

Year 2 – Term 3

Is there ever such a thing as an accident?

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National Curriculum Links:

Design purposeful, functional, appealing products for themselves and other users based on design criteria. Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.

Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].

Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. Explore and use mechanisms [for example wheels and axles], in their products.

Essential Prior Learning:

Use scissors to safely cut materials; be able to use a ruler to measure with some degree of accuracy. Understand designing as the thinking about and recording of what you will make before you make it. Know and describe basic properties of familiar materials, e.g. wood is stiff; paper can be folded; fabric is soft. Have played with toy vehicles to have some understanding as to how they move and used construction kits to build moving vehicles.

Progression in Skill:

Design:

Work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment.

Say what they are making, who it is for and how it is suited to the user.

Describe what their products are for and how they will work.

Use a simple design criteria.

Generate ideas by drawing on their own experiences, using knowledge of existing products.

Develop and communicate ideas by talking and drawing and, where appropriate, ICT.

Model ideas by exploring materials, components and construction kits and by making templates and mock ups.

Make:

Select from a range of tools and equipment, explaining their choices.

Select from a range of materials and components according to their characteristics.

Plan by suggesting what to do next.

Follow procedures for safety.

Measure, mark out, cut and shape materials and components.

Assemble, join and combine materials and components.

Use finishing techniques, including those from art and design.

Evaluate:

Talk about their design ideas and what they are making.

Make simple judgements about their products and ideas against design criteria.

Suggest how their products could be improved.

Technical Knowledge:

Know about the movements of simple mechanisms such as wheels.

Know the correct technical vocabulary for the projects they are undertaking.

Long-term Memory Knowledge:

Designing your product and planning what you will do first means you are more likely to be successful but your first design can be adapted.

Evaluating a product helps you to see what could be improved or done differently.

Glue guns can be used to join materials like wood; the pieces won't move once they are stuck together.

Wheels need to be joined so they can turn, otherwise your vehicle won't move.

Axles are used to attach wheels to the vehicle.

Key Vocabulary

axle	a bar that goes through wheels, keeping them in place and allowing movement
chassis	the base of a wheeled vehicle
template	something that can be used as model for others to copy

Progression in Resources:

rulers to measure; wheels; wooden dowel for axles; glue guns; pegs and/or straws; hacksaws; vice; materials for decoration; cardboard boxes; card

Relevance

Now	Understand that making something is a process, not just the outcome; develop knowledge about how vehicles move.
Future	Have the confidence to adapt projects during the making process to achieve a more suitable outcome; have a greater understanding about how their vehicles work.
Aspiration	Become a product designer; work in the motoring industry; enjoy hobbies such as soapbox racing.