Design and Technology at Abingdon Primary School

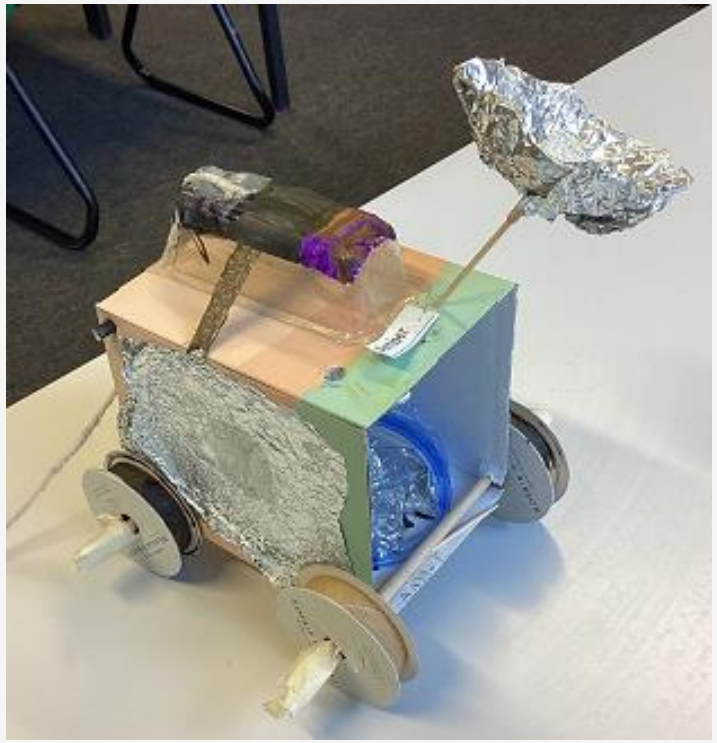
Our Bespoke Drivers

Role Models of all protected characteristics

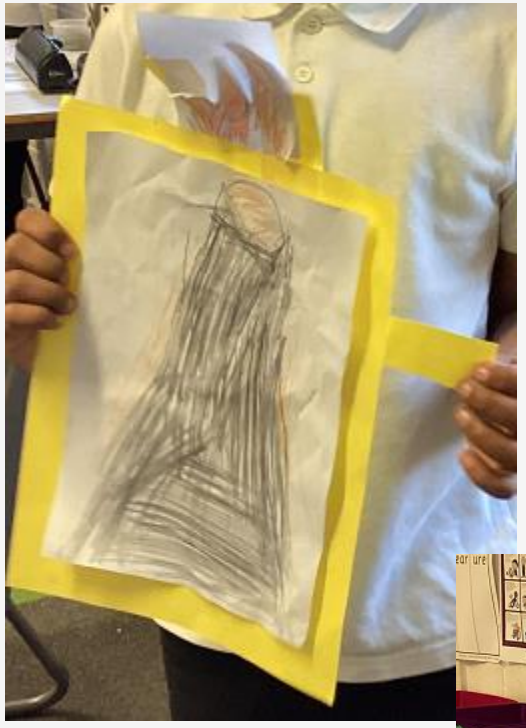
Accessing our local area and all it offers

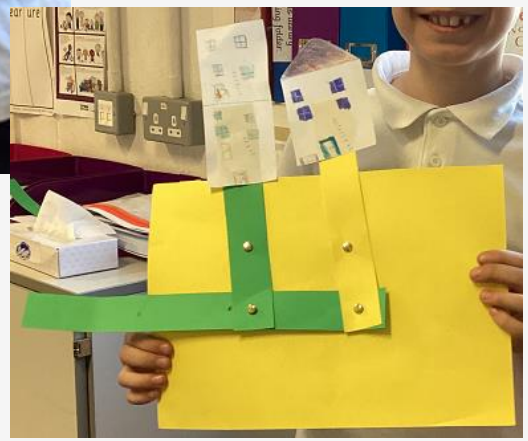
The Power of Word

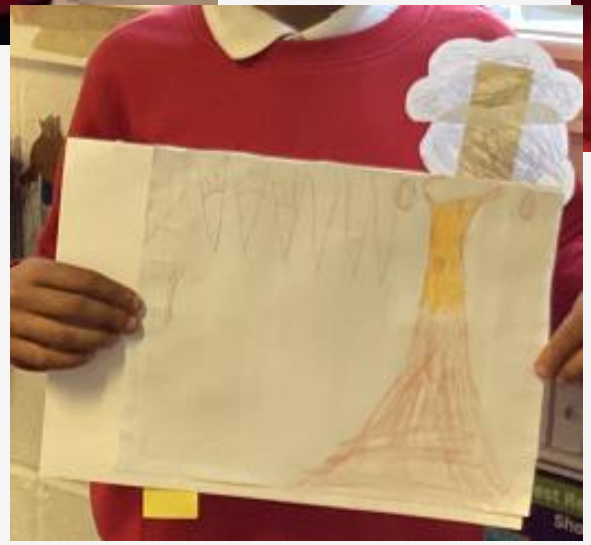
KS1 Moon Buggies Cycle B-Spring term

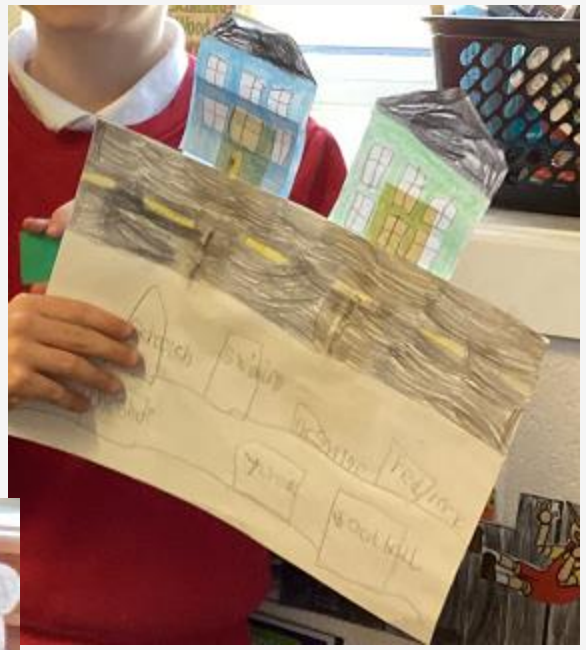


LKS2 moving pictures Cycle B-Spring term









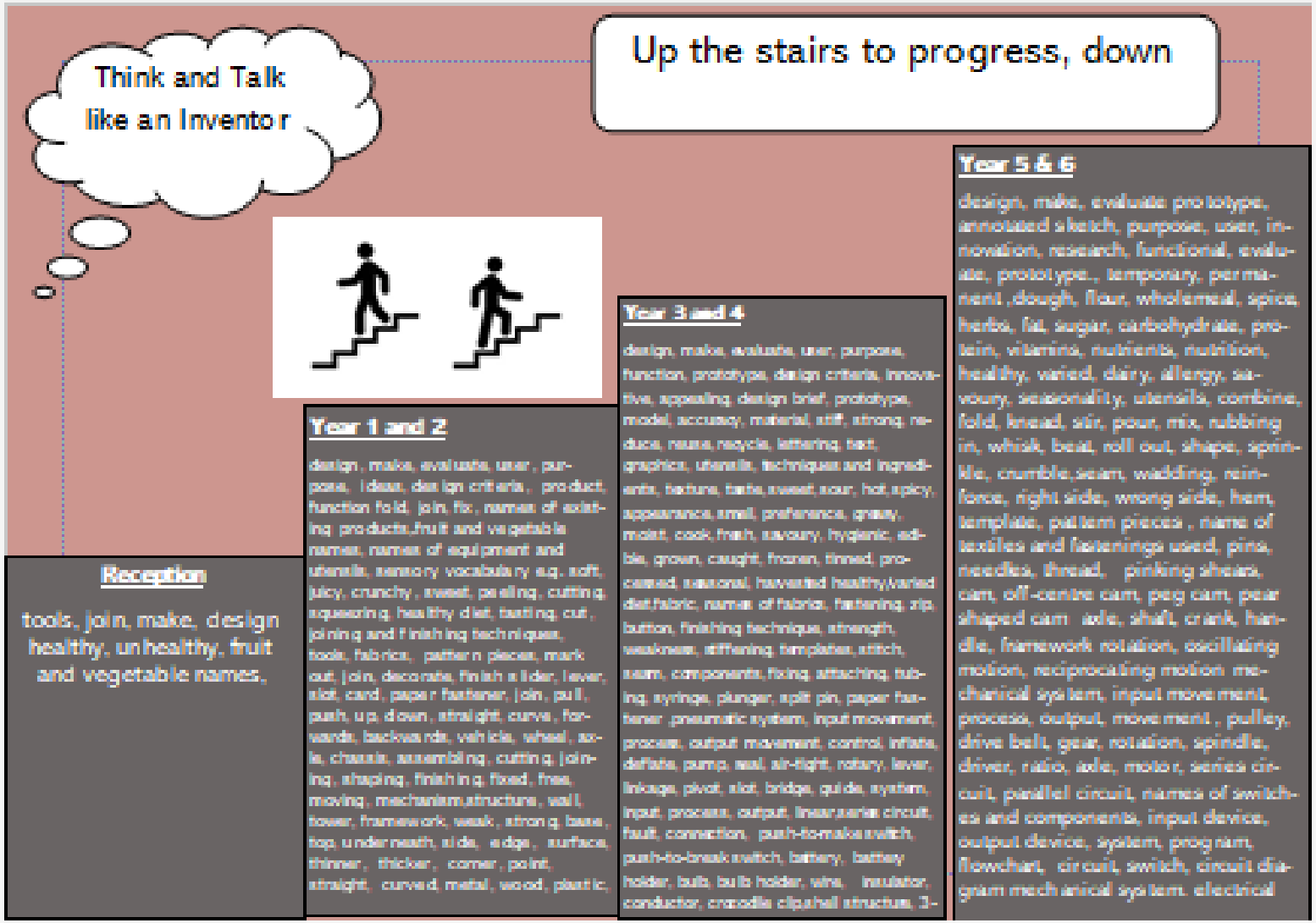
How is Learning Across Our School is Sequenced?

