



Design and Technology Policy 2020-2023

This policy is reviewed every three years and was agreed by the Governing Body of Chellaston Junior School in Summer 2020 **and will be reviewed again in Summer 2023**

Signed: _____ Chair of Governors

Date: _____

Non-Statutory Policy

Aims and Vision

Chellaston Junior School



“Together we are **stepping to success**. Together we are **working to achieve our best**.”



Our aim In striving to become an outstanding school, at CJS we will help ALL pupils to be:

- **Successful Learners** who enjoy learning, make excellent progress and achieve very high standards across the curriculum
- **Confident Individuals** who are able to lead happy, safe, healthy and fulfilling lives
- **Responsible Citizens** who make a positive contribution to British and the global society

Curriculum Intent

At Chellaston Junior School, we ask, “**Why?**”. Our curriculum is based on developing enquiring minds.

Through our curriculum, we teach our pupils core knowledge, which then equips them with the ability to showcase their **reasoning** skills. We want our children to ask ‘why?’ and develop their independence and **resilience** to answer their own questions for themselves.

We encourage and foster pupils’ **creative thinking**, allowing them to explore and respond to the world we live in, through the curiosity of asking ‘why?’

At Chellaston Junior School, we never put a ceiling on what pupils can achieve; we stretch them so that each pupil can reach their full potential. We adapt our curriculum to suit the needs of all our learners. Our adaptations allow equality of opportunity for every child; no pupil is left behind.

Curriculum Intent for Design and Technology

In Design and technology, we aim to inspire our pupils through rigorous and practical lessons. They develop their **creativity and imagination**, through designing and making products that solve real and relevant problems within a variety of contexts, considering their own and others’ needs, wants and values. We help pupils to acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. We encourage pupils **to ask themselves ‘why?’ in designing, making and evaluating** (past and present) products to develop a critical understanding of their impact on daily life and the wider world. We encourage pupils to take calculated risks, to become resourceful and to innovate in their designs in order to develop into enterprising and capable citizens.

2. Teaching

Our teaching in Design and Technology should:

- Stimulate enjoyment and pleasure
- Help children acquire key subject knowledge
- Develop a child's self-confidence and independence
- Provide a feeling of achievement and satisfaction
- Promote spiritual, moral, social and cultural development
- Promote key skills of communication, application of number, ICT, improving own learning and performance, problem-solving
- Increase powers of concentration, perseverance and self-discipline
- Develop sensitivity, creativity and emotional involvement
- Offer opportunities for problem-solving in creative work
- Promote an enjoyment of Technology
- Develop **creativity and imagination**
- Build on pupils' skills and improve their control of materials, tools and techniques
- Encourage the **resilience** in pupils to 'have a go' at expressing their creativity.
- Embed understanding of the importance of healthy eating and how to create healthy savoury meals.
- Foster problem solving skills that can be applied to a wide range of contexts.

Pupils will have the opportunity to work individually, in pairs and in groups. 'Pupil talk' is a central feature of our teaching to ensure that we encourage '**enquiring minds**' and shared '**creativity**'.

Curriculum Journey books will be used to record observations and to develop concepts.

Examples of how pupils can be encouraged to ask '**why**' in Design and Technology lessons:

- Why does the bulb not light?
- Why does the product not stand upright?
- Why does a triangle help form a strong structure?
- Why does the lever not move?
- Why does the wheel not turn freely?

We use a variety of teaching and learning styles in design and technology lessons. Our principal aim is to develop children's skills, knowledge and understanding. Sometimes we do this through whole-class teaching, while at other times we engage the children in research and design activities. We encourage the children to ask, as well as answer, questions which will help them to investigate. They have the opportunity to use a variety of materials such as wood, plastic and fabric. They take part in role-play and discussions and they present reports to the rest of the class. They engage in a wide variety of problem-solving activities. Wherever possible, we involve the pupils in practical activities involving problems and solutions, for example, looking at a product, researching it, designing a solution, making it and evaluating the product. Where appropriate, the curriculum is supported by trips and visitors are encouraged in the school to help support the curriculum.

As part of their work with food, pupils are taught how to cook and apply the principles of nutrition and healthy eating. We believe in instilling a love of cooking in our pupils as a way for them to develop their creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

3. Planning

At Chellaston Junior School, learning is planned by the subject leader on a medium term planner from the themes identified in the year group long term plan. Progression is built into the medium term plan to ensure that the children are increasingly challenged as they move through the school. Teachers use the medium term plans to deliver the learning opportunities as individual lessons ensuring they cover the skills and knowledge outlined in the National Curriculum. It is the class teacher's responsibility to ensure that the planning is differentiated to suit the needs of their class.

