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| **Reception - My World****Whole School Design Technology Map**Structures- we will be planning and making structures of small worlds and buildings around our local area using various construction materials. For example, school, hospital, church**.****Wonderful Weather**Food- we will be planning, making, tasting and evaluating a Lunar New Year desert recipe.**Terrific Tales****Big Ideas**-Mastering practical skills to make high quality products through effective designing and making-Evaluating and improving to develop the process of design thinking-Taking inspiration from real objectsStructures- We will build houses to protect the 3 Little Pigs from The Big Bad Wolf. We will use sticks, straws and Lego bricks. We will investigate ways to strengthen and join the materials in different ways**Watch it Grow**Children will look at existing hand puppets. They will design, plan and make their own farm animal hand puppet and evaluate its effectiveness. | **Year 1/2 Cycle A - London**Food technology - Children will taste and evaluate a range of different types of bread using words to describe their thoughts. They will look at bread making (grinding corn into flour, the importance of yeast) to plan and make a bread plait using the techniques of kneading, folding and scoring. **Transport**Mechanisms -Children will design and make a moving vehicle. They will explore and evaluate different vehicles, how they move and be able to name the different parts of a vehicle (body, chassis, axle and wheel) Children will measure, cut and assemble parts using relevant tools safely to complete their vehicle. **Bridges**Structures – Children will design and build a beam bridge that can hold a toy car, understanding how structures can be made stronger, stiffer and more stable. Looking at bridges, talk about their construction. To experiment with different ways to fold paper (triangles/squares/rolling) etc. and then use these to make their bridge. | **Year 1/2 Cycle B – Puppets**Textiles – Building upon previous learning about puppets (Reception) children will explore different joining techniques to decide which the best one to make a puppet is. Children will design, plan and apply a range of finishing techniques to make a hand puppet to become part of a class puppet show. Children will evaluate their work and suggest improvements.**Grimsby and India**Food – Children will begin to understand the principles of a healthy diet (eatwell plate) and will select from a range of fruits and veg to create an Indian dish. Children will use a range of tools and equipment safely to prepare the foods.**Our Seaside**Mechanisms – Children will look at a range of different mechanism – focussing on sliders and levers. They will design and make a seaside attraction that includes a slider or a lever. |
| **Year 3/4 Cycle A** **Romans**Children will investigate what a catapult is and how it works. They will look at images and videos of catapults. Children will draw and label their design, list materials needed and how they will make it. Children will work in groups to make a catapult out of Lego or Meccano. **Tudors**Children will design a template for the shape of a pouch using card. Children try hemming, running stitch and over stitch. They will join their fabric pieces by stitching them together and learn about and include: seam allowance, stitching on the under/inside, hemming and sewing a seam for threading a drawstring. The children will adorn their pouch using sewing techniques or glue gun. Evaluate pouch. | **Year 3/4 Cycle B** **Chocolate: From Bean to Bar**Children to revisit the Eat-well plate from Autumn Children will plan and make a healthy snack using the Eat-well plate.**Grimsby Fishing Heritage**Children will design and make fish finger packaging. They will consider: which nets to use; who the target audience are and how to attract them; what font and what information should be on the packaging. The children will plan, draw and construct their design and evaluate their product.**Our Local Area**Children will design and make a model lighthouse. After researching, they will identify: required components, equipment and materials. They will draw a detailed annotated sketch and construct their structures starting with the shell. They will apply scientific knowledge to draw and construct a simple circuit with a bulb and attach it to their lighthouse. Children will then evaluate their lighthouses. | **Year 5/6 Cycle A** **WW2**The children will build on previous DT learning about structures. They will design and build a bomb shelter to protect an egg from a falling missile, focussing on what structures are and how to strengthen and stiffen them. They will explore different ways of strengthening their design using different materials. **Extreme Environments**Building on textiles work in Y3/4 the children will design and make a mobile phone case. Skill development will include: accurate measuring and adding width for seams to ensure correct sizing for their phones; learning different stitching techniques for construction and aesthetic design; and shaping, cutting and attaching felt pieces for decorative purposes. | **Year 5/ 6 Cycle B – Guy Fawkes**Food tech – ‘Winter warmer snack’The children will build on their Y3/4 learning about the Eat Well plate to create a warming winter soup. They will learn about hygiene and using equipment safely to chop and prepare vegetables and explore and combine herbs and spices to flavour their snack.**Fair Trade (Viking Raiders)**Children will apply their scientific learning about forces, pulleys and gears to design and create a cam and follower moving toy. They will explore different types of cams and the effect they have on the movement of the follower, before designing their moving Viking warrior.**Keen to be Green**The children will build on their scientific knowledge about circuits and their prior learning In Y3/4 (constructing a lighthouse) to design and create an electronic game for a younger child. The children will use a range of materials to build a game which is battery powered and requires bulbs or buzzers to work. |