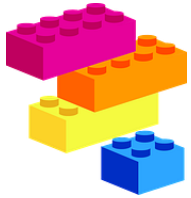
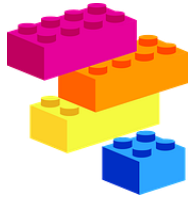
Goathland Primary School
Progression and End of Year Expectations Document
Design Technology

Early Years Foundation Stage EYFS				
EYFS **Characteristics of effective learning**	**Food**	**Textiles**	**Construction**	**Modelling**
Finding out and exploring -Showing curiosity about objects, events and people -Using senses to explore the world around them -Playing with what they know -Pretending objects are things from their experience -Initiating activities -Seeking challenge -Taking a risk, engaging in new experiences, and learning by trial and error **Active Learning** -Maintaining focus on their activity for a period of time -Showing high levels of energy, fascination -Paying attention to details -Persisting with activity when challenges occur -Showing a belief that more effort or a different approach will pay off -Bouncing back after difficulties -Showing satisfaction in meeting their own goals -Being proud of how they accomplished something- not just the end result -Enjoying meeting challenges for their own sake rather than external rewards or praise **Creating and thinking critically Thinking Having their own ideas** -Thinking of ideas -Finding ways to solve problems -Finding new ways to do things -Making links and noticing patterns in their experience	**We are chefs**  -Express likes and dislikes in relation to food -Take part in mixing and combining ingredients with an adult led group.	**We are tailors**  -Describes textures of things Threading onto laces	**We are product designers**  -Construct vertical and horizontal, make enclosures and make/create spaces -Build balance and join pieces together -Shows interest in technological toys -Skill in making toys work	**We are model makers**  -Snip using scissors -Use glue independently -Make props to support roleplay -Select own resources and talk about ideas
	We are chefs  -Eats a range of food understands the need for variety. -Everyday language of capacity and weight	**We are tailors**  - Experiments to create different textures -Begins to thread through punched holes in card/templates.	**We are product designers**  -Constructs with a purpose in mind. - Realises that tools can be used for a purpose -Manipulates to achieve a planned effect -Understands new media can	**We are model makers**  -Use scissors to cut on a line -Use single hole punch -Use simple tools and techniques such as glue tape -Selects appropriate resources -Adapts work where necessary

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-Making predictions -Testing their ideas -Developing ideas of grouping, sequences, cause and effect -Planning, making decisions about how to approach a task, solve a problem and reach a goal -Checking how well their activities are going -Changing strategy as needed -Reviewing how well the approach worked			be combined -Assemble shape and join -Selects tools and techniques - Shows an interest in technological toys with knobs or pulleys or real objects such as cameras or mobile phones Explore characteristics of everyday shapes and objects and use mathematical language to describe them	
Technology Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. **Expressive Arts and Design / Being imaginative** Exploring and using media and materials They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories				

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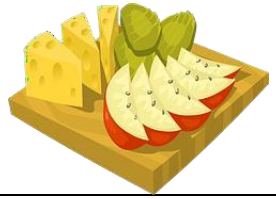
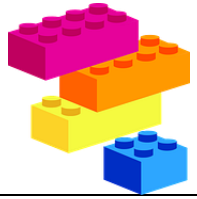
Year 1				
Design: -Think of own ideas from experiences -Suggest ideas and explain - Use words and pictures to plan -Design a product for myself -Work in a range of contexts - Say how the product will work - Say how the product meets the design criteria. **Make:** -Suggest what to do next - Explain what is being made and why -Select tools from a given range (be able to explain why they have chosen) -Select from a range of appropriate materials - Measure and cut **Evaluate:** -Like/dislike -Talk as designs develop -Talk about changes that have been made - Make simple judgements about whether their finished product is like their design.	**Food**	**Textiles**	**Construction**	**Modelling**
				
	We are chefs - Develop Food vocabulary using smell texture and feel -Cut and chop a range of ingredients safely and hygienically -Assemble and cook with support. - Know how to follow hygiene procedures - Group familiar food products e.g. fruit and vegetables	**We are tailors** -Colour fabrics using a range of techniques e.g. fabric paints, printing -Cut out shapes and templates. -Sew running stitch with support if needed (card holes, binca, large needles)	**We are product designers** -Use a range of materials to make models. -Constructs using a lever and slider device -Joining materials appropriately for different materials and situations e.g. tape, glue -Investigate how structures can be made stronger	**We are model makers** -Fold, tear and cut -Roll and curl paper to form tubes -Cut along straight and curved lines -Insert paper fasteners for linkages and use a hole punch.
Example activities	**Royal banquet** - **Would need to make a sandwich that involved cutting something ie; bread, cucumber, cheese OR cutting/ chopping fruits for banquet** - **Buttering** - **assembling**	**Sock puppets** - **cut out shapes to attach** - **running stitch**	**Design a new toy** - **lever and slider** - **strengthening (not wheels)**	

