

DT: Topic overview: Year 1

Construction

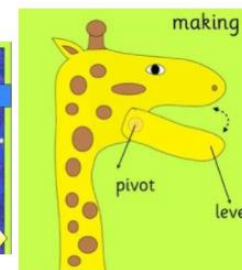
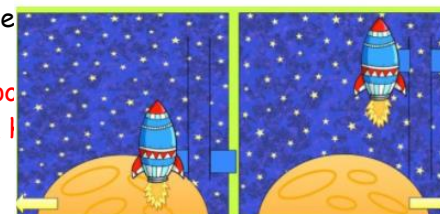
Mechanisms

Sewing/ textiles

Cooking and nutrition

Woodwork

Topic	Knowledge - Children will learn	Children will be able to...	Prior Knowledge	Key Vocabulary
Dinosaurs	To generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. To select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. To evaluate their ideas and products against design criteria.	Project objective: I can design and make a scene with moving parts. - To explore moving books with flaps, levels and pivots to see how they work. To explore objects and designs to identify likes and dislikes - To sketch/ plan two design of dinosaurs, one dinosaur moving using the slider technique and one dinosaur mouth moving using pivot and lever technique To make a simple plan before making. Sketch/ Simple annotations of materials and equipment on design. To make simple annotations- Equipment, Materials to be used. - To choose their favourite design and create the moving dinosaur scene. Create products using sliders, pivot and levers. Use tools safely- e.g. scissors and a hole punch. To cut materials safely using the tools provided. To demonstrate a range of cutting and shaping techniques- Cutting, folding, curling, tearing. To assemble, combine and join materials and components together using a variety of temporary methods e.g glue and masking tape. To use simple finishing techniques to improve the appearance of their product- Join pivot, movement, level, wheel, slider Choose suitable tools for making Measure, mark, cut and shape materials and components Create a dinosaur scene: what does the scene have? What is in the background? How does the dinosaur move? What techniques are we using to make out dinosaurs move across out scene? (pivot and lever). - To evaluate the dinosaur scene and talk about any adaptations / difficulties came across when making the moving dinosaurs To evaluate my ideas and products- Appearance, movement, taste, flavour, purpose What I found easy, what I found difficult, Strengths, what they would change, I could I improve my work, what is different from my plan. To explain to somebody else how to make my product.	Children can manipulate materials to achieve a planned effect. Children can construct with a purpose in mind with a variety of resources.	movement, flaps, levels, pivots, explore, identify, sketch, plan, dinosaur scene, slider, technique, pivot and lever, materials, equipment, tools, scissors, cutting, folding, curling, tearing, glue, masking tape, finishing techniques, appearance, joining materials, measure, mark, create, evaluate,



Construction

Mechanisms

Sewing/ textiles

Cooking and nutrition

Woodwork

Bright
Lights
big city

To design purposeful, functional, appealing products for themselves and other users based on design criteria.

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

To evaluate their ideas and products against design criteria.

Be able to build structures, exploring how they can be made stronger, stiffer and more stable.

Project objective: I can design and make a free standing building from London.

Sir Christopher Wren- St Paul Cathedral

What is an architect? **Design buildings**

What is architecture? **Architecture is what architects create- examples in London include The Houses of Parliament, Westminster Abbey, St Paul's Cathedral.**

- To research and explore different types of London buildings and what materials they are made from. To explore and investigate a range of materials and their suitability (can I cut it? Can I bend it? Can I glue it? Can I cellotape it?)
- To draw and plan a London building- label the construction/ junk modelling materials which will be used. (** children given a list of buildings they can design*)

To make a simple plan before making.

Sketch/ Simple annotations of materials and equipment on design.

To make simple annotations- Equipment, Materials to be used.

Optional buildings: Big Ben, The Shard, Tower of London, London Bridge, Houses of Parliament, London Eye, Wembley Stadium

Junk model materials to use: newspaper, cereal boxes, cardboard boxes, plastic bottles, milk bottles, bubble wrap, milk tops.

- To use construction materials to create 3D model of a London Landmark/ building following my design plan. (**Children work in groups but MUST make the building they designed*)

To choose appropriate resources and tools- newspaper, watered down glue, sugar paper, balloon, paint

To add detail to my design using different pencils and patterns- Different HB pencils, different patterns (stripes, spots, zig zags, wavy lines.

