

Curriculum Intent
Key Stages 1 & 2
Subject long-term planning
Subject: D&T



PENK VALLEY
ACADEMY TRUST

*Learning
Together*



| | Half term 1 | 2 | 3 | 4 | 5 | 6 |
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| Title | Marvelous Me! | Let's Celebrate! | Terrific Tales! | Amazing Animals! | Come Outside! | Ticket to Ride! |
| Overall Intent-Rationale | Students find out about themselves, where they live and other types of houses and homes. They explore designing and making homes | Students find out about different Celebrations and explore resources/artefacts. They explore and use junk modelling/ clay to create their own 3D models (Diva lamp/fireworks and woodland animals) | Students read a variety of 'Traditional Stories' such as 'The Three Little Pigs', 'Cinderella' and 'Goldilocks and the Three Bears'. Children develop their ability to evaluate through exploring materials and building different homes for 'The three Little Pigs' | Students find out about different animals and describe the appearance and name features. They use this knowledge to design and make animal hand puppets | Students find out about plants and growing. They read 'Jack and the Beanstalk' and grow their own bean seeds. | Students find out about different methods of travel (vehicles) They name and describe features of the different types of vehicles for travel. |
| Why this? Why Now? | To develop their awareness of different homes and houses and encourage them to communicate and talk about themselves. To help develop the concept/awareness of 'Same' and 'Different' | Children will have previously had the opportunity to explore play dough and plasticine (Nursery and Autumn 1). To introduce a different material that we can use to make objects with. | Children will have previously explored 'Houses and homes' Autumn 1). They will now develop this to begin evaluate | Children have previously had the opportunity to thread laces through plastic shapes with holes. They have also previously sewed around a Christmas Stocking. This will build on these skills. | Children have had the opportunity during Reception to explore D and T resources/ craft trolley (tape, scissors, glue, hole punches, string etc) through child choice activities. They will now learn different ways that they can join materials together to make a 'beanstalk' | Children have previously used a range of resources to build models such as mobilo. Different vehicles such as trains, cars, aeroplanes have been available to explore. They will now develop their knowledge of vehicles and design and purpose. |
| Key concepts knowledge & skills (Must be all three) | Students understand: <ul style="list-style-type: none"> Design Functionality Nutrition Students know: <ul style="list-style-type: none"> People around the world live in different homes People's homes are different | Students understand: <ul style="list-style-type: none"> Design Functionality Evaluate Students know: <ul style="list-style-type: none"> What a Diva lamp is The names of some woodland/hibernating animals | Students understand: <ul style="list-style-type: none"> Design Functionality Evaluate Data Students know: <ul style="list-style-type: none"> Houses and homes can be made from different materials | Students understand: <ul style="list-style-type: none"> Design Innovate Technology Students know: <ul style="list-style-type: none"> We can use a needle and thread and sew to join 2 pieces of fabric together | Students understand: <ul style="list-style-type: none"> Design Functionality Students know: <ul style="list-style-type: none"> We can join materials together in different ways Some methods are stronger than others | Students understand: <ul style="list-style-type: none"> Design Functionality Innovate Students know: <ul style="list-style-type: none"> There are different types of vehicles for land, water and air Vehicles have different |

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| | <ul style="list-style-type: none"> • Some of the features that a home needs eg. roof, walls etc. • Types of food that are 'healthy' and 'unhealthy' <p>Students can:</p> <ul style="list-style-type: none"> • Use different resources such as lego/duplo to make model houses • Talk about the features and why needed eg. roof in case it rains! • Offer ideas/suggestions to improve our designs • Sort food into categories 'healthy' or 'unhealthy' | <ul style="list-style-type: none"> • Bonfire Night can be celebrated with fireworks <p>Students can:</p> <ul style="list-style-type: none"> • Use and mould clay to make a hollow shape (Diva lamp) • Use clay and other natural materials to make woodland animals • Use junk modelling materials (cardboard rolls etc) to make fireworks (rockets) | <ul style="list-style-type: none"> • We can test the homes for the 'Three Little Pigs' <p>Students can:</p> <ul style="list-style-type: none"> • Talk about what a home for the three little pigs would need to be like eg. strong, windproof • Observe and talk what happened when 'hairdryer/wind' used to test the houses | <ul style="list-style-type: none"> • A hand puppet needs to have a gap big enough to be able to put our hand in • A needle can be sharp and we need to be careful and use safely • We need to sew around the 'edge' of our puppets • Technology (sewing machines) can make this process quicker and more accurate. <p>Students can:</p> <ul style="list-style-type: none"> • Use a needle and thread safely and carefully to join 2 pieces of fabric together | <p>Students can:</p> <ul style="list-style-type: none"> • Use different methods of joining materials together including glue and tape • Talk about which method is the most appropriate/strongest | <p>features eg. wings, wheels</p> <p>Students can:</p> <ul style="list-style-type: none"> • Name the main features of a car, boat, aeroplane • Build model vehicles and describe using some accurate vocabulary- 'wheels. Wings, engine, door, window etc |
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Key stage: 1

