Learning Progression: Design & Technology Designing & Making

				Designi	ng & Making				
	EYFS			Year One Islands Toys Once Upon a Time			Year Two Time Travellers Eggs (What came first?) Explorers		
Topics Autumn Term Spring Term Summer Term	Ourselves Day & Night Space Homes and Buildings Growing Habitats								
Vocabulary	crates blocks bricks Duplo junk-modelling join stick fold Sellotape glue masking tape tie wrap hole punch elastic bank treasury tag paper clip cube cuboid cone	clay cutter pattern roll flatten marks tealight paint brush rollers cutters	screwdriver spanner tape measure sand water drainpipe bucket tube stand spade sieve roof walls door	spring zig-zag fan snake giraffe crocodile fish	axle wheel turn smoothly wood straw metal bottle tops	felt puppet stitch embroidery design evaluate Names of stitches.	Tudor wood plaster glass hinge door window roof box open close strong weak stiffen strengthen join Sellotape glue masking tape elastic band	habitat jungle park underwater etc fish animal names wheel rotate split pin hole punch working part moving part lever up down side to side slide push pull	
Key knowledge and Skills	EYFS - ELG Physical Development – Fine Motor Skills Use a range of small tools including scissors, paint brushes and cutlery.			 KS1 Design Design purposeful, functional, appealing products for themselves and other users bases on design criteria. Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. 					
	Expressive Arts & Design Creating with Materials Safely use and explore a variety of materials, tools and techniques. Share their creations, explaining the process they have used.			Make Select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing. Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. Evaluate Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. Technical Knowledge Build structures, exploring how they can be made stronger, stiffer and more stable. Explore and use mechanisms e.g. levers, sliders, wheels and axles in their products.					

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Activities

In the Early Years progress in designing and making comes from a combination of independent and adult-led activities.

In our Nursery and Reception both indoors and outdoors a wide variety of resources is available to the children, enabling them to develop their skills and creativity.

- Small-scale construction e.g. duplo.
- Large scale construction e.g. crates, wooden blocks.
- Role play with real tools e.g. screwdriver.
- Well stocked creative areas e.g. junk modelling.
- Joining materials e.g. glue, sellotape, masking tape, elastic bands, paper clips etc.
- Tools e.g. scissors, hole punch, brushes rollers, rolling pins.
- Playdough and cutters.
- Outdoor large-scale sand and water play with equipment to build mechanisms for movement.
- Range of existing products e.g. phones, tills kitchen equipment.
- ICT Clevertouch & Computers to access age appropriate software.

In EYFS children begin to talk about what they are doing and suggest alternatives.

Examples of adult-led activities in Nursery:

• Decorate a photo frame to take home.

Examples of adult-led activities in Reception:

- Design a rocket to take Teddy to the moon. Provide a range of boxes of varying sizes and resources to attach and join.
- Use 3D shapes to make a rocket.
- Design a Mother's Day clay tealight holder using quick dry clay.
- Explore different methods to join 2 pieces of card.

Design a Slinky puppet for your friend to play with

- Look at slinky dog in Toy Story and discuss the way the middle of the dog moves because it is a spring.
- Practise making a zig-zag fan mechanism.
- All children make a slinky dog using the zig-zag fan mechanism.
- Design their own animal with a long body, neck, tail e.g. snake, giraffe, crocodile. Use the same technique.
- Evaluate if it works as well as slinky dog. Would you change anything about your design?

Design a Plastic Bottle Car using axles

- Look at cars to see where axles are located i.e. one at the front one at the back.
- Design car and decide where to make the holes for the axles.
- Attach the bottle tops for the wheels.
- Test the car how far will it travel.
- Evaluate how successful the design was?
- What would make the wheels work more smoothly? e.g. try wooden axle and cardboard wheels.

<u>Design a felt puppet character to use in a puppet show for your friend</u>

- Look at existing examples of puppets which are available.
- Design using a template design sheet.
- Giving the puppet a name, character and choose the materials and colours.
- Follow the design to make the puppet.
- Evaluate the puppet by comparing it to the design and see if it turned out the way it was imagined.
- Would you change anything?
- Use in a puppet show for friends.

Thrilling Thursday - Textiles

Design and make a place mat

- Draw a simple design and make colour choices before begin sewing.
- Learn to use a needle and learn stitches.
- Compare to original design of mat.

<u>Design their own Tudor house with an opening door and/or window.</u>

- Learn about Tudor homes and what building materials were used.
- Compare to how we build now.
- Make a design on paper before they begin and list the materials they are going to use.
- A simple design could be made using ICT software such as Purple Mash.
- Make a mock-up of a hinge before they begin e.g. simple hinge using a strip of paper or other idea.
- Once built evaluate it against design has it turned out as expected – does the door window hinge work as you thought it would.
- Assess if the structure was strong enough and if not how could it have been improved.

Design and make a shoe box habitat with one moving part.

- Explore examples of moving parts in toys or books e.g. rotating disc, lever to make part of the design go up and down, sliding mechanism to make part of the design move from one place to another e.g. a bird appears to fly.
- Use a design sheet to draw, list materials and decide what will move in their habitat and which mechanism they are going to use.
- Select and build following design.
- Evaluate the finished habitat against the original design, suggesting any improvements. Evaluate the mechanism and assess if it works as they wanted it to.

<u>Design packaging for their pizza including what type, a picture or photo and the ingredients.</u>

- Look at examples of pizza packaging available to buy.
- What do they have in common?
- Use card to make the simple wrap around packaging.

<u>Thrilling Thursday - Textiles</u> Design and make a pencil case

- Draw what they want it to look like choose colours and type of embroidery stitches to be used.
- Use knowledge of type of stitch.
- When finished fold and join by sewing the to make the pencil case
- Evaluate it against original design.