To cut materials safely using the tools provided.

To assemble, combine and join materials and components together using a variety of temporary methods. e.g glue and masking tape.

To use my plan to create my design.

To make my model stronger and join items together- Masking tape, PVA glue

To use simple finishing techniques to improve the appearance of their product

Junk modelling: creating new and exciting things from discarded items, such as toilet

Children will have explored different materials and combined them using glue and tape. Children will know how to evaluate a product and talk about things they liked and disliked.

architect, architecture, London, building, Westminster Abbey, St Paul's Cathedral, junk modelling, materials, sketch, plan, equipment, newspaper, cereal boxes, plastic bottles, milk tops, construction, 3D model, Landmark, resources, tools, pencils, patterns, HB pencils, safety, assemble, combine, joining materials, techniques, appearance, saw, glue gun, evaluate, model, improvements

rolls, cereal boxes, newspapers etc. Tools to use: saw, glue gun.

Junk model materials to use: newspaper, cereal boxes, cardboard boxes, plastic bottles, milk bottles, bubble wrap, milk tops.

- To evaluate the building and any changes I made when creating it using my plan.

To evaluate my ideas and products- Appearance, movement, purpose etc...

What I found easy, what I found difficult, Strengths, what they would change, how could I improve my work, what is different from my plan.

To explain to somebody else how to make my product.

Questions: Did your final product follow your initial plan? What went well when creating your junk-model sculpture? What material was the most effective in your sculpture and why? What would you improve in future?



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Woodwork

Memo ry Box	To design purposeful, functional, appealing products for themselves and other users based on design criteria. To generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. To select from and use a range of tools and equipment to perform practical tasks. To select from and use a wide range of materials & components, including construction materials, textiles according to their characteristics. To explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	Project objective: I can design and make a moving vehicle. To introduce and discuss the engineer John Kemp Starley who invented bicycle Nationality-English - To explore how vehicles move and look at designs (<i>bicycle, helicopter, tank, car, boat, train, sledge</i>) - To design and plan a toy vehicle with wheels. using inspiration from real vehicles and photographs. To include annotations with colour and materials needed. (<i>tractor, car, taxi, ice cream van, lorry, ambulance, police car, bus</i>) To make a simple plan before making. Sketch/ Simple annotations of materials and equipment on design. To make simple annotations- Equipment, Materials to be used. <u>Questions:</u> What does the vehicles look like? <u>Annotations:</u> red exterior, transparent windows, four wheels, black tyres, yellow number plate etc. - To follow the plan to design a vehicle using woodwork and junk modelling material as the base. To choose and use appropriate tools and resources effectively. - To paint and use a range of materials to decorate a vehicle following my plan to make it appealing to an audience. To make a product which moves- Junk model with moving parts, axel and wheels. To describe how something works To cut materials safely using the tools provided. To use materials to strengthen my product. To make my product stronger. To explain to somebody else how to make my product. To choose appropriate resources and tools. Measuring ruler, wood, saw, glue gun, craft materials, paint Range of materials: paint, boxes, cardboard, paper, newspaper, tissue paper, glue. Paint to be used to add colour to ensure the junk-model vehicle looks life-like. For example, yellow paint to create a yellow taxi exterior. - To evaluate the vehicles effectiveness. To evaluate my ideas and products- Appearance, movement, purpose etc... What I found easy, what I found difficult, Strengths, what they would change, how could I improve my work, what is different from my plan. To explain to somebody else how to make my product.	Children can construct with a purpose in mind with a variety of resources. Children will know and be able to name simple tools. Children will be able to name different types of materials- fabric, plastic and use materials for a purpose.	John Kemp, bicycle, helicopter, tank, car, boat, train, sledge, wheels, vehicles, plan, annotate, materials, equipment, design, questions, woodwork, junk modelling, tools, resources, moving parts, axel, wheels, product, saw, glue gun, evaluate, finished product.
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Questions: Did your finish product follow your initial plan? What materials did you use that ensured your vehicle was mobile? Which was the more effective material to use and why? What could you do to improve your vehicle in the future?



Moon
Zoom

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

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

To explore and evaluate a range of existing products.

To evaluate their ideas and products against design criteria.

Project objective: I can design and make an edible smoothie.

- Taste some different smoothies and complete an evaluation to have an idea on what ingredients they may use for their new smoothie.