Subject: D&T

Year: 1

School: Marshbrook First School

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| Title | | <i>Moving Mechanisms/Pictures</i> | | | <i>Food Technology – Making Pizzas</i> | <i>Textiles – Sewing animal puppets</i> |
| Overall intent – rationale Why this? Why now? | | <p>Pupils will learn about different moving parts by through books and pictures. They will learn about slider, levers, wheels and pivots and what everyday objects use these mechanisms. They will evaluate examples, design and make individual mechanisms and then design and make a finished moving picture of London to incorporate all of the mechanisms.</p> <p>Pupils start looking at mechanisms as part of their Year 1 topic and then develop this understanding and their skills in Year 2 by looking at winding mechanisms, then in Year 3 learning about pneumatic mechanisms and in Year 4 look at story mechanisms in more detail</p> | | | <p>Pupils will learn about where food comes from linked the Geography topic of farming and identify a range of fruit and vegetables and sort into groups. They will also find out about a balanced diet by learning about the five food groups and what each one gives us and examples of foods in each group. Pupils will then design a pizza and learn how to prepare food safely and learn about different cutting skills. They will end the topic by making a pizza.</p> <p>Pupils have opportunity to learn about different fruits and do food tasting in Reception and then in Year 2 go on to make a fruit kebab. In Year 4 children go beyond just preparing food to be cooked or making a cold dish and actually learn how to make a dish from scratch using ingredients and then cook it.</p> | <p>Pupils will learn about different types of puppets and how they work and then make an animal finger puppet using glue to join and add features. They will learn how to sew using two different stitches and then design and make an animal hand puppet.</p> <p>Pupils looked at different materials that are textiles in Reception and how to join materials together using glue.</p> |
| Key concepts knowledge & skills (Must be all three) | | <p>Students understand:</p> <ul style="list-style-type: none"> • Design • Technology • Evaluate • Functionality <p>Students know: That there are different moving mechanisms which work in different ways That a slider allows something to move from side to side That a lever can move up and down</p> | | | <p>Students understand:</p> <ul style="list-style-type: none"> • Design • Nutrition • Technology • Data • Evaluate <p>Students know: Where food comes from That plants, vegetables and fruits come from an arable farm That meat comes from a livestock farm</p> | <p>Students understand:</p> <ul style="list-style-type: none"> • Design • Evaluate • Functionality • Innovation <p>Students know: What a puppet is and what it is for What a hand puppet, finger puppet, sock puppet, marionette puppet & rod puppet looks like and how it moves</p> |

