# Saracens Broadfields Primary School

# Design & Technology

Key Stage 1

Curriculum map

**Philosophy**

There are six underlying attributes at the heart of Saracens Broadfields curriculum and lessons.

1. Lessons and units are knowledge and vocabulary rich so that pupils build on what they already know to develop powerful knowledge.
2. Knowledge is sequenced and mapped in a coherent format so that pupils make meaningful connections through the building blocks..
3. Our flexible curriculum enables teachers to tailor content to other subjects in the curriculum and the current context.
4. Our curriculum is evidence informed through rigorous application of best practice and the science of learning.
5. We prioritise creating a diverse curriculum by committing to diversity in teaching and teachers, and the language, texts and media we use, so all pupils feel positively represented.
6. Creating an accessible curriculum that addresses the needs of all pupils is achieved to accessibility guidelines and requirements.
7. Disciplinary Knowledge is explicitly taught in every lesson, using 'Thinking like a Designer' skills:

Thinking like a designer ....

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| Research |
| Investigating existing products |
| Compare and contrast |
| Design |
| Make |
| Evaluate |
| Selecting from a range of tools and equipment (including ICT) |
| Selecting from a range of materials |

Thinking like a designer ....

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| -understanding the context and user |
| -describe the purpose of their product |
| -annotate sketches and diagrams |
| -apply knowledge on how to work safely |
| -assemble, join and combine materials |
| -investigate the background of existing designs. |
| -formulate step by step plans as a guide to making |
| -apply accurate measuring, marking out and cutting |

8.

## Inclusive and ambitious

The D&T units are pitched so that pupils with different starting points can access them. Lessons within a unit are sequenced so that each one builds on prior learning. The activities are scaffolded so all children can succeed, and they provide scope for all to be challenged.

## Pupil engagement

The D&T lessons are structured to engage pupils in thinking during their lessons - both to engage with the subject matter and to strengthen their memory of what is being learnt.

The nature of D&T is that alongside reading and writing activities in the lessons, pupils will need to be sketching and drawing ideas. In addition, many of our lessons require practical application of the concepts and skills being learned. In many cases this can be done using materials commonly found in the home and the lessons provide guidance on how to use such materials safely alongside adult supervision where necessary and reinforce the learning from the lesson.
It is our intention to contextualise learning where possible and applicable. This real-life application and understanding of D&T is important to show how D&T skills, knowledge and key learning are relevant and applicable in a vast number of areas of work, consumer choices and everyday life.

## Motivation through education

D&T engages pupils in learning how to design and make, in order to improve the world they live in.

Where possible, we draw on real-world experiences to provide an engaging context for developing, designing and making skills and knowledge. Every pupil should have the opportunity to make use of their designing and making skills and knowledge and, through this, develop personal achievement. We provide opportunities for pupils to be creative and solve problems by developing their own solutions to real-world contexts and offer (where possible and applicable) various methods to communicate their ideas and understanding.

## A curriculum of quality

The D&T curriculum has been put together with careful consideration and by consulting with specialists from IT T, secondary and primary education. This wealth of expertise has resulted in an effective, exciting, relevant, and challenging curriculum for pupils and teachers to engage in. The learning in Key Stages 1 and 2 should provide a good foundation for learning in Key Stage 3 and beyond.

## Curriculum design constraints

The D&T curriculum features 20 lessons per Year Group for Key Stage 1, split into two equal units. This is a significantly reduced provision compared to what should ideally be available in a school context and as a result does not fully address all aspects of an ideal D&T curriculum and the national curriculum programmes of study. Due to the constraints of asynchronous learning, there is no easy way to ensure full curriculum coverage. Whilst the curriculum coverage is reduced, we are confident that the fundamentals of a quality D&T curriculum remain and allow both teachers and pupils to benefit from the offering.

