Design and Technology

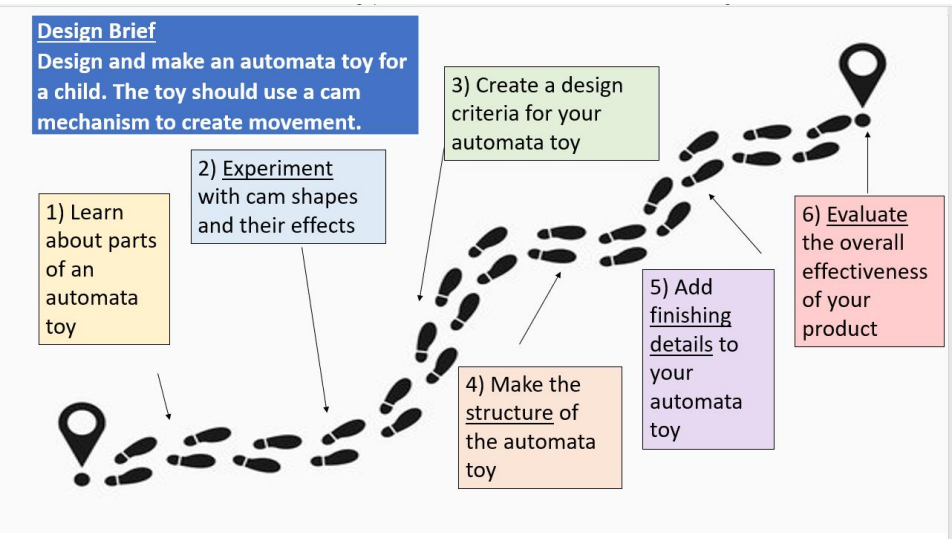
Our Approach

At Wiveliscombe Primary School, every Design and Technology unit follows the same four-stage process:

Investigate → Design → Make → Evaluate

This consistent structure helps children understand that successful products are developed through researching, designing, making, testing and improving. Whilst the products and technical knowledge vary across the curriculum, the design process remains consistent and becomes increasingly independent as pupils move through the school.

At the start of every unit, teachers should introduce the learning journey and design brief. These should be revisited at the beginning of each lesson so that children understand where they are within the design process and are reminded of the purpose of the product they are creating.



The key technical knowledge identifies the essential knowledge pupils are expected to learn during the unit. This should be explicitly taught, revisited regularly and checked during the final evaluation lesson before completing the DT assessment on the pDrive.

Key Technical Knowledge

Fabric pieces can be joined together using a running stitch. Templates can help create identical fabric pieces. Decorations should be attached securely and help communicate a character or idea. Textile products should be both functional and aesthetic.

Throughout the curriculum, children are encouraged to recognise that **successful products combine functionality with appearance**. Products should not only look appealing but also work effectively for their intended purpose and user.

Investigation lessons provide children with the knowledge and experiences needed to make informed design decisions later in the unit.

Key vocabulary should be explicitly taught and referred to throughout the unit using the agreed classroom vocabulary display.

Children should be encouraged to test and refine their products throughout the making process rather than waiting until the final evaluation lesson.

Teacher reference photographs and process diagrams are provided to support subject knowledge and illustrate the expected quality and construction sequence of the final product.

Design Process

At Wiveliscombe Primary School, the design process is consistent across the curriculum, while the format in which children record their ideas is flexible and appropriate to the product they are designing. This enables children to become increasingly familiar with the thinking behind successful design and gives them the skills to adapt the format to their intended product. Children should understand that there is rarely a single correct solution to a design problem. Successful designers use technical knowledge, creativity and evaluation to develop products that best meet the needs of the intended user.

The design process is:

Product → Purpose → User → Research/Inspiration → Design Criteria → Ideas → Final Design → Materials and Techniques → What Could Go Wrong?

Each stage has a distinct purpose:

- Product, purpose and user establish the design brief.
- Research and inspiration help children make informed design decisions.
- Design criteria (provided by the teacher) identify what a successful product must achieve.
- Ideas and final design communicate the proposed solution.
- Materials and techniques explain how the product will be constructed.
- What could go wrong? encourages children to anticipate problems and consider possible solutions before making.

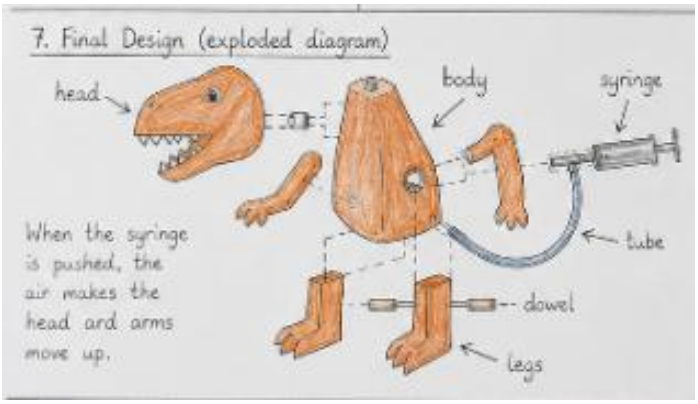
This design process should be evident in every DT unit and should become increasingly independent as pupils move through the school.

<u>Recording Design Work</u>

Whilst the thinking remains consistent, the recording should reflect the product being designed.

Teachers should adapt the recording format where appropriate. For example, children may communicate their ideas through:

- annotated sketch
- labelled drawing
- net
- pattern piece
- storyboard
- exploded diagram
- technical drawing
- recipe design



The aim is for children to communicate and justify their ideas effectively, rather than complete an identical design sheet in every unit.

Progression

KS1

- Design work is largely teacher-led and highly visual.
- Children discuss the user and purpose before producing a simple labelled design.
- Teachers model how design criteria influence decisions.
- Children begin to explain simple design choices
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Lower KS2

- Children begin to generate ideas more independently.
- Designs become increasingly annotated with materials, techniques and construction methods.
- Children explain how their ideas meet the design criteria.

Upper KS2

- Children justify design decisions with increasing independence.
- Designs include more technical detail and consideration of functionality, materials and manufacture.
- Children anticipate potential problems before making and explain how these may be overcome.

Evaluation

Evaluation is an integral part of the design process and should take place throughout a project, not solely at the end. Children are encouraged to test, reflect and improve their work as they make, recognising that successful products are often developed through refinement.

The evaluation process is:

Test → Compare with the Design Criteria → Gather Feedback → Reflect → Improve

Teachers should provide opportunities for children to:

- test whether their product is fit for purpose;
- compare it against the original design criteria;
- gather feedback from a partner or intended user where appropriate;
- reflect on changes made during the making process;
- identify one or more improvements they would make in the future.

Evaluation questions are provided within each unit plan and should be used to support discussion and written reflection. These questions are specific to the product being made, but all evaluations should encourage children to consider functionality, quality of manufacture and how effectively the product meets the original design brief.

As with design work, teachers should adapt the recording format where appropriate. Evaluation may include annotated photographs, written reflections, comparison tables, testing results or responses to focused evaluation questions. The emphasis should always be on the quality of thinking rather than the amount of writing.

By the end of Year 6, pupils should understand that designing is an iterative process: designers research, generate ideas, make informed decisions, test their products and improve them in response to evidence and feedback.