

Stanley Grove Primary Academy
Curriculum 2021-22

Medium Term Plan

DESIGN TECH.

DESIGN TECHNOLOGY- LONGTERM PLANNING OVERVIEW

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

	Development of knowledge and skills	Application of knowledge and skills	Development of knowledge and skills	Application of knowledge and skills	Development of knowledge and skills	Application of knowledge and skills
Year 1	DESIGN TECH-TEXTILES ‘Our Patch’ Alice Kettle and Valerie Goodwin. Understanding ‘textiles’ and the role of a designer. Introduction to basic textile skills of shaping and joining.	DESIGN TECH-TEXTILES ‘Our Patch’ Alice Kettle and Valerie Goodwin. Understanding ‘textiles’ and the role of a designer. Introduction to basic textile skills of shaping and joining.	DESIGN TECH-CONSTRUCTION ‘Animal Ornament’ Johnson Zuze Introduction to basic tools and joining methods- hammer/ nails, screws/screwdriver.	DESIGN TECH-CONSTRUCTION ‘Animal Ornament’ Johnson Zuze Selecting recycled and scrap materials suitable for exterior display, construction of fish shaped garden ornament.	DESIGN TECH-FOOD ‘Funny Faces’ Arcimboldo, bento boxes, Nadia Hussain. Basic food preparation skills including peeling, mashing, cutting, squeezing	DESIGN TECH-FOOD ‘Funny Faces’ Arcimboldo, bento boxes, Nadia Hussain. Designing and making a plant-based dish in the shape of a face to encourage children to eat healthily
Year 2	DESIGN TECH-ELECTRICAL ‘Comforting Night Light’ Existing designs for animal shaped nightlights. Construction of a fish fold-light and an owl tube light. Experiment/Design	DESIGN TECH-ELECTRICAL ‘Comforting Night Light’ Construct a child’s nightlight based on own animal shaped design. Make/Evaluate	DESIGN TECH-MECHANICS ‘Moving Microbe Monsters’ Rob Ives Making microbe monster toys using levers and pulleys Experiment	DESIGN TECH-MECHANICS ‘Moving Microbe Monsters’ Rob Ives Design and make microbe monster toys a winding mechanism. Make/Evaluate	DESIGN TECH-MATERIALS Yoojin Kim, Yevgeniya Yeretskaya and Matthew Reinhart Paper engineering skills to construct pop-up cards	DESIGN TECH-MATERIALS Yoojin Kim, Yevgeniya Yeretskaya and Matthew Reinhart Design and make pop-up ‘Welcome to the UK’ cards with UK landmarks to be given to refugees and new arrivals.
Year 3	DESIGN TECH-TEXTILES ‘Prehistoric Puppet’ Handspring Puppet Company and puppet traditions from around the world. Introduction to glove puppets. Developing textiles skills including shaping using pattern, joining with stitches and embellishment with beads and buttons. Experiment	DESIGN TECH-TEXTILES ‘Prehistoric Puppet’ Handspring Puppet Company and puppet traditions from around the world. Design and make a glove puppet based on an animal from Stone Age Britain. Design/Make/Evaluate	DESIGN TECH-MATERIALS ‘Natural Pots’ Kate Malone and Halima Cassell Explore clay including pinch, coil and slab pots inspired by natural forms. Experiment/Design	DESIGN TECH-MATERIALS ‘Natural Pots’ Kate Malone and Halima Cassell Design and make a natural form themed clay storage pot Make/Evaluate	DESIGN TECH-MECHANICS ‘Wheelie Clever Inventions’ Bronze Age wheels and Al-Jazari Exploring the use of rollers, wheels, cams in relation to movement of objects	DESIGN TECH-MECHANICS ‘Wheelie Clever Inventions’ Bronze Age wheels, Al-Jazari and Leonardo DaVinci Using knowledge of rollers, wheels and cams to design and make an automaton of a moving animal in a Celtic decorative style.
Year 4	DESIGN TECH-CONSTRUCTION ‘Catapult Competition!’ Pupils will learn construction skills in preparation for constructing a Roman inspired catapult game for children. Experiment/Design	DESIGN TECH-CONSTRUCTION ‘Catapult Competition!’ Pupils work together to construct their Roman inspired catapult game for children. Make/Evaluate	DESIGN TECH-ELECTRICAL ‘Roman Quiz Board’ Design a complete-the-circuit quiz game with facts about the Romans (Roman Empire, Roman Manchester, Key dates, Roman Gods etc Experiment/Design	DESIGN TECH-ELECTRICAL ‘Roman Quiz Board’ Constructing a complete-the-circuit quiz board with facts about the Romans (Roman Empire, Roman Manchester, Key dates, Roman Gods etc.) Make/Evaluate.	DESIGN TECH-FOOD ‘Anglo Saxon Spread’ Designing Anglo Saxon inspired recipes for a historical recreation society. Food handling plus making bread, butter and cheese. Experiment/Design	DESIGN TECH-FOOD ‘Anglo Saxon Spread’ Making Anglo Saxon inspired recipes for a historical recreation society. Making an Anglo Saxon flatbread with toppings and a vegetable stew cooked on an open fire Make/Evaluate.
Year 5	DESIGN TECH-MATERIALS ‘Space Lanterns’ Lantern and light celebrations from around the world. Designing a Space themed withy and paper lantern for the Winter Welcoming lantern parade. Experiment/Design	DESIGN TECH-MATERIALS ‘Space Lanterns’ Lantern and light celebrations from around the world. Make a Space themed withy and paper lantern for the parade. Make/Evaluate	DESIGN TECH-MECHANICS ‘Wind and Water’ William Kamkwamba, Theo Jansen. Explore wind and water powered toys using recycled and repurposed materials. Experiment/Design	DESIGN TECH-MECHANICS ‘Wind and Water’ William Kamkwamba, Theo Jansen. Design and make moving toy using recycled and repurposed materials. Design/Make/Evaluate	DESIGN TECH-FOOD ‘Frugal Food’ Marcus Rushford and Jack Monroe Explore cooking nutrition and budgeting skills to help tackle and highlight food poverty. Experiment/Design	DESIGN TECH-FOOD ‘Frugal Food’ Marcus Rushford and Jack Monroe. Design and cook plant-based recipes on a set budget. Use the recipe to write a class cookery book to support others. Make/Evaluate
Year 6	DESIGN TECH-TEXTILES ‘Gift Shop Bag’ Fabric bag inspired by African art for a Manchester Museum’s gift shop. Exploring the brief, experimenting with surface decoration including stencilling. Experiment /Design	DESIGN TECH-TEXTILES ‘Gift Shop Bag’ Fabric bag inspired by African art for a Manchester Museum’s gift shop. Making bag based on designs, utilizing stencilling. Make/Evaluate	DESIGN TECH-MATERIALS ‘Greek Myths and Legends’ Puppet traditions from around the world. Experimenting with materials and shadow puppet building techniques based on Greek mythology Experiment/Design	DESIGN TECH-MATERIALS ‘Greek Myths and Legends’ Puppet traditions from around the world. Using materials to build puppets in groups for a shadow puppet performance of an Ancient Greek myth. Make/Evaluate	DESIGN TECH-ELECTRICAL ‘Operation Game’ Hasbo’s classic game, Ibn Sina. Explore skills to design a complete-the-circuit game with two components in the style of the operation game. Experiment/Design	DESIGN TECH-ELECTRICAL ‘Operation Game’ Hasbo’s classic game, Ibn Sina. Make the electronic operation game as designed to help children develop fine motor skills and learn about anatomy. Make/Evaluate

YEAR 1

TERM	AUTUMN 1
Term Thread	Our Place
'EXPLORE' for ½ term (trip, visitor, experience)	Exploration of the whole school site, meeting people, adding our hands to the walls.
Breadth of Study	TEXTILES 'Our Patch'
Threshold Concept	1. Master practical skills 2. Design, make, evaluate, improve 3. Take Inspiration from designers, artists and products.
Key Person/People	Alice Kettle
Link	We have just drawn and sculpted some imaginary buildings as artists. Now we are going to work as Designers and learn the skills we need to design and make a decoration for our school building next half term. The project is called 'Our Patch'. Our patch is another way of saying the place where we belong or live. We are going to be making flags decorated with houses. We will be using lots of interesting materials to do this and learning new skills.
No. of lessons	3
Unit Content	<p style="text-align: center;">Development of Knowledge and Skills</p> <p style="text-align: center;">Learn basic textile and design skills in preparation to make a bunting flag depicting houses linked to the pupil's exploration of our locality.</p> <p>Lesson 1: Explore what 'Design' and 'Textiles' means. Watch the film, play the games and complete the 2 worksheet challenges. Challenge 1- circling objects if they have been designed. Challenge 2- sorting materials into textiles and non-textiles and gluing samples of each in place.</p> <p>Lesson 2: Recap lesson 1 - what is design? What are textiles? Explore different textile artists who are inspired by building and architecture including Valerie S. Goodwin. Look at the work of Alice Kettle and the 'Stitch my Home' project for Mushaira 2020. Reflect on the cushion cover from Stitch my Home. Discuss- likes/dislikes/improvements/how it was made. Introduce join textiles Challenge- Explore and practice drawing round a stencil (small house shape on felt based on the cushions) and joining fabric (with glue)</p> <p>Lesson 3: Recap artists and designer – Recap joining textiles. Explore and practice running stitch- on Binca to make bookmark. Display work and discuss outcomes and processes. Select work for class portfolio.</p>
Milestones	<ul style="list-style-type: none"> • Shape textiles using templates. • Use materials to practice basic running stitch. • Join textiles using glue. • Colour and decorate textiles using a number of techniques including running stitch and adding sequins) • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to designs. • Explore how products have been made and some of the people who made them. • Use basic design technology vocabulary to talk about the work of designers and work produced.

