

Policy title	:	Design and Technology Curriculum Policy
Date approved	:	September 2021
Review date*	:	September 2022

*Please note that should any further national guidance be issued by external agencies that are relevant to this policy, it will be updated accordingly prior to the review date shown above and re-circulated.

Introduction

At Tollgate Primary School we run a mastery curriculum. This means that all curriculum areas are a progressive model where pupils build on previous learning through their knowledge and application of clear and concise composite goals. Pupils know more and remember more through rehearsal, which leads to a deep and secure knowledge of the key components.

We at Tollgate Primary School believe that '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.' (The National Curriculum in England Framework Document (DfE) 2014)

We have a duty to ensure compliance with the revised National Curriculum and with the application of the new programmes of study and attainment targets. We understand that 'the National Curriculum provides pupils with an introduction to the core knowledge that they need to be educated citizens.'

We as a school community have a commitment to promote equality. Therefore, an equality impact assessment has been undertaken and we believe this policy is in line with the Equality Act 2010.

We believe it is essential that this policy clearly identifies and outlines the roles and responsibilities of all those involved in the procedures and arrangements that is connected with this policy.

This policy should be read in conjunction with the following documentation:

- Designing and Timetabling the Primary Curriculum - a practical guide for Key Stage 1 and 2
- National curriculum in England: design and technology programmes of study
- Statutory framework for the early years foundation stage Setting the standards for learning development and care for children from birth to five

Aims

- To ensure that all pupils build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- To ensure that all pupils critique, evaluate and test their ideas and products and the work of others.
- To ensure that all pupils develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
- To ensure that all pupils understand and apply the principles of nutrition and learn how to cook.
- To share good practice within the school.
- To work with other schools to share good practice in order to improve this policy.

Roles and Responsibility for the Policy

The Headteacher and the Senior Leadership Team will:

- Ensure all school personnel are aware of and comply with this policy;
- Work closely with the School Leader for Design and Technology and the link governor;
- Ensure compliance with the legal requirements of the National Curriculum;
- Encourage parents to take an active role in curriculum development;
- Provide leadership and vision in respect of equality;
- Provide guidance, support and training to all staff;
- Monitor the effectiveness of this policy by;

- Observing teaching and learning
- Planning scrutinies and learning walks
- Holding discussions with pupils and the School Council

The Subject Leader will:

- Lead the development of this policy throughout the school;
- Work closely with the Headteacher, the nominated governor and SENCO;
- Be accountable for standards in this subject area;
- Monitor standards by;
 - Auditing the subject area
 - Review of the scheme of work
 - Monitoring teachers planning
 - Lesson observations
 - Scrutinising children's work
 - Discussions with pupils
- Ensure continuity and progression throughout the school;
- Provide guidance and support to all staff;
- Provide training for all staff on induction and when the need arises regarding;
- Attend appropriate and relevant INSET;
- Keep up to date with new developments;
- Undertake an annual audit and stock take of resources;
- Purchase new resources when required and in preparation for the new academic year;
- Manage the subject budget effectively;
- Undertake risk assessments when required;
- Review and monitor the curriculum.

The Link Governor will:

- Work closely with the Headteacher and the School Leader for Design and Technology;

- Ensure this policy and other linked policies are up to date;
- Ensure that everyone connected with the school is aware of where to find the policy;

Teachers will:

- Comply with all aspects of this policy;
- Work closely with the subject leader to develop this policy;
- Devise short term planning;
- Plan and deliver good to outstanding lessons;
- Plan lessons which are interactive, engaging, of a good pace and have a three part structure;
- Have high expectations for all children and will provide work that will extend them;
- Assess, record and report on the development, progress and attainment of pupils;
- Achieve high standards;
- Celebrate the success of pupils in lessons

Pupils will:

- Be encouraged to work in partnership with the school by making decisions and exercising choice in relation to their educational programme;
- Listen carefully to all instructions given by the teacher;
- Ask for further help if they do not understand;
- Participate fully in all lessons;
- Participate in discussions concerning progress and attainment;
- Treat others, their work and equipment with respect;
- Support the school Code of Conduct and guidance necessary to ensure the smooth running of the school;
- Take part in questionnaires and surveys

Policy Procedure

The direction set out in this policy will be used to guide the planning, delivery and the teaching of the Design and Technology curriculum across the school.

