St Margaret's DT Key Knowledge and Vocabulary Map

Year 1

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
I wonder theme…	**What makes me special?**	**Where does our food come from?**	**Do all children have toys?**	**What is it like in China?**	**What is it like to be an explorer?**	**What's the weather like?**
Kapow Unit		Cooking – Fruit and Vegetables		Textiles – Puppets (Nian Monster)		Structures: Constructing a windmill (linked with wind weather and windmills in Essex)
Objectives		Pupils who are secure will be able to: • Describe fruits and vegetables and explain why they are a fruit or a vegetable. • Name a range of places that fruits and vegetables grow. • Describe basic characteristics of fruit and vegetables. • Prepare fruits and vegetables to make a smoothie.		Pupils who are **secure** will be able to: • Join fabrics together using pins, staples or glue. • Design a puppet and use a template. • Join their two puppets' faces together as one. • Decorate a puppet to match their design.		Pupils who are **secure** will be able to: • Follow design criteria to meet the needs of a user. • Make a stable structure. • Make functioning sails/blades that attach to the supporting structure. • Improve their windmill.
Vocabulary		• fruit • vegetable • seed • leaf • root • stem		• decorate • design • fabric • glue • model • hand puppet		• axle • base • centre • equal • evaluate • middle

		• smoothie • healthy • carton • design • flavour • peel • slice		• safety pin • staple • stencil • template		• rotate • rotor • rotor blades • sails • same • stable • strong • structure • test • weak • wind • windmill

Year 2

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
I wonder theme…	**Are all schools the same?**	**Would you prefer to live in a hot or cold place?**	**Did people in the past travel fast?**	**Why is our world wonderful?**	**Who's the king of the castle?**	**Who rules the oceans?**
Kapow Unit	Structures – Baby Bear's chair (links with classroom chairs)		Textiles – Pouches (making a travel bag)			Cooking – A Balanced Diet (linked to English – The Lighthouse Keeper's Lunch)
Objectives	Pupils who are **secure** will be able to: • Identify man-made and natural structures. • Identify stable and unstable structural shapes. • Contribute to discussions. • Identify features that make a chair stable.		Pupils who are **secure** will be able to: • Sew a running stitch with regular-sized stitches and understand that both ends must be knotted. • Prepare and cut fabric to make a pouch from a template.			Pupils who are **secure** will be able to: • Name the main food groups and identify foods that belong to each group. • Describe the taste, feel and smell of a given food. • Think of three different wrap ideas, considering flavour combinations. • Construct a wrap that meets the design brief and their plan.

	• Work independently to make a stable structure, following a demonstration. • Explain how their ideas would be suitable for Baby Bear. • Produce a model that supports a teddy, using the appropriate materials and construction techniques. • Explain how they made their model strong, stiff and stable.		• Use a running stitch to join the two pieces of fabric together. • Decorate their pouch using the materials provided.			
Vocabulary	• design criteria • man-made • natural • properties • structure • stable • shape • model • test		• decorate • fabric • fabric glue • knot • needle • needle threader • running stitch • sew • template • thread			• appearance • balanced • carbohydrates • chopping board • combination • cut • dairy • design • design brief • diet • evaluate • feel • fruit • grate • grater • ingredients • menu • oils • proteins • review • scissors • smell

						• snip • spread • spreads • table knife • taste • vegetables

Year 3

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
I wonder theme…	**How are things different from the past?**	**Where would you choose to settle?**	**Would you prefer to live in the Stone Age, Bronze Age or Ice Age?**	**What's hidden within? (The rainforest)**	**Why did the Romans invade Britain?**	**What can we learn from the world beneath our feet? (Volcanoes)**
Kapow Unit	Textiles: Cross-stitch and appliqué (linked to school uniform)			Mechanical systems: Pneumatic toys (rainforest creature)		Cooking and nutrition: Eating seasonally
Objectives	Pupils who are **secure** will be able to: • Use a cross-stitch to join two pieces of fabric together. • Design and cut the template for a cushion. • Use cross-stitch and appliqué to decorate a cushion face. • Make a cushion that includes appliqué and cross-stitch.			Pupils who are **secure** will be able to: • Draw accurate diagrams with correct labels, arrows and explanations. • Correctly identify definitions for key terms. • Identify five appropriate design criteria. • Communicate two ideas using thumbnail sketches. • Communicate and develop one idea		Pupils who are **secure** will be able to: • Explain that fruits and vegetables grow in different countries based on their climates. • Understand that seasonal fruits and vegetables grow in a given season. • Understand that eating seasonal fruit and vegetables positively affects the environment. • Design a tart recipe using seasonal ingredients.