YEAR 1

TERM	AUTUMN 2
Term Thread	Our Place
'EXPLORE' for ½ term (trip, visitor, experience)	Exploration of Longsight.
Breadth of Study	TEXTILES Our Patch
Threshold Concept	1. Master practical skills 2. Design, make, evaluate, improve 3. Take Inspiration from designers, artists and products.
Key Person/People	Valerie S. Goodwin
Link	As Artists we created an imaginary city using lots of scrap materials. We are going to think about more buildings inspired by our homes in Longsight. We are going to continue our work as Designers to design and make the 'Our Patch' bunting decoration for our school building we will use lots of the skills we learnt last half-term and lots of textile materials.
No. of lessons	3
Unit Content	Application of Knowledge and Skills Using basic design and textiles techniques, design and make a square flag inspired by buildings and homes around Longsight. Make a rectangular flag depicting houses linked to the pupil's exploration of our locality. This will be turned into bunting to decorate the classroom. Lesson 1: Recap content from Autumn 1 lessons. Watch film then complete challenge- experiment with design by playing with shapes and colours. Complete a design sheet for bunting flag. Lesson 2: Recap. Joining fabrics – gluing with fabric glue. Following design made the previous lesson. Gluing felt shapes onto background to make bunting flag. Add further decoration with beads, buttons, large sequins (leave a ruler gap for the flags to be sewn to a ribbon to make bunting). Session 3: Look at work from previous lesson. What needs to be done to finish the design? Make any alterations, repairs, or improvements. Sewing practice. Complete Binca house challenge using running stitch. On completion, evaluate your flag and the work of others in the class. Select work and photographs for class portfolio. NOTE: The flags will be machine sewn by J. Lyons onto ribbon to complete the bunting ready for display in classrooms or corridors.
Milestones	<ul style="list-style-type: none"> • Shape textiles using templates. • Use materials to practice basic running stitch. • Join textiles using glue. • Colour and decorate textiles using a number of techniques including running stitch and adding sequins) • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to designs. • Explore how products have been made and some of the people who made them. • Use basic design technology vocabulary to talk about the work of designers and work produced.

YEAR 1

TERM	SPRING 1
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Term Thread	Animals
'EXPLORE' IDEAS	Owl visit
Breadth of Study	Construction 'Animal Ornament'
Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person for Knowledge Web	Johnson Zuze
Link	Our work on animals continues. We have worked as Scientists and Artists. We are now going to work as Designers. We are going to make an animal themed ornament to hang in your back yard or garden. We have been looking at the continents in Geography so we will learn some skills making a land animal ornament. Next half term we will be looking at oceans so we will be designing a fish theme ornament. Because of our climate in UK (link back to geography and science) we need to use materials (link back to science), which can last being outside in British weather.
No. of lessons	3
Unit Content	<p style="text-align: center;">Development of Knowledge and Skills</p> <p style="text-align: center;">Design an animal themed (fish) garden ornament using suitable recycled materials inspired by the work of Johnson Zuze.</p> <p style="text-align: center;">You will be constructing (building) your animals next half term.</p> <p>Lesson 1: Explore different assemblage and 'junk' sculptures inspired by animals, including work of Johnson Zuze. Complete the worksheet looking at and sorting suitable materials for making a garden ornament - Link back Term 1 Science (Materials) to select materials which be survive being left outside.</p> <p>Lesson 2: Explore and practice using hammers with nails and screws and screwdrivers by making a hedgehog (land animal)</p> <p>Lesson 3: Design your own fish themed garden ornament for someone in your family who has a backyard or garden. Complete the design sheet. Use your materials worksheet to select suitable scrap materials to decorate your fish. Display work and discuss outcomes and processes. Select work for class portfolio.</p>
Milestones	<ul style="list-style-type: none"> • Use materials to practise screwing, gluing and nailing materials to make and strengthen products. • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to designs. • Explore how products have been made and some of the people who made them. • Use basic design technology vocabulary to talk about the work of designers and makers and work produced.

YEAR 1

TERM	SPRING 2
Term Thread	Animals
'EXPLORE' IDEAS	Blue Planet Aquarium/Sea Life Centre
Breadth of Study	Construction
Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person for Knowledge Web	Johnson Zuze
Link	We have worked as artist to explore animals inspired by Picasso. Picasso made sculptures out of junk and scrap materials including a bull and a goat. We will now continue with our animal them and make a fish garden ornaments. In Geography we were looking at continents, oceans and where different animals live around the world. We made a hedgehog last half term which is a land animal and now you will make your fish which is an animal that lives in water. Remember to think back to last half terms Science and only use materials that will not be ruined if they get wet.
No. of lessons	3
Unit Content	<p>Application of Knowledge and Skills</p> <p>'Animal Ornament'</p> <p>Make an animal themed garden ornament using suitable recycled materials inspired by the work of Johnson Zuze.</p> <p>Lesson 1: Revise and reflect on the start of the unit. Review designs. Make any alterations. Sand your wood to prepare and begin to build your fish.</p> <p>Lesson 2: Use the scrap materials, hammer and nails to follow your designs and decorated your garden ornament.</p> <p>Lesson 3: Evaluate your garden ornament. What needs to be done to finish the design? Make any alterations, repairs, or improvements. On completion evaluate your animal ornament and the work of others.</p>
Milestones	<ul style="list-style-type: none"> • Use materials to practise screwing, gluing and nailing materials to make and strengthen products. • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to designs. • Explore how products have been made and some of the people who made them. <p>• Use basic design technology vocabulary to talk about the work of designers and makers and work produced.</p>

YEAR 1

TERM	SUMMER 1
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Term Thread	Food from Around the World
'EXPLORE' for ½ term (trip, visitor, experience)	Appna's/ Manchester Super Store
Breadth of Study	FOOD TECHNOLOGY 'Funny Face'
Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person/People	Nadia Hussain, Arcimboldo, Bento Boxes
Link	We have been working as scientists to learn about plants. There are a lot of plants that we can eat fruits and vegetables come from plants. Our work exploring different foods from around the world continues. We are now going to work as designers and make some lovely food out of fruit and vegetables for us to eat. We are going learn how to peel, cut and prepare different fruits and vegetables. We are going to make a range of healthy plant-based dishes and learn cooking skills.
No. of lessons	3
Unit Content	Development of Knowledge and Skills Lesson 1: Introduction to hygiene and food handling- Why must we wash our hands before touching food? Introduction to healthy eating- Which fruit and vegetables do we already know? What are our favourite fruits and vegetables? Why do we need to eat fruit and vegetables? Basic outline. Make a poster telling people to eat 7 fruits and vegetables a day (current government guidance) with a character made out of fruit and vegetables in reference to Arcimboldo introduced in Art. Lesson 2: Food preparation techniques- using food handling rules – Fruit. Peeling, (banana), cutting (banana and strawberry), mashing (banana and strawberry), squeezing (orange) and mixing (all ingredients) - Pupils follow directions to make a smoothie- complete a flow chart of what they did plus matching the vocabulary to the process. Lesson 3: Using the final mixing bowl, weigh the carrot, cabbage leaf and chives. Record the weight on sheet. Peeling cutting, chopping, grating, mixing – make a coleslaw. Peel and grate carrot, cut cabbage leaf with knife and 'claw method', chop chives with scissors, mix in a spoon of mayonnaise. Weigh again and notice any difference in weight- what might make a difference- peeling the carrot, cutting end off carrot plus addition of mayonnaise. Taste test before writing up key vocabulary and recipe. Select work and photographs for class portfolio.
Milestones	<ul style="list-style-type: none"> • Cut, peel, grate, mash and handle ingredients safely and hygienically. • Measure or weigh using measuring cups or scales. • Assemble ingredients. • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to designs. • Explore how products have been made and some of the people who made them. • Use basic design technology vocabulary to talk about the work of designers and makers and work produced.

YEAR 1

TERM	SUMMER 2
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Term Thread	Food from Around the World
'EXPLORE' for ½ term (trip, visitor, experience)	Formby Beach
Breadth of Study	FOOD TECHNOLOGY 'Funny Face'
Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person/People	Nadia Hussain, Arcimboldo, Bento Boxes
Link	<i>We have been learning lots about plants. Part of plants are fruits and vegetables but also seeds. We found out about a type of seed called peppercorns last half term, which have a big history. We put pepper on a food to make it taste nice we are now going to make some more tasty food using fruits and vegetables that have come from all around the world. We are going to design a meal that will encourage children to eat more fruits and vegetables. We will use the skills we learnt last half term to make our plant-based meal.</i>
No. of lessons	3
Unit Content	<p style="text-align: center;">Application of Knowledge and Skills 'Funny Face'</p> <p>Lesson 1: Recap work from previous term. Introduction to Nadia Hussain who has written a cookbook with her children. Look at bento boxes from Japan. Complete a survey about which one people like most and they want to eat. Why do we make food decorative? We make food that looks good, so people want to eat it. Some children do not like eating some things. We need to encourage children to eat at least five kinds of fruit and vegetables a day. How can we do this? We are going to design and make a plate of food with lots of healthy vegetables we will encourage little children who might not love all fruits or vegetable to eat the food.</p> <p>Lesson 2: On a paper plate, design an individual 'Funny-Face Veggie No-Cook Pizza' by selecting from available ingredients. Label the ingredients and preparation methods (e.g. hair is grated carrot, the eyes are sliced cucumber, the cheeks are mashed banana etc.)</p> <p>Lesson 3: Hand washing, food hygiene and safety reminders. Put together your funny face no cook pizza following design. Peeling, cutting, grating, spreading. Evaluating. Looking at each other's work- whose food looks tasty? Do you think little children would like to eat the food? Photograph before eating. Select work and photographs for class portfolio.</p>
Milestones	<ul style="list-style-type: none"> • Cut, peel, grate, mash and handle ingredients safely and hygienically. • Measure or weigh using measuring cups or scales. • Assemble ingredients. • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to designs. • Explore how products have been made and some of the people who made them. • Use basic design technology vocabulary to talk about the work of designers and makers and work produced.

YEAR 2

TERM	AUTUMN 1
Term Thread	Living Things
'EXPLORE' for ½ term (trip, visitor, experience)	Fletcher Moss and Steiner Wood Trip
Breadth of Study	ELECTRICS 'Animal Night Light'
Threshold Concept	1. Master practical skills 2. Design, make, evaluate, improve 3. Take Inspiration from designers, artists and products.
Key Person/People	Mlle Hipolyte, Evie Eccles
Link	Later in this half term we will be Reminding ourselves about Florence Nightingale who we learnt about in Year1. We will also be learning about another remarkable person who was very caring and looked after people. Her name was Mary Seacole. Both these important women gave people comfort when they were sick or injured. Florence Nightingale was known as The Lady with the Lamp- can you remember why? We are now going to work as Designers to design a lamp. It will be a night light to sit next to someone's bed to give them comfort. Because we have been looking at living things as Scientists the lamp will be inspired by animals
No. of lessons	3
Unit Content	Development of Knowledge and Skills Design a nightlight for a younger child using animals as inspiration. Your light needs to be something that will help the child feel safe and calm at night. You will be designing and gaining the skills to make your nightlight next half term. Lesson 1: Examine and discuss the design brief. Investigate a range of nightlights and animal shaped products. Reflect on the designs, discuss- likes/dislikes/improvements/how it was made etc. Make a spotlight parrotfish shaped 'Fold' nightlight. Oil it and leave to dry over-night. Lesson 2: Put together your Fold nightlight. Make an owl shaped 'Tube' nightlight. Lesson 3: Choose an animal. Use what you have learnt to design your animal themed nightlight. Fill in the design sheet. Discuss your design with others. Display work and discuss outcomes and processes. Select work for class portfolio.
Milestones	<ul style="list-style-type: none"> • Make a product incorporating a simple battery-operated device. • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to designs. • Explore how products have been made and some of the people who made them. • Use basic design technology vocabulary to talk about the work of designers and work produced.