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## Units Overview

| Unit Number | Unit Title | Recommended year group | Number of lessons |
|---|---|---|---|

| | | | |
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| 2. | Textiles: Making a Puppet | Year 1 | 4 |
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Unit Specifics

| **Unit title** | **Prior knowledge required:** | **Equipment required** |
|---|---|---|
| Year 1 | | |
| Year 1 | | |
| Year 2 | | |
| Year 2 | | |

**Year 1 Lessons**

Unit 1: Structures

| **Building Blocks:**<br>**EYFS -** | | | | | | |
|---|---|---|---|---|---|---|
| **Lesson number** | **Lesson question** | **Pupils will learn** | **Key Vocabulary** | **Substantive knowledge** | **Disciplinary Skills** | **Resources Needed** |
| 1 | **How do you make a stable structure?** | **Pupils will learn**<br>● To create a stable structure. | ● Base<br>● Rotate<br>● Rotor<br>● Rotor blade<br>● Sail<br>● Stable<br>● Structure | ● I can find the centre of an object.<br>● I can puncture a hole.<br>● I can add weight to a structure. | ● Understanding the context and user.<br>● Apply accurate measuring, marking out and cutting. | ● Paper cups (3 per child)<br>● Modelling dough |
| 2 | **How do you make the sails of a windmill?** | **Pupils will learn**<br>● To use tools and equipment accurately to make part of a structure. | ● Equal<br>● Fold<br>● Length<br>● Rotor blades<br>● Sails<br>● Same<br>● Scissors<br>● Width | ● I can hold scissors correctly.<br>● I can begin to estimate equal distances.<br>● I can cut carefully.<br>● I can fold to make the shape of the structure. | ● Apply accurate measuring, marking out and cutting. | ● Paper cups |

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| 3 | **How do you attach the sails to your windmill?** | **Pupils will learn**<br>● To join parts of a structure. | ● Attach<br>● Join<br>● Rotate<br>● Structure<br>● Test<br>● Turn | ● I can widen a hole.<br>● I can join parts together.<br>● I can attach a supporting structure.<br>● I can test a structure. | ● Assemble, join and combine materials. | ● Bendy straws (1 per child- MUST be bendy)<br>● Cocktail sticks (one each) |
| 4 | **How do you evaluate your windmill?** | **Pupils will learn**<br>● To evaluate a structure. | ● Evaluate<br>● Improve<br>● Test | ● I can test my windmill.<br>● I can make my design better.<br>● I can decorate my windmill for the user. | ● Investigate the background of existing designs. | ● Paper cups<br>● Modelling dough<br>● Bendy straws |
| **Building towards..**<br>**Subsequent years:**<br>**Year 2 Year 3 Art and Design:**<br>**Year 3 History:**<br>**Year 4 Design and Technology**:<br>**Year 5 Art -**<br><br>**Careers:** Architect, Structural Engineer, Construction Project Manager, General Contractor, Civil Engineer, Surveyor, Building Inspector, Construction Estimator, Property Developer, Construction Safety Officer, Prefab Construction Specialist. | | | | | | |

Unit 2: Textiles

| **Building Blocks:**<br>**EYFS -** | | | | | | |
|---|---|---|---|---|---|---|
| **Lesson number** | **Lesson question** | **Pupils will learn** | **Key Vocabulary** | **Substantive knowledge** | **Disciplinary Skills** | **Resources Needed** |
| 1- Do the diagnostic assessment first!- | **How do you join fabrics together using different methods?** | **Pupils will learn**<br>● To join fabrics together using different methods. | ● Design<br>● Equipment<br>● Glue<br>● Hand puppet<br>● Safety pin<br>● Technique | ● I can remember that different techniques may be used to join fabrics for different purposes.<br>● I can join fabric by pinning, stapling or glueing. | ● assemble , join and combine materials | ● Fabric scraps<br>● Safety pins<br>● Staplers and staples<br>● Fabric glue or PVA glue<br>● Glue pots and spreaders<br>● Pegs , clips or weights |
| 2 | **How can you design a puppet?** | **Pupils will learn**<br>To use a template to create my design. | ● decorate<br>● design<br>● fabric<br>● inspiration<br>● model<br>● stencil<br>● template | ● I can design a puppet using a template.<br>● I can use a template to cut out my puppet. | ● assemble , join and combine materials | ● Safety pins (three each,<br>● Coloured pencils (a selection per table).<br>● Felt or other fabric – if you |