ABINGDON PRIMARY SCHOOL – Design and Technology Yearly overview Cycle A							
CURRICULUM AREA	FS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Autumn	All About Me! Autumn Festivals and Celebrations - To use a range of materials and resources, to make things. - Explore a variety of construction materials and make a plan for what they want to make	The Great Fire of London Structures Free standing structures- eg. make a tower for Rapunzel		Eureka! Food Healthy and varied diet – eg. making own greek salad/pitta pockets		Behind Enemy Lines Electrical systems More complex switches and circuits Make an alarm/security light for an air raid shelter (Link to science)	
Spring	What I Grow Up...Who Lives Where? Children to select the tools and techniques they need to assemble materials that they are using Create collaboratively, sharing ideas, resources and skills.	Sensational Stockport Mechanisms Sliders and levers- eg. make a pop up/ moving part book connected to growing plants		Globetrotters Electrical systems Simple circuits and switches eg. make a flashing tourist sign		What a Wonderful World Mechanical systems Cams- eg. making a rainforest animal toy that moves with a cam	
Summer	Growth and Change Once Upon a Time... - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. (ELG) - Sharing their creations, explaining the process they have used. - Safely use and explore a variety of materials, tools and techniques.	Going on Safari Food Preparing fruit and vegetables- eg. making fruit kebabs (Gruffalo's Surprise)		Tomb raiders Structures Shell structures- eg. make a container for treasure/ coffin for a mummy (link to art)		Rotten Romans Structures Frame structures Make a roman temple	

EYFS curriculum runs on a 1 year cycle.

	ABINGDON PRIMARY SCHOOL – Design and Technology Yearly overview Cycle B						
CURRICULUM AREA	FS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Autumn 1	All About Me! Autumn Festivals and Celebrations - To use a range of materials and resources, to make things. - Explore a variety of construction materials and make a plan for what they want to make	Down in the Deep, Dark Woods Textiles Templates and joining techniques- eg. make a puppet from a traditional tale		Stones n' Bones Mechanical systems Pneumatics eg. make a moving monster head		Vikings and Anglo Saxons Textiles Combining different fabric shapes- Make a square for a Medieval blanket.	
Spring 1	When I Grow Up...Who Lives Where? Children to select the tools and techniques they need to assemble materials that they are using Create collaboratively, sharing ideas, resources and skills	Amazing Adventurers Mechanisms Wheels and axels – make a dune buggy		Extreme Earth Mechanical systems Levers and Linkages eg. make a book with a moving part (link to text)		Time Travellers Mechanical systems Pulleys or gears –make a pulley that can lift something up.	
Summer 1	Growth and Change Once Upon a Time... - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function (ELG) - Sharing their creations, explaining the process they have used. - Safely use and explore a variety of materials, tools and techniques.	A taste of India Food Preparing fruit and vegetables eg. making a simple vegetable curry		As mad as a hatter Textiles 2D shape to 3D product- eg. making hats (Link to art)		A Better Tomorrow Food Celebrating culture and [illegible] eg. Design and make a soup using sustainable / local ingredients	

Vocabulary Progression



This links to The Power of Word – understanding the power that vocabulary can have.

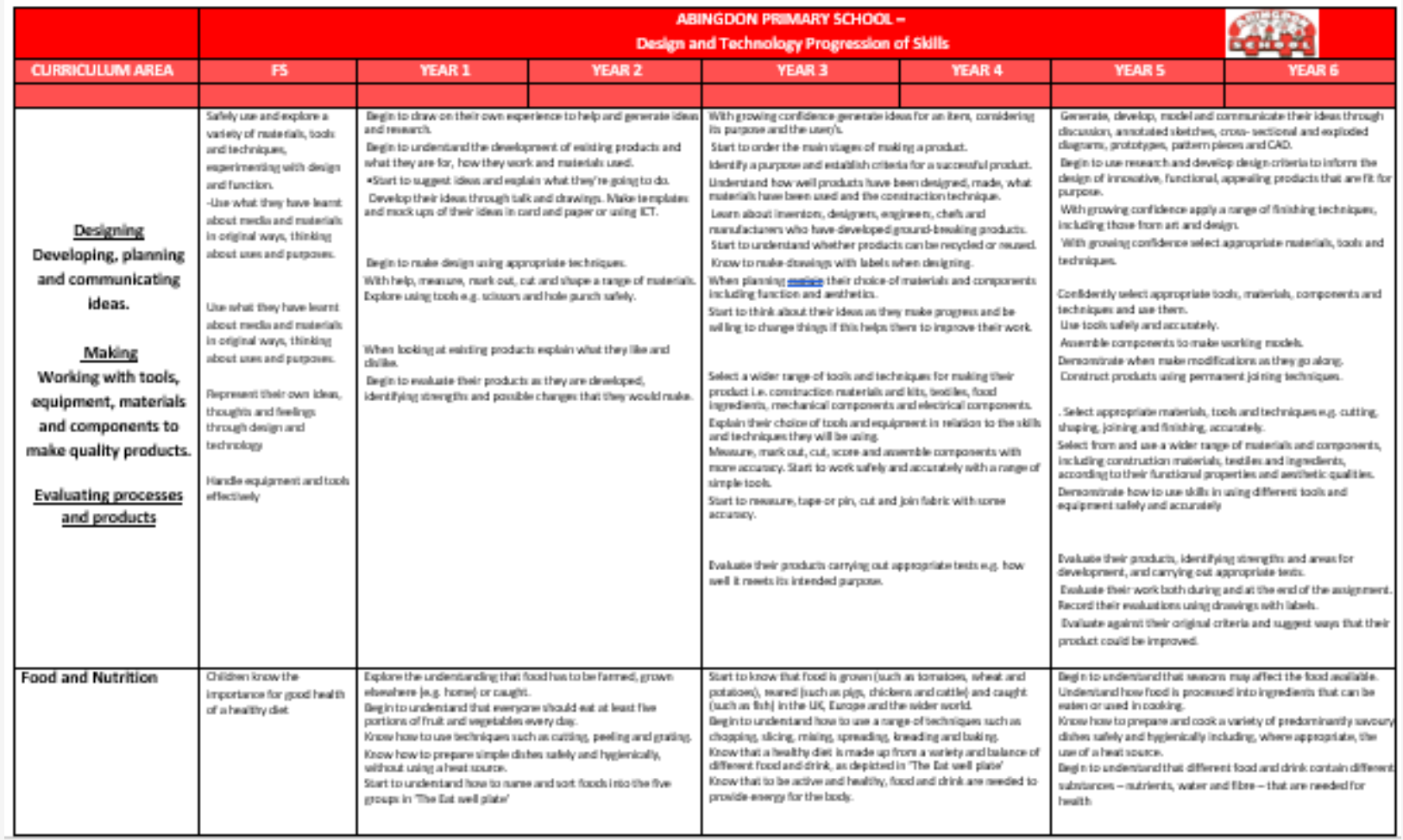
Vocabulary Progression

CURRICULUM AREA	FS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
		ABINGDON PRIMARY SCHOOL – Design and Technology Progression of Vocabulary					
Designing, making and evaluating	tools, join, make, design	design, make, evaluate, user, purpose, ideas, design criteria, product, function fold, join, fix names of existing products,.		design, make, evaluate, user, purpose, function, prototype, design criteria, innovative, appealing, design brief, prototype, model, accuracy, material, stiff, strong, reduce, reuse, recycle, lettering, text, graphics,		design, make, evaluate prototype, annotated sketch, purpose, user, innovation, research, functional, evaluate, prototype. temporary, permanent	
Food and Nutrition	healthy, unhealthy, fruit and vegetable names,	fruit and vegetable names, names of equipment and utensils, sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, hard, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, tasting, cut,		utensils, techniques and ingredients, texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet.		dough, flour, wholemeal, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, dairy, allergy, savoury, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble.	
Textiles **Weaving, threads, stitching, fabrics**		joining and finishing techniques, tools, fabrics, pattern pieces, mark out, join, decorate, finish		fabric, names of fabrics, fastening, zip, button, finishing technique, strength, weakness, stiffening, templates, stitch, seam,		seam, wadding, reinforce, right side, wrong side, hem, template, pattern pieces name of textiles and fastenings used, pins, needles, thread, pinking shears	
Mechanisms/ mechanical Systems		slider, lever, slot, card, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards. vehicle, wheel, axle, chassis. assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism		components, fixing, attaching, tubing, syringe, plunger, split pin, paper fastener pneumatic system, input movement, process, output movement, control, inflate, deflate, pump, seal, air-tight rotary. lever, linkage, pivot, slot, bridge, guide, system, input, process, output, linear.		cam, off-centre cam, peg cam, pear shaped cam axle, shaft, crank, handle, framework rotation, oscillating motion, reciprocating motion mechanical system, input movement, process, output movement pulley, drive belt, gear, rotation, spindle, driver, ratio, axle, motor	
Electrical Systems				series circuit, fault, connection, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip		series circuit, parallel circuit, names of switches and components, input device, output device, system, program, flowchart circuit, switch, circuit diagram mechanical system, electrical system, input, process, output.	
Structures		structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved metal, wood, plastic, circle, triangle, square, rectangle, cuboid, cube, cylinder.		shell structure, 3-D shape, net, cube, cuboid, prism, edge, face, length, width, breadth, capacity marking out, scoring, shaping, tabs, adhesives, joining,		frame structure, stiffen, strengthen, reinforce, stability, shape, join,	

Words in red are words that are repeated.

How are knowledge and skills built on through school?