YEAR 2

TERM	AUTUMN 2
Term Thread	Living Things
'EXPLORE' for ½ term (trip, visitor, experience)	Mary Seacole in role
Breadth of Study	ELECTRICS
Threshold Concept	1. Master practical skills 2. Design, make, evaluate, improve 3. Take Inspiration from designers, artists and products.
Key Person/People	Mlle Hipolyte, Evie Eccles
Link	We have been looking for scientist to explore 'Living Things'. Last half term we worked as artists drawing one type of living thing, plants and the flowers. We are now going to continue our project as designers and make a lamp inspired by the other kind of living things, animals! Complete your animal themed nightlight to comfort people in the dark that we designed last half term.
No. of lessons	3
Unit Content	<p style="text-align: center;">Application of Knowledge and Skills 'Animal Night Light</p> <p style="text-align: center;">Make a nightlight for a younger child using animals as inspiration. Your light needs to be something that will help the child feel safe and calm at night. Evaluate your work and the work of others.</p> <p style="text-align: center;">Lesson 1: Revise and reflect on the start of the unit. Review designs. Make any alterations. Make design decisions</p> <p style="text-align: center;">Lesson 2: Construct your nightlight following your designs and using selected materials.</p> <p>Lesson 3: Review the work. Make any alterations, repairs, or improvements. Complete your nightlight. Evaluate your night light and the work of others. Can you recognise the animals that inspired the designs? Test out the nightlights in a blackout. Do all the nightlights offer 'comfort' or are some a bit scary? Select work and photographs for class portfolio.</p>
Milestones	<ul style="list-style-type: none"> • Make a product incorporating a simple battery-operated device. • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to designs. • Explore how products have been made and some of the people who made them. • Use basic design technology vocabulary to talk about the work of designers and work produced.

YEAR 2

TERM	SPRING 1
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Term Thread	Health
'EXPLORE' IDEAS	Manchester Museum (Living World and Vivarium)
Breadth of Study	Construction 'Moving Microbe Monsters'
Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person for Knowledge Web	Robert Ives
Link	We have been looking at how to stay healthy. In Science we learnt about a type of living thing called germs. We took inspiration from germs in our artwork. We are going to continue to look at germs. This time we will use them as inspiration as Design Technologists. We will be making moving toys to help teach children what germs are. Another word for the tiny living things around us such as bacteria and virus' is microbes. We are going to be working as Designers to make 'Moving Microbe Monsters'.
No. of lessons	3
Unit Content	<p>Development of Knowledge and Skills</p> <p>Learn about different mechanisms. Use your learning to design a 'Moving Microbe Monster' to help little children understand the importance of good hygiene. You will be designing and gaining the skills ready to make your 'Moving Microbe Monsters' next half term.</p> <p>Lesson 1: Exam and discuss the design brief. Explore cartoons of bacteria and viruses. Make a 'Wash your hands' poster using the worksheet to help you with your own cartoons of germs and virus's.</p> <p>Lesson 2: Introduction to simple mechanics: levers, pulleys, and winding mechanisms. Look at the work of Rob Ives. Follow the instructions to make a moving toy using a lever (Peg toy) use the germ design from the previous lesson.</p> <p>Lesson 3: Follow the instructions to make a moving toy using a pulley (loops onto door handle) use the germ design from lesson 1. Introduction to Winding mechanisms ready for designing and making a winding mechanism toy next half term. Request all pupils to find a suitable box. Display work and discuss outcomes and processes. Select work for class portfolio.</p>
Milestones	<ul style="list-style-type: none"> • Create products using levers, pullies and winding mechanisms. • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to designs. • Explore how products have been made and some of the people who made them. • Use basic design technology vocabulary to talk about the work of designers and makers and work produced.

YEAR 2

TERM	SPRING 2
Term Thread	Health
'EXPLORE' IDEAS	Trip to the Village of Eyam
Breadth of Study	Construction 'Moving Microbe Monsters'
Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person for Knowledge Web	Robert Ives
Link	We just finished a beautiful artwork based on germs! Across this term we have been learning about illness and health including looking at the village of Eyam. The people who live there tried very hard to keep everyone else safe when they were ill. One way we can keep ourselves and other people safe when there is an illness is to wash our hands. This keeps away the microbes! We will continue our Health themed work to complete our design technology project called Moving Microbe Monsters. We will apply our learning about mechanisms to and work as designers and makers to create another moving toy. This time the toy will show people that they need to wash their hands before eating so they don't get micro monsters in their mouth.
No. of lessons	3
Unit Content	<p>Application of Knowledge and Skills</p> <p>Make 'Moving Microbe Monster' to help little children understand the importance of good hygiene. You will be using a winding mechanism within your toy and will make your own design decisions.</p> <p>Lesson 1: Revise and reflect on the start of the unit including looking at mechanisms covered- lever and pulley. Begin construction of basic toy.</p> <p>Lesson 2: Introduction to winding mechanisms. Create design for winding mechanism based on available materials. Review designs. Select materials and continue construction of the toy so it can move.</p> <p>Lesson 3: Review the work. Make any alterations, repairs, or improvements. Complete your Moving Microbe Monster. Evaluate your toy and the work of others? Which toys moved successfully? Which 'Microbe Monsters' looked the most effective? Select work and photographs for class portfolio.</p>
Milestones	<ul style="list-style-type: none"> • Create products using levers, pullies and winding mechanisms. • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to designs. • Explore how products have been made and some of the people who made them. • Use basic design technology vocabulary to talk about the work of designers and makers and work produced.

YEAR 2

TERM	SUMMER 1
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Term Thread	Our Country
'EXPLORE' for ½ term (trip, visitor, experience)	Salford Quays (old Docks)
Breadth of Study	MATERIALS 'Welcome to the UK!
Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person/People	Yoojin Kim, Yevgeniya Yeretskaya and Matthew Reinhart
Link	In science we have been learning about the suitability of some materials we have also been learning about plants. Plants grow and we grow! We are all growing up in the United Kingdom. Some people were born here, and other people migrated, this means they came from other countries. In geography this half term, we will be learning about the United Kingdom. We will also be learning about a time when lots of people arrived from a different part of the world. When a new person comes to our school, we welcome them. A new person can mean a new friend, new ideas, new skills to share, maybe new games. It is good to make people feel welcome. We are going to work as designers to make welcome cards for people who have newly arrived in our country from places around the world. People are sometimes forced to leave their home countries because of bad things happening there. Those people are refugees. The word come from refuge which means a place of safety. It is good if people who have come to our country to be safe, feel welcomed. We are going to work as designers to make welcome cards to give to refugees and new arrivals to our country. They will be pop-up cards with famous building and landmarks from all the countries of the UK.
No. of lessons	3
Unit Content	Development of Knowledge and Skills Lesson 1: Introduction. Look at examples of pop-up designers including – Paper Engineers Yoojin Kim, Yevgeniya Yeretskaya and Matthew Reinhart. Look at pop up books including 'Paddington Pop-Up London' (Paddington Bear is a migrant who emigrated to Britain from Peru in South America!). Watch film by creative team - Try 2 pop up methods – V folds/counter fold which we use to make a face saying welcome. Lesson 2: Watch film – try box layers techniques- two versions. Then show how building can be added- drawing on then adding buildings (buildings are pre-drawn for pupils to cut out.) Lesson 3: Draw buildings and major landmarks from cities including capital cities around the UK in preparation for including in Welcome cards that will be made next half term- store work safely in labelled envelopes. Display work and discuss outcomes and processes. Select work for class portfolio.
Milestones	<ul style="list-style-type: none"> • Cut materials safely using tools provided. • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting and folding). • Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen). • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to designs. • Explore how products have been made and some of the people who made them. • Use basic design technology vocabulary to talk about the work of designers and makers and work produced.

YEAR 2

TERM	SUMMER 2
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Term Thread	Our Country
'EXPLORE' for ½ term (trip, visitor, experience)	Windrush Visitor
Breadth of Study	MATERIALS 'Welcome to the UK!
Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person/People	Yoojin Kim, Yevgeniya Yeretskaya and Matthew Reinhart
Link	As Historians have been finding out about how it was difficult for the people who were part of the Windrush generation to come to our country because of racist ideas. We also found out about how people who migrated from different countries around the world brought their culture with them which we have just been celebrating when we were working as Artist. We are going to finish our work celebrating our multi-cultural country by being Designers and make 'Welcome' cards for refugees and migrants who have newly arrived in our country. They will be pop-up cards with famous building and landmarks from all the countries of the UK that we were exploring as Geographers. We will be using card and paper as these are the most suitable materials, remember we have been looking at materials are scientists!
No. of lessons	3
Unit Content	Application of Knowledge and Skills Lesson 1: Revisit previous half term- recap on basic skills. Design 'Welcome to the UK' pop-up card based on box layers- use buildings drawn last half term to help with designs selecting some of the buildings sketched and consider layout Lesson 2: Begin Interior card construction based on designs Lesson 3: Review work so far, make any alterations then complete card including decoration of the front of the card and writing a message for inside. Evaluate work. Select work and photographs for class portfolio.
Milestones	<ul style="list-style-type: none"> • Cut materials safely using tools provided. • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting and folding). • Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen). • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to designs. • Explore how products have been made and some of the people who made them. • Use basic design technology vocabulary to talk about the work of designers and makers and work produced.

