

IQRA SLOUGH ISLAMIC PRIMARY SCHOOL  
(ISIPS)  
Design and Technology (LCP)

We Learn, We Lead, We Inspire

Review Date..... 1<sup>st</sup> September 2021.....

Signature.....  .....

Frequency of Review.....2 years.....

Next Review Date..... 1<sup>st</sup> September 2023.....



*We Learn, We Lead, We Inspire!*

## 1

Technology is one of the foundation subjects of the National Curriculum and therefore it is expected that all children will follow it.

### **Introduction**

Design and technology prepares children to take part in the development of tomorrow's rapidly changing world. Creative thinking encourages children to make positive changes to their quality of life. The subject encourages children to become autonomous and creative problem-solvers, both as individuals and as part of a team. It enables them to identify needs and opportunities and to respond by developing ideas, and eventually making products and systems. Through the study of design and technology, they combine practical skills with an understanding of aesthetic, social and environmental issues, as well as of functions and industrial practices. This allows them to reflect on and evaluate present and past design and technology, its uses and its impacts. As part of design and technology mindfulness is taught as we see everywhere being a creative studio working at the intersection of design technology.

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.

## 2 **Aims and objectives**

**2.2** Regardless of gender, ethnic origin or ability, we specifically aim to ensure that all pupils:

- to develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making;
- to enable children to talk about how things work, and to draw and model their ideas;
- to encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures;
- to explore attitudes towards the made world and how we live and work within it;
- to develop an understanding of technological processes, products, and their manufacture, and their contribution to our society;
- to foster enjoyment, satisfaction and purpose in designing and making.

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- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
  - 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
  - critique, evaluate and test their ideas and products and the work of others
  - understand and apply the principles of nutrition and learn how to cook.
- 
- Content

In design and technology, children acquire and apply knowledge and understanding of:

- materials and components;
- mechanisms and control systems;
- structures;
- food and horticulture;
- existing products;
- quality;
- Health and safety.

### **3 Teaching and learning style**

**3.1** At IQRA we use a variety of teaching and learning styles in design and technology lessons. The principal aim is to develop children's knowledge, skills and understanding in design and technology. 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. This coincides with the school's 4 golden rules: **Respect, Co-operation, Compassion and Honesty**. 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 ICT. Children have the opportunity to also develop their emotional well-being and mindfulness through working in a calm manner with a range of resources.

Children will:

- develop designing skills, including generating and developing ideas, clarifying a task, creating design proposals, communicating ideas, planning and evaluating;
- acquire and refine the practical skills associated with making, including working with materials and components, tools and processes, eg planning, measuring and marking out, cutting and shaping, joining and combining, finishing, and evaluating;
- apply scientific skills, eg predicting and fair testing;
- apply mathematical skills, eg measuring to an appropriate number of decimal places, drawing and interpreting tables, graphs and bar charts;
- apply computing skills, eg making things happen by the use of control, handling information through the use of a database or spreadsheet;
- apply art skills, eg investigating texture and colour or recording visual information.

Children will have opportunities in Design Technology to:

- work both independently and with others, listening to others' ideas and treating these with respect;
- can be creative, flexible and show perseverance;

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- critically evaluate existing products, their own work and that of others;
- develop a respect for the environment and for their own health and safety and that of others;
- recognise the strengths and limitations of a range of technologies and appreciate which are appropriate for particular situations;
- develop their cultural awareness and understanding and appreciate the value of differences and similarities;
- develop an understanding that all people are equal regardless of age, race, gender or ability and that there needs to be alternative solutions to meet the needs of individuals and groups of people;
- find enjoyment, satisfaction and purpose through designing and making;
- apply value judgements of an aesthetic, economic, environmental, moral, scientific and technical nature.

**3.2** In all classes there are children of differing ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies:

- setting common tasks that are open-ended and can have a variety of results;
- setting tasks of increasing difficulty where not all children complete all tasks;
- providing a range of challenges through the provision of different resources;
- using additional adults to support the work of individual children or small groups.

## **4 Design and technology curriculum planning**

**4.1** 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 during the key stages. (**Appendix 1**)

**4.2** Our medium-term plans 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.

**4.3** 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.

**4.4** Teachers plan visits to local and national galleries and museums to give an inspiring, rich and broad curriculum.

## **5 The Foundation Stage**

**5.1** We encourage the development of skills, knowledge and understanding that help reception children make sense of their world as an integral part of the school's work. As the reception class is part of the EYFS curriculum, we relate the development of the children's knowledge and understanding of the world to the objectives set out in the Early Learning Goals. These underpin the curriculum planning for children aged three to five. 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 construction kits, materials, tools and products, developing making skills and handling appropriate tools and construction material safely and with increasing control.

**5.2** 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.

**6** **Contribution of design and technology to teaching in other curriculum areas**

**6.1 English**

Design and technology contributes to the teaching of English at IQRA by providing valuable opportunities to reinforce what the children have been doing during their English lessons. The evaluation of products requires children to articulate their ideas and to compare and contrast their views with those of other people. Through discussion children learn to justify their own views and clarify their design ideas. Children also develop emotional well-being through discussion about their products and how it meets the criteria.

**6.2 Mathematics**

In design and technology there are many opportunities for children to apply their mathematical skills through choosing and using appropriate ways of calculating measurements and distances. They learn how to check their results of calculations for reasonableness and learn how to use an appropriate degree of accuracy for different contexts. Children learn to measure and use equipment correctly. They apply their knowledge of fractions and percentages to describe qualities and calculate proportions. The children will carry out investigations and in doing so; they will learn to read and interpret scales, collect and present data and draw their own conclusions. They will learn about size and shape and make practical use of their mathematical knowledge in order to be creative and practical in their designs and modelling.