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| | | <p>That a wheel or pivot allows something to rotate around in a clockwise or anti-clockwise direction</p> <p>Students can: Describe how something works Make a simple plan before making Make a product that moves Describe to someone else how I want to make my product Choose appropriate resources and tools</p> | | <p>That dairy products come from a farm that keeps animals which make give us milk</p> <p>What the five food groups are called from the eatwell plate (Fruit & Vegetables, Carbohydrates, Meat Fish & Alternatives, Dairy & Fats and Sugars)</p> <p>That we need to follow rules to be safe when preparing and cooking food</p> <p>Which kind of foods are suitable to grow to put on a pizza</p> <p>Students can: Identify different fruit and vegetable names from real examples Sort pictures of food into fruits and vegetables Draw and label examples of foods in each part of the eatwell plate Describe what each food group does for us to give us a balanced diet Choose appropriate resources and tools Make a simple plan/design of a pizza Cut food safely Demonstrate different cutting skills List all the rules that are needed when preparing or cooking food such as washing hands, tying hair back, removing jewellery, cleaning surfaces, wearing an apron etc</p> | <p>What running stitch and overstretch looks like</p> <p>How to join two pieces of fabric together</p> <p>Students can: Identify how a puppet works Find similarities and differences between two different puppets Make a simple plan before making Explain to someone else what I want my puppet to look like Choose appropriate resources and tools Draw accurately around a template using a pencil Cut out animal shapes on felt with fabric scissors Join two pieces of fabric together using glue Use binca to do running stitch and overstretch Make a simple plan before making Join two pieces of fabric together by sewing Add features to their puppet using a range of resources like googly eyes, pipe cleaners, pom-poms and bits of fabric scrap</p> |
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Key stage: 1

Subject: D&T

Year: 2

School: Marshbrook First School

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| Title | | | <i>Australian Rainsticks (Structures)</i> | <i>Fruit Kebabs (Cooking and Nutrition)</i> | | <i>Minibeast Mechanisms (Winding Mechanisms)</i> |
| Overall intent – rationale | | | Structures helps to develop a basic knowledge of materials and their properties, foster creativity and problem-solving skills, develop fine motor skills, introduce basic engineering principles and encourages teamwork and collaboration. | Cooking and nutrition is an important part of helping them develop the knowledge, skills, and habits they need to make healthy choices and lead healthy lives. | | Mechanisms provide children with a foundation in basic mechanical systems and to develop their practical skills, which will help them to understand and solve problems in the world around them. |
| Why this? | | | Design purposeful, functional, appealing products for themselves based on design criteria. Generate, develop, model and communicate their ideas through talking and drawing. Select from and use a range of tools and equipment to perform practical tasks. Select from and use a wide range of materials and components, including construction materials according to their characteristics. Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria | Design purposeful, functional, appealing products for other users based on design criteria. Generate, develop, model and communicate their ideas through talking, drawing and information technology. Select from and use a range of tools and equipment to perform practical tasks. Select from and use a wide range of materials and components, including ingredients, according to their characteristics. Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from. | | Design purposeful, functional, appealing products for other users based on design criteria. Generate, develop, model and communicate their ideas through talking and drawing. Select from and use a range of tools and equipment to perform practical tasks. Select from and use a wide range of materials and components, including construction materials, according to their characteristics. Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. |
| Why now? | | | This is the first time children have covered structures. | In Y1 the children have explored fruits and what needs to be done before eating. Compared two fruits. Evaluated potato salads. Labelled and put foods on the Eatwell plate. Practised chopping, cutting, peeling and grating. Food hygiene. Design, make and evaluate a savoury salad. | | In Y1 the children explored simple moving pictures in books. Explored and investigated examples of levers and sliding mechanisms. Made simple sliders. Learnt how to use a hole punch and evaluated. Created a character using a wheel mechanism. Created a character with moving parts with pivots made from split pins. Design, make and evaluate a moving picture for bonfire scene. |
| Key concepts knowledge & skills (Must be all three) | | | <p>Students understand:</p> <ul style="list-style-type: none"> ● Design ● Evaluate ● Functionality ● Innovation <p>Students know:</p> <ul style="list-style-type: none"> ● What a rainstick is ● Know if something is homemade or mass produced ● What a prototype is | <p>Students understand:</p> <ul style="list-style-type: none"> ● Design ● Evaluate ● Functionality ● Nutrition ● Data ● Technology ● Innovation <p>Students know:</p> <ul style="list-style-type: none"> ● What a fruit kebab is | | <p>Students understand:</p> <ul style="list-style-type: none"> ● Design ● Evaluate ● Functionality ● Innovation <p>Students know:</p> <ul style="list-style-type: none"> ● What winding means ● What a drum, axle, handle and winder are ● Different ways to support an axle ● Know why an axle needs to be parallel |