YEAR 3

TERM

AUTUMN 1

Term Thread	Stones and Bones
'EXPLORE' (visit, visitor, experience)	Manchester Museum Animals Gallery
Breadth of Study	TEXTILES
Threshold Concept	1. Master practical skills 2. Design, make, evaluate, improve 3. Take Inspiration from designers, artists and products.
Key Person for Knowledge Web	Handspring Puppet Company
Link	When we were working as Artists, we were drawing parts of the human body and we discovered that at early ancestors the Stone Age people, made lots of cave art, where they drew and painted lots of animals. We've also been looking at animals as scientists. Later on this term we will be finding out about the Stone Age and also about a part of the world called Europe. There is a lot of diversity across all 46 European countries, in geographical features, population and habitats for different animals including moose in Sweden, brown bear Russia, Lynx in Romania and grey wolves in Russia. During the Stone Age there was even more diversity of animals living in the UK and other parts of Europe including some really big, scary and surprising creatures which are now extinct. We will be continuing our work as Designers. In Design Technology you will be designing puppets based on the Stone Age animals.
No. of lessons	3
Unit Content	<p style="text-align: center;">Development of Knowledge and Skills 'Prehistoric Puppets'</p> <p>Design a fabric glove puppet of a Stone Age animal to be played with at a museum. Your puppet needs to look good, look like your chosen animal and be strong enough to be played with. You will be designing and gaining the skills ready to make your glove puppet next half term.</p> <p>Lesson 1: Exploring puppets as designers. PowerPoint presentation looking at examples of different types on puppets including animals made by Handspring Puppet company. Look at examples of animal glove. Complete the first challenge and make a paper bag hand puppet of an animal roaming around in Stone Age Britain.</p> <p>Lesson 2: Developing textiles skills which will be used in making puppet next half term. Begin to create a 'sampler' showing techniques. Focus on running-stitch, back-stitch and over-stitch.</p> <p>Lesson 3: Continuing developing textiles skills which will be used in making puppet next half term. Finish 'sampler' showing techniques. Focus on appliqué, button and bead securing.</p> <p>Display work and discuss outcomes and processes. Select work for class portfolio.</p>
Milestones	<ul style="list-style-type: none"> • Understand the need for a seam allowance. • Join textiles with appropriate stitching. • Select the most appropriate techniques to decorate textiles. • Design with purpose by identifying opportunities to design. • Identify and take inspiration from the work of other designers and artists to generate ideas for designs. • Improve upon existing designs, giving reasons for choices.

YEAR 3

TERM	AUTUMN 2
Term Thread	Stones and Bones
'EXPLORE' (visit, visitor, experience) IDEAS	Rot or Not archaeology workshop OR Archaeologist from MMU or Manchester Museum
Breadth of Study	TEXTILES
Threshold Concept	1. Master practical skills 2. Design, make, evaluate, improve 3. Take Inspiration from designers, artists and products.
Key Person for Knowledge Web	Handspring Puppet Company
Link	We have been working as historians to find out more about the Stone Age. We know that people had to work hard to survive and that they hunted animals to eat. We also know that there were different animals living in Britain in that time. We are going to carry on our work now as designers, On the project we started where we were learning how to sew and make puppets. Now that we have learnt some important skills, we are going to design and make our own puppet. The puppets are going to be inspired by prehistoric animals that archaeologists have proved lived in Britain during the Stone Age.
No. of lessons	3
Unit Content	Application of Knowledge and Skills 'Prehistoric Puppets' Make a fabric glove puppet of a Stone Age animal to be played with at a museum. Your puppet needs to look good, look like your chosen animal and be strong enough to be played with. You designed your puppet last half term and will now realise your design. Lesson 1: Revise and reflect on the start of the unit including the design brief for a textile puppet. Look through the PowerPoint presentation on animals found in Stone Age Britain. Select an animal on which to base your design. Complete the design sheets. Keep safe for use next half term. Make templates to fit your hand allowing for seam allowance. Lesson 2: Review designs. Make any alterations. Begin to construct your glove puppet by cutting around your templates onto felt. Add decoration and embellishments to the front and back section of your glove puppet (ensure you leave seam allowance) to realise your design. Lesson 3: Review the work. Make any alterations, repairs, or improvements. Construct your glove puppet in felt using blanket and/or running stitch. Check for any flaws and make any corrections. Display, discuss and evaluate the work. Select pieces to go into class portfolio
Milestones	<ul style="list-style-type: none"> • Understand the need for a seam allowance. • Join textiles with appropriate stitching. • Select the most appropriate techniques to decorate textiles. • Design with purpose by identifying opportunities to design. • Identify and take inspiration from the work of other designers and artists to generate ideas for designs. • Improve upon existing designs, giving reasons for choices.

YEAR 3

TERM	SPRING 1
Term Thread	The Bronze Age

'EXPLORE' (visit, visitor, experience) IDEAS	Carving and Casting Exercise
Breadth of Study	MATERIALS
Threshold Concept	*Master Practical Skills * Design , make, evaluate, improve. *Take Inspiration
Key Person for Knowledge Web	Kate Malone and Halima Cassell
Link	We have been working as Scientists over the past two weeks. We found out about rocks and soil and then plants- especially flowers and seeds. Later this half term we will be working as historians looking at the Bronze Age and a group of people called the Bell Beaker People who brought new ideas from different parts of the world. The Bell Beaker people were so called because of the clay bell-shaped drinking pots they made; a beaker is another word for a cup. We are going to work as Designers to learn how to work with clay. This is so we can design a clay pot, which we will make next half term. We will, explore ways of adding decorations and creating pots inspired by nature including, plants and seeds. This will also link to our science project, as clay is a type of rock, which when it breaks down makes a very soft clay soil.
No. of lessons	3
Unit Content	<p style="text-align: center;">Development of Knowledge and Skills 'Natural Form Pots'</p> <p>Learn about different techniques to make and decorated pots made from clay. Use your learning to design a pot inspired by nature to use as a decorative storage pot. You will be designing and gaining the skills ready to make your 'Natural Form Pots' next half term.</p> <p>Lesson 1- Examine and discuss the design brief. Look at Bell Becker Peoples pots. Look at a range of ceramic artists inspired by natural materials including Manchester artist Halima Cassell who used clay collected from countries all around the world and Kate Malone, who makes pots in the shape of natural forms like fruits and seeds. Discuss natural forms, make a collage of natural forms using the worksheets.</p> <p>Lesson 2- Experiments with the clay. Make a thumb pot followed by a coil pot - decorating your pots with natural objects pressed into the surface.</p> <p>Lesson 3- Experiments with clay. Using guide and rollers and a mould. Make a simple leaf shaped bowl. Draw natural forms ready to help with the project continuing next half term. Display work and discuss outcomes and processes. Select work to photograph or class portfolio.</p>
Milestones	<ul style="list-style-type: none"> <li style="text-align: center;">• Design with purpose by identifying opportunities to design. <li style="text-align: center;">• Make products by working efficiently (such as by carefully selecting materials). <li style="text-align: center;">• Refine work and techniques as work progresses, continually evaluating the product design. • Cut and shape materials accurately and safely by selecting appropriate tools. • Measure and mark out to the nearest centimetre. <li style="text-align: center;">• Apply appropriate cutting and shaping techniques. • Select appropriate joining techniques.

YEAR 3

TERM	SPRING 2
Term Thread	The Bronze Age
'EXPLORE' (visit, visitor, experience) IDEAS	Grow your own crops like Bronze Age farmers
Breadth of Study	MATERIALS
Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person for Knowledge Web	Kate Malone and Halima Cassell
Link	Last half term we were working as Historians to understand the big changes that came to Britain with the migration of people and their ideas. Designers use other people's ideas to develop new and exciting works. You are now going to continue to work as designers to make your clay pot. You are using a material which was so important to the early farmers and Bronze Age people including the Bell Beaker People. When you were working as Scientists you were experimenting with seed dispersal. Perhaps some of you have used seeds and seed pods in your design?
No. of lessons	3
Unit Content	<p style="text-align: center;">Application of Knowledge and Skills 'Natural Form Pots'</p> <p style="text-align: center;">Use skills you have learnt to design and make a natural form inspired pot.</p> <p>Lesson 1: Revise and reflect on the start of the Nature Pots unit. Look at gathered natural forms and your inspiration board. Look at the Design Brief. Design a pot inspired by a natural form of your choice (inspire by Kate Malone). Your design needs to use two colours of the natural clay (inspired by Manchester artist Halima Cassell) Review designs. Make any alterations. Watch the slab clip to remind yourself of the basic techniques. Begin preparing and measuring out the sections of your pot in the clay. Cover with a damp cloth and clingfilm ready for the next lesson.</p> <p>Lesson 2: Begin to construct your pot using a combination of slab, pinch and coil. Look at your designs again then continue construction of your pot. Wrap it to keep it damp again at the end of the lesson.</p> <p>Lesson 3: Review the work. Make any alterations, repairs, or improvements. Complete your pot construction and decoration with reference to your designs. Display, discuss and evaluate the work. Select pieces to document and go into class portfolio</p>
	<ul style="list-style-type: none"> • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Cut and shape materials accurately and safely by selecting appropriate tools. • Measure and mark out to the nearest centimetre. • Apply appropriate cutting and shaping techniques. • Select appropriate joining techniques.