Progression grids are in place to track the progress of each element of the art and design curriculum



ABINGDON PRIMARY SCHOOL –
Design and Technology Progression of Skills

CURRICULUM AREA	FS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Designing **Developing, planning and communicating ideas.** **Making** **Working with tools, equipment, materials and components to make quality products.** **Evaluating processes and products**	Safely use and explore a variety of materials, tools and techniques, experimenting with design and function. -Use what they have learnt about media and materials in original ways, thinking about uses and purposes. Use what they have learnt about media and materials in original ways, thinking about uses and purposes. Represent their own ideas, thoughts and feelings through design and technology Handle equipment and tools effectively	Begin to draw on their own experience to help and generate ideas and research. Begin to understand the development of existing products and what they are for, how they work and materials used. •Start to suggest ideas and explain what they're going to do. Develop their ideas through talk and drawings. Make templates and mock ups of their ideas in card and paper or using ICT. Begin to make design using appropriate techniques. With help, measure, mark out, cut and shape a range of materials. Explore using tools e.g. scissors and hole punch safely. When looking at existing products explain what they like and dislike. Begin to evaluate their products as they are developed, identifying strengths and possible changes that they would make.		With growing confidence generate ideas for an item, considering its purpose and the user/s. Start to order the main stages of making a product. Identify a purpose and establish criteria for a successful product. Understand how well products have been designed, made, what materials have been used and the construction technique. Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products. Start to understand whether products can be recycled or reused. Know to make drawings with labels when designing. When planning explain their choice of materials and components including function and aesthetics. Start to think about their ideas as they make progress and be willing to change things if this helps them to improve their work. Select a wider range of tools and techniques for making their product i.e. construction materials and kits, textiles, food ingredients, mechanical components and electrical components. Explain their choice of tools and equipment in relation to the skills and techniques they will be using. Measure, mark out, cut, score and assemble components with more accuracy. Start to work safely and accurately with a range of simple tools. Start to measure, tape or pin, cut and join fabric with some accuracy. Evaluate their products carrying out appropriate tests e.g. how well it meets its intended purpose.		Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross- sectional and exploded diagrams, prototypes, pattern pieces and CAD. Begin to use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. With growing confidence apply a range of finishing techniques, including those from art and design. With growing confidence select appropriate materials, tools and techniques. Confidently select appropriate tools, materials, components and techniques and use them. Use tools safely and accurately. Assemble components to make working models. Demonstrate when make modifications as they go along. Construct products using permanent joining techniques. . Select appropriate materials, tools and techniques e.g. cutting, shaping, joining and finishing, accurately. Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. Demonstrate how to use skills in using different tools and equipment safely and accurately Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests. Evaluate their work both during and at the end of the assignment. Record their evaluations using drawings with labels. Evaluate against their original criteria and suggest ways that their product could be improved.
Food and Nutrition	Children know the importance for good health of a healthy diet	Explore the understanding that food has to be farmed, grown elsewhere (e.g. home) or caught. Begin to understand that everyone should eat at least five portions of fruit and vegetables every day. Know how to use techniques such as cutting, peeling and grating. Know how to prepare simple dishes safely and hygienically, without using a heat source. Start to understand how to name and sort foods into the five groups in 'The Eat well plate'		Start to know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. Begin to understand how to use a range of techniques such as chopping, slicing, mixing, spreading, kneading and baking. Know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate' Know that to be active and healthy, food and drink are needed to provide energy for the body.		Begin to understand that seasons may affect the food available. Understand how food is processed into ingredients that can be eaten or used in cooking. Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source. Begin to understand that different food and drink contain different substances – nutrients, water and fibre – that are needed for health

Textiles **Weaving, threads, stitching, fabrics**	To use a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	Begin to assemble, join and combine materials together. Begin to use simple finishing techniques to improve the appearance of their product. Use a variety of techniques, e.g. weaving, finger knitting, fabric crayons, sewing and gluing. -How to thread a needle, cut, glue and trim material. apply decorations eg.beads, buttons	-Use a variety of techniques, eg. printing, dying, quilting, weaving, embroidery, paper and plastic trappings and applique. - Name the tools and materials they have used. Develop skills in stitching, cutting and joining. -Match the tool to the material. - Choose textiles as a means of extending work already achieved. .	- Aim to make and to achieve a quality product. With confidence pin, sew and stitch materials together to create a product. Join fabrics in different ways, including stitching. -Use different grades and uses of threads and needles. -Extend their work within a specified technique. -Experiment with using batik safely.
Mechanisms/ mechanical Systems		Explore and use mechanisms e.g. levers, sliders, wheels, and axels.	Start to understand that mechanical and electrical systems have an input, process and output. Start to understand that mechanical systems such as levers and linkages or pneumatic systems create movement.	Understand how mechanical systems such as cams or pulleys or gears create movement.
Electrical Systems			Start to understand that mechanical and electrical systems have an input, process and output. Know how simple electrical circuits and components can be used to create functional products.	Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products. Understand that mechanical and electrical systems have an input, process and output.
Structures	To use a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	Begin to build structures, exploring how they can be made stronger, stiffer and more stable.	Begin to know how to reinforce and make a 3D framework.	Know how to reinforce and strengthen a 3D framework

Progression grids are in place to track the progress of each element of the art and design curriculum

Medium term plan example-Year 1 and 2 Cycle B-Food Technology

Medium Term Curriculum Plan – A Taste of India
Subject: Design and Technology
Aspect of D&T: Food
Focus: Preparing fruit and vegetables
Term: Summer
Year group: 1 and 2

National curriculum objective

- understand and apply the principles of nutrition and learn how to cook.

Subject specific vocabulary

- fruit and vegetable names,
- names of equipment and utensils
- sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, hard, skin, seed, pip, core, slicing
- peeling
- cutting
- Squeezing
- healthy diet
- tasting
- cut

Design and Technology aims

Designing
- Design appealing products for a particular user based on simple design criteria.
- Generate initial ideas and design criteria through investigating a variety of fruit and vegetables.
- Communicate these ideas through talk and drawings.

Making
- Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely.
- Select from a range of fruit and vegetables according to their characteristics e.g. colour.

Evaluating
- Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences
- Evaluate ideas and finished products against design criteria, including intended user and purpose.

Technical knowledge and understanding
- Understand where a range of fruit and vegetables come from e.g. farmed or grown at home.
- Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The eatwell plate.
- Know and use technical and sensory vocabulary relevant to the project.

Weekly overview

Week	Objective	Previous linked objectives/ learning?	Lesson Outline	Key questions	SEND adaptation/adjustments	Resources needed
1	Begin to draw on their own experience to help generate ideas and research	ELG-know that other children don't always enjoy the same things, and are sensitive to this	What food do you know that is Indian inspired? What are your favourite fruits? Where do you think they come from.... Watch this clip to show fruits from India https://www.youtube.com/watch?v=S8UJ4w2YIw Which ones do you know/like? Look at/ smell/touch /taste some of them, describe them and decide which ones you like.	• What does it look/smell like? • What does it taste like? • Which ones do you like/dislike?	• Smiley/sad face to indicate like/dislike	• Indian inspired food • Indian fruit • Spoons/plates • Paper towels
2	Begin to design	ELG-select and use technology for particular purposes.	You are going to make a fruit drink/smoothie/yoghurt for our end of topic showcase. Decide what you would like to make/ which fruit/s you are going to use/who it's for. Draw and label design and name it.	• Which fruit are you going to use? • Are you going to add milk or juice?	• Pictures to select choices for recipe	• Scaffolded sheet to design recipe
3	Use simple utensils and equipment	Use simple utensils and equipment	Discuss basic food hygiene practices when handling food www.foodafactoflife.org.uk • Demonstrate how to use simple utensils and provide opportunities for the children to practise food-processing skills such as washing, grating, peeling, slicing, squeezing • Discuss healthy eating advice, including eating more fruit and vegetables; using The eatwell plate model talk about the importance of fruit and vegetables in our balanced diet • Allow children to practise grating, peeling, slicing, squeezing  Complete 'From project on a page'	• What is good hygiene? • How do we keep healthy? • How do we use utensils safely? • Do we eat the whole fruit? • What might we have to do before eating this? • Why do we cut, grate, peel and slice in this way?	• Adapted utensils • Support/supervision	• Eatwell plate • Knife • Grater • Peeler • Fruit and vegetables
4	Use simple utensils and equipment	ELG-select and use technology for particular purposes.	Make chosen smoothie	• Which fruits do you need? • How much milk/juice do you need?	• Adapted utensils • Support/supervision	• Knife • Grater • Peeler

Medium term plan example-Year 3 and 4 Cycle B-Pneumatics

Medium Term Curriculum Plan –Stones N' Bones
Subject: Design and Technology
Aspect of D&T: Mechanical systems and Pneumatics
Cycle B
Term: Autumn
Year group: 3 and 4

Subject specific vocabulary

1. Components
2. Pneumatic system
3. Mechanics
4. Pivot
5. Driver
6. Process
7. Lever
8. Linkage

National curriculum objectives:

- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.
- Generate, develop, model and communicate their ideas through discussion, annotated sketches.
- Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.
- Investigate and analyse a range of existing products.
- Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.

Design and Technology progression of skills

Designing

Developing, planning and communicating ideas

- identify a purpose and establish criteria for a successful product.
- understand how well products have been designed, made, what materials have been used and the construction technique.
- know to make drawings with labels when designing.
- When planning explain their choice of materials and components including function and aesthetics.

Year 4

- identify the strengths and areas for development in their ideas and products.

Making

Working with tools, equipment, materials and components to make quality products.

- Select a wider range of tools and techniques for making their product i.e. construction materials and kits, textiles, food ingredients, mechanical components and electrical components.
- Explain their choice of tools and equipment in relation to the skills and techniques they will be using.
- Start to understand that mechanical and electrical systems have an input, process and output.
- Start to understand that mechanical systems such as levers and linkages or pneumatic systems create movement.
- Start to think about their ideas as they make progress and be willing to change things if this helps them to improve their work.

