Design and Technology Curriculum Milestone 1			
Area & NC links	**Key Vocabulary**	**Sticky Facts**	**Sticky Knowledge**
Mechanism: Moving pictures linked to Shrewsbury. **Where We Live** use knowledge of existing products to help come up with ideas, drawing on their own experiences discuss their intended products and create drawings before making make a simple moving mechanism. produce a range of different moving mechanisms including: levers, pivots, rotary motion, wheels and axles) begin to assemble, join and combine materials and components together using a variety of temporary methods eg glues or masking tape	Hole punch Paper fastener Handle Lever Pivot Slider Slot Linkage Bridge Fulcrum	• Where a lever is "floppy" it can be strengthened with pipe cleaners, straws or lollipop sticks. • Scissors and a seesaw are simple examples of a lever. • A ley part to a lever is the **fulcrum**. This is a fixed point that allows the lever to rotate around it. • The fulcrum can be in the centre (seesaw) or at one end (hinge on a door). Assessment task: Children's own evaluation of their finished product. Is it fit for purpose? How did it work? (Photograph of finished product.)	• **Make a moving picture for travelling around Shrewsbury using levers or a wheeled mechanism.** • Use materials to practise cutting, gluing and securing materials to make products. • Make a moving picture using prepared images. • Make a lever or wheeled mechanism to create movement. • Cut the card accurately using scissors. • Measure and mark out to the nearest cm when cutting card. • Develop their ideas from an initial design and consider how they could strengthen their construction to improve the movement.
Preparing Food: Fruit salad **Out of Africa** *know about healthy diets *begin to prepare food, for example a fruit salad/ smoothie *name and sort foods into the five groups on 'The Eatwell plate'	Hygienic Cutting Peeling Chopping De-coring Tinned Frozen Dried Sweet Sour	• There is a wide variety of fruits that can be eaten; either fresh, tinned or dried. • Different fruits have different sensory qualities such as colour, texture and taste. • We need to eat 5 portions of fruit and vegetables a day for a healthy and balanced diet.	• **Design and make a vegetable / fruit smoothie for their superhero so they are fit, healthy and strong** • We need to know how to cut, peel or grate ingredients safely and hygienically; wash our hands and surfaces. • Assemble or cook ingredients in a variety of ways.

*know that everyone should eat at least five portions of fruit and vegetables every day *know that all food comes from plants or animals *that food ingredients should be combined according to their sensory characteristics *know about where food comes from cook a range of simple foods such as sandwiches *know how to prepare simple dishes safely and hygienically, without using a heat source *demonstrate how to use techniques such as cutting, and peeling	Bitter Texture Smooth	• We need to wash our hands before handling food to stop the spread of bacteria. Assessment task: Children's own evaluation of their finished product. Is it fit for purpose? How did it taste? (Photograph of finished product.)	• Measure or weigh ingredients using measuring cups or electronic scales. • Understand where the fruit and vegetables come from. • Understand basic principles of a balanced and varied diet. • Think of interesting ways of decorating their salad.
Structures (London Houses) **Fire Fire!** *build structures, exploring how they can be made stronger, stiffer and more stable. *begin to use simple finishing techniques to improve the appearance of their product *start to evaluate their products as they are developed, identifying strengths and possible *changes they might make	Net Cube Fastening Cutting Sticking Joining Stronger	• A 3D shape (cube) has 6 squares in its net so that it has a lid. • London houses were made from wood and were close together, that is why they burnt down so quickly. To use carboard and wooden lollipop sticks to replicate the wooden features on the houses. • 3D shapes are built from a net. • To use glue and masking tape to secure pieces in the right place. Assessment task: Children's own evaluation of their finished product. Is it fit for purpose? How strong was the structure? (Photograph of finished product.)	• **Make a traditional London building linked to the Great Fire of London. Children to recreate London using an artist representation.** • Make a structure using a range of materials. • Measure and mark out to the nearest centimetre. • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). • Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen).