Ingredients to make a smoothie: milk, yogurt, different fruits to create different flavours, e.g. mango, strawberry, banana, blue berry etc, sweeteners.
Smoothies to taste: banana, strawberry and mango.

- To design a new smoothie considering the fruit they would add.

To make a simple plan before making.

Sketch/ Simple annotations of materials and equipment on design.

To make simple annotations- Equipment, Materials to be used.

- To create a Space smoothie following design plan using a blender / whisk to mix the fruit. Use a knife to cut the food safely.

To cut, peel or grate ingredients safely.

To measure using measuring cups.

To assemble or cook healthy ingredients.

To understand where food comes from.

To choose appropriate resources and tools. Blender, whisk, fruit, bowl, knife, chopping board, juice, milk, Chopping board, knife, sandwich fillings, butter, bread.

To cut food safely.

To use basic food handling, hygiene practise and personal hygiene.

Ingredients: milk, yogurt, fruit.

Equipment: knife, whisk, glass, spoon.

- Taste the smoothie and complete an evaluation.

To evaluate my ideas and products- Appearance, movement, taste, flavour, purpose etc...

What I found easy, what I found difficult, Strengths, what they would change, how could I improve my work, what is different from my plan.

To explain to somebody else how to make my product.

Questions: Did your finish product follow your plan/instructions? Did it taste nice? How would you improve your smoothie? What did you find difficult about making your smoothie? What rating would you give your smoothie out of 10?

Children will be able to name simple tools. Children will be able to talk about why we need to eat healthily. Children know they need to eat 5 fruit and vegetables per day. Children will be able to use their imagination to construct with a purpose in mind with a variety of resources.

milk, fruit, yogurt, milkshake, strawberry, banana, blueberries, sweeteners, blender, whisk, fruits, cut, chop, knife, make, create, plan, materials, equipment, healthy ingredients, food, chopping board, safety, food handling, food hygiene, personal hygiene, evaluate, ideas, appearance, flavour, taste, instructions, food rating.



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Superheroes	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 wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics Evaluate their ideas and products against design criteria	Project objective: I can design and make an appealing outfit for a superhero. Throughout the topic discuss Vivienne Westwood and how she is a famous fashion designer known for her clothing (Nationality- British)221 - To explore and discuss different types of clothing and the materials they are made. To explore objects and designs to identify likes and dislikes Different types of clothing: hat, scarf, top, t-shirt, jeans, jumper. What would a superhero wear? Cloak, cape, gloves, shoes, costume, mask. What material are these clothes? Elastic, stretch cotton, leather. Why? Lightweight, protective, waterproof etc. - To plan and design an item of clothing for a new superhero and add annotations with colours, materials and sizes (e.g. trousers, t-shirt, cloak, dress, hat, trainers/shoes etc...) To make a simple plan before making. Sketch/ Simple annotations of materials and equipment on design. To make simple annotations- Equipment, Materials to be used. What item of clothing would your superhero wear? Why? Annotations: elastic bodysuit, leather boots, cotton gloves, elastic cape. - To use design plan to join materials using fabric glue to create their superhero costume To shape textiles using templates To cut materials safely using the tools provided. Colour and decorate textiles using a range of techniques To choose appropriate resources and tools-Scissors, felt, wool, marker pens, template, buttons, ribbons, wool, felt, With help measure, mark, cut and shape materials and components To assemble, combine and join materials and components together using a variety of temporary methods e.g glue and masking tape. Use tools safely e.g. scissors and a hole punch <u>Materials to join:</u> fabric, buttons, ribbon, wool, sequins, stapling, hole punch for treasury tag, masking tape, glue - To evaluate their superhero costume against a set criteria. To evaluate my ideas and products- Appearance, movement, taste, flavour, purpose etc... What I found easy, what I found difficult, Strengths, what they would change, how could I improve my work, what is different from my plan. To explain to somebody else how to make my product. <u>Questions:</u> Did your finished product follow your plan? What could you have done differently? How	Children will have been taught to manipulate materials to achieve a planned effect. Children will have been taught to construct with a purpose in mind with a variety of resources.	2D, 3D, card, paper, sketch, draw, design, adapt, change, make, create, fabric, materials, buttons, ribbon, wool, sequins, collage, cut, glue stick, fix, join, evaluate, change, same
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		could you improve your product in the future? What was the most effective material used and why?	
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