

Year	Autumn	Spring	Summer
1	Mechanisms - sliders and levers	Structures - free standing	Food -preparing fruit and vegetables
2	Food - preparing fruit and vegetables	Mechanisms - wheels and axels	Textiles - templates and joining techniques
3	Mechanical systems - pneumatics	Structures - shell structures	Food - sandwiches
4	Electrical systems - circuits and switches	Mechanical systems - levers and linkages	Textiles - 2D shape to 3D product
5	Mechanical systems - cams	Structures - frame structures	Food - following a recipe
6	Electrical systems - more complex circuits and switches	Textiles - combining different fabric shapes	Food - preparing and cooking

It is crucial that the children know:

- the correct vocabulary/terminology (and meanings) to describe and explain what they are doing at each stage
- How to work safely
- The names (and properties) of tools and materials *to enable them to make choices and explain them*







Year 1 - mechanisms (Levers and sliders)

Design Criteria: make a moving picture for a storybook or greetings card using a slider or lever.

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Designs can be drawings or models	

Crucial Knowledge: Making

Hole punches make round holes in paper or card.		Card - A flat piece of thick paper	
Scissors can cut paper and card.		Double sided tape goes under the join for a neat finish.	
Paper fasteners (split pins) join paper or card to make a moving part.		Sticky pads lift the join up to make it 3D.	

Crucial Knowledge: Evaluating

Evaluation	deciding how well something is done and how it could be improved.
------------	---

Crucial Knowledge: Technical Knowledge

mechanism	Parts which work together to make movement
lever	A beam or bar which is fixed at a point and moves in an arch.
pivot	A point where a lever is fixed
slider	Moves in a straight line up and down or side to side through a slit.

Crucial Knowledge: Health and safety

Tie long hair back

Keep the floor clear

Listen to and follow instructions carefully








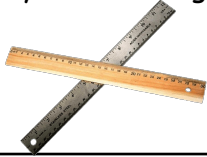


Year 1 - structures (free standing)

Design Criteria: Design and make playground equipment

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Designs can be drawings or models	

Crucial Knowledge: Making

<p>Card - A flat piece of thick paper</p> 	<p>Sellotape is transparent and shiny. You can't draw or colour over it. It can give a neat finish.</p> 
<p>PVA joins thicker card, wood and plastic. It needs to be held in place until it is dry.</p> 	<p>Double sided tape is hidden under the join and gives a neat finish.</p> 
<p>Masking tape is white. It tears easily and can be drawn on. It is good for models.</p> 	<p>Staplers put staples into paper, card or fabrics to join them</p> 
<p>Ruler for measuring accurately and drawing straight lines</p> 	<p>Single hole punch make a round hole in card or paper</p> 
<p>Scissors can cut card and paper</p> 	<p>Reclaimed materials - reusing items like boxes and bottles</p> 

Crucial Knowledge: Evaluating

Evaluation

deciding how well something is done and how it could be improved.

Crucial Knowledge: Technical Knowledge

structure

A frame or box that holds things in place

Straws can be joined with pipe cleaners to make a frame

A stable structure won't fall over if it is pushed.

The frame can be made stronger by gluing triangles in the corners.

Crucial Knowledge: Health and Safety

Tie long hair back

Keep the floor clear

Listen to and follow instructions carefully








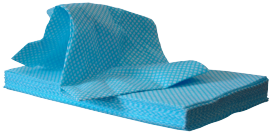


Year 1 - cooking and nutrition (preparing fruit and vegetables)

Design criteria: Design and make a fruit salad

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Designs can be drawings or models	

Crucial Knowledge: Making

Slice - cut into thin, flat pieces with a knife		A measuring jug has levels marked for quantities of liquid or solids such as flour.	
Colander allows liquid to drain while solid stays inside		Juicer squeezes the juice out of fruits like oranges	
A chopping board is used as a base for cutting, slicing, dicing and chopping foods.		Clean the tables before and after preparing food	
PVC cloth is a plastic cover for the table to protect it		Table fork for holding foods firmly while they are cut	

Crucial Knowledge: Evaluating

Evaluation	deciding how well something is done and how/if it could be improved.
Sensory evaluation	Using senses to evaluate appearance, smell, taste, texture (mouth feel)