Teaching and Learning Style

The school uses a variety of teaching and learning styles in design and technology lessons. Teachers ensure that the children apply their knowledge and understanding when developing ideas, planning and making products and then evaluating them. We do this through a mixture of whole class teaching and individual/group activities. Within lessons, we give children the opportunity both to work on their own and to collaborate with others, listening to other children's ideas and treating these with respect. Children critically evaluate existing products, their own work and that of others. They have the opportunity to use a wide range of materials and resources, including technology.

Curriculum Planning and Organisation

Design and technology is a foundation subject in the National Curriculum. Our school uses the National Curriculum a bespoke scheme of work as the basis for its curriculum planning in design and technology. We have tailored scheme to the local circumstances of our school in that we use the local environment as the starting point for aspects of our work.

We carry out the curriculum planning in design and technology in three phases: long-term, medium-term and short-term. The long-term plan maps out the units covered in each term through the key stages. The design and technology subject leader works this out in conjunction with teaching colleagues in each year group.

Our medium-term plans, which we have adopted from the national curriculum, give details of each unit of work for each term. They identify learning objectives and outcomes for each unit, and ensure an appropriate balance and distribution of work across each term.

Class teachers complete a weekly plan for each design and technology lesson. These list the specific learning objectives for each lesson and detail how the lessons are to be taught. The class teacher keeps these individual plans, and the class teacher and subject leader often discuss them on an informal basis.

We plan the activities in design and technology so that they build upon the prior learning of the children. We give children of all abilities the opportunity to develop their skills, knowledge and understanding and we also build planned progression into the scheme of work, so that the children are increasingly challenged as they move through the school.

Achieving Mastery

At Tollgate Primary School we run a mastery curriculum. This means that all curriculum areas are designed as a progressive model where pupils build on previous learning through their knowledge and application of clear and concise composite goals. Pupils know more and remember more through rehearsal, which leads to a deep and secure knowledge of the key components. At Tollgate we strive to deliver exceptional lessons where all children are expected to meet the learning objective and achieve mastery. We recognise the fact that there are children of widely different artistic abilities in all classes and we provide suitable pathways for all children to achieve the learning objective. These pathways include:

- Adaption

- Support
- Deepening Understanding
- Lowest 20% Toolkit

Adaption: is the altering or changing of the task so it is accessible for SEND children. The adaption of task should take into consideration the learning objective, stage of their learning the child is at and barriers to learning a child may encounter

Support: Support is any resource which may assist a pupil in achieving the learning objective. This may take the form of assistance from an adult (teacher or teacher or assistant), a modelled example of what is needed to succeed in the lesson or any other pictorial or concrete resource that can help the children achieve mastery

Deepening Understanding: Children who have met the objective of the lesson can deepen their understanding of the component or composite goal by completing a task that encourages a child to apply or explain the knowledge and skills they have acquired.

Lowest 20% toolkit: These are strategies aimed at the lowest 20% children in your class. They are strategies to enable children working within the lowest 20% to access and meet the demands of our mastery curriculum. These strategies include; Live Modelling, Support or scaffold, varied questions, setting the 'Bigger Picture', key vocabulary, 1:1 support, 1:2 Support and carefully planned independent learning time.

We plan the topics in DT so that they build upon prior learning. Children of all abilities have the opportunity to develop their skills and knowledge in each unit and, through planned progression built into the scheme of work, we offer them an increasing challenge as they move up the school.

The Foundation Stage

We encourage the development of skills, knowledge and understanding that help EYFS children make sense of their world as an integral part of the school's work. Children in EYFS are educated in the seven areas of learning as set out in 'Statutory framework for the early years foundation stage Setting the standards for learning, development and care for children from birth to five 2021'. This learning forms the foundations for later work in design and technology. These early experiences include asking questions about how things work, making and tasting a range of foods, exploring shapes, making animals from Play-Doh as well as other activities.

We provide a range of experiences that encourage exploration, observation, problem solving, critical thinking and discussion. These activities, indoors and outdoors, attract the children's interest and curiosity.