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| | <ul style="list-style-type: none"> • What an Aborigine design would look like <p>Students can:</p> <ul style="list-style-type: none"> • Identify pros and cons of a design • Contribute to and explore the inside of a prototype • Decide on the best method for the inside of the structure and explain their reasons • Explore ways of covering the ends of their structure and decide on the best • Explore sounds made by different materials on the product • Label a design based on previous exploration and a success criteria • Make a product based on a design • Evaluate their product against success criteria | <ul style="list-style-type: none"> • That products are aimed at certain audiences • What basic food hygiene means • What an Aborigine design would look like <p>Students can:</p> <ul style="list-style-type: none"> • Identify pros and cons of a design • List basic food hygiene • Name and choose appropriate tools • Describe and label ingredients on a design • Analyse data gathered via technology to influence a design • Explain why they have made design choices • Make a product based on a design • Evaluate their product against success criteria • Sell their product | <ul style="list-style-type: none"> • How to hold a handsaw safely <p>Students can:</p> <ul style="list-style-type: none"> • Identify pros and cons of a design • Label and experiment with winding mechanisms • Practise making a secure axle • Cut dowelling using a handsaw and a vice with supervision • Explore how to attach a drum to a winder • Explain pros and cons of supporting the drum • Label a design based on previous exploration and a success criteria • Make a product based on a design • Evaluate their product against success criteria |
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Key stage: 2

Subject: D&T

Year: 3

School: Marshbrook First School

| | Half term 1 | 2 | 3 | 4 | 5 | 6 |
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| Unit Title | Stone Age homes | Seasonal Stockings | | | Moving Monsters | |
| Overall intent – rationale Why this? Why now? | In this unit, children research and develop design criteria to inform the design of their own Stone Age shelter. They will generate, develop, model and communicate their ideas through discussion and annotated sketches. They will Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. Finally, they will evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. | In this unit, children research and develop design criteria to inform the design of their own Christmas stocking. They will generate, develop, model and communicate their ideas through discussion and annotated sketches. They will Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. Finally, they will evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. | | | In this unit, children research and develop design criteria to inform the design of their own Moving Monster. They will generate, develop, model and communicate their ideas through discussion and annotated sketches. They will Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. Finally, they will evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. <i>Children previously look at mechanisms in their Year 2 mini beast mechanisms where they create a winding mechanism.</i> | |

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| | Children previously look at structures in their Australian rain sticks unit in Year 2. | Children previously do cover sewing skills in the Year 1 unit of finger puppets. | | | | |
| <p>Key concepts knowledge & skills</p> <p>(Must be all three)</p> | <p>Students understand:</p> <ul style="list-style-type: none"> • Design • Functionality • Innovation • Reinforce • Evaluate <p>Students know:</p> <ul style="list-style-type: none"> • The 4 types of Stone Age structures. • How to reinforce a structure. • How to attach materials together. • How to measure using a ruler. <p>Students can:</p> <ul style="list-style-type: none"> • Annotate a design correctly including measurements. • Select the most appropriate tools and techniques given for the task. • Choose a material both for its suitability and its appearance. • To be able to cut accurately. • To be able to measure accurately. • Evaluate products for different purposes. • To be able to attach materials together to create a shelter. | <p>Students understand:</p> <ul style="list-style-type: none"> • Design • Functionality • Visual Appeal • Innovation • Reinforce • Evaluate <p>Students know:</p> <ul style="list-style-type: none"> • How to attach materials together. • How to measure using a ruler. • The strongest stitch to join fabric together. • Use different decorative techniques. <p>Students can:</p> <ul style="list-style-type: none"> • Investigate decorative techniques. • Annotate a design correctly including measurements. • Select the most appropriate tools and techniques given for the task. • Choose a material both for its suitability and its appearance. • To be able to cut accurately. • To be able to measure accurately. • Evaluate products for different purposes. | | | <p>Students understand:</p> <ul style="list-style-type: none"> • Design • Functionality • Visual Appeal • Innovation • Reinforce • Evaluate <p>Students know:</p> <ul style="list-style-type: none"> • What pneumatic means and how it can be used to make something move. • How to attach materials together to create a pneumatic system. • How to measure using a ruler. <p>Students can:</p> <ul style="list-style-type: none"> • Investigate techniques for making simple pneumatic systems. • Annotate a design correctly including measurements. • Select the most appropriate tools and techniques given for the task. • Choose a material both for its suitability and its appearance. • To be able to cut accurately. • To be able to measure accurately. • Evaluate products for different purposes. • To be able to attach materials together to create a pneumatic system. | |