Preparing Food: **Pole to Pole** **Designing a healthy pot noodle.** *design products with a user in mind *know that food has to be farmed, grown elsewhere (eg home) or caught design a healthy meal using scientific knowledge *that food ingredients should be combined according to their sensory characteristics *use knives safely to chop food	Dry Wet Vegetables Cutting Chopping Mixing Herbs Rehydrate Change	• A pot noodle needs dry ingredients. • Water can change the state of the dry ingredients. • We should eat a minimum of 5 fruit and vegetables a day. • Equipment needs to be used safely when chopping, cutting, or grating. • I should choose from a range of ingredients that looks pleasing to the eye and matches the design brief. • I can explain that the food we get from a supermarket is grown for us to eat. • Food is farmed, can be grown in other countries before it ends up on our plates. Children to make choices of what ingredients that they would like to add into their pot noodle. Assessment task: Children's own evaluation of their finished product. Is it fit for purpose? How did it taste? (Photograph of finished product.)	• Children to make a healthy pot noodle. • Understand that vegetables grow and are harvested. • Understand the importance of healthy eating and a varied diet. • Children to explore how to protect the ingredients with a cover. (Children to use a large plastic cup and cover it with foil and an elastic band.)
Mechanism: Moving Vehicles: Horse and Cart linked to **Castles.**	Joining Combining Connecting Punching Axle	• A moving vehicle needs an axle with wheels. • Movement can be made by fixing the wheels to the axle and allowing the	• **Design and Make a vehicle to transport Handa's fruit rather than on her head.**

*when looking at existing products, can they explain what they like and dislike about products and why? *design according to simple design criteria *explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products *annotate diagrams of proposed designs model ideas by exploring materials, components and construction kits and by making templates and mock-ups *begin to assemble, join and combine materials and components together using a variety of temporary methods eg glues or masking tape.	Vehicle Chassis Doweling Axle holding	axle to spin (using straws, plastic tubing, clothes pegs and card triangles). • Movement can also be achieved by fastening the axle to chassis and allowing the wheel to spin (secure with foam seals). Assessment task: Children's own evaluation of their finished product. Is it fit for purpose? How did it move? (Photograph of finished product.)	• Use materials to practise drilling, gluing and securing materials to make products. • Make sensible choices on which materials and tools to use to make a vehicle with moving wheels. • Make simple plans before building through drawings and arranging materials for construction. • Cut wooden dowelling safely using tools provided. • Measure and mark out to the nearest cm when cutting wood / card / plastic tubing. • Create moving vehicle where either the axle spins or the wheel spins on the axle. • Demonstrate a range of joining techniques to allow movement of the wheels in their product.
Textiles: Make Punch and Judy Puppets (hand puppets) **Land Ahoy** *model ideas by exploring materials, components and construction kits and by making templates and mock-ups *choose materials and components they require from those provided *demonstrate how to cut, shape and join fabric to make a simple product *use basic sewing techniques	Template Sewing Fabric Needle Running stitch Seam Stitch Thread Marking out	• There are many different types of puppets: finger, cone, paddle, hand, shadow or string • Sewing is the stitching together of material using a needle and thread. • To thread a needle you have to place the cotton through the eye of the needle.	• **Design and make a puppet for a Punch and Judy style show (either finger, cone, paddle or hand)** • Shape textiles using templates. • Cut out materials neatly and accurately with material scissors. • Join textiles to make a puppet using a running stitch. • Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing).

*start to evaluate their product by discussing how well it works in relation to the purpose (design criteria)		• There are many types of stitching you can use to fix two pieces of fabric together, such as running stitch, cross stitch and back stitch etc. • Designers make mock ups to help them to design a final product. Assessment task: Children's own evaluation of their finished product. Is it fit for purpose? How did it fit? Was is wearable? (Photograph of finished product.)	

Design Technology Project Skills			
Developing, Planning and Communicating Ideas	**Working with tools, materials and equipment to make products**	**Evaluate and improve processes and products**	**Inspiration from design in history**
• Think of own ideas and explain what they want to do. • Use pictures, diagrams, models and words to plan. • Design purposeful, functional and appealing products for a particular user and based on design criteria. • Choose best materials to use and give reasons why.	• Explain what they are making • Know which tools they must use and use safely. • Join and combine things in different ways. • Select from and choose a range of materials based on their characteristics.	• Describe how something works • Talk about their own work to others. • Describe what went well with their work. • If did again, how would they improve? • Evaluate their work against an agreed design criteria.	• Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs. • Explore how products have been created.