Evaluating

Evaluating processes and products

- Start to evaluate their product against original design criteria e.g. how well it meets its intended purpose.

Year 4

Evaluate their products carrying out appropriate tests.

Technical knowledge and understanding

- Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]

Weekly overview

Week	Objective	Previous linked objectives/ learning?	Lesson Outline	Key questions	SEND adaptation/adjustments	Resources needed
1	Explore simple mechanisms, such as sliders and levers, and simple structures.		Children investigate objects that use air to make them work e.g. bicycle pump, balloon, inflatable swimming aids, foot pump for inflating an air bed. What does the air do? How can air be used to move heavy objects? • Construct a simple pneumatic system by joining a balloon to 5mm tubing and then to a washing-up liquid bottle. • Demonstrate lifting an object and ask the children to think about ways in which this might be used in a product. Who might it be for? What is its purpose? What part moved and how did it move? What materials have been used? How effective do you think it is and why? What else could move? • Demonstrate a range of pneumatic mechanisms using prepared teaching aids including two syringes joined by plastic tubing; three syringes connected using a T-connector and using different sized syringes.	Ask the children: • What happens to the air when you squeeze the bottle? What happens when you let go? Can you lift a soft toy or a note pad using a balloon? • What happens when the plunger of one syringe is pressed in? Why do the syringes move at different speeds?		• Objects that use air to make them work e.g. balloon, armbands, foot pump. • Washing up liquid bottle • Tubing • Plastic syringes
2	Generate realistic and appropriate ideas and their own design criteria through		Demonstrate how to assemble the systems using syringes, tubing, balloons and plastic bottles. Introduce ways in which pneumatic systems can be used to operate levers. • Demonstrate the correct and accurate use of measuring, marking out, cutting, joining and finishing skills and techniques.	• A) What happens when you squeeze the bottle? What happens when you let go? • B) What happens when you press the plunger of one syringe down? How far does the other syringe move?		• Plastic syringes • Tubing • Balloons • Plastic bottles • Washing up liquid bottle

Medium term plan example-Year 5 and 6 Cycle B- Food Technology

Medium Term Curriculum Plan – A Better Tomorrow
Subject: Design and Technology
Aspect of D&T: Food
Focus: celebrating culture and seasonality
Summer
Year group: 5 and 6

Subject specific vocabulary

- ingredients
- spice
- herbs
- fat
- sugar
- carbohydrate,
- protein
- vitamins
- nutrients,
- allergy,
- intolerance,
- savoury,
- source,
- seasonality
- utensils,
- whisk, beat

National curriculum objective

- understand and apply the principles of nutrition and learn how to cook.

Design and Technology aims

Designing

- Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification.
- Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose.
- Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas.

Making

- Write a step-by-step recipe, including a list of ingredients, equipment and utensils
- Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients.
- Make, decorate and present the food product appropriately for the intended user and purpose.

Evaluating

- Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams.
- Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements.
- Understand how key chefs have influenced eating habits to promote varied and healthy diets.

Technical knowledge and understanding

- Know how to use utensils and equipment including heat sources to prepare and cook food.
- Understand about seasonality in relation to food products and the source of different food products.
  Know and use relevant technical and sensory vocabulary

Weekly overview:

Week	Objective	Previous linked objectives/ learning?	Lesson Outline	Key questions	SEND adaptation/adjustments	Resources needed
1	Begin to draw on their own experience to help generate ideas and research		What is a soup? Which ones do you like? Taste a selection of soups, try to decide what is in them and evaluate. Is there anything you would like to add to the soups- cheese, spices, herbs?	• What does it look/smell like? • What does it taste like? • Which ones do you like/dislike? • What ingredients do you think are in each soup? • What ingredients are sourced locally/in the UK/from overseas? • What are the key ingredients needed to make the products? • What is the nutritional value of a product?	• Smiley/sad face to indicate like/dislike	• Variety of soups – cans/ packets/ pots • Spoons/bowls • Paper towels
2	Carry out research into vegetables and soup products	Have knowledge and understanding about food hygiene, nutrition, healthy eating and a varied diet.	Research vegetables and soup products to find out where they have come from/grown/ season they are grown/ Research soup products- look at ingredients/ nutritional value. Present results in e.g. tables/graphs/charts and by using evaluative writing.	• What ingredients help to make the product? • What is the impact of added ingredients/finishes/shapes on the finished product?	• Scaffolded sheet	• Variety of soups – cans/ packets/ pots
3	Carry out research into key chefs		Carry out research into key chefs and how they have promoted seasonality, local produce and healthy eating eg Kevin Dalgleish, Jean Delord, Nina Parris-Jones, Andi Oliver (female)	• How do they use local /seasonal produce? • Why is it important to use local/seasonal ingredients?	• Printed information	• laptops
4	Begin to design and use simple	Be able to use appropriate equipment and	You are going to design and make a soup (for yourself? Or someone else?) using seasonal vegetables.	• Which fruit are you going to use? • Are you going to add milk or juice?	• Pictures to select choices for recipe • Adapted utensils	• Scaffolded sheet to design recipe • Knife

Examples of prior learning being outlined in planning.

Prior learning clearly laid out in bespoke planning

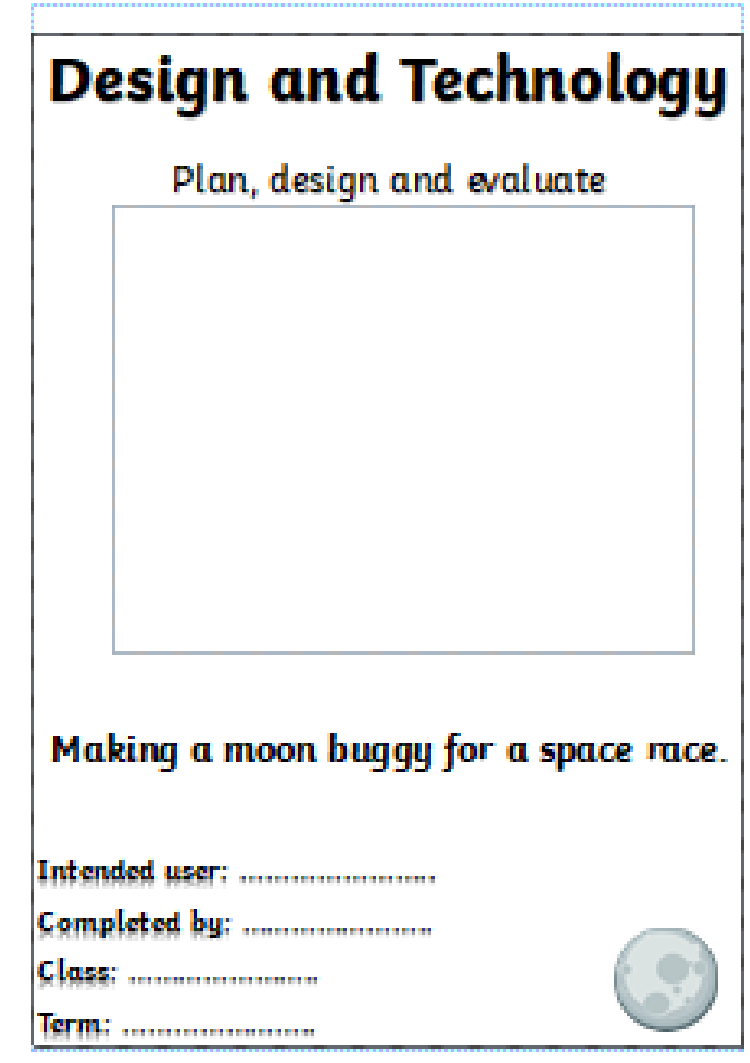
Medium Term Curriculum Plan – A Better Tomorrow
Subject: Design and Technology
Aspect of D&T: Food
Focus: celebrating culture and seasonality
Term: Summer
Year group: 5 and 6

Week	Objective	Previous linked objectives/ learning?	Lesson Outline
1	Begin to draw on their own experience to help generate ideas and research		What is a soup? Which ones do you like? Taste a selection of soups, try to decide what is in them and evaluate. Is there anything you would like to add to the soups- cheese, spices, herbs?
2	Carry out research into vegetables and soup products	Have knowledge and understanding about food hygiene, nutrition, healthy eating and a varied diet.	Research vegetables and soup products to find out where they have come from/grown/ season they are grown/ Research soup products- look at ingredients/ nutritional value. Present results in e.g. tables/graphs/charts and by using evaluative writing.
3	Carry out research into key chefs		Carry out research into key chefs and how they have promoted seasonality, local produce and healthy eating eg Kevin Dalgleish, Jean Dalport, Nina Panayiodou, Andi Oliver (female)
4	Begin to design and use simple	Be able to use appropriate equipment and	You are going to design and make a soup (for yourself? Or someone else?) using seasonal vegetables.