Crucial Knowledge: Technical Knowledge

ingredients	Things used to make a food product
hygiene	Being clean
texture	How food feels in your mouth
utensils	Tools used in the kitchen
All food comes from plants or animals	
Food needs to be farmed, grown elsewhere (e.g. home) or caught	

Crucial Knowledge: Health and safety

Tie long hair back

Wear an apron and roll up your sleeves

Cover and clean your table

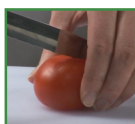
Wash your hands before, during and after preparing food

Use the correct equipment and follow instructions carefully

Fork secure



The bridge hold



Clean up properly when you have finished









Year 2 - cooking and nutrition (preparing fruit and vegetables)

Design Criteria: Design and make a vegetable side salad

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Designs can be drawings or models	

Crucial knowledge: Making

Colander allows liquid to drain while solid stays inside		Grate- shred food by rubbing it on a grater	
A juicer squeezes the juice out of fruits like oranges		Cut- to use a tool to make something shorter	
Slice - cut into thin, flat pieces with a knife		Chop - cut something into pieces with repeated cuts	
Measuring jug has levels marked for quantities of liquid or solids such as flour.		Peel - remove the outside layer of skin	

Crucial Knowledge: Evaluating

Evaluation	deciding how well something is done and how/if it could be improved.
Sensory evaluation	Using senses to evaluate appearance, smell, taste, texture (mouth feel)

Crucial Knowledge: Technical Knowledge

ingredients	Things used to make a food product
hygiene	Being clean
taste	Finding the flavour of a food
texture	How food feels in your mouth
utensils	Tools used in the kitchen
Farming	Growing crops or keeping animals for food
Healthy diet	Eating different types of foods to get the energy and nutrients bodies need.

Crucial Knowledge: Health and safety

Tie long hair back

Wear an apron and roll up your sleeves

Cover and clean your table

Wash your hands before, during and after preparing food

Use the correct equipment and follow instructions carefully

The bridge hold



The claw grip



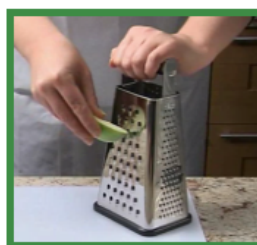
Peeling



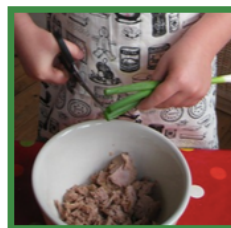
Fork secure



Grating



Scissors



Clean up properly when you have finished





Year 2 - mechanisms (wheels and axles)

Design Criteria: Design and make a rolling toy or vehicle

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Designs can be drawings or models	

Crucial Knowledge: Making

Card a flat piece of thick paper		Scissors can cut card and paper	
Card tubes cylinder shapes made from card		PVA glue joins thicker card, wood and plastic. It needs to be held in place until it is dry	

Crucial Knowledge: Evaluating

Evaluation	deciding how well something is done and how or if it could be improved.
------------	---

Crucial Knowledge: Technical Knowledge

mechanism	Parts which work together to make movement
wheel	A circle that rolls so a vehicle or toy can move
axle	A rod that attaches to the wheel and allows the wheel to turn
off-set	not mounted centrally
zigzag	Move in one direction and then in a different direction
Circular wheels mounted centrally roll in a straight path.	
Circular wheels which are mounted off-set to one another produce an up/down movement.	
Circular wheels mounted off-set can also produce a zig zag path of movement.	

Crucial Knowledge: Health and safety

Tie long hair back

Keep the floor clear from tripping hazards

Listen to and follow instructions carefully












Year 2 - textiles (templates and joining techniques)

Design Criteria - Design and make a textile (fabric) puppet.

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Designs can be drawings or models	

Crucial Knowledge: Making

Beads small items used for decoration		Cotton a fabric used for sewing	
Dipryl fabric used to try out ideas		Felt a fabric which doesn't fray which can be joined by gluing, stapling or sewing	
Needle used for sewing. Has a hole (eye) to put the thread through		needle threader - helps to put the thread through the eye of the needle	
Ribbon thin lengths of fabric used for fastening or decoration.		Thimble protects fingers when sewing	
Thread used to join fabrics when sewing		Wool used for weaving, knitting and decoration	

Crucial Knowledge: Evaluating

Evaluation	deciding how well something is done and how/if it could be improved.
------------	--

Crucial Knowledge: Technical Knowledge

textiles	types of fabric or cloth used for sewing
sew	Join textiles using lengths of thread pulled by a sharp needle.
template	A shape that is drawn around that is the same shape as the item being made.
applique	Making a picture or pattern with fabric pieces
embroidery	Using sewing to make a pattern or picture
2 pieces of fabric can be joined by sewing, gluing or stapling.	
Textiles can be decorated with beads, ribbons, buttons, fabric pens, applique and embroidery.	