4. Inclusion

Our school is an inclusive school. We aim to make all pupils feel included in all our activities. We try to make all our teaching fully inclusive. We recognise the entitlement of all pupils to a balanced, broadly-based curriculum. We have systems in place for early identification of barriers to their learning and participation so that they can engage in school activities with all other pupils. We acknowledge the need for high expectations and suitable targets for all children.

4.1 Pupils with Special Educational Needs

Pupils with learning difficulties in Design and Technology may be supported by a classroom assistant where appropriate. Learning will be differentiated by task but the aim will always be that the outcome, in terms of knowledge acquisition is the same for all pupils. Teachers will seek innovative ways to support less able learners.

4.2 Pupils identified as More Able

Pupils who are identified as talented in any aspect of the Design and Technology curriculum will, where appropriate, have their learning experiences extended and enriched by use of the knowledge, concepts and skills from KS3. They will be encouraged to be innovative through creative thinking and guided to use an iterative design process. They will be encouraged to attend suitable out of school activities and bring their own expertise to lessons.

5. Assessment, Reporting and Recording

5.1 Assessment

Formative assessment is used to identify a child's progress in each aspect of Design and Technology. It involves determining what each child has learned and what, therefore, should be the next stage of learning. Formative assessment is mostly carried out during the course of day to day teaching and through marking and feedback to pupils. There is no statutory assessment for Design and Technology at the end of Key Stage Two.

At the end of each unit taught, objectives that have been covered are highlighted on the subject progression map. On the progression map, names are recorded of pupils not yet achieving the objects and any pupils having exceeded the objectives. The subject leader uses this information, alongside scrutiny of work and pupil interviews to complete feedback and action to share with year group teams. This review allows year groups to adapt future planning.

By the end of Key Stage 2, pupils at CJS should be able to:

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- understand how key events and individuals in design and technology have helped shape the world

Technical knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products.

Cooking and Nutrition

- understand and apply the principles of a healthy and varied diet
- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

5.2 Reporting

Reporting on Design and Technology is done annually through a written pupil report to parents. The end of year report is based on the ongoing assessment record kept by the teacher throughout the year.

5.3 Recording

An assessment of learners' skills is recorded on the school's MIS (Integris) is completed and kept as an ongoing record of achievement against the skills taught. This assessment informs the end of year report and is passed on to the next teacher as part of transition.

Recorded evidence and copies of assessment sheets will be monitored by the subject leader and kept as evidence of curriculum coverage and progression.

6 Links across the Curriculum

Design and technology goes hand in hand with art. It uses skills related to art using a variety of mediums, examples of this could be looking at a product and designing advertising material. All topics are taught at the same time as other subject topics which have a similar theme, for example the 'Space Buggies' topic is taught at the same time as the science topic which involves Space. Also, the 'Lego Workshop', focusing on how electrical circuits and components can be used to create functional parts, is taught alongside the science topic of Electricity.

7 Resources

Resources are kept in the design and technology cupboard near the hall. Large items are kept in the cupboard near to the Foremark classroom. Staff are able to collect and return resources to the cupboard. As design and technology is a subject that uses consumable resources, the design and technology coordinator is responsible for making sure general resources are ordered as well as resources used for topics. This is done by communicating with class teachers to see what they need.

8 Health and Safety

An important aspect of design and technology is the need to develop the children's awareness of the need to work safely and with due regard to the health and safety of themselves and others. Children will be shown how to use equipment correctly and will be given the opportunity to practice skills and techniques under supervision.

The teacher is the final decision maker about safety in his/her classroom. If there is any doubt about how to work safely, or the capacity to provide the necessary level of supervision then the activity should be postponed until advice from the subject manager or Headteacher has been obtained. If activities are deemed to be dangerous then other alternatives should be sought. All tools are regularly checked and maintained. Under no circumstances should a child be allowed to use the hot glue guns.

When cooking, parents will be sent a text in advance asking them to alert the school of any food allergies. Staff are to read the risk assessment and ensure that the safety measures are adhered to. Children will develop their knowledge and understanding of food hygiene; including washing their hands prior to working with food, tying long hair back, removing jewellery and keeping their work area clean.

9 Monitoring and Evaluation

It is the role of the Subject Leader for Design and Technology to monitor standards and progress in Design and Technology.

Monitoring and evaluation of Design and Technology is achieved through:

- Scrutiny of Curriculum Journey books
- Pupil interviews
- Learning walks (where the subject leader has time to do this)
- Giving feedback to teachers
- Analysis of assessment information for all classes and year groups

Equality Statement

At Chellaston Junior School, we actively seek to encourage equity and equality through our teaching. As such, we seek to advance the equality of opportunity between people who share any of the following characteristic:

- gender;
- ethnicity;
- disability;
- religion or belief;
- sexual orientation;
- gender reassignment;
- pregnancy or maternity.

The use of stereotypes under any of the above headings will always be challenged.