



The Academy at
St James
Aspire, Achieve, Believe

Design and Technology Policy

May 2023

Review Date

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1. Rationale

At St James we believe that Design and Technology provides children with the opportunity to develop skills, knowledge and understanding of making functional products with a particular user in mind, while encouraging them to be creative and adventurous. Design and Technology also helps with the teaching of Maths and English by putting those subjects into context, making them easier to digest and more understandable.

A key part of Design and Technology is the trial and error element, teaching children to problem solve, work as a team and be resilient.

2. Aims

- To provide an environment which encourages the development of confidence, necessary for pupils to identify, investigate, examine and attempt to solve practical problems.
- To develop pupils' full potential in DT capability by providing a broad balanced and differentiated curriculum which encompasses all statutory requirements.
- To encourage the use of initiative to explore appropriate and alternative solutions.
- To provide opportunities for pupils to apply the knowledge skills and understanding learned in other curriculum areas where appropriate.
- To create an awareness of the wide range of tools and materials available and the ways they can be worked.
- To provide opportunities for pupils to make judgements using relevant criteria. eg. aesthetic, cultural.
- To provide the opportunity for pupils to record and evaluate their own work.
- To provide pupils with a sense of achievement.

Objectives

- To develop pupils' understanding of ways they could change or control artefacts, systems and environments and how these might be made to work more effectively.
- To foster pupils' natural curiosity and need to examine and investigate; thereby encouraging spontaneous discoveries of design need.
- To ensure that technological activities are based initially on pupils' own experience.
- To encourage the application of previous learning experiences.
- To encourage the flexibility and openness of mind necessary to meet challenges.
- To have access to and use a comprehensive range of tools and materials in a responsible way.
- To provide activities which encourage critical observation, leading to a wider understanding of elements of design in the natural and the man-made world.
- To help pupils develop the social skills required to work as a member of a team as well as the ability to work independently, seeking help when the situation demands it.
- To enhance pupils' awareness of similarities and differences in the art of designing and making between that done in school and that done commercially.

3. Implementation

Our aims and objectives are set out in the policy will be delivered in a way which displays;

- Effective planning based upon the National Curriculum and Foundation Stage Curriculum at all key stages.
- Links to other curriculum areas.
- Continuity and progression
- Whole class group, pair and individual work.
- Activities which encourage full and active participation by children of all abilities.
- Planning that recognises the need for equal opportunities.

Appropriate tools and resources are stored in the DT/Art cupboard.

4. Curriculum Planning

We carry out the planning of Design and Technology in 3 phases: long-term, medium-term and short-term. The long-term plan maps out the units covered in each term during the key stage. Medium and short-term planning is done by the class teachers in key stages.

We plan the activities in Design and Technology around our topic. This always builds on 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

5. Foundation Stage

In the foundation stage we encourage the development of skills; knowledge and understanding that help children make sense of their world as an integral part of their school experience. We relate this development to the objectives set out in the Early Learning Goals. This learning forms the foundations for later work in design and technology. These early experiences include asking questions about how things work, investigating and using a variety of materials, tools and products, developing making skills and handling appropriate tools and construction materials safely and with increasing control. We plan based on our topics but also provide an enabling environment offering a range of experiences that encourage exploration, observation, problem solving, critical thinking and discussion.

6. Cross Curricular Links

English

Design and technology contributes to the teaching of English in our school by providing valuable opportunities to reinforce what the children have been doing during their English lessons. Through discussion the children develop an understanding that people have different views about design and learn to justify their own views and clarify ideas they have for their designs. The evaluation of products requires children to articulate their ideas and to compare their views with those of other people.

Maths

In design and technology, the children are given the opportunity to use and apply their mathematical skills. They learn how to measure accurately and how to check their results for reasonableness. They apply their knowledge of fractions and percentages to describe quantities and calculate proportions. They learn to read and interpret scales, collect and present data and draw conclusions. In designing and modelling they learn about size and shape.

Science

Cross curricular links can be made with science within certain aspects of the design and technology curriculum. Teachers use these links to combine their teaching in areas such as electricity and healthy foods.

Computing

Computing enhances the teaching of design and technology, wherever appropriate, in all key stages. The children use computing to research and collect information and look at ways that they can design.

Art

Children are encouraged to use their skills and methods developed in Art for applying aesthetic enhancements to their designs and products.

P.S.H.E.

We encourage a sense of responsibility in following safe procedures when making things. They also learn about personal hygiene, the prevention of disease spreading, health and healthy diets when working with food. Their work encourages them to be responsible and to set targets to meet deadlines.

Spiritual, moral, social and cultural development

We give children the opportunity to work together and give them the chance to discuss their ideas and feelings about their work and the work of others. Through collaborative and cooperative working the children develop respect for the abilities of other children and a better understanding of themselves. They also develop a respect for the environment, for their own health and safety, and for that of others. They develop a cultural awareness and learn to appreciate the value of differences and similarities.

7. Assessment

The assessment of Design and Technology is completed during lessons and at the end of a unit of work. Teachers will make assessments through observations while children are completing work, these assessments will include the use of key skills, conversations with children and recorded work. Teachers will also assess work at the end of a unit, making judgements based on the national curriculum and school's skills progression grids for Design and Technology.

Children are also encouraged to make assessments of their own work and evaluate how their work can be improved. Teachers will plan future work to enable children to build on prior learning and develop their key skills.

8. Guidelines for delivery

In order to ensure that our principles and aims are carried out, staff will ensure:

- The school environment is full of interesting interactive displays, which pupils obtain resources to work from.
- Pupils are provided with a range of materials with appropriate storage and retrieval systems.
- Pupils are engaged, motivated and inspired.

DT Activities

We will provide three essential types of activity for pupils:

Designing and making assignments - will provide pupils with the opportunity to put their DT capability to work to develop products that meet real needs. They will require pupils to draw on their repertoire of designing and making skills together with their knowledge and understanding in an overall context.

Focused practical tasks - will give pupils the opportunity to learn and practice particular skills and knowledge to add to their repertoire.

Investigating, disassembling and evaluating simple products – will give pupils the opportunity to explore existing products and use what they find out to add to their repertoire of knowledge, skills and understanding.

These activities will provide the opportunity for pupils to work with the necessary range of materials and components.

9. Differentiation

We believe that learning activities should be matched to the variety of learning needs of pupils. In technology pupils are usually involved in learning skills, designing, making and evaluating within a set context. If activities are carefully thought out differentiation of outcome can occur naturally as pupils work at their own levels. It is teacher intervention which makes a difference and maximises the potential of the individual pupil. It is about where the pupil is now and where he/she has the potential to be.

10. Equal Opportunities

We are committed to creating equal opportunity for everyone whatever their gender, race, disability, culture or religious beliefs and we are conscious of the needs of bilingual pupils and minority groups. We address cultural diversity through including materials and products from different cultures so that achievements from other cultures as well as our own can be recognised and acknowledged.

11. SEN

All children including those with special educational needs have access to the Design and Technology curriculum. The initial responsibility is the class teacher's but support is available from other members of staff.

12. Health and Safety

In using materials, tools and equipment, we believe that it is vital that pupils acquire an understanding of the risks to health and safety. Pupils will be taught:

- about hazards, risks and risk control
- to recognise hazards, assess consequent risks and take steps to control the risks to themselves and others
- to use information to assess the immediate and cumulative risks
- to manage their environment to ensure the health and safety of themselves and others
- to explain the steps they take to control risks