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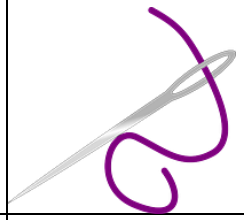
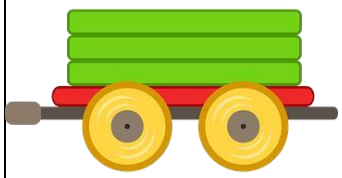
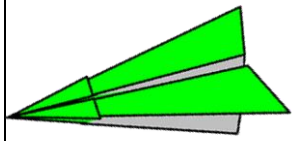
Year 2				
Design: -Think of own ideas from experiences and others -Develop design ideas through discussion and drawing -Simple design criteria -Make drawings, label parts -Add notes -Make mock ups / templates - Say how the product will work - Say how the product meets the design criteria. - Know who they are designing a product for and why they need it (why is this product suitable). **Make**: -Name tools -Select tools and equipment -Measure and cut -Assemble join and combine to make models -Explain what is being made and why -Select tools from a given range (be able to explain why they have chosen) -Select from a range of appropriate materials **Evaluate**: -Talk about pre-existing products -What could be done different and what went well -Evaluate against a design criteria - Make judgments about whether their finished product is like their design.	**Food**	**Textiles**	**Construction**	**Modelling**
				
	We are chefs -Food vocabulary -Grate, peel and chop a range of ingredients safely and hygienically -Measure and weigh food items using non-statutory measures e.g. spoon and cups -Assemble and cook -Understand where food comes from. - Select ingredients according to their characteristics - Know how to follow hygiene procedures - To understand the need for a variety of foods in a diet	**We are tailors** -Colour and decorate fabrics. - e.g. dyeing, adding sequins and decorating with button -Join using glue, running stitch and over sewing. -Sew a running stitch and over stitch with increased independence and metal needles	**We are product designers** -Models with wheels and axles -Cut strip wood/dowel using a hacksaw and bench hook - Mark out materials to be cut using a template if needed. To the nearest cm - Use a range of materials to create models with wheels and axels. e.g. tubes, dowel, cotton reels	**We are model makers** -Investigate how structures can be made stiffer and more stable - Investigate strengthening sheet materials -Cut along straight and curved lines with accuracy - Cut out regular and irregular shapes with accuracy

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Example Recipes	**Yorkshire recipes**	**Bunting** - glue - running stitch - over stitch **Simple hanging decorations (Christmas) - buttons, sequins to decorate. Cut round simple templates..** **Simple Christmas decorations**		**Fire engines** **Card designs - marking and cutting shapes/ develop to more of a plaque to hang up - how can we strenghten it?** **Who is it for - designs that suit**

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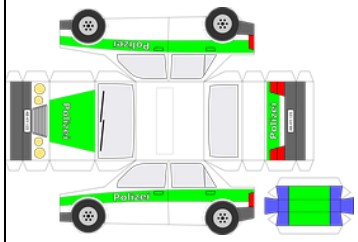
Year 3				
Design: -Generate ideas for an item and Consider purpose and user -Identify purpose establish criteria for a successful product - Indicate specific features of their product - Gather information about the needs/wants of particular groups. - Explore, develop and communicate proposals by modelling -Drawings with detailed labels and notes -Plan the order of work - Develop their own design criteria -Share and clarify ideas through group discussion. **Make**: -Select tools and techniques - explain choice of tools and what techniques they are going to perform with them. - Select appropriate materials. -Explain choice of material according to its functional properties and aesthetic qualities. -Measure mark cut and assemble components with more accuracy. -Use finishing techniques to strengthen and improve -Think about ideas as they make and change them as they make **Evaluate**: -Evaluate products against a success criteria -Disassemble, investigate and evaluate familiar products	**Food**	**Textiles**	**Construction**	**Modelling**
				
	We are chefs -Making healthy eating choices and form an understanding of a balanced diet - Prepare ingredients hygienically, selecting appropriate utensils - Develop a sensory vocabulary, using smell, taste texture and feel - Measure ingredients with support – grams/cups/ follow a recipe/follow instruction - Assemble and cook ingredients – know how to mix, mould and begin to cook foods. (using toasters and microwaves with supervision	**We are tailors** - Understand how to create a Seam allowance - Join fabrics using running stitch, back stitch - Explore fastenings and re-create some e.g. Sew on buttons and make loops	**We are product designers** -Materials more stable by giving them a wide base -Choosing materials based on their properties -See a glue gun used by adult	**We are model makers** -Cut materials accurately and safely by selecting appropriate tools -Create nets make 3d shapes. -Cut internal shapes -Cut slots -Levers and linkages -Fixed and moving joins - Create and investigate joining's temporary, fixed and moving -Measure to nearest cm