Teachers collaborate on the planning of the subject to ensure parity in provision and to share expertise. Curriculum planning is managed in three phases namely:

Long Term Planning

- Details what is to be taught over the year
- Provides teaching guidelines and overall objectives for each year group for the whole year

- Medium Term Planning

- Organises the subject into termly or half-termly sections
- Is more detailed and the objectives are more specific in nature
- Ensures a balanced distribution of work is undertaken across each term

- Short Term Planning

- Is done by class teachers
- Details the subject curriculum over the week
- Plans lessons in detail with specific class objectives -
- Sets individual learning goals for each pupil -
- Responds to the individual needs of the pupil.

Links with computing

The use of information and communication technology will promote, enhance and support the teaching of this subject area. We believe in delivering an exceptional Design and Technology Curriculum where children understand how to use computers to programme, monitor, and control products.

Inclusion

We believe that we are an educationally inclusive school as we are concerned about the teaching and learning, achievements, attitudes and well-being of all our pupils. We aim to provide places for all pupils who express a preference to join this school.

We work hard to offer equality of opportunity and diversity to all groups of pupils within school and promote an inclusive educational setting for all irrespective of:

- Gender
- SEND
- Pupil Premium Grant
- LAC

We believe we have a duty to ensure that all children have equal rights to the opportunities offered by education and that all children will be encouraged to fulfil their potential in their academic, physical and creative achievements.

We want to give all children the right to access high quality educational experiences, to take part in a broad and balanced curriculum and to be part of the social life of the school.

We have an even greater obligation to plan and deliver well-structured lessons with appropriate assessment plus ambitious targets for pupils who have low levels of prior attainment or come from disadvantaged backgrounds.

Also, we have a duty to cater for pupils whose first language is not English by planning teaching opportunities to help them develop their English and to gain full access to the National Curriculum.

Special Educational Needs

At Tollgate Primary School we teach design and technology to all children, whatever their ability. Design and technology design is a part of the school curriculum policy. This helps to provide a broad and balanced education to all children. Through our design and technology teaching we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's different needs. Assessment against the National Curriculum allows us to consider each child's attainment and progress against expected standards.

When progress falls significantly outside the expected range, the child may have special educational needs. Our assessment process looks at a range of factors – classroom organisation, teaching materials, teaching style, adaptation of task – so that we can take some additional or different action to enable the child to learn more effectively. This ensures that our teaching is matched to the child's needs.

Intervention through SEN Support and EHC plans will lead to the creation of an Individual Education Plan (IEP) for children with special educational needs. The IEP may include, as appropriate, specific targets relating to design and technology.

We enable pupils to have access to the full range of activities involved in learning design and technology. Where children are to participate in activities outside the classroom, for example, a museum or factory trip, we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

We want pupils with identified special educational needs to have full access to all subjects of the National Curriculum with teachers planning lessons that have no barriers to pupils achieving and with appropriate targets relating to the subject.

Assessment for Learning

We assess the children's work in Design Technology whilst observing them working during lessons. Teachers record the progress made by children against the learning objectives for their lessons. At the end of a unit of work we make a judgement against the National Curriculum expected standards and this is recorded on Educator - this information to plan future work for each child. This method of recording also enables the teacher to make an annual assessment of progress for each child, as part of the child's annual report to parents. We pass this information on to the next teacher at the end of each year.

The Design Technology subject leader keeps evidence of the children's work in a portfolio. This demonstrates what the expected level of achievement is in art and design in each year of the school.

Teachers will:

- Carry out continuous assessment;
- Use short-term assessments matched to the teaching objectives to adjust their planning;
- Make comments in pupil's books related to the learning objective;
- Assess children's acquisition of key knowledge through termly quizzes;
- Carry out medium-term assessments to measure progress against key objectives to adjust planning;
- Carry out long-term assessment to assess progress against school and national targets;
- Use long-term assessments to help them plan for the next academic year;

- Inform parents and carers of their child's progress and targets

Monitoring & Review of the Subject

Monitoring of standards of children's work and the quality of teaching is the responsibility of the subject coordinator supported by the Headteacher and the SLT.

Standards will be monitored by:

- Looking at pupil's work
- Subject observations
- Pupil discussions
- Audit of subjects
- Scrutiny of planning
- General curriculum discussions

Resources

The school has a full range of resources to support the teaching of this subject throughout all year groups. Resources are upgraded and replenished when the need arises. An annual stock takes and audit is undertaken by the School Leader for Design and Technology in the summer term in preparation for the next academic year.