Crucial Knowledge: Health and safety

Use a thimble to protect fingers when pushing needles and pins into fabric



Listen to and follow instructions carefully


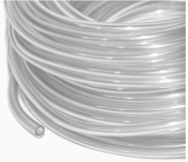




Year 3 - mechanical systems (pneumatics)

Design Criteria: Design and make a creature which moves using pneumatics

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Annotated sketch	A detailed drawing with labels describing the size, materials and notes about how the product works
prototype	A model to check an idea works
Designs can be drawings or models	

Crucial Knowledge: Making

Syringe a simple pump with a plunger and barrel		Tubing is flexible pipe to connect syringes	
reclaimed materials - using items like boxes again instead of throwing them away.		PVA glue joins thicker card, wood and plastic. It needs to be held in place until it is dry	
Masking tape is white. (opaque). It tears easily and can be drawn on. It is good for models.		Double sided tape is hidden under the join and gives a neat finish.	

Crucial Knowledge: Evaluating

Evaluation	deciding how well something is done and how/if it could be improved.
------------	--

Crucial Knowledge: Technical Knowledge

mechanism	Parts which work together to make movement
input	What goes into a system
modify	Change something slightly in order to improve it
output	What comes out of a system
pneumatic	Moving an object by pushing it with air

Crucial Knowledge: Health and safety

Tie long hair back
Keep the floor clear from tripping hazards
Listen to and follow instructions carefully





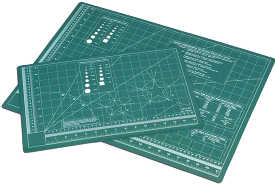



Year 3 - structures (shell structures)

Design Criteria: Design and make packaging to hold something special.

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Annotated sketch	A detailed drawing with labels describing the size, materials and notes about how the product works
prototype	A model to check an idea works
Designs can be drawings or models	

Crucial Knowledge: Making

Acetate sheet is plastic film that can be used to make a window in a package.		Card A flat piece of thick paper	
Masking tape is white. (opaque). It tears easily and can be drawn on. It is good for models.		PVA glue joins thicker card, wood and plastic. It needs to be held in place until it is dry	
Cutting mat - protects tables from damage when scoring or cutting with a safety knife		junior craft knife A sharp knife with a retractable blade	
Safety ruler - a ruler with a raised centre and groove to protect fingers		Snips for adults to use to cut thick card	

Crucial Knowledge: Evaluating

Evaluation	deciding how well something is done and how/if it could be improved.
------------	--

Crucial Knowledge: Technical Knowledge

assemble	Put together
nets	The flat or opened out shape of an object e.g. a box
scoring	Cutting a line or mark into sheet material to make it easier to fold
shell structure	A hollow structure made from a net
Card can be stiffened and strengthened	

Crucial Knowledge: Health and Safety

An adult must supervise when using certain tools. (junior safety knife)
A cutting mat and safety rule must be used when cutting or scoring
Tie long hair back
Keep the floor clear from tripping hazards
Listen to and follow instructions carefully









Year 3 -cooking and nutrition

Design Criteria: Design and make a sandwich

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Annotated sketch	A detailed drawing with labels describing the size, materials and notes about how the product works
Designs can be drawings or models	

Crucial Knowledge: Making

Antibacterial spray kills bacteria on work surfaces, PVC table covers and aprons		An apron is worn to protect clothes	
A chopping board is used as a base for cutting, slicing, dicing and chopping food products		Grate - shred food by rubbing it on a grater	
Chop cut something into pieces with repeated cuts		Slice - cut into thin, flat pieces	
PVC cloth is a plastic cover for the table to protect it		Peel - remove the outer skin of a fruit or vegetable	

Crucial Knowledge: Evaluating

Evaluation	deciding how well something is done and how/if it could be improved.
Sensory evaluation	Using senses to evaluate appearance, smell, taste, texture (mouth feel)

Crucial Knowledge: Technical Knowledge

ingredients	Foods or substance that are combined to make a particular dish
taste	Finding the flavour of a food.
texture	How food feels in your mouth
aroma	Pleasant smell
utensils	Tools used in the kitchen
recipe	Set of instructions for making a food dish.
grown	Producing plants from seeds
Reared	Breed and take care of animals for food.
caught	Animals (usually fish) taken from the wild for food.