				using an exploded diagram. • Select appropriate equipment and materials to build a working pneumatic system. • Assemble their pneumatic system within the housing to create the desired motion. Create a finished pneumatic toy that fulfils the design brief.		•
Vocabulary	• appliqué • cross-stitch • design • equipment • fabric • patch • running stitch • thread • seam • texture • knot			• mechanism • lever • pivot • linkage system • pneumatic system • input • output • component • thumbnail sketch • research • adapt • properties • reinforce • motion		• appearance • arid • climate • complementary • country • cut • design • evaluate • export • fruit • grate • import • ingredients • Mediterranean • mock-up • mountain • peel • polar • seasonal • seasons • snip • taste

						• temperate • texture • tropical • vegetable • weather

Year 4

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
I wonder theme…	**What do the Ancient Egyptians believe?**	**How are rivers used around the world?**	**How hard was it to invade and settle in Britain?**	**Would you survive the cold?**	**Were the Vikings mad, bad or misunderstood?**	**Where does our food come from?**
Kapow Unit	Electrical systems: Torches (to search in the pyramids)		Textiles: Fastenings (book sleeve, linked to Shakespeare writing units)		Cooking and nutrition: Adapting a recipe (linked to banquet)	
Objectives	Pupils who are **secure** will be able to: • Identify electrical products and explain why they are useful. • Help to make a working switch. • Identify the features of a torch and how it works. • Describe what makes a torch successful. • Create suitable designs that fit the success criteria and their own design criteria. • Create a functioning torch with a switch according to their design criteria.		Pupils who are **secure** will be able to: • Identify the features, benefits and disadvantages of a range of fastening types. • Write design criteria and design a sleeve that satisfies the criteria. • Make a template for their book sleeve. • Assemble their case using any stitch they are comfortable with.		Pupils who are **secure** will be able to: • Describe features of biscuits using taste, texture and appearance. • Follow a recipe with support. • Use a budget to plan a recipe. • Adapt a recipe using additional ingredients.	

Vocabulary	• battery • bulb • buzzer • conductor • circuit • circuit diagram • electricity • insulator • series circuit • switch • component • design • design criteria • diagram • evaluation • LED • model • shape • target audience • input • recyclable • theme • aesthetics • assemble • equipment • ingredients • packaging • properties • sketch • test		• Criteria • Fabric • Fastening • Fix • Mock-up • Stitch • Template		• adapt • addition • appearance • budget • buttery • combine • comment • compare • construct • cream • crunchy • cuboid • cut • design • evaluate • fold • hygiene • ingredients • layout • market research • modify • multiplication • opinion • pounds • sieve • sift • target audience • taste • texture • unique • wooden spoon	