YEAR 3

TERM	SUMMER 1
Term Thread	Iron Age Britain
'EXPLORE' (visit, visitor, experience) IDEAS	Moving mega Ms at Mellor Hill Fort and round house
Breadth of Study	MECHANICS
Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person for Knowledge Web	Al-Jazari
Link	We started our new term working as Scientists. We looked at a particular force called magnetism. There are other kinds of forces. Forces just means something that pushes or pulls an object. There are machines we use to help us with forces. Simple machines such as wheels. Wheels had first been invented in the Middle East during the Bronze Age. The first wheels were just log rollers which later developed into a true wheel. Wheeled carts and chariots were well established in Britain during the Iron Age. Wooden, hand and oxen drawn carts, were hugely important for transporting crops and goods. We are going to work as Design Technologists to learn more about the simple machine that is a wheel and axel. We will experiment moving loads with rollers and making wheeled carts, which we will use when working as Scientists exploring more forces next half term.
No. of lessons	3
Unit Content	<p style="text-align: center;">Development of Knowledge and Skills 'Wheelie Clever Inventions'</p> <p>Lesson 1: Introduction to wheels. Watch the film clip made by Creative Team about the use of rollers then wheels in prehistory. In small teams, experimenting moving a brick with rollers.</p> <p style="text-align: center;">Lesson 2: Using the available materials follow the directions to make and test a mini cart to carry small weights.</p> <p>Session 3: Other uses of wheels. Wheels and axels are very useful for other things. Watch Year 2 films about pullies and winding mechanisms. Introduction to cams. History from Ancient China and later appeared in mechanisms by Al-Jazari who used them in his automata, described in 1206. They were not used in Europe until the 14 Century. Observe that they work as a wheel on an axel, but because of either their altered shape or repositioning the axel, they can change rotational into linear motion (from going round and round- they make things go up and down!). Make an example of an eccentric (where the axel is off-centre, pear and snail cam with simple followers.</p>
Milestones	<ul style="list-style-type: none"> <li style="text-align: center;">• Design with purpose by identifying opportunities to design. <li style="text-align: center;">• Make products by working efficiently (such as by carefully selecting materials). <li style="text-align: center;">• Refine work and techniques as work progresses, continually evaluating the product design. <li style="text-align: center;">• Create products using wheels and cams. • Use scientific knowledge of the transference of forces when making products

YEAR 3

TERM	SUMMER 2
Term Thread	Iron Age Britain
'EXPLORE' (visit, visitor, experience) IDEAS	Visit to Mam Tor
Breadth of Study	MECHANICS
Threshold Concept	*Master Practical Skills * Design , make, evaluate, improve. *Take Inspiration
Key Person for Knowledge Web	Al Jazari, Leonardo Da Vinci Paul Spooner
Link	Soon we will go on our visit to Mam Tor to work as Geographers to do some fieldwork. We will be travelling by minibus to get there. We would have a very long way to walk if it was not for wheels! As Design Technologists last half term we explored the simple machine- the wheel. We discovered that as well as being used to transport people and things, that there are other uses for wheels which can spin on an axel. In the Iron Age Britain, some crafts people used potter's wheels to spin clay to shape their pots. As Designers we will be exploring wheels and axels further including the use of cams, which uses turning motion to make something move up and down. We will be taking inspiration from the Iron Age, by using Celtic animal designs for our automata.
No. of lessons	3
Unit Content	<p style="text-align: center;">Application of Knowledge and Skills 'Wheelie Clever Inventions'</p> <p>Lesson 1: Watch the film on different ways automata can be made using simple cams. Use the design sheet to design a automata of a moving animal drawn in a Celtic decorative style. You must use at least 1 cam so that your animal can move.</p> <p>Lesson 2: Selecting from available materials begin construction of your automata.</p> <p>Lesson 3: Review the work. Make any alterations, repairs, or improvements. Complete your Celtic animal automata construction and decoration with reference to your designs. Test your automata and evaluate your own and others work.</p>
Milestones	<ul style="list-style-type: none"> • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Create products using wheels and cams. • Use scientific knowledge of the transference of forces when making products

YEAR 4

TERM	AUTUMN 1
Term Thread	The Romans
'EXPLORE' for ½ term (trip, visitor, experience)	Visit the Manchester Art Gallery
Breadth of Study	CONSTRUCTION 'Catapult Competition!'
Threshold Concept	1. Master practical skills 2. Design, make, evaluate, improve 3. Take Inspiration from designers, artists and products.
Key Person/People	Dionysius the Elder of Syracuse (inventor of the Catapult)
Link	As artists we have been painting battle scenes imagined between A Roman centurion and the Celtic warrior. The Romans didn't just fight hand-to-hand they also had war machines and technology on their side. As Historians we will be studying the Roman Empire. The Romans successfully invaded other countries and built an empire due to the superior military strategy and weaponry. One weapon they used was a type of catapult. The catapult was invented in ancient Greece (in 399 BCE). The catapult is a device that hurls heavy objects or arrows over a large distance. The Romans later added wheels to the catapult to make it more manoeuvrable. Also called the ballista, this device was a major weapon of warfare for well over a thousand years. We are going to be working as Designers to make our own catapults, not as weapons of course, but as fun toys!
No. of lessons	3
Unit Content	<p>Development of Knowledge and Skills</p> <p>Pupils will learn construction skills in preparation a Roman inspired catapult game for children. The design will be based around a working catapult, which needs to be well made, safe to use and attractive to the child. The game components must be themed around the Roman invasion of Britain.</p> <p>Lesson 1: Exam and discuss the design brief. Watch the videos of Roman Catapults in action. Make and play with 2 basic catapults. Reflect on the designs discuss likes/dislikes/improvements/ how it was made etc.</p> <p>Lesson 2: Experiment in your pairs making a Roman style catapult from scrap materials. It will be this style of catapult pupils will be constructing for their game next half term, so this serves as a prototype.</p> <p>Lesson 3: Work in your pair to design the game that will accompany the Roman catapult you will be making next half term. Design the decoration for the catapult and any game components. Construct the rules/aim of your game to design your toy catapult as a pair. Make notes. Label materials and methods. Display work and discuss outcomes and processes. Select work for class portfolio.</p> <p>Useful support for teachers: https://seerih-innovations.org/tinkering4learning/resources/catapults/</p>
Milestones	<ul style="list-style-type: none"> • Develop a range of practical skills including cutting, nailing, gluing and sanding. • Develop use of tools, materials and practical techniques. • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Explore some of the great designers to generate ideas for designs. • Improve upon designs, giving reasons for choices. • Use design technology vocabulary to talk about the work of designers and work produced.

YEAR 4

TERM	AUTUMN 2
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Term Thread	The Romans
'EXPLORE' for ½ term (trip, visitor, experience)	Boudica in role
Breadth of Study	CONSTRUCTION 'Catapult Competition!'
Threshold Concept	1. Master practical skills 2. Design, make, evaluate, improve 3. Take Inspiration from designers, artists and products.
Key Person/People	
Link	We have just been painting a battle scenes between the Celtic warrior and a Roman centurion. We will continue now to make a miniature Roman war machine, not for battle but for fun! You will finish your catapult and the game pieces that accompany it. When you have finished, making your designs, celebrate by deciding which pair has the best catapult- The winners are presented with the traditional Roman award of a laurel leaf wreaths to wear - everyone else will be fed to the lions! (Possibly Ms. Lyons!) Which horrifically, is something else the Romans used to do!
No. of lessons	3
Unit Content	Application of Knowledge and Skills 'Catapult Competition!' In pairs, make a Roman themed catapult game. Use construction materials (nails, joints and strengthening with design) The design needs to work as a catapult game, be safe to use and attractive to a child. Lesson 1: Revise and reflect on the start of the unit. Follow instructions to cut wood in preparation for construction of construction of your catapult. Ensure tools are used safely. Lesson 2: Review the work. Make any alterations, repairs, or improvements. Complete your catapult and Roman inspired decoration. Lesson 3: In your pair review designs. Make your game components. Make any alterations. Present and demonstrate your catapult games to others. Evaluate your games – does achieve the design brief? Have a competition to see which pair constructed the best catapult. Select work and photographs for class portfolio.
Milestones	<ul style="list-style-type: none"> • Develop a range of practical skills including cutting, nailing, gluing and sanding. • Develop use of tools, materials and practical techniques. • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Explore some of the great designers to generate ideas for designs. • Improve upon designs, giving reasons for choices. • Use design technology vocabulary to talk about the work of designers and work produced.

YEAR 4

TERM	SPRING 1
Term Thread	The Romans in Britain and Manchester
EXPLORE' for ½ term (trip, visitor, experience)	Roman centurion visitor

Breadth of Study	ELECTRONICS 'Roman Quiz'
Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person/people	
Link	You are going to pull together the knowledge you have gained in science where you were developing your understanding of electricity and circuits. You also learnt about how sound is made and how we hear. As Historians you have learning about the Romans, their empire and how the conquered and ruled Britain. You are going to put this learning together to create and electronic game. You will work as Designers to create an electronic quiz board for people to answer questions about the Romans. The circuit will be complete when the player gets the question correct and a buzzer will sound!
No. of lessons	3
Unit Content	<p style="text-align: center;">Development of Knowledge and Skills</p> <p style="text-align: center;">Design a complete-the-circuit quiz game with facts about the Romans (Roman Empire, Roman Manchester, Key dates etc. Roman Gods etc)</p> <p>Lesson 1: Examine and discuss the design brief. In small teams look at and play with electronic games for inspiration. Look at the prototypes complete-the-circuit buzzer game. Discuss how they were made comparing what you can see to the drawing of the circuit.</p> <p>Lesson 2: Construct a simple prototype electronic quiz board by following the filmed instructions.</p> <p>Lesson 3: Work out your quiz questions you will be using in your game to be constructed next half term- try them out on each other. Display work and discuss outcomes and processes. Select work for class portfolio.</p>
Milestones	<ul style="list-style-type: none"> • Create a product using a simple circuit. • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Explore some of the great designers to generate ideas for designs. • Improve upon designs, giving reasons for choices. •Use design technology vocabulary to talk about the work of artists and work produced.

YEAR 4

TERM	SPRING 2
Term Thread	Roman Manchester

'EXPLORE' for ½ term (trip, visitor, experience)	Field Trip to Castle Field and the Roman Remains
Breadth of Study	ELECTRONICS 'Roman Quiz'
Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person/people	
Link	You will carry on using your understanding on electronics to finish making your electronic quiz board. Make sure you have some tricky questions about the Romans- you don't want it to be too easy! You will need to draw on what you have learnt to make the best working games. Enjoy playing with them when the hard work is done!
No. of lessons	3
Unit Content	<p style="text-align: center;">Application of Knowledge and Skills 'Roman Quiz'</p> <p style="text-align: center;">Design a complete-the-circuit quiz game with facts about the Romans (Roman Empire, Roman Manchester, Key dates etc. Roman Gods etc)</p> <p>Lesson 1: Revise and reflect on the start of the Roman Quiz unit. Design your game. You will need to design the circuit but also the look and style (the aesthetics) of your game to make it attractive and interesting to play with. You will need to make several design decisions</p> <p>Lesson 2: Review designs. Make any alterations. Begin to assemble your basic circuit board for your game following your design, begin by cutting out the shape of your board on corex and working on the electronic circuits.</p> <p>Lesson 3: Review the work. Make any alterations, repairs, or improvements. Complete your electronic game construction and decoration with reference to your designs. Ask others to play with your game and get their feedback as part of your evaluation. Evaluate your game and the work of others. Select work and photographs for class portfolio.</p>
	<ul style="list-style-type: none"> • Create a product using a simple circuit. • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Explore some of the great designers to generate ideas for designs. • Improve upon designs, giving reasons for choices. •Use design technology vocabulary to talk about the work of artists and work produced.