Medium Term Curriculum Plan –Amazing Adventurers
Subject: Design and Technology
Aspect of D&T: Wheels and Axels
Term: Spring 2
Year group: 1 and 2

Week	Objective	Previous linked objectives/ learning?	Lesson Outline
1	Begin to draw on their own experience to help generate ideas and research	ELG-know that other children don't always enjoy the same things, and are sensitive to this	• Explore and evaluate a range of wheeled products such as toys and everyday objects. Through questioning, direct children's observations e.g. the number, size, position and methods of fixing wheels and axles. • Draw an example of a wheeled product, stating the user and purpose, and labelling the main parts e.g. body, chassis, wheels, axles and axle holders.
2	Explore the use of mechanisms- wheels and axels	ELG-know that other children don't always enjoy the same things, and are sensitive to this	• Using construction kits with wheels and axles, ask children to make a product that moves. • Demonstrate to children how wheels and axles may be assembled as either fixed axles or free axles. • Show different ways of making axle holders and stress the importance of making sure the axles run freely within the holders.
3	Begin to design	ELG-select and use technology for particular purposes.	• Think about what vehicle travelling on the moon would need. Show a mock up moon surface and toy astronaut/alien who will be driving the vehicle. • Design and label a vehicle that could travel on the moon and give explanations where needed
4	Select from and use a range of tools and materials	ELG-select and use technology for particular purposes.	• Make a vehicle base using wheels and axels kit, cutting dowelling and attaching wheels

DT Booklet- KS1- Amazing Adventurers



Design and Technology

Plan, design and evaluate

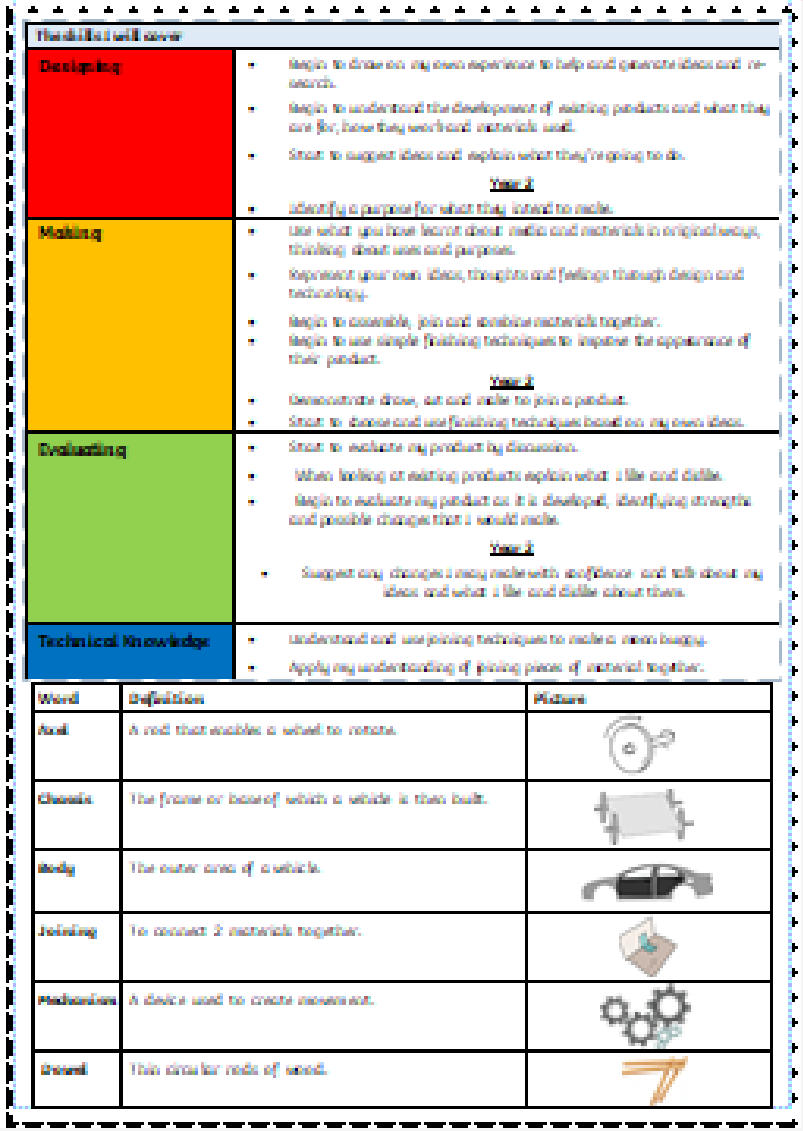
Making a moon buggy for a space race.

Intended user: .....

Completed by: .....

Class: .....

Term: .....

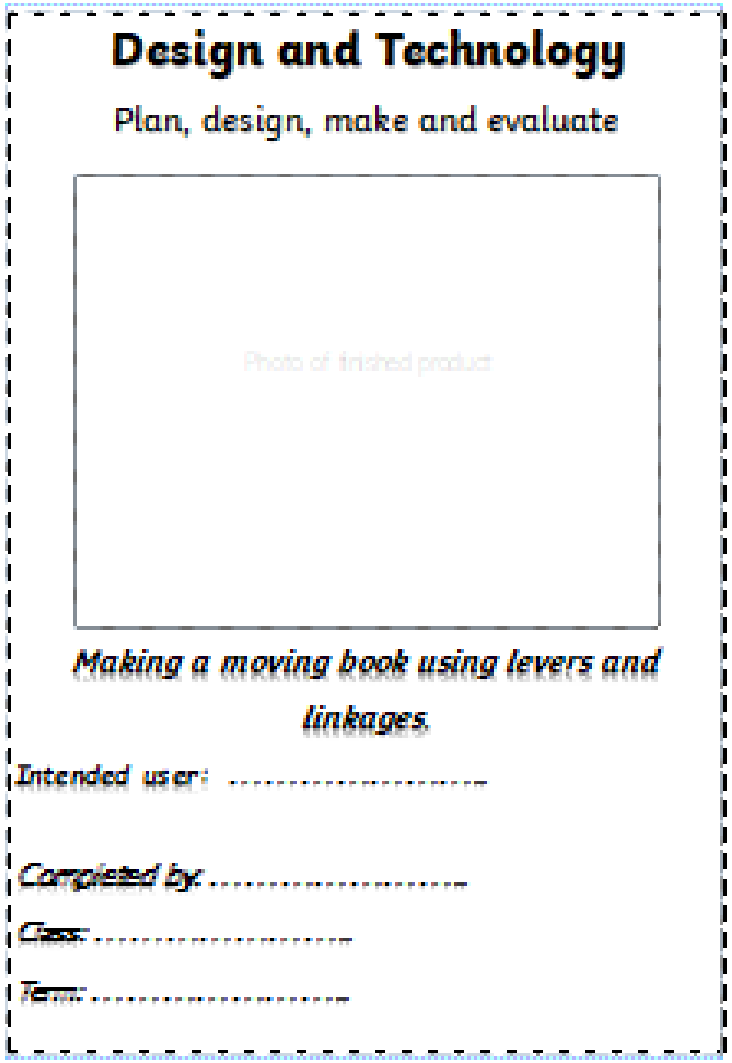


The skills I will cover	
Designing	• Begin to draw on my own experience to help and generate ideas and re-search. • Begin to understand the development of existing products and what they are for, how they work and materials used. • Start to suggest ideas and explain what they're going to do. **Year 2** • Identify a purpose for what they intend to make.
Making	• Use what you have learnt about media and materials in original ways, thinking about uses and purposes. • Represent your own ideas, thoughts and feelings through design and technology. • Begin to assemble, join and combine materials together. • Begin to use simple finishing techniques to improve the appearance of their product. **Year 2** • Demonstrate draw, cut and make to join a product. • Start to choose and use finishing techniques based on my own ideas.
Evaluating	• Start to evaluate my product by discussion. • When looking at existing products explain what I like and dislike. • Begin to evaluate my product as it is developed, identifying strengths and possible changes that I would make. **Year 2** • Suggest any changes I may make with confidence and talk about my ideas and what I like and dislike about them.
Technical Knowledge	• Understand and use joining techniques to make a moon buggy. • Apply my understanding of joining pieces of material together.

Word	Definition	Picture
Axel	A rod that enables a wheel to rotate.	
Chassis	The frame or base of which a vehicle is then built.	
Body	The outer case of a vehicle.	
Joining	To connect 2 materials together.	
Mechanism	A device used to create movement.	
Dowel	Thin circular rods of wood.	

DT booklets put into Art books in a paper wallet so people can easily see them.

DT Booklet- LKS2- Extreme Earth



Design and Technology

Plan, design, make and evaluate

Photo of finished product

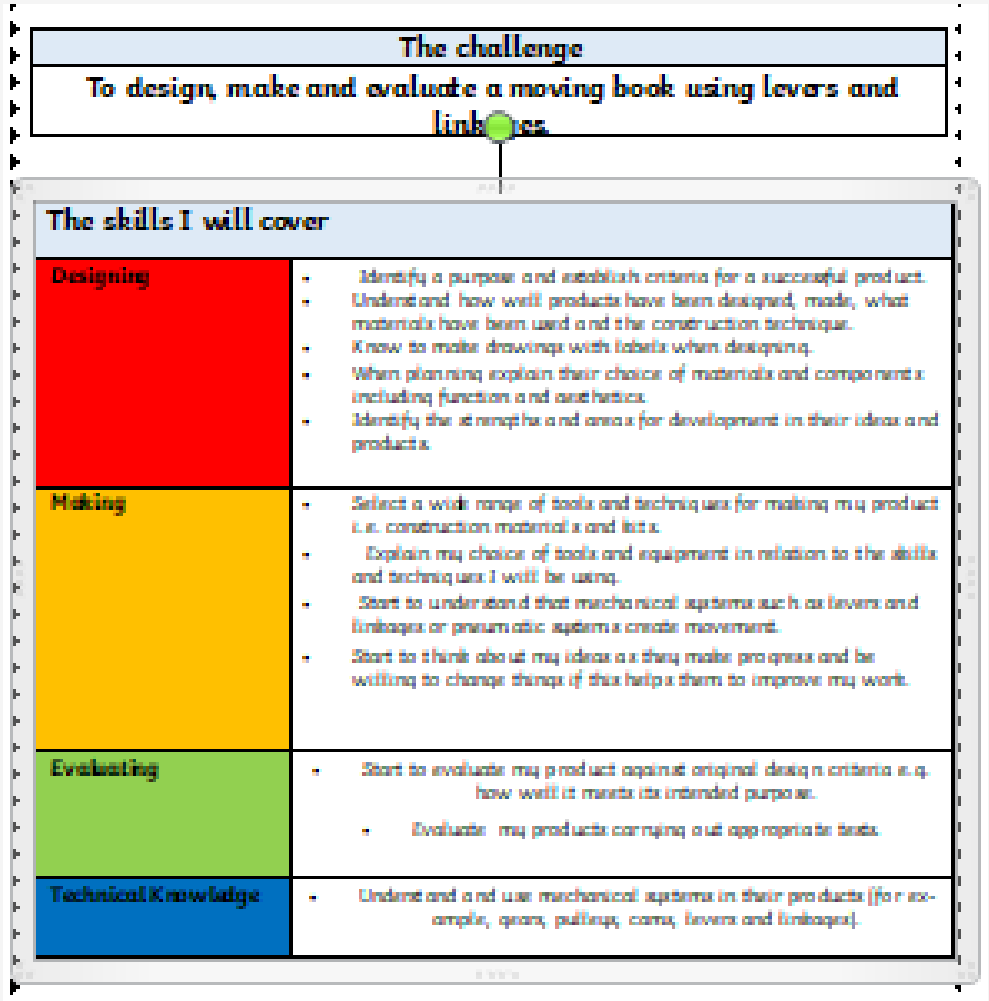
Making a moving book using levers and linkages

Intended user: .....