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| | | | | | | do not have fabric scissors, felt will be easier to cut than other fabrics (enough for two A5 templates each<br>● Scissors (to cut paper – one each).<br>● Fabric scissors |
| 3 | **How can I join two fabrics together accurately?** | **Pupils will learn**<br>To join two fabrics together accurately. | ● equipment<br>● fabric<br>● glue<br>● safety pin<br>● technique | ● I can join fabrics together.<br>● I can align two pieces of fabric.<br>● I can use a template.<br>● I can fit my hand into my puppet. | ● assemble , join and combine materials | ● Safety pins<br>● Staplers and staples (enough for one between two children)<br>● Fabric glue or PVA<br>● Glue pots and spreaders |

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| | | | | | | (enough for one between two children)<br>● Chalk or pens to mark the fabric<br>● Pegs, clips or weights<br>● The children's puppet design sheets |
| 4 | **How can I embellish my design using joining methods?** | **Pupils will learn**<br>● To embellish my design using joining methods. | ● decorate<br>● design criteria<br>● equipment<br>● inspiration<br>● model<br>● technique | ● I can use joining methods to decorate my puppet.<br>● I can still put my hand into the puppet after it is decorated. | ● assemble , join and combine materials | ● Your demonstration model puppet<br>● Decorations such as wool for hair, buttons for eyes, bits of fabric for noses and |

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| | | | | • I can evaluate my own and others' work. | | mouths, ribbons for clothes, etc.<br>• Safety pins<br>• Staplers and staples<br>• Fabric glue or PVA<br>• Glue pots and spreaders<br>• Chalk, pencil or pen |
| **Building towards..**<br>**Subsequent years:**<br>**Year 2 Year 3 Art and Design: Making pouches**<br>**Year 3 History:**<br>**Year 4 Design and Technology**:<br>**Year 5 Art -**<br><br>**Careers:** Architect, Structural Engineer, Construction Project Manager, General Contractor, Civil Engineer, Surveyor, Building Inspector, Construction Estimator, Property Developer, Construction Safety Officer, Prefab Construction Specialist. | | | | | | |

Unit 3: Smoothies (highlighted = things we need to order)

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| **Building Blocks:**<br>**EYFS -** |

| Lesson number | Lesson question | Pupils will learn | Key Vocabulary | Substantive knowledge | Disciplinary Skills | Resources Needed |
|---|---|---|---|---|---|---|
| 1 | **What is a fruit?** | **Pupils will learn**<br>● To identify fruits | ● Fruit<br>● Plant<br>● Seed | ● I can name fruits and vegetables.<br>● I can identify seeds.<br>● I can sort fruits and non-fruits. | ● Understanding the context and user. | ● A variety of different fruits<br>● Small foods that are not fruit |
| 2 | **Where do fruits and vegetables grow?** | **Pupils will learn**<br>● To describe where fruits and vegetables grow | ● Bush<br>● Leaf<br>● Root<br>● Soil<br>● Tree<br>● Stem<br>● Vegetable<br>● vine | ● I can name places where fruits and vegetables grow.<br>● I can decide whether a fruit or vegetable will grow aboveground or underground.<br>● I can make predictions about where edible parts of plants will grow. | ● Understanding the context and user. | ● Potatoes<br>● Carrots<br>● Apples<br>● Knives<br>● Potentially-materials to grow strawberries, broad beans and/or potatoes |
| 3 | **How do you cut and juice a fruit?** | **Pupils will learn**<br>● To practise food | ● Chopping board | ● I can use a fork to hold foods I | ● Apply knowledge on how to work | ● Table knife<br>● Manual juicer |