YEAR 4

TERM	SUMMER 1
Term Thread	All Change
EXPLORE' for ½ term (trip, visitor, experience)	Alderley Edge (Roman Mines)

Breadth of Study	FOOD 'Anglo Saxon/Viking Spread'
Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person/people	
Link	We have been learning about food chains and scientists, and we are going to learn about some food as designers. When the Romans arrived, they bought and traded many new things including food. After they left much of the foods remained. Other foods and drinks were no longer available due to changes of trade routes at the end of the Roman Empire. As Historians we will be learning about the people who settled in Britain after the Romans left. These people brought with them new cultures, including foods and ways of cooking. We are going to continue to explore changes made by migration by working as Designers to learn Saxon and Viking food traditions and cooking techniques. We will be making and tasting foods eaten by the Anglo Saxons and Vikings in what became England (Angle Land)
No. of lessons	3
Unit Content	<p style="text-align: center;">Development of Knowledge and Skills 'Anglo Saxon/Viking Spread'</p> <p>Lesson 1: Basic reminder on food hygiene and handling. Revisit safe food preparation skills including knife handling. Watch film on Viking Food https://www.bbc.co.uk/bitesize/clips/z4pnvcw Fruit oat cake. Teacher led making oat cake using simple recipe- pupils help by weighing ingredients. Have a go at grinding oat flour. Choose from sweet ingredients available in Anglo Saxon England to taste with it. Write out ingredients of basic oat cake- complete sheet on available sweet ingredients. Look at food pyramid to see where foods fall (ie Oats are a carbohydrate important for energy)</p> <p>Lesson 2: Milk, butter and cheese represented a significant part of the Anglo-Saxon diet. They were also used as payments handed over to the local lord or King. What are dairy products? Making butter in small groups and cheese as a class (teacher led). Butter and cheese refrigerated for the next lesson.</p> <p>Lesson 3: Teacher led Making flatbreads to taste. Looking at different flours. Sampling flatbreads with butter and cheese plus range of savoury ingredients- herbs etc. Write out recipe for basic flat bread- complete questionnaire about savoury ingredients. Display work and discuss outcomes and processes. Select work and photographs for class portfolio.</p>
Milestones	<ul style="list-style-type: none"> • Prepare ingredients hygienically using appropriate utensils. • Measure ingredients to the nearest gram accurately. • Follow a recipe. • Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking). • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Explore some of the great designers to generate ideas for designs. • Improve upon designs, giving reasons for choices. • Use design technology vocabulary to talk about the work of artists and work produced.

YEAR 4

TERM	SUMMER 2
Term Thread	All Change
EXPLORE' for ½ term (trip, visitor, experience)	Saxon cook out Examples of changes of state with fire and cooking

Breadth of Study	FOOD 'Anglo Saxon/Viking Spread'
Threshold Concept	*Master Practical Skills * Design , make, evaluate, improve. *Take Inspiration
Key Person/people	
Link	We have been exploring changes- Changes to Britain after it was no longer controlled by Rome, changes to boarders when Britannia became England and was then divided into Anglo Saxon and Viking areas. As Geographers we have explored how settlements change over time. We are now going to work as Designers to prepare and cook food inspired by Anglo-Saxon and Viking foods. We have worked as scientists to explore changes of states. By mixing foods and applying heat we will be changing states. We will be turning liquids into a gaseous state when we cook a vegetable stew called potage. We will be changing liquids into solids when we turn milk into butter and cheese
No. of lessons	3
Unit Content	<p style="text-align: center;">Application of Knowledge and Skills 'Anglo Saxon / Viking Spread'</p> <p>Lesson 1: Recap last half term content including carbohydrates and dairy products. Look again at the ingredient available to the Anglo Saxons/Vikings. Design a flat bread with savoury fillings and flavourings. Write out an ingredient list including toppings. (List needs to be handed in so ingredients can be purchased ready for the next lesson)</p> <p>Lesson 2: Prepare bread dough and ingredients including toppings- a package for refrigeration. Each table prepares a different vegetable for the potage (carrots, leeks, onions, cabbage, turnips and parsnips). Use safe food preparation skills. All ingredients prepped and packaged ready for cook out.</p> <p>Lesson 3: Anglo Saxon/Viking Cook out. Take all the ingredients to the forest school area. Meet Ms. Martin and Ms. Lyons for a 'cook out' experience on an open fire (including a cauldron for the vegetable potage with nettles, wild garlic and peas added) out using the ingredients prepared in the last lesson. Make whole class potage stew and cook flat breads on the fire in Saxon style. Sample with the potage. Evaluate the outcomes. Note: while the different teams cook their flat breads others will also try other relevant technologies and Anglo-Saxon crafts such as weaving. There will also be some Viking story telling around the fire. Select work and photographs for class portfolio.</p>
Milestones	<ul style="list-style-type: none"> • Prepare ingredients hygienically using appropriate utensils. • Measure ingredients to the nearest gram accurately. • Follow a recipe. • Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking). • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Explore some of the great designers to generate ideas for designs. • Improve upon designs, giving reasons for choices. • Use design technology vocabulary to talk about the work of artists and work produced.

YEAR 5

TERM	AUTUMN 1
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Term Thread	Rockets and Revolution
'EXPLORE' for ½ term (trip, visitor, experience)	Jodrell Bank
Breadth of Study	CONSTRUCTION 'Space Lanterns'
Threshold Concept	1. Master practical skills 2. Design, make, evaluate, improve 3. Take Inspiration from designers, artists and products.
Key Person/People	
Link	In art we looked at representation of work and working people. As Historians we will learn about the way work changed for people. Workers used to make things in their homes and in small workshops, then due to the Industrial Revolution, they began working with machines in massive factories. People lost the ability to make traditional arts and crafts as they no longer had free time. We are going to work with our hands and make our own things. We are going to make withie lanterns for our school's annual lantern parade. We will work as Designers taking inspiration from our science lessons to design space themed lanterns.
No. of lessons	3
Unit Content	Development of Knowledge and Skills Design a lantern for our community lantern parade. The theme is 'Space' so you can take inspiration from, planets, rockets (not Stephenson's Rocket but space rockets!), stars, the moon anything you can think on as long as it is 'out of this world' Work in pairs to design your lantern. Lesson 1: Exam and discuss the design brief. Investigate a range lanterns from images online. Look at images of our lantern made for past Winter Welcoming parades. Reflect on the designs discuss-likes/dislikes/improvements/how it was made mind make space design sheet. Collect images to do with space and lanterns and make an Inspiration board. Introduction of Arts and Crafts Movement. Lesson 2: Look at the construction of one of our parade lanterns. Identify the materials and how it was made. Watch the construction clips to gain understanding of the materials and techniques. MAKE STAR out of wooden splints and 2 withies circles one wet with wire 1 dry with tape. Lesson 3: Sketch different ideas for your lantern. When you and your partner have a design you both like, complete the design sheet and annotate your work. Make a skeleton prototype using wooden spills. Display work and discuss outcomes and processes. Select work for class portfolio.
Milestones	<ul style="list-style-type: none"> • Further develop a range of construction skills and techniques to create products • Strengthen materials using suitable techniques. • Choose suitable techniques to construct products or to repair items. • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making refinements. • Ensure products have a high-quality finish, using art skills where appropriate. • Use prototypes and annotated diagrams • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements to the user experience. • Comment on and explain designs and products with a strong grasp of design technology vocabulary

YEAR 5

TERM	AUTUMN 2
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Term Thread	Rockets and Revolution
'EXPLORE' for ½ term (trip, visitor, experience)	Science and Industry Museum
Breadth of Study	CONSTRUCTION 'Space Lanterns'
Threshold Concept	1. Master practical skills 2. Design, make, evaluate, improve 3. Take Inspiration from designers, artists and products.
Key Person/People	
Link	In Science we looked at how the rotation of the Earth creates night and day. During Winter, the days get shorter and the time when we are in darkness gets longer. As part of our community Winter Welcoming Celebration. We all come together as darkness falls and light our lanterns to cheer our spirits and celebrate being together in the long cold winter. Work as a designer to finish your space themed lanterns ready to carry in the parade.
No. of lessons	3
Unit Content	<p style="text-align: center;">Before Art Application of Knowledge and Skills 'Space Lanterns'</p> <p>Construct a lantern for our community lantern parade. The theme is 'Space' so you can take inspiration from, planets, rockets (not Stephenson's Rocket but space rockets!), stars, the moon anything you can think on as long as it is 'out of this world' Work in pairs to design your lantern.</p> <p>Lesson 1: Revise and reflect on the start of the unit. Review designs. Make any alterations. Measure and cut withies to size and begin to construct the skeleton structure of your lantern.</p> <p>Lesson 2: Continue to build your lantern. Ensure you have your paper 'skin' stuck in place by the end of the lesson.</p> <p>Lesson 3: Review the work. Make any alterations, repairs, or improvements. Complete your lantern by adding colour decoration and detail as appropriate. While the work is drying walk around the room and view each other's work. You can only assess and evaluate the success of your lantern when you see it lit in the darkness on the parade. Select work and photographs for class portfolio.</p>
Milestones	<ul style="list-style-type: none"> • Further develop a range of construction skills and techniques to create products • Strengthen materials using suitable techniques. • Choose suitable techniques to construct products or to repair items. • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making refinements. • Ensure products have a high-quality finish, using art skills where appropriate. • Use prototypes and annotated diagrams • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements to the user experience. • Comment on and explain designs and products with a strong grasp of design technology vocabulary

YEAR 5

TERM	SPRING 1
Term Thread	Machinery and Manchester
EXPLORE' for ½ term (trip, visitor, experience)	Quarry Bank Mill
Breadth of Study	MECHANICS 'Wind and Water'

Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person/people	
Link	In Science we have been looking at movement and forces which make machines work. In History we have been looking at how the world changed due to the development of machinery and factories. In Geography this term we will begin to look at the impact of these changes to our environment and climate. Just as developing our understanding led to machines and factories which pollute our environment, our scientific understanding can also get us out of climate catastrophe. For thousands of years before the industrial revolution we harnessed the power of the wind and flowing water to create energy and make things move. We need to do this more now, so we stop burning oil, gas and coal to power our world. We are going to work as Designers to create toys which are powered by wind and water- we will also recycle and reuse scrap materials as this is another way, we can save energy.
No. of lessons	3
Unit Content	<p style="text-align: center;">Development of Knowledge and Skills</p> <p style="text-align: center;">Design a wind or water powered toy using recycled materials to help save our planet!</p> <p>Lesson 1: Examine and discuss the design brief. Explore the work of designer and inventor William Kamkwamba. Follow the film instructions to make a pin-wheel out of scrap paper.</p> <p>Lesson 2: Recap on previous lesson – further introduction to artists and inventors who harness wind and waterpower with exploring the work of Theo Jansen and William Kamkwamba. Play with some of the simple wind and water powered toys and discuss the mechanisms involved. Work in pairs and follow the film instructions to make two types of wind powered cars from scrap and compare the effectiveness.</p> <p>Lesson 3: Follow the film instructions to construct a water-paddle boat. Watch the selected films to get inspiration for the kind of wind/water powered toys you may wish to make next half term. Discuss the sorts of scrap materials you need to begin collecting for making the toys. Display work and discuss outcomes and processes. Select work for class portfolio.</p>
Milestones	<ul style="list-style-type: none"> • Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms or pulleys). • Use innovative combinations of mechanics in product designs. • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making refinements. • Ensure products have a high-quality finish, using art skills where appropriate. • Use prototypes and annotated diagrams • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements for the user • Comment on and explain designs and products with a strong grasp of design technology vocabulary.