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| | | <ul style="list-style-type: none"> To be able to attach materials together to create a stocking. | | | | |
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Key stage: 2

Subject: D&T

Year: 4

School: Marshbrook First School

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| Title | <i>Storybooks (mechanisms)</i> | <i>Battery Operated Lights (electrical systems)</i> | | | | <i>Seasonal Food (cooking and Nutrition)</i> |
| Overall intent – rationale Why this? Why now? | <p>Through creative and practical activities, pupils are taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making.</p> <p>In Year 3 children have looked at pneumatic mechanisms, in Year 2 they have looked at winding mechanisms and in Year 1 they have looked at simple mechanisms in books. This unit will specifically build on their understanding of mechanisms from Year 1.</p> | <p>Through creative and practical activities, pupils are taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making.</p> <p>As the children have learned about electricity in science during this term. They will now apply their understanding of electrical circuits to make a product suitable for the home.</p> <p>Children have not worked with electrical systems before.</p> | | | | <p>As part of their work with food, pupils are taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.</p> <p>Children understand and apply the principles of a healthy and varied diet. They prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. They understand seasonality, and know where and how a variety of ingredients are grown, reared and processed.</p> <p>In Years 1 & 2 children have prepared dishes using the principles of a healthy and balanced diet. They have also understood where these food come from.</p> |
| Key concepts knowledge & skills (Must be all three) | <p>Students understand:</p> <ul style="list-style-type: none"> Design Technology Data Evaluate Functionality Innovation <p>Students know:</p> | <p>Students understand:</p> <ul style="list-style-type: none"> Design Technology Evaluate Functionality Innovation <p>Students know:</p> | | | | <p>Students understand:</p> <ul style="list-style-type: none"> Design Nutrition Evaluate Functionality <p>Students know:</p> <ul style="list-style-type: none"> How to be safe and hygienic when preparing food. |

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| | <ul style="list-style-type: none"> • About different types of motion. • About linkage and lever mechanisms to create moving parts. • What a prototype is. • How to measure accurately using a ruler. • How to join mechanisms. • About fixed and loose pivots. • How to use finishing techniques. <p>Students can:</p> <ul style="list-style-type: none"> • Evaluate existing products with mechanisms, including their purpose, functionality and audience. • Measure accurately using a ruler. • Create a design criteria and produce a plan that meets the criteria. • Evaluate and suggest improvements for their designs. • Make a prototype. • Persevere and adapt work when their original ideas do not work. • Make a product that uses mechanical components. • Evaluate the product made against the design criteria. • Talk about what they like and suggest improvements to their product. | <ul style="list-style-type: none"> • About the key events and individuals in the development of light technology. • About purposeful products that incorporate lights and their design features. • How an electrical circuit is constructed and works. • How to measure accurately using a ruler. • About the properties of electrical conductors and insulators. • How a switch works. <p>Students can:</p> <ul style="list-style-type: none"> • Sequence events in light technology. • Evaluate existing light products for purpose and functionality. • Create a design criteria and design a product with a light that meets the criteria. • Make a functional product which contains an electrical circuit with a light and switch that turns on and off. • Measure accurately. • Choose suitable materials for functionality and aesthetics. • Evaluate their product against their design criteria. • Talk about what they like and suggest improvements to their product. | | | | <ul style="list-style-type: none"> • How food ingredients come together. • When, where and how different foods (e.g. meat, fish, fruit, vegetables) are grown in the UK and processed. <p>Students can:</p> <ul style="list-style-type: none"> • Research how different foods are grown and processed in the UK. • Follow recipes and cook hygienically and safely. • Use different utensils safely. • Evaluate existing recipes. • Talk about seasonality and identify which foods are grown in which season. • Plan a menu based on a balanced and variety diet that is in season. • Prepare and evaluate a healthy seasonal dish. |
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