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| | | preparation skills | • Cut<br>• Fork<br>• Juice<br>• Juicer<br>• Table knife | am cutting.<br>• I can use a table knife to cut soft foods.<br>• I can use a juicer to get juice from fruits.<br>• I can work safely and follow instructions. | safely.<br>• Apply accurate cutting. | • Chopping board<br>• Fork<br>• Modelling dough |
| 4 | **How do you test ingredients?** | **Pupils will learn**<br>• To select ingredients for a recipe | • Flavour<br>• Select<br>• taste | • I can choose fruits and vegetables to taste.<br>• I can suggest fruits to put together based on taste.<br>• I can describe a food's taste.<br>• I can decide on three ingredients to create a recipe. | • Investigate the background of existing designs. | • Example shop-bought smoothies (enough for each child to have a small sample)<br>• One small sample of each: avocado, strawberries, banana, tinned pineapple<br>• One small sample of each juice: orange, lemon, lime<br>• Cocktail sticks or plastic forks |

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| 5 | **How do you make a smoothie?** | **Pupils will learn**<br>● To apply food preparation skills to a recipe | ● Blend<br>● Blender<br>● Cut<br>● Ingredients<br>● Juice<br>● Recipe | ● I can gather the ingredients for a simple recipe.<br>● I can cut and juice fruits as part of a recipe.<br>● I can use my senses to compare my smoothie with my partner's. | ● Understanding the context and user.<br>● Annotate sketches and diagrams.<br>● Assemble, join and combine materials. | ● Electric blender<br>● Knife<br>● Fork<br>● Chopping board<br>● Bowl<br>● Manual juicer<br>● Strawberries, tinned pineapple chunks, banana, avocado, oranges, lemons, limes<br>● Smoothie cups with a lid<br>● Straws |
| 6 | **How can you evaluate your smoothie?** | **Pupils will learn**<br>● To evaluate against the design brief | ● Compare<br>● Evaluate | ● I can colour a template to create a carton design.<br>● I can choose my favourite recipe.<br>● I can talk to the class about the design brief. | ● Investigate the background of existing designs. | N/A |
| **Building towards..**<br>**Subsequent years:**<br>**Year 2 Year 3 Art and Design:** | | | | | | |

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| **Year 3 History:**<br>**Year 4 Design and Technology**:<br>**Year 5 Art -**<br><br>**Careers:** Architect, Structural Engineer, Construction Project Manager, General Contractor, Civil Engineer, Surveyor, Building Inspector, Construction Estimator, Property Developer, Construction Safety Officer, Prefab Construction Specialist. | |

## Year 2 Lessons

Unit 1: Mechanisms: Making a moving monster

| **Building Blocks:**<br>**EYFS -** | | | | | | |
|---|---|---|---|---|---|---|
| **Lesson number** | **Lesson question** | **Pupils will learn** | **Key Vocabulary** | **Substantive knowledge** | **Disciplinary Skills** | **Resources Needed** |
| 1 Pre topic assessment<br><br>**Pivots, levers and linkages** | How do objects move? | ● To look at objects and understand how they move. | ● Axle<br>● Design criteria<br>● Input<br>● Linkage<br>● Mechanical | ● I can understand that mechanisms are a collection of moving parts that work together in a machine. | ● Researching mechanisms<br>● Investigating existing products | n/a<br><br>● Scissors, door handle, stapler, pens |

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| | | | • Output<br>• Pivot<br>• Wheel | • I can understand that a mechanism always has an input and output.<br>• I can identify mechanisms in everyday objects.<br>• I can understand that a lever is something that turns on a pivot.<br>• I can understand that a linkage is a system of levers connected by pivots.<br>• I can help devise whole-class design criteria for what our moving monster should do. | | |
| 2 **Making linkages** | How do you make a linkage? | **Pupils will learn**<br>• To look at objects and understand how they move. | • Input<br>• Linkage<br>• Mechanica<br>• Output<br>• Pivot | • I can understand that mechanisms are a collection of moving parts that work together in a machine.<br>• I can understand that there is always an input and output in a | • Design, Make and Evaluate. | • Plasticine or rubber (one each)<br>• Pre-cut card strips made from thin or thick card<br>• Thin and thick card<br>• Paper fasteners/split pins |