YEAR 5

TERM	SPRING 2
Term Thread	Machinery and Manchester
'EXPLORE' for ½ term (trip, visitor, experience)	River Trip East Lancashire Railway – Take the tram to Bury then ride on a steam train or John Ryland Library.
Breadth of Study	MECHANICS

'Wind and Water'	
Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person/people	
Link	In Geography we looked at the impact of global warming and the need for renewable energies like wind and waterpower. We will continue our work by making our wind or water powered toy we worked on as Designers last half term.
No. of lessons	3
Unit Content	<p style="text-align: center;">Application of Knowledge and Skills</p> <p style="text-align: center;">Design, construct and evaluate a wind or water powered toy using recycled materials to help save our planet!</p> <p>Lesson 1: Recap the start the unit from previous half term. In pairs design your own wind or water powered toy. Draw diagrams of the mechanical aspects. Consider scrap materials you want to find. Discuss your design with your partner.</p> <p>Lesson 2: Review design and make any alterations. Select your construction materials and begin construction of your toy.</p> <p>Lesson 3: Review the work. Make any alterations, repairs, or improvements. Complete your toy adding any detail or decoration. Demonstrate your toy and present your work to your class. Evaluate your work and the work of others. Select work and photographs for class portfolio.</p> <ul style="list-style-type: none"> • Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms or pulleys). • Use innovative combinations of mechanics in product designs. • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making refinements. • Ensure products have a high-quality finish, using art skills where appropriate. • Use prototypes and annotated diagrams • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements for the user • Comment on and explain designs and products with a strong grasp of design technology vocabulary.

YEAR 5

TERM	SUMMER 1
Term Thread	Making Change
EXPLORE' for ¼ term (trip, visitor, experience)	People's History Museum
Breadth of Study	FOOD 'Frugal Food Cookbook'

Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person/people	Marcus Rashford and Jack Monroe
Link	We are exploring the theme of 'Making Change' over this term. We have already worked as Scientists exploring changes that happen over the lifetime of different animals and reversible and non-reversible changes. Later in History we will learn how people made positive changes to make society fairer. One way in which society is not fair, is that some people do not have enough to eat. This is known as food poverty or food insecurity. This was a big problem for people in the industrial revolution, but it's still a big problem today, in countries all around the world including our own. Families, for no fault of their own, do not have enough money to be able to feed their families as they would like to, or make sure they get the nutrients they need to be healthy. Doctors say we should all be eating 7 portions of fruit or vegetables a day-this can be hard for some families. We are going to continue our work on change by working as Design Technologists. We will be designing and making a recipe book as a class with affordable recipes that will give people lots of fruit, vegetables and energy to help tackle ill health due to food insecurity.
No. of lessons	3
Unit Content	<p style="text-align: center;">Development of Knowledge and Skills</p> <p style="text-align: center;">Learn cooking and budgeting skills and understand nutrition and food poverty</p> <p>Lesson 1: Introduction to difficulties with food insecurity and people involved in tackling food poverty including: Teacher demonstration to make 'carrot cake' porridge. Opportunity to demonstrate safe working practices. Pupils taste porridge and discuss other ways to flavour and add nutrients (mashed banana, frozen berries, peanut butter etc).</p> <p>Lesson 2: Nutrition- What do we need? Focus on protein (ensure that pupils understand this can be plant based), carbohydrates (for slow-release energy) and fruits and vegetables (emphasis on vegetables for Vitamins and other essential nutrients. Work in teams to design a recipe for vegetable couscous within a limited budget.</p> <p>Lesson 3: Knife and food preparation skills with pupils working in teams to make a nutritious and tasty plant-based meal of a cous-cous salad as designed in lesson 2. Discuss outcomes and processes. Select work and photographs for class portfolio.</p>
Milestones	<ul style="list-style-type: none"> • Understand the importance of correct storage and handling of ingredients. • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. • Demonstrate a range of cooking techniques. • Create and refine recipes. • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making refinements. • Ensure products have a high-quality finish, using art skills where appropriate. • Use prototypes and annotated diagrams • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements to the user experience. • Comment on and explain designs and products with a strong grasp of design technology vocabulary.

YEAR 5

TERM	SUMMER 2
Term Thread	All Change
EXPLORE' for ½ term (trip, visitor, experience)	River Trip
Breadth of Study	FOOD

'Frugal Food Cookbook'	
Threshold Concept	*Master Practical Skills * Design , make, evaluate, improve. *Take Inspiration
Key Person/people	
Link	Over this term, we have been working as Artists to look at ways of expressing the things we believe need to change. In History we also looked at how people changed things for the better. A big part of why people fought to have the vote, was because the price of bread got so expensive. People were paid so badly, that they could no longer eat and feed their families. This led to people protesting to make sure bread was cheaper but also to get the vote, so they had people in Parliament to represent them and their needs. We looked as historians at people who lived or worked in Manchester who campaigned for change. Someone who was born in Manchester and who has been campaigning to help make the world fairer is footballer Marcus Rashford. During covid lots of people lost their jobs or lost their usual pay. This has meant it has been harder for people to feed their families. People have needed to use food banks and people like Manchester footballer Marcus Rushford have led campaigns to make sure children get the food they need. We are going to work as Design Technologists to create healthy meals with lots of vegetables for a low cost.
No. of lessons	3
Unit Content	<p>Application of Knowledge and Skills</p> <p>'Frugal Food'</p> <p>Work as a class to make a recipe book of low-cost nutritious plant-based meals to help tackle food insecurity.</p> <p>Lesson 1: Recap on previous half terms learning. Watch film of Marcus Rashford getting Campaigner of the Year award from anti-poverty campaigner Jack Monroe. https://www.youtube.com/watch?v=0L08G0ywoHU Watch Dr Rupy cooking budget rice dish with anti-poverty campaigner Jack Monroe https://www.bbc.co.uk/food/recipes/smoky_vegetable_43212 Challenge is set to create a low-cost, one-pot rice dish that can be put into a class cookery book.</p> <p>Lesson 2: Watch film showing basic reminders on food handling and safe preparation. Work as a team to prepare the one-pot rice dish as planned in the previous lesson. Present and photograph the finished dish, taste and evaluate. Add any notes or changes to original recipe.</p> <p>Lesson 3: Creating a class recipe book 'Frugal Food'. (Note: could use computers if ICT suite is available). Write a class Tweet to Marcus Rashford and Jack Monroe sending pictures of your recipes and dishes #endchildfoodpoverty. Select work and photographs for class portfolio.</p>
Milestones	<ul style="list-style-type: none"> • Understand the importance of correct storage and handling of ingredients. • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. • Demonstrate a range of cooking techniques. • Create and refine recipes. • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). <ul style="list-style-type: none"> • Make products through stages of prototypes, making refinements. • Ensure products have a high-quality finish, using art skills where appropriate. • Use prototypes and annotated diagrams • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements to the user experience. <ul style="list-style-type: none"> • Comment on and explain designs and products with a strong grasp of design technology vocabulary.

YEAR 6

TERM	AUTUMN 1
Term Thread	Africa and Ancient Egypt
'EXPLORE' for ½ term (trip, visitor, experience)	Ancient Egyptian Artefacts and samples of cuneiform tablets from Manchester Museum (possibly with the inflatable)

Breadth of Study	TEXTILES 'African Exhibition Bag'
Threshold Concept	1. Master practical skills 2. Design, make, evaluate, improve3. Take Inspiration from designers, artists and products.
Key Person/People	A Range of African Artisans
Link	We have just taken inspiration from artists from around the world who you work in their artwork. We are now going to explore patterns rather than words. As Geographers we will be exploring countries of the continent of Africa, and we will be looking at ancient Egypt as historians. We are now going to work as designers and take inspiration from the artwork and crafts of this vast and varied continent of Africa to create design our work.
No. of lessons	3
Unit Content	Development of Knowledge and Skills Develop textile skills and design a fabric bag inspired by Pan African design for an exhibition at Manchester Museum on African cultures Lesson 1: Exam and discuss the design brief. Investigate a range of tote bags and other style of fabric bags. Reflect on the designs discuss-likes/dislikes/improvements/how it was made etc. Use African patterns and designs including Egyptian hieroglyphics, West African Adinkra Symbol and Zulu beading patterns to decorate a paper gift bag. Lesson 2: Further explore African patterns and designs including Egyptian hieroglyphics, West African Adinkra Symbol and Zulu beading patterns. Experiment with making simple stencils and stencilling Lesson 3: Design your gift bag- include the shape and form as well as the pattern and decorative features in your design. You must incorporate stencilling, stitching and beading in the design of the bag. Display work and discuss outcomes and processes. Select work for class portfolio.
Milestones	<ul style="list-style-type: none"> • Join textiles with appropriate stitching. • Create objects (such as a bag) that employ a seam allowance. • Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration). • Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles • Employ a wide range of decorative techniques including, appliqué, embroidery, beading, stencilling and using fabric paints • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making refinements. • Ensure products have a high-quality finish, using art skills where appropriate. • Use prototypes and annotated diagrams • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements for the user. • Comment on and explain designs and products with a strong grasp of design technology vocabulary.

