

Year 3 Term 4

What has a greater impact on our lives: humans or nature?

DESIGN TECHNOLOGY



National Curriculum Links:

Select from and use a wider range of tools and equipment to perform practical tasks.
Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.

Essential Prior Learning:

Be able to design purposeful, functional, appealing products for themselves and other users based on design criteria, e.g. how the structure will be stable.
Be able to select from and use a range of tools and equipment to perform practical task (card, paper, lolly sticks, cardboard, saws and scissors).
Able to evaluate their ideas and products against design criteria. Build structures, exploring how they can be made stronger, stiffer and more stable.

Progression in Skill:

Roman Pavilions were constructed as small palaces.
Use pictures of pavilions to design innovative, functional and appealing model pavilions that are fit for purpose and create design criteria e.g. how the structure will be stable, how the corners will be reinforced.
Model and communicate their ideas for their pavilion through discussion, annotated sketches, cross-sectional and exploded diagrams or prototypes.

Select from and use a range of materials and components, including matchsticks, lolly sticks, toothpicks, straws, pipe cleaners and card triangles to create their pavilions.
Investigate and analyse a range of pavilions and evaluate their ideas by creating frames out of small objects out of matchsticks and marshmallows/playdough.
Understand how key events and individuals in design of pavilions have helped shape the modern world.
Assess their own pavilion against design criteria and consider the views of others to improve their work.
How to strengthen, stiffen and reinforce the pavilion.

Long-term Memory Knowledge:

Know that Roman Pavilions were constructed as small palaces.
Recognise a typical Roman pavilion from pictures, describing some of the typical features.
Use historical sources and prior learning to design a model and design criteria.
Explain their ideas for a pavilion through discussion, drawings and prototypes.
Understand which materials are best suited to create their pavilion and why.
Know how structures stay strong and stable; understand how to strength, stiffen and reinforce our design and that a triangle is one of the strongest shapes.

Key Vocabulary

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| structure | Something that has been made and put together and can easily stand on its own (e.g. a building, bridge or chair). |
| stable | An object that does not easily topple over. |
| reinforce | To make a structure or material stronger, especially by adding another material or element to it. |
| pavilion | A decorative building or structure for leisure activities. |

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| inspiration | To gain ideas from different sources, such as the internet, magazines or books. |
| aesthetic | How an object or product looks. |
| innovative | Something different that uses new methods or ideas. |
| natural | Found in nature. |
| 3D shapes | Shapes with three dimensions: width, height and depth (e.g. cube, prism or sphere). |
| design criteria | A set of instructions or requirements for a project. |
| target audience | A person or particular group of people at whom a product is aimed. |
| theme | An idea or specific design that your product or structure is based on (e.g. space themed). |

Progression in Resources:

Matchsticks, lolly sticks, toothpicks, straws, pipe cleaners and card triangles

Relevance

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| Now | Children to develop an understanding of how to create structures that are fit for purpose |
| Future | Children continue to develop their understanding of creating structures and use tools and equipment available to them to design, create and evaluate their own structure. |
| Aspiration | Children are encouraged to study and work in fields such as architecture, engineering and product design. |