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-How finished products could be improved - Identify strengths and areas for development. - Be able to evaluate other children's products constructively. - Refer back to their design criteria in evaluating completed products. - Consider and explain how a finished product could be improved. -Investigate and analyse a range of existing products. Understand how key event and individuals in DT have helped shape the world				
Example Activities	**Viking baking** **-bread (baking)** **- fishcakes**		**Mayan temples** - **pulleys, leavers, linkages**	**Waterwheel**

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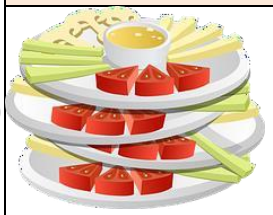
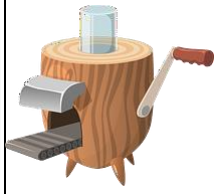
Year 4				
Design: -Generate more than one idea considering purpose -Gather information to help design a successful product. (i.e. by asking others views) -Produce a detailed plan with labelled diagrams, a written explanation and sequence of actions. -Propose realistic suggestions of how they can achieve their designs. -Make prototypes -Design appealing products fit for purpose - Indicate specific features of their product - Gather information about the needs/wants of particular groups. - Develop their own design criteria -Share and clarify ideas through group discussion. **Make**: -Choose and use a range of tools and equipment with accuracy - explain choice of tools and what techniques they are going to perform with them. - Select appropriate materials. -Explain choice of material according to its functional properties and aesthetic qualities. -Measure mark out join and assemble -Select tools and techniques for making their products **Evaluate**:	**Food**	**Textiles**	**Construction**	**Modelling**
				
	We are chefs - Prepare ingredients hygienically using appropriate utensils - Follow a recipe - Assemble or cook ingredients – e.g. beating rubbing in - Measure and weigh ingredients - Make healthy eating choices from an understanding of a balanced diet	**We are tailors** -Use appropriate decoration techniques e.g. applique (glued or simple stiches) - Join textiles with appropriate stitching (any stitch) - Create a simple pattern and understand the need for a pattern	**We are product designers** - Incorporate a circuit with a bulb or buzzer into a model - Choose materials based on their functional properties and aesthetic qualities - Use a glue gun with adult supervision 1:1	**We are model makers** -Measure and mark to nearest mm -Diagonal struts to strengthen.

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- Discuss how well the finish product meets the design criteria and how well it meets the needs of the user. -Investigate and analyse a range of existing products. -Evaluate their work both during and at the end of the assignment. - Identify strengths and areas for development. - Be able to evaluate other children's products constructively. - Refer back to their design criteria in evaluating completed products. Understand how key event and individuals in DT have helped shape the world				
	Greek dips **Think need to make something to dip in with them**	**????** **Needs to include buttons – maybe make a purse?**	**Board game** - **with electrics** - **design on computer first (CAD)**	

Year 5

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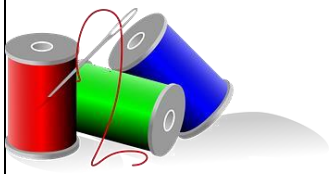
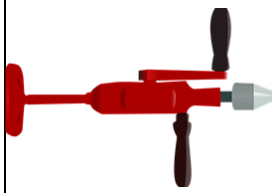
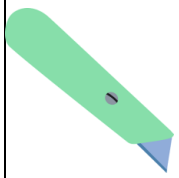
Design: -Generate ideas through brainstorming and identifying purpose -Create annotated sketches/cross-sectional drawings to develop and communicate ideas. -Use models kits and drawings to formulate ideas -Make simple prototypes -Use results a of investigations when developing ideas -Develop clear sequence of what has to be done, planning how to use materials, equipment and processes and suggesting alternative methods if the first attempt fails. -Use results of investigations, information sources including ICT when developing design ideas. - Make decisions taking into account constraints such as time, resources and cost. **Make**: -Select materials tools and techniques and explain choices. -Measure, mark, cut out shape range of materials using appropriate tools, equipment and techniques. -Accurate measuring and marking out -Use tools safely under close supervision -Produce lists of appropriate tools and equipment. - Join and combine materials and components in temporary and permanent ways. - Formulate step by step plans. - Use techniques that involve multiple steps - Demonstrate resilience and resourcefulness when tackling practical problems.	**Food**	**Textiles**	**Construction**	**Modelling**
				
