

Design Technology in Year 1

Topics: Design a planet; Design and build a GFOL house; Fabric Faces; Design a scientific invention; Pirate packed lunches

Design a planet

National Curriculum Statements:

Design:

- 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

Make:

- 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

Evaluate:

- evaluate their ideas and products against design criteria

Technical knowledge:

- build structures, exploring how they can be made stronger, stiffer and more stable

Progression of Knowledge and Understanding for Year 1:

- Structures:
 - begin to measure and join materials, with some support
 - describe differences in materials
 - suggest ways to make material/product stronger

Progression of skills for Year 1:

- Design:
 - research similar existing products
 - have own ideas
 - explain what I want to do
 - explain what my product is for, and how it will work
 - use pictures and words to plan, begin to use models
 - design a product for myself following design criteria
- Make:
 - work in a safe and hygienic manner
 - explain what I'm making and why
 - consider what I need to do next
 - select tools/equipment to cut, shape, join, finish and explain choices
 - measure, mark out, cut and shape, with support
 - choose suitable materials and explain choices
 - try to use finishing techniques to make product look good
- Evaluate:
 - talk about my work, linking it to what I was asked to do
 - talk about existing products considering: use, materials, how they work, audience, where they might be used
 - talk about existing products, and say what is and isn't good

- talk about things that other people have made
- begin to talk about what could make product better

Assessment Questions:

- Can the child join materials simply (eg: using glue or tape)?
- Can the child select the tools and equipment they need independently?
- Can they explain their choices?
- Can they explain what works well and what could be improved?

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Design and build a Great Fire of London house

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Make:

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Evaluate:

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

Technical knowledge:

- build structures, exploring how they can be made stronger, stiffer and more stable

Progression of Knowledge and Understanding for Year 1:

- Structures:
 - begin to measure and join materials, with some support
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- talk about existing products, and say what is and isn't good
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- begin to talk about what could make product better

Assessment Questions:

- Can the child join materials simply (eg: using glue or tape)?
- Can they select materials of suitable sizes and shapes?
- Can the child select the tools and equipment they need independently?
- Can they explain their choices?
- Can they explain what works well and what could be improved?

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Fabric Faces

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Make:

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- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate:

- explore and evaluate a range of existing products
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Technical knowledge:

- build structures, exploring how they can be made stronger, stiffer and more stable

Progression of Knowledge and Understanding for Year 1:

- Textiles:
 - measure, cut and join textiles to make a product, with some support
 - choose suitable textiles

Progression of skills for Year 1:

- Design:
 - research similar existing products
 - have own ideas
 - explain what I want to do
 - explain what my product is for, and how it will work
 - use pictures and words to plan, begin to use models
 - design a product for myself following design criteria
- Make:
 - work in a safe and hygienic manner
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Assessment Questions:

- Can the child create simple running stitches with some support?
- Are they able to choose appropriate materials to create a fabric face?
- Can they choose the correct tools (eg needle) and use them safely?
- Are they able to say what is going well and what could be better?

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Design a scientific invention

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Evaluate:

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

Technical knowledge:

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products

Progression of Knowledge and Understanding for Year 1:

- Structures:
 - begin to measure and join materials, with some support
 - describe differences in materials
 - suggest ways to make material/product stronger
- Mechanisms:
 - begin to use levers and sliders

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- Design:
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 - explain what my product is for, and how it will work
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 - design a product for myself following design criteria
- Make:
 - work in a safe and hygienic manner
 - explain what I'm making and why
 - consider what I need to do next
 - select tools/equipment to cut, shape, join, finish and explain choices
 - measure, mark out, cut and shape, with support
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Assessment Questions:

- Can the child join materials simply (eg: using glue or tape)?
- Can they include a moving part, eg a pivot or slider?
- Can they select materials of suitable sizes and shapes?
- Can the child select the tools and equipment they need independently?
- Can they explain their choices?
- Can they explain what works well and what could be improved?

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Pirate packed lunches

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Cooking and Nutrition:

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from

Progression of Knowledge and Understanding for Year 1:

- Cooking and Nutrition:
 - describe textures
 - wash hands & clean surfaces
 - think of interesting ways to decorate food
 - say where some foods come from, (i.e. plant or animal)
 - describe differences between some food groups (i.e. sweet, vegetable etc.)
 - discuss how fruit and vegetables are healthy
 - cut, peel and grate safely, with support

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Assessment Questions:

- Can the child select and use utensils safely and hygienically?
- Can the child explain their choices of ingredients?
- Can they explain where certain foods come from?
- Can they explain the similarities and differences between different foods?