

Design and Technology

Progression in the 6 Essentials

User

Pupils should have a clear idea of who they are designing and making products for, considering their wants, needs, values, interests and preferences. The intended user could be themselves, or others, an imaginary or story-based character, a client, a consumer or a specific target group

What does this look like in K51?

The pupils can:

- identify who their products will be for
- suggest possible users of a range of existing products
- explore how existing products are used
- consider where and when their own and others' products might be used.
- evaluate whether users' needs and preferences have been met effectively.
- appreciate the importance of the user within D&T

How is this developed further in KS2?

The pupils can:

- explore users' needs in a range of contexts
- research to identify potential problems and opportunities for users
- analyse findings and draw conclusions from their research
- distinguish between needs, wants, values, interests and preferences
- design products for individuals, clients, consumers and target groups

Purpose

Pupils should be able to clearly communicate the purpose of their products they are designing and making. Each product should be designed to perform one or more defined tasks.

What does this look like in KS1?

The pupils can:

- state what they products are for
- suggest the purpose of a range of existing products
- develop design criteria that take account of the intended purpose of their products

How is this developed further in KS2?

The pupils can:

- clarify the purpose of the products they are designing and making
- evaluate how well existing products meet their intended purpose
- understand the concept of 'fitness for purpose' in the context of their own designing and making
- distinguish between how well products are designed and how well they are made
- discuss whether their own and existing products have an impact beyond their intended purpose
- recognise when products have to fulfil conflicting requirements

Functionality

Pupils should design and make products that work effectively in order to fulfil users' needs, wants and purposes.

What does this look like in K51?

The pupils can:

- know that their products should work in some way
- know how a range of existing products work
- develop specific technical knowledge and understanding in order to ensure that their products work well

How is this developed further in KS2?

The pupils can:

- understand the meaning of 'functionality' and its importance to design and technology
- know how functionality is relevant to the product they are designing
- know how the materials and components they use assist the functionality of the product
- contrast the functional properties of materials and components with their aesthetics qualities
- understand that how products work affects how they are used

Design Decisions

Pupils need opportunities to make their own design decisions. Through making design decisions pupils decide on the form their product will take, how their product will work, what task it will perform and who the product will be for. This demonstrates their creative, technical and practical expertise.

What does this look like in K51?

The pupils can:

- make their own design decisions
- discuss the design decisions that have been made in existing products
- take into account users' needs when making design decisions
- develop their technical and practical expertise in order that they can make informed design decisions
- use D&T related visits and inputs from experts to make informed design decisions

How is this developed further in KS2?

The pupils can:

- discuss the effectiveness of the design decisions made in existing products
- discuss the effectiveness of the design decisions made in their own products

Innovation

When designing and making, pupils need some scope to be original with their thinking. Projects that encourage innovation lead to a range of design ideas and products being developed. It helps to have open-ended starting points.

What does this look like in KS1?

The pupils can:

 respond creatively and imaginatively to design briefs and problems

How is this developed further in KS2?

The pupils can:

- demonstrate some originality when design and making
- learn how to take creative risks
- understand the meaning of 'innovation' within D&T
- understand how innovation is an important part of the process of designing and making products

Authenticity

Pupils should design and make products that are believable, real and meaningful to themselves and others.

What does this look like in KS1?

The pupils can:

- carry out projects that are real and meaningful to them and others
- work within a range of relevant contexts, ranging from domestic to industrial
- work towards realistic and credible outcomes that can be evaluated in use
- engage in activity that mirrors design and technology in the wider world
- create products with a genuine purpose and for a real user
- create products which need to work in some way in order to be successful

How is this developed further in KS2?

The pupils can:

 understand the difference between genuine D&T products and outcomes created in other areas of the curriculum