Crucial Knowledge: Health and safety

Tie long hair back

Wear an apron and roll up your sleeves

Cover and clean your table

Wash your hands before, during and after preparing food

Use the correct equipment and follow instructions carefully

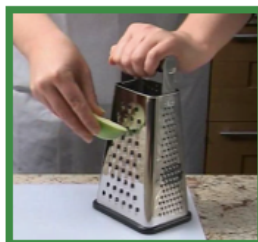
The bridge hold



The claw grip



Grating



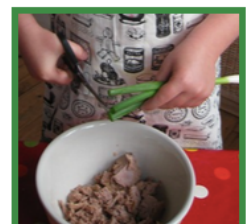
Peeling



Fork secure



Scissors



Clean up properly when you have finished





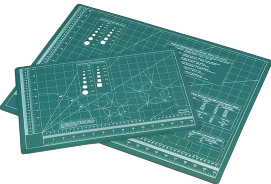



Year 4 - mechanical systems (Levers and linkages)

Design criteria: Design and make a moving picture or information book.

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Annotated sketch	A detailed drawing with labels describing the size, materials and notes about how the product works
Designs can be drawings or models	

Crucial Knowledge: Making

Card A flat piece of thick paper		Glue stick - solid glue for sticking paper and thin card.	
Masking tape is white. (opaque). It tears easily and can be drawn on. It is good for models.		Paper fasteners (split pins) join paper or card to make a moving part.	
Cutting mat protect tables from damage when scoring or cutting with a safety knife		Sticky pads lift the join up to make it 3D.	
Single hole punches make a round hole in card or paper		Safety ruler - a ruler with a raised centre and groove to guard fingers	

Crucial Knowledge: Evaluating

Evaluation	deciding how well something is done and how/if it could be improved.
------------	--

Crucial Knowledge: Technical Knowledge

mechanism	Parts which work together to make movement
Fixed pivot	The paper fastener goes through the levers and the back paper to hold the lever in place.
Loose pivot	Attaches two levers together but it is not attached to the base.
Using fixed and loose pivots in one mechanism makes different types of movement than just side to side or up and down.	

Crucial Knowledge: Health and safety

Tie long hair back
Keep the floor clear from tripping hazards
Listen to and follow instructions carefully









Year 4 - electrical systems (circuits and switches)

Design criteria: design and make an alarm for a toy vehicle

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Annotated sketch	A detailed drawing with labels describing the size, materials and notes about how the product works
Cross sectional diagram	Showing the inside of something as though it has been cut in half.
Exploded diagram	Shows the separate parts and how they fit together
Designs can be drawings or models	

Crucial Knowledge: Making

A battery is used for powering bulbs, motors and buzzers in a circuit.		A battery holder holds batteries in a circuit	
A bulb is an electrically powered light.		A bulb holder holds a bulb in a circuit	
A buzzer makes a noise when connected to a circuit.		Wire is a thread made of metal and covered in plastic for safety	
Crocodile clips are shaped like clothes pegs and used to attach wires to electrical components.		Wire strippers remove the plastic coating from electrical	

Crucial Knowledge: Evaluating

Evaluation	deciding how well something is done and how/if it could be improved.
------------	--

Crucial Knowledge: Technical Knowledge

Simple electrical circuits and components can create functional products.

A circuit is a complete pathway for electricity to flow around

A circuit includes a cell, wires and one or more components - bulb, motor, buzzer

A switch can be added to a circuit to turn it on or off.

conductor	A material that electricity can pass through
insulator	A material that electricity cannot pass through
Push to break switch	A switch turned off by pressing it
Push to make switch	A switch turned on by pressing it
Tilt switch	A switch that works when tilted at an angle.

Crucial Knowledge: Health and safety

Mains electricity can be very dangerous.

Keep the floor clear from tripping hazards

Listen to and follow instructions carefully

Batteries should be checked to make sure they are not leaking.

