

How we Plan, Teach and Assess

Design & Technology

Planning Overview

All teachers plan three separate D&T units throughout the year. One of these units is a cooking unit and the remaining two vary, depending on the year group.

Teachers are encouraged to use ideas and vocabulary opportunities detailed in the Design and Technology Association 'Project on a Page' scheme of work. This scheme is used as a guide and aims to support and build on teacher's own ideas, upon which the school's end of year expectations for each year group are based.

D&T is planned as a unit at a time (eg- food, textiles) and takes on the form of Smart Notebook[®] planning. The Smart Notebook[®] planning consists of key lesson elements including learning objective, key vocabulary and key skills. All of these elements are taken from the year group's Langney end of year expectations. Career opportunities are also explored during the Smart Notebook[®].

D&T Teaching by Year Group

Year 1

- Structures: freestanding structures
- Mechanisms: sliders and levers

Year 2

- Mechanisms: wheels & axles
- Textiles: templates & joining techniques

Year 3

- Textiles: 2D shape to 3D product
- Structures: shell structures

D&T Teaching by Year Group

Year 4

- Electrical circuits: simple circuits & switches
 - Mechanical systems: levers & linkages

Year 5

- Electrical systems: more complex switches & circuits
 - Structures: frame structures

Year 6

- Mechanical systems: pulleys and gears
- Textiles: combining different fabric shapes

D&T lesson Structure

All D&T lessons follow the same structure from beginning to end (with a slight variation depending on progression in year groups).

Each D&T lesson starts with a 'Memory Challenge' to improve the children's short and long term memory. We revisit topic questions from the last lesson, last unit and last year. Following this, the objective is shared with the children and discussed to ensure children fully understand the context. In addition to this, subject specific vocabulary is shared and key skills that children need in order to be successful.

Children are introduced to a preview question (linked to Bloom's questioning) to think about for the duration of the lesson and children's learning is supported throughout by teacher questioning and modelling.

The Flow of D&T Lessons

The first lesson taught in the sequence of D&T lessons is a market research based lesson. During this lesson, children become familiar with their task (what they are aiming to make,) the reason for this and their potential audience/ user.

Once children are aware of this, they begin to conduct market research around objects, items or food that already exist in this area and begin to evaluate these products. This could range (in a lower key stage class) from playing with various toys and discussing what they like/ dislike about them, to (in an upper key stage class) conducting internet research, surveys and questionnaires into machines containing gears and pulleys. The resources and research techniques used in each year group will vary depending on the project and the age of the children.

Lesson 2 in the sequence of D&T lessons is the design lesson. In this lesson, children look back at their market research and decide what they liked, disliked and what worked or didn't work quite so well. Children are reminded of the purpose of their product and their potential user before designing their own, innovative design. Depending on the year group, most children are expected to label their design. This can include materials used, colours, extra features (eg flaps, stitches etc). In an upper key stage class, children might be expected to justify their decisions and share these with a peer for constructive feedback.

The Flow of DT Lessons

The next lesson can be split into two parts. The first part of the lesson is a skill-focussed lesson whereby children learn or perfect a particular skill they will need to use. This might include practising a particular stitch, learning how to join pieces of wood together or practising how to safely chop food. This part of the lesson might also include making a prototype of their finished design using a practice material such as paper or card. When children are ready and they are happy with their designs, they begin to make their product. Children may work in pairs or groups to support each other but where possible, will always make their own product in order to promote ownership and decision making. Before making their product, children will be reminded of safety rules and will be supervised by their class teacher at all times (all teachers have access to the generic D&T risk assessment which covers the use of saws, needles etc)

The Flow of DT Lessons

The final D&T lesson in the sequence can also be split into two parts. The first part being sharing their finished product with a peer or the class and testing it out. Finally, children evaluate their finished product. In a lower key stage class this could be done on a writing frame with pre-made questions or using pictures. In an upper key stage class, children may write about things that went well, things that could be improved, advice for others making something similar and their overall feeling of their finished product.

The cooking unit of D&T is taught following the same format as detailed above, however the 'making lesson' can be combined with a cooking and nutrition lesson, taught by a specialist which children are lucky enough to take part in for a whole term of the school year. Alternatively if teachers wish, they can deliver a stand alone cooking unit. If this is the case, teacher's need to prepare in advance and ensure they have ordered the food that is required, check the cooking utensils are free to be used and ensure they have a clean, safe environment for children to complete their cooking lesson in.

All D&T lessons are evidenced in the children's D&T sketch books and / or personal chromebooks.

How is the Subject Assessed?

Design Technology at Langney Primary is formatively assessed against the end of year expectations on OTRACK during/after each lesson.

The end of year expectations for each year group are under the different strands of:

- Evaluating existing products
- Design
- Make
- Evaluate
- Technical knowledge and understanding

Children are assessed as working towards, expected or greater depth (where appropriate) against each end of year expectation.

Mid year, children are also 'on track' summatively assessed with a further end of year summative judgement. These are both recorded on OTrack.