



## Curriculum summary

### Subject: Design and Technology

#### **Intent:**

##### **Why we teach Design and Technology (DT)**

DT 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.

#### **Implementation:**

##### **How we teach DT**

Children build upon prior learning to give a progression through year groups. They are given the opportunity to work as a class, as part of a group or as an individual. The choice of class organisation will be determined by; the learning task or activity, the nature of the theme and the resources being used. Children in the Early Years Foundation Stage are given the opportunity to explore and use media and materials and to be imaginative through basic and enhanced provision. Children are taught DT in one hour weekly lessons.

##### **How we plan for learning**

The DT curriculum can be found in the vertical and horizontal mapping and embedded within theme planning. Lessons are planned and sequenced so that new knowledge and skills build on what has been taught before. Teachers can also use a scheme of work to help them with their theme planning. Teachers also produce a weekly overview that captures the schedule for lessons and a brief overview of the coverage for that week.

##### **How we assess learning**

Each child's performance in DT will be assessed by the teacher against the end of year expectations during lessons and summative assessment is completed termly.

Self-assessment: Pupils self-reflection at DILS is very powerful in them achieving further success. We promote resilient, problem solving learners who are very articulate and can talk through problems.



These skills are at the heart of our design curriculum and children use them to really explore and become passionate, curious and experimental in design. Peer assessment is used to evaluate other children's work through actions such as showcasing and stars and wishes.

## **Impact:**

### **Our expectations for all**

At Dunstable Icknield Lower School we aim through the use of DT to;

- 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.

### **Our expectations for Year 4**

In year 4 we expect children to work on 5 key areas throughout the year.

During the design process children are expected to ;

- come up with at least one idea about how to create a product.
- put together a step-by-step plan which shows the order and also what equipment and tools needed.
- produce a plan and explain it to others.
- suggest some improvements and say what was good and not so good about the original design

During the making process children are expected to;

- choose and use a range of tools equipment and techniques.
- use a variety of materials/components with some accuracy
- make a product work well (function)
- select from and use a widening range of materials and components including construction materials and textiles according to their functional properties and aesthetic qualities.

During the evaluating process children are expected to

- begin to explain how their design can be improved
- evaluate their product, thinking of both appearance and the way it works.
- practise their evaluation skills by evaluating existing products against set criteria.



During the technical language process children work on a range of subjects including textiles, stiff and flexible materials and electrical and mechanical components.

## **Textiles:**

- think what the user would want when choosing textiles
- think about how to make a product strong
- devise a template
- explain how to join things in a different way.

## **Stiff and flexible sheet materials:**

- measure carefully so as to make sure they have not made mistakes
- attempt to make their product strong.

## **Electrical & mechanical components**

- select the most appropriate tools and techniques to use for a given task.
- make a product which uses both electrical and mechanical components.
- use a simple circuit.
- use a number of components
- add things to circuits
- explain how they have altered their product after checking it.
- be confident about trying out new and different ideas.

Children will also explore through food through cooking and nutrition;

- select from and use a wider range of ingredients/ components according to their functional and aesthetic qualities
- demonstrate a good level of expertise when using a range of tools and equipment

## **How we measure impact**

Throughout the pupil's journey, children will build upon skills learned from previous years to further enhance their DT knowledge. They will be assessed by their teacher in accordance with the objectives set out by our curriculum. We feel confident the children demonstrate their ability to know more, remember more by the increasing complexity of their projects. At Dunstable Icknield Lower School we use teacher assessment, self-evaluation, peer assessment to triangulate the students' attainment. This is based off the work completed off each unit.

## **How we monitor DT**

The DT lead, the headteacher and the Senior Leadership Team take responsibility for the monitoring of the DT curriculum and the standards achieved by the children. The DT leader will monitor for appropriate pitch and progression regularly. This monitoring takes the form of:



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1. lesson observations and feedback;
2. learning walks and pupil voice conversations;
3. planning scrutiny followed by support where necessary;
4. work scrutiny on a frequent basis;
5. termly data analysis

## **How we report**

The teacher reports engagement and progress face to face during parent teacher meetings and in an end of year report. The DT lead will also feed back to the DT link governor about the progress of the subject and what is being put in place. Updates on DT are shared with staff either through staff meetings or through in school communication tools.