Wires get hot in electrical circuits and must be insulated.

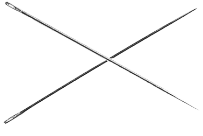







Year 4 - textiles (2D shape to 3D object)

Design Criteria: design and make

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Annotated sketch	A detailed drawing with labels describing the size, materials and notes about how the product works
Prototype	A model to check an idea works
Pattern	A pattern is made up of several templates
Designs can be drawings or models	


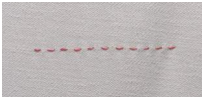
Crucial Knowledge: Making

Needles are used for sewing. They have a hole (eye) to put the thread through		Needle threader - helps to put the thread through the eye of the needle	
Thimble protects fingers when sewing		Thread used to join fabrics when sewing	
Hook and eye is used for fastening		Press stud is used for fastening	
Velcro is used for fastening. It can be sewn or glued on.		Zip is used for fastening.	

Crucial Knowledge: Evaluating

Evaluation	deciding how well something is done and how/if it could be improved.
------------	--

Crucial Knowledge: Technical Knowledge

Back stitch 	Stitches which overlap. Joins fabric securely.
Running stitch 	Stiches which do not overlap and leave a gap between them.
A piece of fabric can be folded and sewn to make a 3D textile product.	
There are different types of fastenings: button, zip, press stud, velcro	

Crucial Knowledge: Health and safety

Use a thimble to protect fingers when pushing needles and pins into fabric.

Carry scissors correctly.

Listen to and follow instructions carefully.


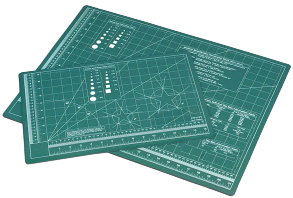

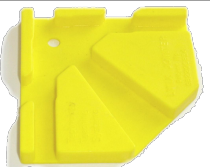

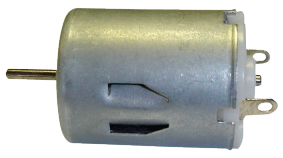



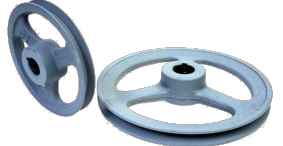
Year 5 - Mechanical systems (pulleys or gears)

Design and make a fairground ride

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Annotated sketch	A detailed drawing with labels describing the size, materials and notes about how the product works
Cross sectional diagram	Showing the inside of something as though it has been cut in half.
Exploded diagram	Shows the separate parts and how they fit together
Designs can be drawings or models	

Crucial Knowledge: Making

Bench hook- hooks over the edge of a table to provide a platform on which to work with materials.		Cutting mat - A protective surface on which to cut paper or card without scoring through it	
Dowel - Wood cut in a cylindrical shape		Jointer - holds pieces of wood together when making a joint	
Junior hack saw A small saw for cutting small sections of wood, metal or plastic		Motor -A device that turns and controls wheels, gears or pulleys,	
Safety knife - A sharp knife with a retractable blade		Safety ruler - A ruler with a raised centre and groove to guard fingers	
Wire stripper - removes the plastic insulation from wire		Pulley - A grooved wheel over which a cord or belt can run	

Crucial Knowledge: Evaluating

Evaluation	deciding how well something is done and how/if it could be improved.
------------	--

Crucial Knowledge: Technical Knowledge

A pulley is a wheel that carries a flexible rope, cord, cable, chain or belt on its rim.

Pulleys can change the speed and direction of rotation

Pulleys are used to lift or pull objects - especially heavy objects.

Drive belt	The belt which connects and transfers movement between two pulleys
------------	--

A gear is a wheel with grooves called teeth cut into it.

Gears can speed up or slow down the movement

Crucial Knowledge: Health and safety

Mains electricity can be very dangerous.

Keep the floor clear from tripping hazards

Listen to and follow instructions carefully

Batteries should be checked to make sure they are not leaking.

Wires get hot in electrical circuits and must be insulated.