Completed by: .....

Class: .....

Term: .....



The challenge

To design, make and evaluate a moving book using levers and linkages.

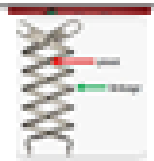
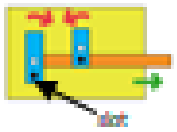
The skills I will cover

Designing	• Identify a purpose and establish criteria for a successful product. • Understand how well products have been designed, made, what materials have been used and the construction techniques. • Know to make drawings with labels when designing. • When planning explain their choice of materials and components including function and aesthetics. • Identify the strengths and areas for development in their ideas and products.
Making	• Select a wide range of tools and techniques for making my product i.e. construction materials and kits. • Explain my choice of tools and equipment in relation to the skills and techniques I will be using. • Start to understand that mechanical systems such as levers and linkages or pneumatic systems create movement. • Start to think about my ideas as they make progress and be willing to change things if this helps them to improve my work.
Evaluating	• Start to evaluate my product against original design criteria e.g. how well it meets its intended purpose. • Evaluate my products carrying out appropriate tests.
Technical Knowledge	• Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].

DT booklets are put into the art books inside a paper wallet.

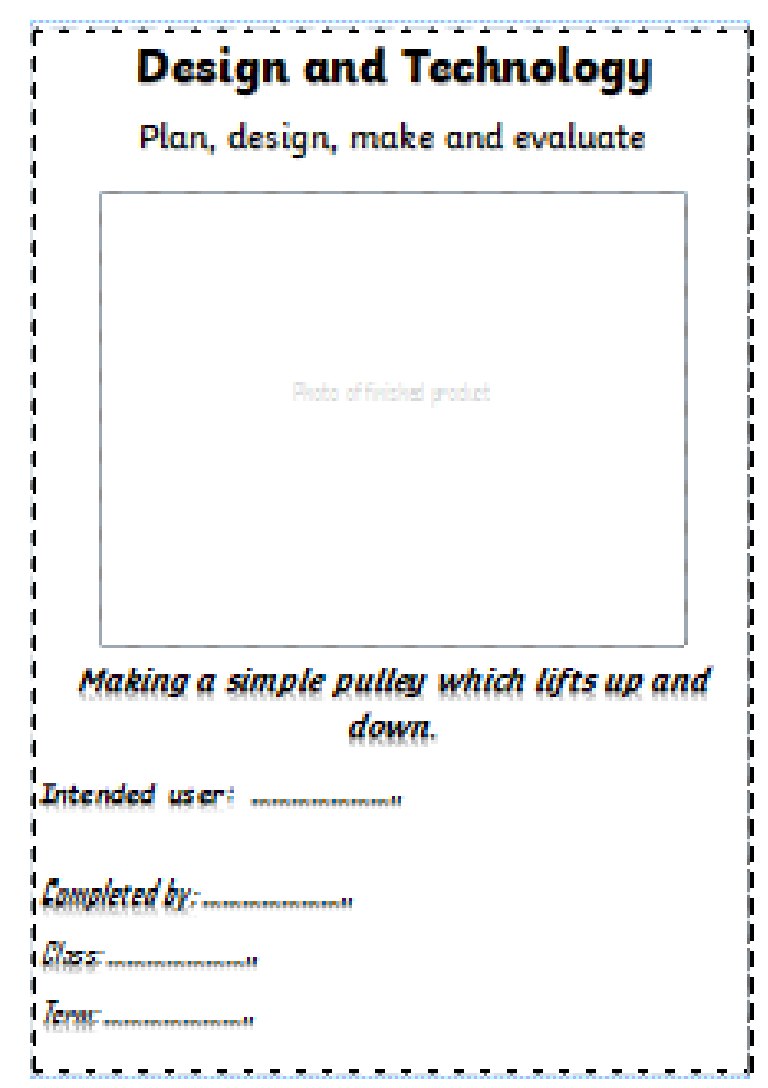
DT Booklet- LKS2- Extreme Earth

Key Vocabulary

Word	Definition	Picture
Lever	A rigid bar which moves around the pivot.	
Linkage	The card strips joining one or more levers to produce the type of movement required.	
Pivot	A fastener that joins card strips together.	
Slot	The hole through which a lever is placed to enable part of a picture to move.	
Bridge	A short card strip used to keep lever and linkage mechanisms in place and control movement.	
Guide	A short card strip used to keep lever and linkage mechanisms in place and control movement.	

DT booklets are put into the art books inside a paper wallet.

DT Booklet-UKS2-Pulleys or Gears



Design and Technology

Plan, design, make and evaluate

Photo of finished product

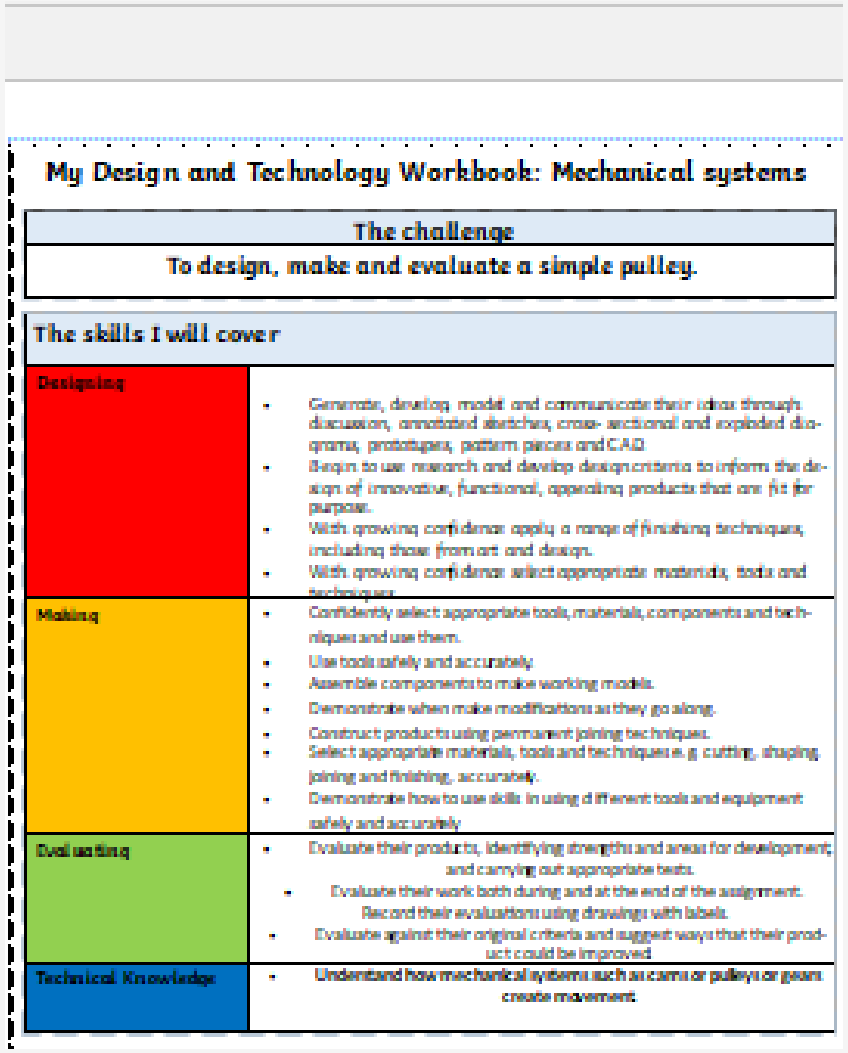
Making a simple pulley which lifts up and down.

Intended user: .....

Completed by: .....

Class: .....

Term: .....



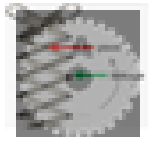
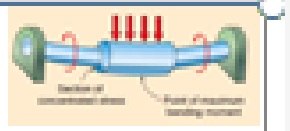
My Design and Technology Workbook: Mechanical systems

The challenge
To design, make and evaluate a simple pulley.

The skills I will cover	
Designing	• Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross- sectional and exploded diagrams, prototypes, pattern pieces and CAD. • Begin to use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. • With growing confidence apply a range of finishing techniques, including those from art and design. • With growing confidence select appropriate materials, tools and techniques.
Making	• Confidently select appropriate tools, materials, components and techniques and use them. • Use tools safely and accurately. • Assemble components to make working models. • Demonstrate when make modifications as they go along. • Construct products using permanent joining techniques. • Select appropriate materials, tools and techniques e.g. cutting, shaping joining and finishing, accurately. • Demonstrate how to use skills in using different tools and equipment safely and accurately.
Evaluating	• Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests. • Evaluate their work both during and at the end of the assignment. Record their evaluations using drawings with labels. • Evaluate against their original criteria and suggest ways that their product could be improved.
Technical Knowledge	• Understand how mechanical systems such as cams or pulleys or gears create movement.