YEAR 6

TERM	AUTUMN 2
Term Thread	Africa and Ancient Egypt
'EXPLORE' for ½ term (trip, visitor, experience)	Bolton Museum Ancient Egyptian collection

Breadth of Study	TEXTILES 'African Exhibition Bag'
Threshold Concept	1. Master practical skills 2. Design, make, evaluate, improve 3. Take Inspiration from designers, artists and products.
Key Person/People	
Link	We are going to move away from writing and look again and symbols and patterns. In our Geography this term looked different the many countries in Africa. The continent is vast with different ethnicities and cultures throughout. We have already explored some of the art forms from different countries in Africa. We are going to continue to work as designers to take inspiration from a combination of African cultures.
No. of lessons	3
Unit Content	Application of Knowledge and Skills Construct and evaluate a fabric bag for an exhibition at Manchester Museum on African cultures. Lesson 1: Revise and reflect on the start of the unit. Review designs. Make any alterations. Make templates and stencils. Stencil / decorate any of your fabrics as required by the design. Leave to dry overnight, so it is ready to be used in the next lesson. Lesson 2: Decorate the stencilled fabrics from the previous lesson based in the designs adding beading and embroidered aspects. Begin to construct bag Lesson 3: Review the work. Make any alterations, repairs, or improvements. Complete bag (After pupils have stitched on their tape handles and pinned the sides Judy will be positioned in the top hall with the sewing machine to machine stich the sides). Evaluate bag and the work of others. Would the bag sell successfully in the museum shop? Who might buy it? Select work and photographs for class portfolio.
Milestones	<ul style="list-style-type: none"> • Join textiles with appropriate stitching. • Create objects (such as a bag) that employ a seam allowance. • Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration). • Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles • Employ a wide range of decorative techniques including, appliqué, embroidery, beading, stencilling and using fabric paints • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making refinements. • Ensure products have a high-quality finish, using art skills where appropriate. • Use prototypes and annotated diagrams • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements for the user. • Comment on and explain designs and products with a strong grasp of design technology vocabulary.

YEAR 6

TERM	SPRING 1
Term Thread	Ancient Greece
EXPLORE' for ½ term (trip, visitor, experience)	Greeks, Gods and Art and Architecture tour at Manchester Art Gallery

Breadth of Study	MATERIALS 'Greek Myths and Legends'
Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person/people	Handspring Puppet Company
Link	We have been exploring electricity. We will be using electricity in our next project. We will be making a type of puppets that require light. Before electricity people used candles and lantern, but fortunately we can just flip the switch when we want to display our puppets! Later in the term we will be exploring the ancient Greeks. Story telling was incredibly important to Ancient Greek culture. Stories were used to entertain, explain way things that could not be understood and teach life lessons. Greek theatre was one way they told their tales, they also wrote them down and had professional story tellers. These storytellers travelled from city state to city state sharing their stories. Because of this a common language developed. Over this term we are going to work as designs to create puppets so we can become storytellers and make some Ancient Greek myths and legends come to life and entertain.
No. of lessons	3
Unit Content	Development of Knowledge and Skills Lesson 1: Examine and discuss the design brief. Explore presentation on tradition of shadow puppets and look at basic construction. Discuss how they were made. Follow the film and draw mythological characters in profile. Get into groups 6 groups (1x8, 3x4, 2x5). Each group is allocated a story depending on the size of their group. Each group needs to watch the relevant film provided. Lesson 2: Recap on shadow puppets. Follow the film to make a shadow puppet of a snake with the cut outs and transparent sections to experiment with the different techniques. Lesson 3: Get back into your teams from lesson 1 and read the allocated story. As a team discuss and assign characters, props and scenery to each designer and record who is responsible for each aspect. Design your individual puppet/ props using either the transparent or paper-cut methods. Discuss your ideas to the rest of the team. Select work for class portfolio.
Milestones	<ul style="list-style-type: none"> • Cut and shape materials with precision and refine the finish with appropriate tools or techniques. • Measure and mark out to the nearest millimetre. • Show an understanding of the qualities of materials to choose appropriate tools • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making refinements. • Ensure products have a high-quality finish, using art skills where appropriate. • Use prototypes and annotated diagrams • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements for the user • Comment on and explain designs and products with a strong grasp of design technology vocabulary.

YEAR 6

TERM	SPRING 2
Term Thread	Ancient Greece

'EXPLORE' for ½ term (trip, visitor, experience)	Democracy and Debate teams on 'what is worse?' - and/or meet a local politician Eventually at Manchester Town Hall
Breadth of Study	MATERIALS 'Greek Myths and Legends'
Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person/people	Handspring Puppet Company
Link	It's nearly time to use some of that very useful electricity to light up our shadow puppets. With our puppets we will work together to carry on the great tradition of Ancient Greek story telling.
No. of lessons	3
Unit Content	<p style="text-align: center;">Application of Knowledge and Skills</p> <p style="text-align: center;">Work in terms to construct shadow puppets to retell Greek myths and legends. Film your stories and evaluate.</p> <p>Lesson 1: Revisit and reflect on the start of the Greek Myths and Legends unit. Get into your teams and look through your design ideas. Review design in your teams. Make any changes to your designs based on the discussions. Begin to construct your shadow puppet characters either using opaque (with cut outs) or transparent techniques.</p> <p>Lesson 2: Look at your designs again then continue construction of puppets. As the puppets are finishes move on to any key pieces of scenery/props allocated. Work as a team to get all components finished. Make any alterations.</p> <p>Lesson 3: Rehearse your story using the puppets and scenery constructed. Using the screen and lights perform your record them for the school's social media. Evaluate your work and the work of others. Select work and photographs for class portfolio.</p>
	<ul style="list-style-type: none"> • Cut and shape materials with precision and refine the finish with appropriate tools or techniques. • Measure and mark out to the nearest millimetre. • Show an understanding of the qualities of materials to choose appropriate tools • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making refinements. • Ensure products have a high-quality finish, using art skills where appropriate. • Use prototypes and annotated diagrams • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements for the user • Comment on and explain designs and products with a strong grasp of design technology vocabulary.

YEAR 6

TERM	SUMMER 1
Term Thread	The Islamic Golden Age and The House of Wisdom
EXPLORE' for ½ term (trip, visitor, experience)	Visit the New South-East Asian exhibition at Manchester Museum when it opens. (In the meantime complete 'heart start' training with first aid and CPR)
Breadth of Study	ELECTRICAL

'Operation Game'	
Threshold Concept	*Master Practical Skills * Design, make, evaluate, improve. *Take Inspiration
Key Person/people	
Link	We looked at the circulatory system and light and seeing (optics) as Scientists. We are going to take inspiration from those early Islamic scientists, doctors and healers including Ibn Sina, Ibn Al-Nafis, Ibn Al-Baitar, Rufaida Al-Aslamiyah and design a game which includes medical procedures and will be useful for teaching children to develop their fine-motor skills! We will also link back to our science last term when we explored electricity and electrical circuits. We will be working as 'design Technologists to design an electronic board game based on the well-known game by Hasbro called 'Operation'.
No. of lessons	3
Unit Content	<p style="text-align: center;">Development of Knowledge and Skills</p> <p style="text-align: center;">Design a complete-the-circuit game in the style of operation to help children improve their fine motor skills.</p> <p>Lesson 1: Examine and discuss the design brief. Draw a diagram of a 'broken circuit' game. In teams explore electronic games including 'Operation'. Evaluate games.</p> <p>Lesson 2: Make a model of the circuit used for the classic Operation game. Explore different materials conductive and non-conductive materials suitable for constructing a version of an 'Operation' style game by making mini circuits.</p> <p>Lesson 3: Design your game. You will need to design the circuit but also the look and style (the aesthetics) of your game to make it attractive and interesting to play with. You will need to make several design decisions about the look of the patient and overall game. Look at pages from the Canon of Medicine and various graphic styles to help with the design. Label the various materials you wish to use. Display work and discuss outcomes and processes. Select work for class portfolio.</p>
Milestones	<ul style="list-style-type: none"> • Create a project using a series circuit with two or more components. • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). <ul style="list-style-type: none"> • Make products through stages of prototypes, making refinements. • Ensure products have a high-quality finish, using art skills where appropriate. • Use prototypes and annotated diagrams • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements to the user experience. • Comment on and explain designs and products with a strong grasp of design technology vocabulary.

YEAR 6

TERM	SUMMER 2
Term Thread	The Islamic Golden Age and The House of Wisdom
EXPLORE' for ½ term (trip, visitor, experience)	The Jewish History Museum
Breadth of Study	ELECTRICAL 'Operation Game'

Threshold Concept	*Master Practical Skills * Design , make, evaluate, improve. *Take Inspiration
Key Person/people	
Link	We have just been exploring optics and the circulatory system. Scientific medical understanding progressed so much during the Golden Age of Islam, which we began to study last half term. We are going to Carry on at work on the Islamic Golden Age by being Design Technologists and completing our electronic operation game. Make sure it is finished a really high standard as we want to share it with younger children to help develop their fine motor skills. The golden age of Islam was all about knowledge and learning it would be nice to help younger children to learn important skills.
No. of lessons	3
Unit Content	<p style="text-align: center;">Application of Knowledge and Skills</p> <p style="text-align: center;">Make a complete-the-circuit game in the style of operation to help children improve their fine motor skills.</p> <p>Lesson 1: Revise and reflect on the start of the unit. Review designs. Make any alterations. Begin to follow your design, by cutting out the shape of your board on card and drawing out the 'patient'. Cut out relevant areas for the removal of the body parts.</p> <p>Lesson 2: Look at your designs again then continue construction game. Build the circuit and make the items to be surgically removed ensuring they fit in the relevant holes.</p> <p>Lesson 3: Review the work. Make any alterations, repairs, or improvements. Complete your electronic operation game construction and decoration with reference to your designs. Ask others to play with your game and get their feedback as part of your evaluation. Evaluate your game and the work of others. Select work and photographs for class portfolio.</p>
Milestones	<ul style="list-style-type: none"> • Create a project using a series circuit with two or more components. • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making refinements. • Ensure products have a high-quality finish, using art skills where appropriate. • Use prototypes and annotated diagrams • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements to the user experience. • Comment on and explain designs and products with a strong grasp of design technology vocabulary.