Year 5 - structures (frame structures)

Design and make a shelter

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Annotated sketch	A detailed drawing with labels describing the size, materials and notes about how the product works
Cross sectional diagram	Showing the inside of something as though it has been cut in half.
Exploded diagram	Shows the separate parts and how they fit together
Designs can be drawings or models	

Crucial Knowledge: Making

Card triangles used to strengthen and support joints		Bench hook - hooks over the edge of a table to provide a platform on which to work with materials.	
Junior hack saw A small saw for cutting small sections of wood, metal or plastic		Glass paper rough paper used for smoothing and polishing	
Art straws Bendable straws which be used for making frameworks		Square section wood used for making frames	
Dowel - Wood cut in a cylindrical shape		Jointer - holds pieces of wood together when making a joint	

Crucial Knowledge: Evaluating

Evaluation	deciding how well something is done and how/if it could be improved.
------------	--

Crucial Knowledge: Technical Knowledge

A frame is made by joining rigid pieces of material together	
The material can be joined using PVA glue	
Gluing triangles in the corner of the frame makes the frame stronger	
compression	Using pressure to squeeze an object (squeezing)
strut	A part of a structure under compression
tension	A force pulling on a material or structure (stretching)
tie	A force pulling on a material or structure (stretching)
triangulation	A part of a structure under tension
A structure can fail if there is too much load.	

Crucial Knowledge: Health and safety






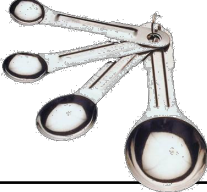




Some tools can only be used by adults.
Make sure loads cannot cause injury if structures fail when testing.
Saw and drill use must be supervised by an adult
Tie long hair back
Keep the floor clear from tripping hazards
Listen to and follow instructions carefully

Year 5 - cooking and nutrition following a recipe

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Annotated sketch	A detailed drawing with labels describing the size, materials and notes about how the product works
Designs can be drawings or models	

Crucial Knowledge: Making

Peel - remove the outside layer of skin		Grate- shred food by rubbing it on a grater	
Chop - cut something into pieces with repeated cuts		Slice - cut into thin, flat pieces with a knife	
Measuring jug has levels marked for quantities of liquid or solids such as flour.		Measuring spoons A set of spoons to measure amounts of ingredients, such as a teaspoonful	
Baking sheet - flat metal sheet for baking pizzas, rolls etc		Rolling pin Used for rolling out pastry, biscuit dough and fondant icing	
Scales - A device for weighing ingredients		Spatula - A smooth edged, flat hand tool for smoothing cake fillings etc	

Crucial Knowledge: Evaluating

Evaluation	deciding how well something is done and how/if it could be improved.
Sensory evaluation	Using senses to evaluate qualities such as appearance, smell, taste, texture (mouth feel)

Crucial Knowledge: Technical Knowledge

Recipes can be adapted to change the appearance, taste, texture and aroma
Food is grown (e.g. tomatoes, wheat, potatoes), reared (e.g. pigs, chickens, cattle) and caught (e.g. fish) in the UK, Europe and the wider world
Seasons may affect the food available
Some food is processed into ingredients that can be eaten or used in cooking
Different food and drink contain different substances - nutrients, water and fibre - that are needed for health

Crucial Knowledge: Health and safety

Hands and work surfaces must be hygienically clean.
Cooking utensils and equipment must be used safely and correctly.
Tie long hair back.
Adults must use oven gloves to remove baking sheets from the oven.


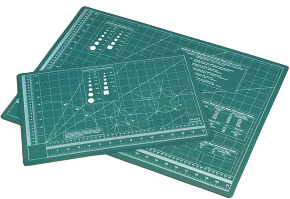

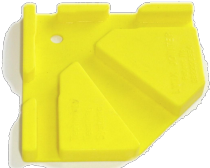





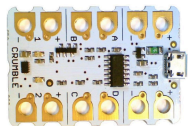
Year 6 - electrical systems

more complex circuits and switches

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Annotated sketch	A detailed drawing with labels describing the size, materials and notes about how the product works
Cross sectional diagram	Showing the inside of something as though it has been cut in half.
Exploded diagram	Shows the separate parts and how they fit together
Designs can be drawings or models	

Crucial Knowledge: Making

Bench hook- hooks over the edge of a table to provide a platform on which to work with materials.		Cutting mat - A protective surface on which to cut paper or card without scoring through it	
Dowel - Wood cut in a cylindrical shape		Jointer - holds pieces of wood together when making a joint	
Junior hack saw A small saw for cutting small sections of wood, metal or plastic		Motor -A device that turns and controls wheels, gears or pulleys,	
Safety knife - A sharp knife with a retractable blade		Safety ruler - A ruler with a raised centre and groove to guard fingers	
Wire stripper - removes the plastic insulation from wire		Control box can be joined to the circuit and programmed to follow commands	

Crucial Knowledge: Evaluating

Evaluation	deciding how well something is done and how/if it could be improved.
------------	--

Crucial Knowledge: Technical Knowledge

Simple electrical circuits and components can create functional products.