DT booklets are put in the art books in a paper wallet.

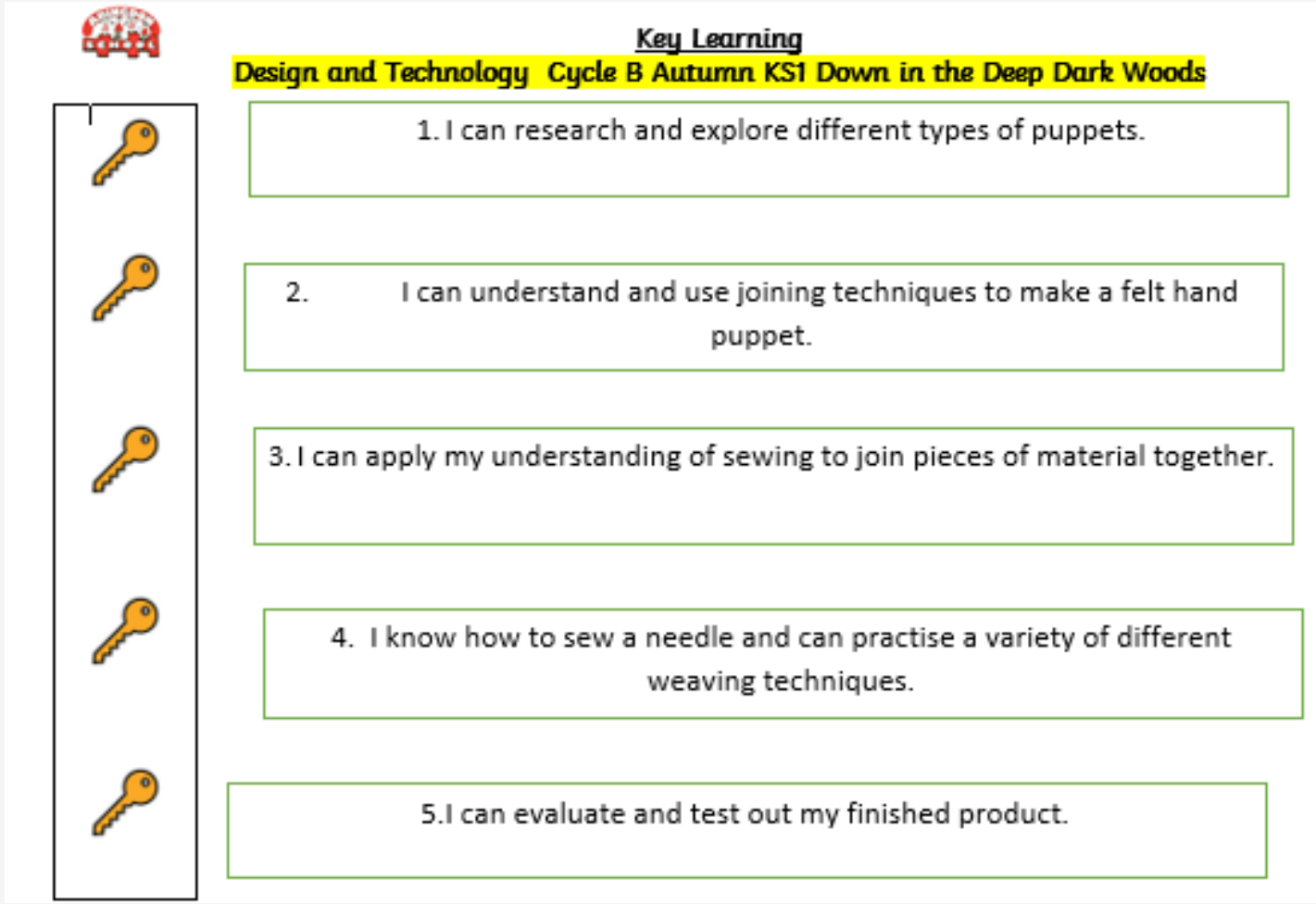
DT Booklet-UKS2-Pulleys or Gears

Key Vocabulary		
Word	**Definition**	**Picture**
Pulley	A grooved wheel over which a drive belt can run.	
Rotation	The action of rotating about an axis or centre.	
Gear	A wheel with teeth around it's circumference.	
Spindle	A cylindrical, rotating shaft or rod that is used to transmit rotational motion.	
Driver	The gear or pulley that provides the input movement the system.	
Ratio	A way to compare two or more quantities.	

DT booklets are put in the art books in a paper wallet.

Key Learning poster example

In each subject we have identified the key learning we want the children to know. This is shared with the children with 'key' images.



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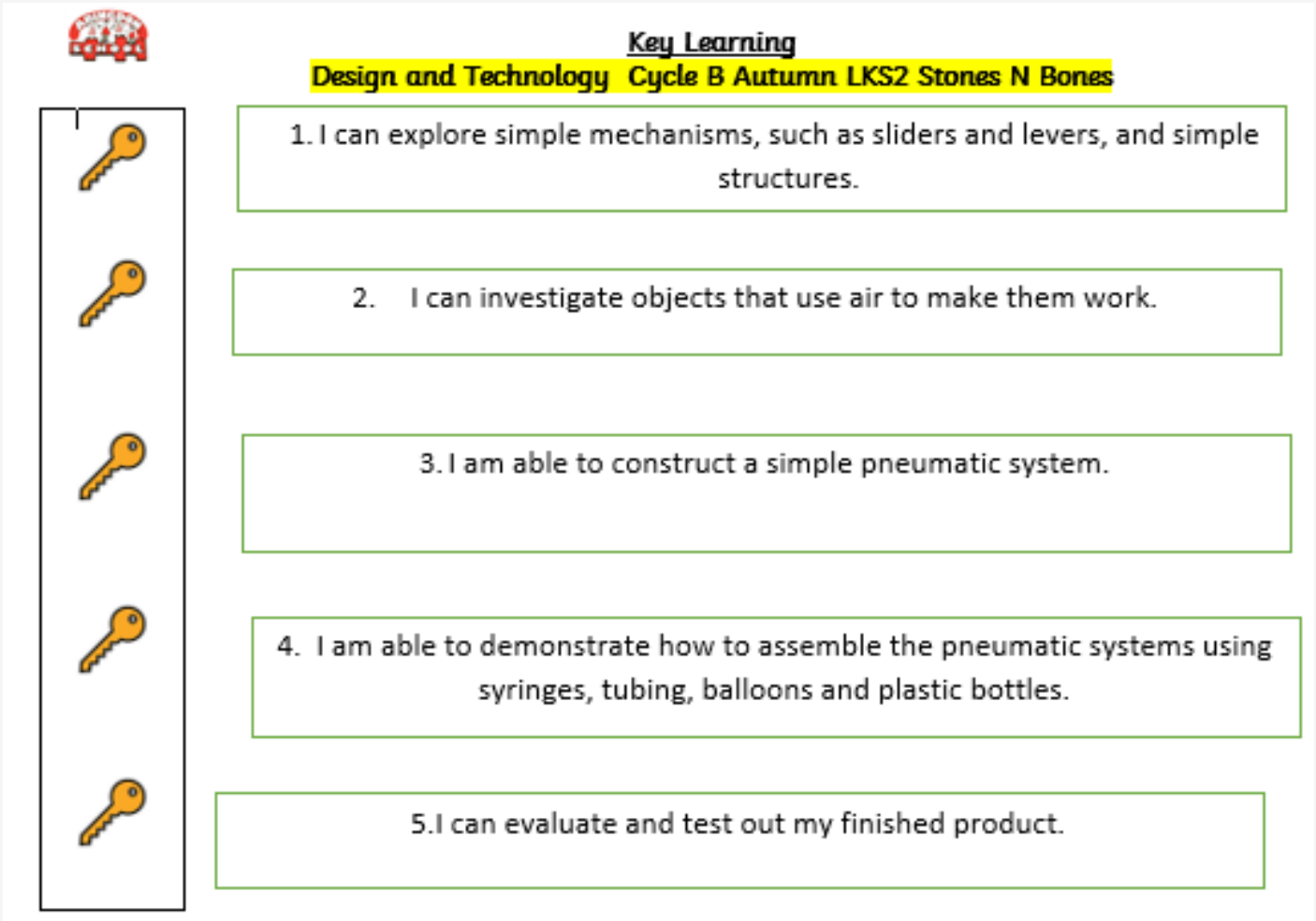