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| | | | | mechanism.<br>● I can understand that a lever is something that turns on a pivot.<br>● I can understand that a linkage is a system of levers that are connected by pivots. | | ● Scissors<br>● Glue |
| 3 **Designing my monster** | What features does a monster have? | **Pupils will learn**<br>● To explore different design options. | ● design criteria<br>● Input<br>● Linkage<br>● Mechanical<br>● Output<br>● Pivot<br>● Survey | ● I can understand that linkages use levers and pivots to create motion.<br>● I can think of two of my own points to add to the class design criteria.<br>● I can draw two moving monster designs that meet all points of my design criteria.<br>● I can design the linkage I will use to make my monster move. | ● Design, Make and Evaluate. | ● Colouring pencils |

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| 4 **Making my monster** | How do you make a moving monster? | **Pupils will learn**<br>● To make a moving monster. | ● design criteria<br>● Evaluation<br>● Linkage<br>● Mechanic<br>● Pivot | ● I can make linkages by connecting levers and pivots.<br>● I can understand that materials can be selected according to their characteristics.<br>● I can design and make the features of my monster. | Design, Make. | Card, paper template of head, rubber, split pins, rulers. Glue, scissors |
| 5 End of topic assessment | **Evaluate my product** | **How can you improve your moving monster?** | Evaluate | ● I can evaluate how functional my monster is and whether it meets the Design Criteria. | Evaluate | Computers |
| **Building towards..**<br>**Subsequent years:**<br>**Year 2 Year 3 Art and Design:**<br>**Year 3 History:**<br>**Year 4 Design and Technology**:<br>**Year 5 Art -**<br><br>**Careers:** Architect, Structural Engineer, Construction Project Manager, General Contractor, Civil Engineer, Surveyor, Building Inspector, Construction Estimator, Property Developer, Construction Safety Officer, Prefab Construction Specialist. | | | | | | |

Unit 2: Mechanisms: structures: Baby Bear's Chair

| **Building Blocks:**<br>**EYFS -** | | | | | | |
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| **Lesson number** | **Lesson question** | **Pupils will learn** | **Key Vocabulary** | **Substantive knowledge** | **Disciplinary Skills** | **Resources Needed** |
| 1 **Pre topic assessment Exploring stability** | **Can you explain what stable means?** | **Pupils will learn**<br>● **To explore the concept and features of structures and the stability of different shapes.** | design criteria<br>man-made<br>natural<br>properties<br>structure<br>stable<br>shape<br>model<br>test | I can identify natural and man-made structures.<br><br>I can understand what is meant by stability and identify when a structure is more or less stable than another.<br><br>I can explain that shapes and structures with wide, flat bases or legs are the most stable. | Evaluate | Stiff cardboard, wb/pen, 3D shapes, modelling dough |

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| 2<br>**Strengthening** materials | **How can I build a strong, stiff structure using paper?** | **Pupils will learn**<br>● To understand that the shape of the structure affects its strength. | Stable, stiff, strong, test, weak. | - I can understand the meaning of the words strength, stiffness and stability.<br>- I can understand there are different ways to fold paper to improve its strength and stiffness.<br>- I can build a strong and stiff structure by folding paper.<br>- I can test the strength of my structure. | Make | -Pre-made structures of a cylinder, a cuboid and a triangular prism,<br>-A pile of books of a similar size and weight, A4 paper for children to make their tube structures (three sheets per pair or group).<br>-Masking tape (one per pair or group).<br>-Cylindrical objects, such as glue sticks or board pens to help the children to make their cylindrical shape (optional – see Main event). |