A circuit is a complete pathway for electricity to flow around

A circuit includes a cell, wires and one or more components - bulb, motor, buzzer

A switch can be added to a circuit to turn it on or off.

A control bo can be programmed to react to commands

conductor	A material that electricity can pass through
insulator	A material that electricity cannot pass through
Push to break switch	A switch turned off by pressing it
Push to make switch	A switch turned on by pressing it
Tilt switch	A switch that works when tilted at an angle.

Crucial Knowledge: Health and safety

Mains electricity can be very dangerous.

Keep the floor clear from tripping hazards

Listen to and follow instructions carefully

Batteries should be checked to make sure they are not leaking.

Wires get hot in electrical circuits and must be insulated.









Year 6 - textiles

combining different fabric shapes

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Annotated sketch	A detailed drawing with labels describing the size, materials and notes about how the product works
Prototype	A model to check an idea works
Pattern	A pattern is made up of several templates
Designs can be drawings or models	

Crucial Knowledge: Making

Needles are used for sewing. They have a hole (eye) to put the thread through		Needle threader - helps to put the thread through the eye of the needle	
Thimble protects fingers when sewing		Thread used to join fabrics when sewing	
Hook and eye is used for fastening		Press stud is used for fastening	
Velcro is used for fastening. It can be sewn or glued on.		Zip is used for fastening.	

Crucial Knowledge: Evaluating

Evaluation	deciding how well something is done and how/if it could be improved.
------------	--

Crucial Knowledge: Technical Knowledge

Pattern	A pattern is made of several templates
Seam allowance	Extra fabric allowed for joining together
specification	Describes what a product has to do
tacking	Large running stitches to hold pieces of fabric together temporarily
The pieces cut from the pattern are joined together and make a more complicated design.	

Crucial Knowledge: Health and safety

Use a thimble to protect fingers when pushing needles and pins into fabric.
Carry scissors correctly.
Listen to and follow instructions carefully.






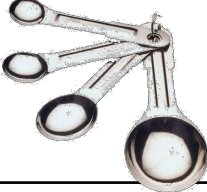




Year 6 - cooking and nutrition

preparing and cooking

Crucial Knowledge: Designing

Design criteria	what a product must do to be successful
Purpose	what a product is for
User	who a product is for
Annotated sketch	A detailed drawing with labels describing the size, materials and notes about how the product works
Designs can be drawings or models	

Crucial Knowledge: Making

Peel - remove the outside layer of skin		Grate- shred food by rubbing it on a grater	
Chop - cut something into pieces with repeated cuts		Slice - cut into thin, flat pieces with a knife	
Measuring jug has levels marked for quantities of liquid or solids such as flour.		Measuring spoons A set of spoons to measure amounts of ingredients, such as a teaspoonful	
Baking sheet - flat metal sheet for baking pizzas, rolls etc		Rolling pin Used for rolling out pastry, biscuit dough and fondant icing	
Scales - A device for weighing ingredients		Spatula - A smooth edged, flat hand tool for smoothing cake fillings etc	

Crucial Knowledge: Evaluating

Evaluation	deciding how well something is done and how/if it could be improved.
Sensory evaluation	Using senses to evaluate qualities such as appearance, smell, taste, texture (mouth feel)

Crucial Knowledge: Technical Knowledge

Recipes can be adapted to change the appearance, taste, texture and aroma
Food is grown (e.g. tomatoes, wheat, potatoes), reared (e.g. pigs, chickens, cattle) and caught (e.g. fish) in the UK, Europe and the wider world
Seasons may affect the food available
Some food is processed into ingredients that can be eaten or used in cooking
Different food and drink contain different substances - nutrients, water and fibre - that are needed for health

Crucial Knowledge: Health and safety

Hands and work surfaces must be hygienically clean.
Cooking utensils and equipment must be used safely and correctly.
Tie long hair back.
Adults must use oven gloves to remove baking sheets from the oven.