Raising Awareness of this Policy

We will raise awareness of this policy via:

- The school website
- The Staff Handbook
- Meetings with parents such as introductory, transition, parent-teacher consultations and periodic curriculum workshops
- School events
- Meetings with school personnel
- Reports such annual report to parents and Headteacher reports to the Governing Body

Training

Tollgate Primary School will provide opportunities for all employees to have access to the information, instruction, supervision and training required to enable them to discharge their responsibilities.

Equality Impact Assessment

Under the Equality Act 2010 we have a duty not to discriminate against people on the basis of their age, disability, gender, gender identity, pregnancy or maternity, race, religion or belief and sexual orientation. As such, we believe that it is in line with the Equality Act 2010 as it is fair, it does not prioritise or disadvantage any pupil and it helps to promote equality at this school.

Monitoring the Effectiveness of the Policy

The practical application of this policy will be reviewed annually or when the need arises by the coordinator and the Headteacher.

DT Curriculum overview 2021 - 2022

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
<u>Autumn</u> 2	<u>Growing Greenhouses.</u> Children to research, design and create a greenhouse made from recycled materials. Children to cut, join and assemble green house and test effectiveness of design by growing seeds.	<u>Sandwich Making</u> Children will research, design and make a healthy sandwich for a packed lunch. They will start to inform design with audience research.	<u>Simple Salads</u> Children to research different recipes and salads from around the world, Focus on food preparation eg: chopping, grating peeling, slicing, mixing and spreading and food hygiene.	<u>Pizza Parlour</u> Chn design and create recipe for a pizza. Investigate pizza menus and choose selection of different toppings to add to base based on market research. Children will consider the nutritional values of foods and their intended audience when designing.	<u>Musical Instruments</u> Children will make and create a musical instrument. They will research instruments from around the world and how the shape, design and function changes the pitch, tone and frequency of sounds.	<u>International Recipes</u> Children will gain an understanding of where food comes from and how it is produced. They will research design a meal based on a world cuisine and seasonality.
<u>Spring</u> 2	<u>Snappy Snacks</u> Chn to investigate different recipes and	<u>Pretty Packaging</u> Children will research variety of existing	<u>Containers</u> Children to design, and make an alternative to	<u>Emergency Shelters</u> Children will create an emergency shelter in	<u>Baking Bread</u> Chn to use salt dough when making their	<u>Controllable Cars</u> Chn to design and create electronic car, Research

	healthy foods. Children will produce healthy snacks using oats, honey and various fruits.	products. They will design and create a container for a new chocolate bar, including net and design of branding.	a plastic bag. They will test materials for strength, investigate ways of joining, folding and strengthening before testing their bag for durability.	response to a natural disaster. They will create a design brief and a set of criteria to work to and test their shelters to see how effective they are.	proto-type. Investigate various recipes and alter recipe according to different ingredients and influences from world recipes.	different cars design and different electrical systems on a car. Chn to create framework using wood and join. Create an electric motor.
<u>Summer 2</u>	<u>Pop up Pictures</u> Children to investigate a variety of different pop up books and ways of making pictures move eg: hinges, springs, etc. Children to create own pop up card based around a popular fairy tale.	<u>Perfect Puppets</u> Children to design and create their own hand puppet. Children will create a prototype pattern, then cut and sew fabrics pieces joining together using stitching/ gluing.	<u>Whizzing Wheels</u> Children to design and make their own car propelled by a balloon. Children will explore axles and wheels. Children will measure/ saw and join wood to create wooden frame.	<u>Building Bridges</u> Research on the bridges and shapes within them. Children to make choices around materials and techniques to strengthen and test a bridge. Build a bridge to hold a weight.	<u>Renewable Energy</u> Children will research and develop a mechanical prototype for a renewable energy source. They will create a design brief, select their own materials and evaluate their design against the criteria.	<u>Fun Funfairs</u> Research different fairground rides. Children to design and create fairground rides using model kits and recycled materials. They will look at mechanisms that use cams, pulleys, handles, axles and springs to create movement.