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| 3 **Making baby bear's chair** | **How can you make a chair strong enough for Baby Bear?** | **Pupils will learn**<br>● To make a structure according to design criteria. | Design criteria, model, stiff, stable, structure. | -I can remember that chairs are structures that need to be strong, stiff and stable.<br>-I can create joints and structures from paper, card and tape. | Make | Sandwich bags, scissors, tape, card, paper, straws, pipe cleaners, recycled materials e.g. kitchen rolls. |
| 4 **Fixing and testing baby bear's chair** | **How can you make baby bear's chair more stable next time?** | **Pupils will learn**<br>● To produce a finished structure and evaluate its strength, stiffness and stability. | Design criteria, model, stiff, stable, structure, test | -I can identify that the chair I design needs to be strong, stiff, stable and support Teddy.<br>-I can create joints and structures.<br>-I can evaluate my structure according to the design criteria. | -Explore and evaluate a wide range of existing products.<br>-Evaluate their ideas and products against design criteria. | Worksheet |
| 5 End of topic assessment | | | | | | |
| **Building towards..** | | | | | | |

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| **Subsequent years:**<br>**Year 2 Year 3 Art and Design:**<br>**Year 3 History:**<br>**Year 4 Design and Technology**:<br>**Year 5 Art -**<br><br>**Careers:** Architect, Structural Engineer, Construction Project Manager, General Contractor, Civil Engineer, Surveyor, Building Inspector, Construction Estimator, Property Developer, Construction Safety Officer, Prefab Construction Specialist. | |

Unit 3: Cooking and Nutrition: Balanced Diet

| **Building Blocks:**<br>**EYFS -** | | | | | | |
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| **Lesson number** | **Lesson question** | **Pupils will learn** | **Key Vocabulary** | **Substantive knowledge** | **Disciplinary Skills** | **Resources Needed** |
| 1 Pre topic assessment **Recap of balanced meals/ food groups, preparing ingredients** | **n/a** | **Pupils will learn**<br>● The 5 food groups<br>● What a balanced meal is<br>● What is a diet? | Food groups, dairy, carbohydrates, protein, fats and sugars, fruits and vegetables | ● I can identify the 5 food groups.<br>● I know what a balanced meal is.<br>● I know what a diet is. | Research | Quizizz |

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| 2 **Preparing ingredients** | **What are the appropriate pieces of equipment to prepare food?** | **Pupils will learn**<br>● To identify an appropriate piece of equipment to prepare a given food. | Chopping board, cut, grate, grater, scissors, snip, spread, table knife. | ● I can identify equipment used for preparing food.<br>● I can practise food preparation skills using a range of equipment.<br>● I can justify using a piece of equipment with a type of food. | Investigating existing products | <u>Equipment:</u> Table knife, fork, green chopping board, foods to cut<br><u>Foods</u>: Cucumber, peppers, avocado, hummus, mayonnaise, parsley, coriander, spring onion, cheese, boiled egg). |
| **3 Taste testing ingredients** | **How can you create a balanced meal?** | ● To select balanced combinations of ingredients. | Combination, feel, taste, design brief, smell. | ● I can select foods from specific food groups.<br>● I can describe the taste of different foods.<br>● I can explain why I have chosen to put foods together. | Investigating existing products, compare and contrast. | <u>Equipment</u>: Table knife, box grater, scissors, chopping boards (green and white), plastic spoons, fork, cocktail sticks.<br><br><u>Foods</u>: pepper, boiled egg, hummus, |

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| | | | | | | cucumber, cheddar cheese, cream cheese, avocado. coriander, parsley, spring onion. |
| 4 **Planning recipes** | **Which ingredients will you use in your wrap and why?** | **Pupils will learn**<br>● To design based on criteria. | Design, ingredients | I can follow design criteria.<br><br>I can design three different wraps.<br><br>I can justify the choice I have made. | Investigating existing products, Make. | Equipment: Shop bought wraps (different variations), colouring pencils. |
| 5 **Creating and evaluating wraps** | **Which ingredients could you choose next time for your wrap? And why?** | **Pupils will learn**<br>● To evaluate a dish based on design criteria. | Appearance, evaluate, review. | I can select the ingredient for my recipe.<br><br>I can identify the equipment needed to prepare different foods. | Evaluate | Equipment: Table knife, box grater, scissors, chopping boards (green and white), plastic spoons, fork, cocktail sticks. |

