculum is high quality, well thought out and is planned to demonstrate progression. Assessment of children's learning in Design Technology is an ongoing monitoring of children's understanding, knowledge and skills by the class teacher throughout lessons. This will be used by the tracking of objectives using Insight Tracking. This assessment is then used to inform differentiation, support and challenge required by the children.

Design Technology is also monitored by the subject leader throughout the year in the form of book monitoring, lesson observations and pupil interviews to discuss their learning and understanding and establish the impact of the teaching taking place.

Our children enjoy and value Design and Technology and know why they are doing things, not just how. Children will understand and appreciate the value of Design and Technology in the context of their personal wellbeing and the creative and cultural industries and their many career opportunities. Progress in Design and Technology is demonstrated through regularly reviewing and scrutinising children's work, in accordance with our Design and Technology assessment policy to ensure that progression of skills is taking place.

Namely through:

- Looking at pupils' work, especially over time as they gain skills and knowledge
- Observing how children perform in lessons
- Talking to the children about what they know.

The Design and Technology curriculum will contribute to children's personal development in creativity, independence, judgement and self-reflection. This would be seen in them being able to talk confidently about their work, and sharing their work with others. Progress will be shown through outcomes and through the important record of the process leading to them.

Essential Characteristics

- Significant levels of creativity, originality, and the willingness to take creative risks to produce innovative ideas and prototypes.
- Opportunities to explore who they are as designers and makers, building the confidence to produce products that are unique and reflect their personality.
- An excellent, proactive attitude to learning and independent working.
- The ability to use time efficiently and work constructively and productively with others.
- The ability to carry out thorough research, show initiative and ask questions to develop an exceptionally detailed knowledge of users' needs.
- The ability to act as responsible designers and makers, working ethically, using finite materials carefully and working safely.
- A thorough knowledge of which tools, equipment and materials to use to make their products.
- The ability to apply mathematical knowledge.
- The ability to manage risks exceptionally well to manufacture products safely and hygienically.
- The ability to evaluate their work and suggest ways to improve both their work and the work of others
- A passion for the subject and knowledge of, up-to-date technological innovations in materials, products and systems.

Curriculum Progression: Why this? Why now?						
	Cycle A			Cycle B		
	Autumn	**Spring**	**Summer**	**Autumn**	**Spring**	**Summer**
EYFS						
KS1	**Mechanisms – Wheels and Axels** Children design a vehicle that includes wheels, axels and axel holders. They create clearly labelled drawings. Adapt mechanisms. Links to cross-curricular topic of toys. **E: Make a vehicle with moving wheels.**	**Textiles – Puppets** Children use a template to cut create a design for a puppet. They will cut fabric neatly with scissors before using joining techniques like glue, pins or staples (Y1) or running stitch (Y2) to create their puppet	**Structures - Windmills**	**Mechanisms: Fairground Wheel**	**Structures: Baby Bears Chair**	**Food: A Balanced Diet**
LKS2	**Textiles – Cushions** Designing and making a template. Children will select and cut material with ease using fabric scissors. Children will use running (Y3) or cross-stitch (Y4) to join materials. They will also use applique to decorate.	**Structures- Pavilions**	**Food:**	**Textiles – Fastenings** Children will research different types of fastenings before making and testing using a template. They will design a book sleeve articulating decisions made. They will select a stitch that is most appropriate.	**Structures - Castles**	**Electrical Systems - Static**
UKS2 **(Year 5)**	**Project 1 – Structures** ● During this project, pupils will create a stable structure that adopts the principles of triangulation. ● They will have the opportunity to use appropriate materials and tools within the workshop. ● They will also develop knowledge of the working and aesthetical properties of timber. ● Pupils will also prototype bridge structures exploring bridge types such as beam, arch and truss structures. **Project 2 – Stuffed Toy** ● Develop a creative design solution whilst exploring a range of stitching textiles to make a viable textiles product. ● Knowledge of material properties are an integral part of the unit, ensuring that pupils are able to use key terms accurately. **Project 3 – Electronic Greetings Card**					

	● Pupils have opportunity to learn more about electrical systems.