**6.3 Information and communication technology (ICT)**

We use ICT to support design and technology teaching when appropriate. Children use software to enhance their skills in designing and making, and use draw-and-paint programs to model ideas and make repeating patterns. The children also use ICT to collect information and to present their designs.

**6.4 Personal, social and health education (PSHE) and citizenship**

Design and technology contributes to the teaching of personal, social and health education and citizenship. We encourage the children to develop a sense of responsibility in following safe procedures when making things. They also learn about health and healthy diets. Their work encourages them to be responsible and to set targets to meet deadlines, and they also learn through their understanding of personal hygiene, how to prevent disease from spreading when working with food.

**6.5 Spiritual, moral, social and cultural development**

The teaching of design and technology offers opportunities to support the social development of our children through the way we expect them to work with each other in lessons. Our groupings allow children to work together, and give them the chance to discuss their ideas and feelings about their own work and the work of others which enhances their emotional well being. Through their collaborative and co-operative work across a range of activities and experiences in design and technology, 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 their cultural awareness and understanding, and they learn to appreciate the value of differences and similarities. A variety of

experiences teaches them to appreciate that all people are equally important, and that the needs of individuals are not the same as the needs of groups.

### **7 Teaching design and technology to children with special needs**

**7.1** We teach design and technology to all children, whatever their ability. Design and technology also forms part of our school curriculum policy to provide a broad and balanced education to all children. Teachers provide learning opportunities that are matched to the needs of children with learning difficulties.

### **8 Assessment and recording**

**8.1** Teachers assess children's work in design and technology by making assessments as they observe them working during lessons. They record the progress that children make by assessing the children's work against the learning objectives for their lessons. Teachers then use the assessment that they record, to plan the future work of each child and to make an annual assessment of progress for each child, as part of the annual report to parents.

### **9 Resources**

**9.1** Our school has a wide range of resources to support the teaching of design and technology across the school. Classrooms have a range of basic resources, with the more specialised equipment being kept in the Art and design cupboard.

### **10 Health and safety**

**10.1** The general teaching requirement for health and safety applies in this subject. We teach children how to follow proper procedures for food safety and hygiene. The general teaching requirement for health and safety applies in this subject. Teachers will carry out a risk assessment before each activity, considering their tools, materials and equipment being used. Before undertaking practical tasks, children should be taught to use tools correctly in order to ensure safety.

- Parents are an invaluable source of skills and information, and may be invited to demonstrate and teach their skills, or may indirectly share their skills through assisting with Design Technology lessons.
- Visits out of school are encouraged and need to be well supervised with appropriately briefed adult helpers supporting teaching staff.
- Specialists in DT are invited to come and show children the different skills children can learn eg Heathrow Design a terminal project

### **11 Monitoring and review**

**11.1** The monitoring of the standards of children's work and of the quality of teaching in design and technology is the responsibility of the design and technology subject leader.

#### **Home School Links**

Opportunities should be available for children at home to investigate and practise skills, research information and use computing where possible.

#### **Equal Opportunities**

## Design and Technology Policy

Please refer to the appropriate policy.

### Special Education Needs

Please refer to the Inclusion Policy.

### Appendix 1

| Design and Technology Curriculum |  |                               |  |   |  |                                       |
|----------------------------------|--|-------------------------------|--|---|--|---------------------------------------|
|                                  | Autumn 1                               | Autumn 2                      | Spring 1   | Spring 2  | Summer 1   | Summer 2                              |
| <b>Year 1</b>                    | Design a vehicle                       |                               | Design a game cover with new character using ICT |   | Look at British artist Phillip Taaffe and his inspiration from Islamic art |                                       |
| <b>Year 2</b>                    |  | Diorama of African/city scene |  | Comic book style map with 3d features of Slough |  | Food Technology- What is picnic food? |
| <b>Year 3</b>                    | Food Technology – making Mediterranean |                               |  | Celtic Monastery model and                      | Diorama of battle of Lewes-  | Volcano paper mache                   |

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|-------------------|--|--|--|---|-----------------------------------|---|
|                   | foods for a<br>'Food<br>Festival'                                      |  |  | Celtic knot<br>stich work   | artist Peter<br>Tool              |   |
| <b>Year<br/>4</b> | Roman mosaic<br>tiles- create<br>own pattern                           |  | Get<br>Architecture<br>workshop to<br>build<br>skyscraper<br>with children |   | Create<br>Anglo-<br>Saxon<br>mask | Visit Black<br>country<br>Museum to<br>see what<br>children did<br>in spare time-<br>create own<br>kites, ping<br>pong<br>catapults |
| <b>Year<br/>5</b> | Create own<br>packaging in<br>Andy Warhol<br>style on boxes<br>or tins |  | Create own<br>clay armlets<br>and amulets<br>with<br>hieroglyphics         |   | Create own<br>cave using<br>paper |   |
| <b>Year<br/>6</b> |  | Construct<br>coastal<br>collage<br>mixture of<br>materials |  | Look at<br>Islamic art in<br>AD900<br>especially<br>rise of<br>Baghdad.<br>Children<br>create |                                   |   |

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|  |  |  |  | monochrome<br>ceramics. |  |  |
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