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| | | | | I can decide if I like different wraps and choose my favourite. | | |
| 6 End of topic assessment | | | | | | Quizziz |
| **Building towards..**<br>**Subsequent years:**<br>**Year 2 Year 3 Art and Design:**<br>**Year 3 History:**<br>**Year 4 Design and Technology**:<br>**Year 5 Art -**<br><br>**Careers:** Architect, Structural Engineer, Construction Project Manager, General Contractor, Civil Engineer, Surveyor, Building Inspector, Construction Estimator, Property Developer, Construction Safety Officer, Prefab Construction Specialist. | | | | | | |

Unit 4: Fairground Wheel

| **Building Blocks:**<br>**EYFS -** | | | | | | |
|---|---|---|---|---|---|---|
| **Lesson number** | **Lesson question** | **Pupils will learn** | **Key Vocabulary** | **Substantive knowledge** | **Disciplinary Skills** | **Resources Needed** |
| 1 Pre topic assessment **Design a** | **What is a mechanism?** | **Pupils will learn**<br>● What is a mechanism | Mechanism, design criteria, survey, | - I know what a mechanism is. | n/a | Worksheet/Computer |

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| **fairground wheel** | | ?<br>● How deos a fairground wheel spin?<br>● What are design criteria?<br>● What is a survey?<br>● List the main parts of a fairground wheel. | | - I know how a fairground wheel spins.<br>- I know what a design criteria is.<br>- I know what a survey is.<br>- I can list the main parts of a fairground wheel. | | |
| 2 **Planning the build** | **How do mechanisms work?** | **Pupils will learn**<br>● To explore wheel mechanisms and design a fairground wheel. | Axle, design, design criteria, frame, wheel, axle holder, design brief, ferris wheel, pod. | -I can describe how axles help wheels to move a vehicle.<br>-I can evaluate different designs.<br>-I can design and label a working wheel. | Research | Worksheets, powerpoint. |

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| 3 **Building the frame and wheel** | **Which of these properties may be useful for a fairground wheel?** | **Pupils will learn**<br>• To select materials with appropriate properties. | Model, rotate, stable, strong, waterproof, weak. | -I can describe the properties of different materials.<br>-I can select appropriate materials for my wheel.<br>-I can build a wheel on an axle. | Make | -Materials with different properties, such as rubbers, paper, card, rulers, whiteboards, etc. (a selection per table).<br>-The children's *Activity: Wheel design* sheets from *Lesson 1: Design a fairground wheel.*<br>-Small, plain white paper plates (one each).<br>-Paper straws (one each).<br>-A sharp pencil and a small ball of modelling dough to pierce holes in the plates (one per table).<br>-Modelling dough or sticky tack (optional – see Main event).<br>-Supplementary materials for the children to reinforce and decorate their wheels, such as lolly sticks, straws, cocktail sticks, cardboard, split pins, cotton reels, paper straws, egg cartons and yoghurt pots (a selection per table). |

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| 4 **Surveying the design options** | **What materials should the wheel be made from?** | **Pupils will learn**<br>• To conduct a simple survey to gather opinions. | Opinion, survey | -I can recall that a survey is used to find out what people like.<br>-I can tally results.<br>-I can use my results to inform the design. | Make and Evaluate | -The children's *Activity: Wheel design* sheets added to in *Lesson 2: Planning the build*.<br>-The children's wheel and axle made in *Lesson 2: Planning the build*.<br>-The children's frame made in *Lesson 3: Building the frame and wheels*.<br>-Art materials, such as paint or felt pens to decorate the wheel.<br>-Craft materials that can be used to decorate the wheel and frame, such as pipe cleaners, coloured paper and card.<br>-Scissors (one each).<br>-Tape (one between two).<br>-Glue (one between two). |