Year 5

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2

I wonder theme…	**What are the mysteries and achievements of Ancient civilisations?**	**What's up high?**	**What's special about our local area?**	**Why do the oceans matter?**	**What was live life in Tudor England?**	**What's it like in the forest?**
Kapow Unit	Mechanical systems: Pop-up book (linked to Mayan Mask)			Structure: Bridges (over water / oceans link)		Textiles: Stuffed toys (woodland animals)
Objectives	Pupils who are **secure** will be able to: • Produce a suitable plan for each page of their book. • Produce the structure of the book. • Assemble the components necessary for all their structures/mechanisms. • Hide the mechanical elements with more layers using spacers where needed. • Use a range of mechanisms and structures to illustrate their story and make it interactive for the users. • Use appropriate materials and captions to illustrate the story.			Pupils who are **secure** will be able to: • Identify stronger and weaker shapes. • Recognise that supporting shapes can help increase the strength of a bridge, allowing it to hold more weight. • Identify beam, arch and truss bridges and describe their differences. • Use triangles to create simple truss bridges that support a load (weight). • Cut beams to the correct size, using a cutting mat. • Smooth down any rough cut edges with sandpaper. • Follow each stage of the truss bridge creation as instructed by their teacher. • Complete a bridge, with varying ranges of accuracy and finish, supported by the teacher. • Identify some areas for improvement, reinforcing their bridges as necessary.		Pupils who are **secure** will be able to: • Design a stuffed toy, considering the main component shapes of their toy. • Create an appropriate template for their stuffed toy. • Join two pieces of fabric using a blanket stitch. • Neatly cut out their fabric. • Use appliqué or decorative stitching to decorate the front of their stuffed toy. • Use blanket stitch to assemble their stuffed toy, repairing when needed. • Identify what worked well and areas for improvement.

Vocabulary	• design • input • motion • mechanism • criteria • research • reinforce • model			• beam bridge • arch bridge • truss bridge • strength • technique • corrugation • lamination • stiffness • rigid • factors • stability • visual appeal • aesthetics • joints • mark out • hardwood • softwood • wood file/rasp • sandpaper/glasspaper • bench hook/vice • tenon saw/coping saw • assemble • material properties • reinforce • wood sourcing • evaluate • quality of finish accuracy		• accurate • annotate • appendage • blanket-stitch • design criteria • detail • evaluation • fabric • sew • shape • stuffed toy • stuffing • template

Year 6

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
I wonder theme…	**What was the impact of WW2?**	**Would you like to live in the desert?**	**What did the Greeks ever do for us?**	**How do we influence**	**Who should feature**	**Where does our energy come from?**

				the world around us?	**on the £10 bank note?**	
Kapow Unit		Textiles: Waistcoats (cooling clothes for in the desert)	Mechanical systems: Automata toys (Greek theatre)			Electrical systems: Steady hand game
Objectives		Pupils who are **secure** will be able to: • Consider a range of factors in their design criteria and use this to create a waistcoat design. • Use a template to mark and cut out a design. • Use a running stitch to join fabric to make a functional waistcoat. • Attach a secure fastening, as well as decorative objects. • Evaluate their final product.	Pupils who are **secure** will be able to: • Mark, saw and cut out the components and supports of their toy with a varying degree of accuracy to the intended measurements. • Follow health and safety rules, taking care with the equipment. • Attempt a partial assembly of their toys using an exploded-diagram, following a teacher's demonstration. • Develop a design idea with some descriptive notes. • Explore different cam profiles and choose three for their follower toppers with an explanation of their choices. • Create neat, decorated follower toppers with some accuracy. • Measure and cut panels that fit with some inaccuracies to conceal the inner workings of the automata. • Decorate and finish the automata to meet the design criteria and brief.			Pupils who are **secure** will be able to: • Explain simply what is meant by 'form' (the shape of a product) and 'function' (how a product works). • State what they like or dislike about an existing children's toy and why. • Learn about skills developed through play and apply this knowledge in a survey of one or more children's toys. • Identify the components of a steady hand game. • Design a steady hand game of their own according to their design criteria, using four different perspective drawings. • Create a secure base for their game, with neat edges, that relates to their design. • Make and test a functioning circuit and assemble it within a case.

			• Evaluate their finished product, making descriptive and reflective points on function and form.			
Vocabulary		• annotate • decorate • design criteria • fabric • target customer • waistcoat • waterproof	• accurate • assembly-diagram • automata • axle • bench hook • cam • clamp • component • cutting list • diagram • dowel • drill bits • exploded-diagram • finish • follower • frame • function • hand drill • jelutong • linkage • mark out • measure • mechanism • model • research • right-angle • set square • tenon saw			• assemble • battery • battery pack • benefit • bulb • bulb holder • buzzer • circuit • circuit symbol • component • conductor • copper • design • design criteria • evaluation • fine motor skills • fit for purpose • form • function • gross motor skills • insulator • LED • user