	We are chefs - Taste a range of ingredients and food items to develop a sensory vocabulary for use when designing - Measure and weigh accurately using scales - Cut and shape ingredients using appropriate tools and equipment - Begin to use hobs to heat food with appropriate supervision -Cook savoury dishes using a range of cooking techniques	**We are tailors** - Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decorations) - Decorate textiles appropriately often before joining components - Pin and tack fabric pieces together - Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles e.g. soft for a cushion	**We are product designers** -Assemble components to make a working model - Use different tools and equipment safely - Use a hand drill to make tight and loose fit holes - Understand and use mechanical systems in their products e.g. **gears, pulleys** -Work safely with tools	**We are model makers** -Chose appropriate material for the purpose - Safely cut measured accurate slots - Introduce scoring and cutting using craft knives - Cut accurately and safely to a marked line - Join and combine materials with a temporary, fixed or moving joining's -Use linkages to make movement larger

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Evaluate: -Justify decisions about materials and methods of construction -Evaluate against design criteria personally and from others -Identify what does and does not work in the product -Make suggestions as to how theirs or others designs could be improved -Investigate and analyse existing products - Evaluate the work of others - Discuss whether materials used are sustainable. - Is the product innovative Understand how key event and individuals in DT have helped shape the world				
Suggested Actvities	**Make a Victorian stew style one-pot dish** - **perhaps introducing a slow cooker** - **prepare a variety of vegetables** - **introducing meat** - **making dumplings**	**Make an apron** - **adding an edging** - **decorative stitches to decorate** - **Design on computer**	**Roman chariots** **Design with k'nex then use wood to construct a frame.**	

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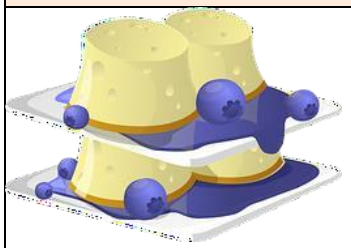
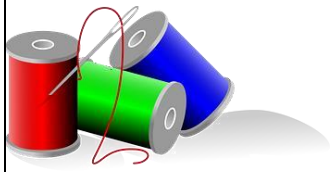
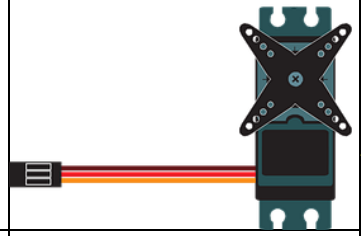
Year 6

Design:
-Investigate products and images to create design criteria
-Plan order of work choosing appropriate materials tools and techniques.
-Create annotated sketches/cross-sectional drawings to develop and communicate ideas.
-Models, kits and drawings to formulate idea
-Make protoypes (use CAD)
-Use Computer Aided Design
- Make decisions taking into account constraints such as time, resources and cost.

Make:
-Select materials tools components and techniques and explain why
- Assemble components to make working models.
-Make a quality product
-Use tools safely increasing independence
-Produce lists of appropriate tools and equipment.
- Formulate step by step plans.
- Use techniques that involve multiple steps and make modifications as they go along.
- Demonstrate resilience and resourcefulness when tackling practical problems.
-Achieve a quality product.

Evaluate:
-Identify strength and areas for improvement and carry out appropriate tests
-Record their evaluations with drawings/labels
-Evaluate against their original criteria and suggest ways could be improved
-How well does product meet needs of user
-Analyse range of existing products

Food	Textiles	Construction	Modelling
			
We are chefs - Understand the importance of correct storage and handling of ingredients (using knowledge of microorganisms) - To understand seasonality and where, and how ingredients are grown, reared caught and processed - Measure accurately and calculate ratios of ingredients to scale up or down from a recipe - Demonstrate a range of baking and cooking techniques - Decorate appropriately -Create/refine recipes	**We are tailors** -Pin Sew and attach materials together to create a product - Make a 3D quality product that use pattern pieces and seam allowance -Use a range of styles of decoration of textiles	**We are product designers** -Construct products using permanent joining techniques -Use different tools and equipment safely -Incorporate a motor and a switch into a model -Control a model using an ICT control programme -Build a framework using a range of materials e.g. wood card plastic to support mechanisms - Use a cam to make an up and down mechanism - Understand and use mechanical systems in their products e.g. **gears**, levers and cams	**We are model makers** -Cut strip wood, dowel, square section wood accurately to 1mm -Join materials using appropriate methods E.g. nailing and screwing. - Use a craft knife, cutting mat and safety ruler under 1:1 supervision - Choose an appropriate sheet material for the purpose - Cut materials with precision and refine the finish with appropriate tools such as sanding wood after cutting and more refined cut after roughly cutting out a shape

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- Evaluate the work of others - Discuss whether materials used are sustainable. - Is the product innovative -Reflect on their work using design criteria and saying how well their product meets the needs of the user. -Investigate and analyse a range of existing products. Understand how key event and individuals in DT have helped shape the world				
	Something that involves frying – maybe stir fry?		**Computer programmed game (could link with Scratch ICT)**	**Something using different materials?** **What about making a box with a binged lid – linked to Egyptian sarcopogus?**

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