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| 5 **Adding pods and decoration**<br><br>End of topic assessment | **What shape are your pods going to be? Does your wheel spin?** | **Pupils will learn**<br>• To finish and evaluate a structure with a rotating wheel. | Decorate, evaluation, test. | -I can add pods for the correct number of people.<br>-I can ensure that my pods stay upright when rotating around a fixed point.<br>-I can explain my decisions for the pod design.<br>I can evaluate a wheel mechanism and adapt it as necessary. | Make and Evaluate | Coloured card, scissors, pipe cleaners, split pins, paint, colouring pens, tape, paper plate, pencil, straws, blu tack. |
| **Building towards..**<br>**Subsequent years:**<br>**Year 2 Year 3 Art and Design:**<br>**Year 3 History:**<br>**Year 4 Design and Technology**:<br>**Year 5 Art -**<br><br>**Careers:** Architect, Structural Engineer, Construction Project Manager, General Contractor, Civil Engineer, Surveyor, Building Inspector, Construction Estimator, Property Developer, Construction Safety Officer, Prefab Construction Specialist. | | | | | | |

Unit 5: Textiles: Pouches

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| **Building Blocks:** |

| **EYFS -** | | | | | | |
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| **Lesson number** | **Lesson question** | **Pupils will learn** | **Key Vocabulary** | **Substantive knowledge** | **Disciplinary Skills** | **Resources Needed** |
| 1 Pre topic assessment **Running stitch** | **What is a running stitch?** | **Pupils will learn**<br>● To sew a running stitch. | decorate<br>fabric<br>fabric glue<br>knot<br>needle<br>needle threader<br>running stitch<br>sew<br>template<br>thread | I can thread a needle.<br><br>I can sew a running stitch.<br><br>I can use neat and evenly spaced stitches to join fabric. | Make | Thread (thick but not woolly), Small pieces of felt. Needle threading tool (optional). |
| 2 **Using a template** | **How do you use a template to join fabric together?** | **Pupils will learn**<br>● To use a template<br>● To cut felt<br>● To join two pieces of felt together with pins | Fabric, knot, needle, needle threader, running stitch, sew, template, thread | I can remember how to use a template.<br><br>I can cut fabric neatly.<br><br>I can pin fabric accurately.<br><br>I can design a pouch. | Design and Making | Scissors (ideally, fabric scissors), Pins, Felt , printed template |

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| 3 **Making a pouch** | **How do you make a fabric pouch?** | **Pupils will learn**<br>• To join fabrics using a running stitch. | Fabric knot, needle, needle, threader, running stitch, sew, thread | I can sew neat, even stitches.<br><br>I tie a knot at either end of the thread.<br><br>I can design decorations for my product. | Make and Design | Children's needles, thread, scissors (fabric from previous lesson |
| 4 **Decorating a pouch** | **How do you decorate your pouch?** | **Pupils will learn**<br>• To decorate a pouch using fabric glue or stitching. | Fabric knot, needle, needle, threader, running stitch, sew, thread | I can join items using fabric glue or stitching.<br><br>I can decorate fabric using different items.<br><br>I can evaluate my own designs. | Evaluate | Decorative items |
| 5 End of topic assessment | **How can you improve the look of your pouch for next time?** | | | | Evaluate | Quizizz |
| **Building towards..**<br>**Subsequent years:**<br>**Year 2 Year 3 Art and Design:**<br>**Year 3 History:** | | | | | | |

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| **Year 4 Design and Technology**:<br>**Year 5 Art -**<br><br>**Careers:** Architect, Structural Engineer, Construction Project Manager, General Contractor, Civil Engineer, Surveyor, Building Inspector, Construction Estimator, Property Developer, Construction Safety Officer, Prefab Construction Specialist. | |

Credit : Kapow Primary!