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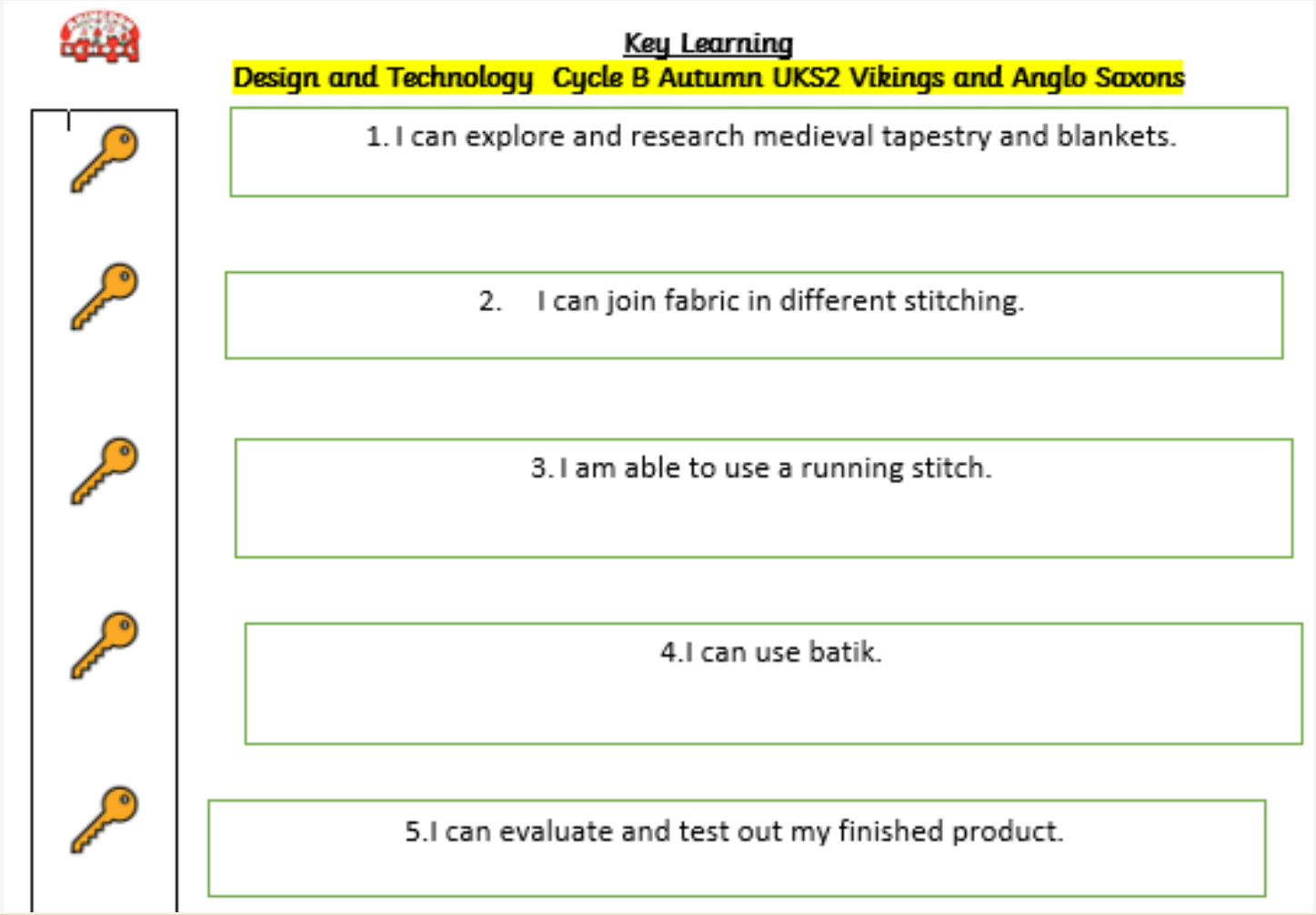
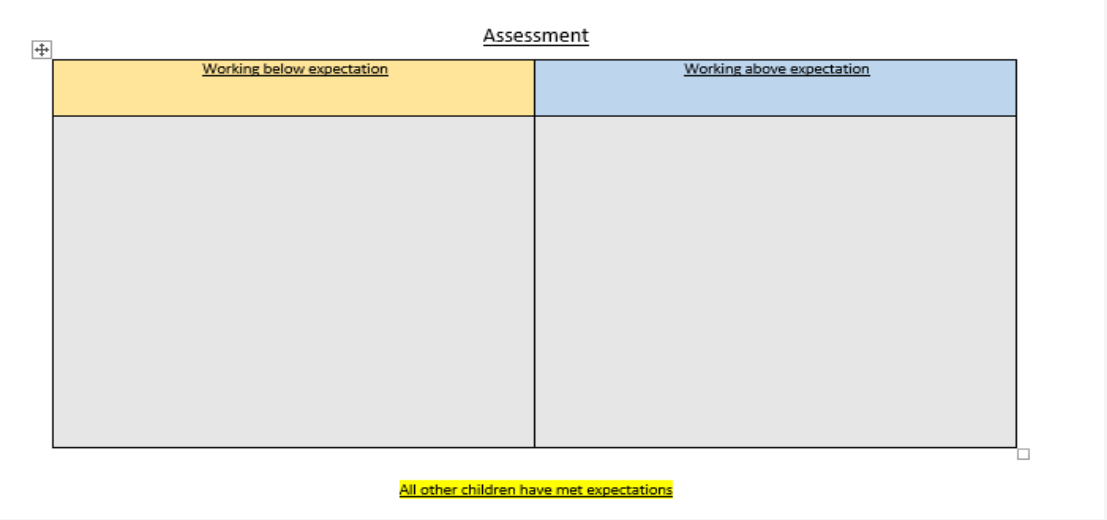


Assessment

We use a number of formative assessment strategies:
Live marking
Concept maps
Quizzes
Double page spreads
Verbal questioning

We assess the children as too whether they can articulate the key knowledge.



Challenge and Adaptations

Key questions	SEND adaptation/adjustments	Resources needed
• Which ones do you like/dislike? • What is it made of? • Does it have a function- if so, what?	• Smiley/sad face to indicate like/dislike	• Hats • Photos of hats
• Which fabric have you used? • Which stitching have you used? • How strong is the joining?	• Bigger needles • Thicker thread • Pre cut holes in fabric	• Fabric • Thread • Needles
• What is its purpose? • What fabric will you choose? Why? • What properties does the fabric have? • How will the fabric be joined together? • How will it be decorated? • Does its decoration have a purpose? • What are its measurements?	• Support measuring • Scribe annotations	• fabric

Main adaptations are clear on MTPs

Adaptations are planned into lessons. They might look like:

Use of additional resources – scaffolding (e.g.; key word lists, visual representations – Dual coding)

Teacher expertise – e.g.; additional processing time, use of talk partners, scribing, modelling. I do , we do you do

Referring back to previous learning and vocabulary.

Making parallels with the present day – linking the past to the present or the present to the past.

Use of artefacts, visits and visitors.

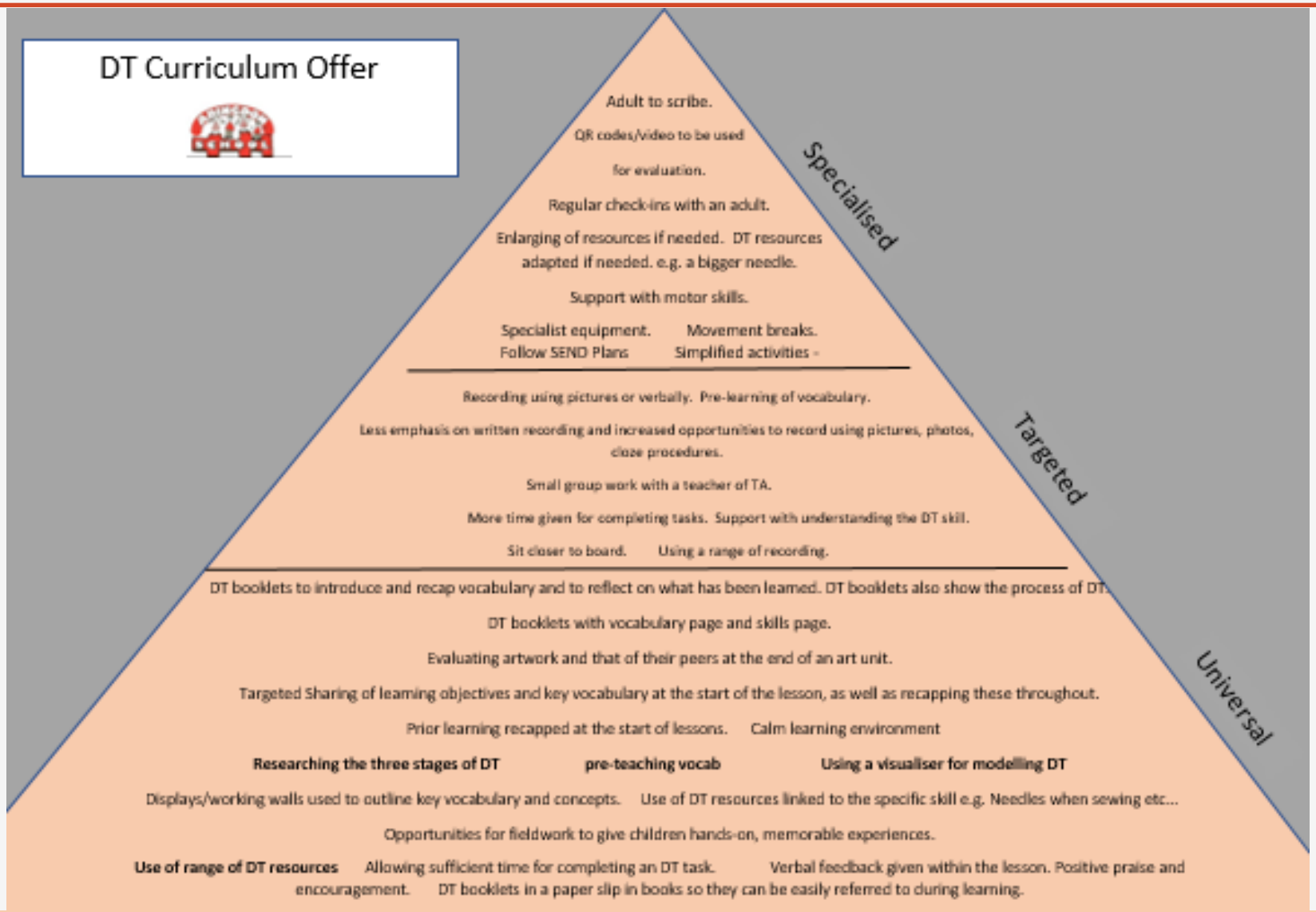
Enable Tables

We use the Five a day principle alongside our own current focuses for adaptations:

1) "Nest/Pair/Share"
2) Pre-teaching of vocabulary and any key concepts
3) Visual resources and dual coding across the whole school
4) Chunking learning
5) Using the visualiser for modelling and misconceptions

To further extend children's learning we use a challenge stamp with a further question/s to move them on.

Provision Pyramids



What do our children say about our curriculum?

I enjoy DT because I love making things and doing practical tasks.

I really enjoyed sewing a felt puppet!

I always look forward to DT week at school!