

D.T AT INGOLDISTHORPE C of E VA PRIMARY SCHOOL



Implementation

At Ingoldisthorpe Primary School we provide a D.T curriculum filled with creative and practical activities over a progressive, rolling two year cycle. Knowledgeable staff teach engaging lessons to ensure children are taught the skills required to both design, critique and produce, a variety of individual, bespoke prototypes from their own design, that meets a certain success criteria. Investigating existing products, the children learn to identify suitable materials that are either fit or unfit for purpose, along with testing their designs fairly to ensure an accurate evaluation of the finished piece. Children are given the opportunity to research and design using an array of resources from clay, wood, card, glue and natural materials to name but a few. Within the progressive curriculum, in the beautiful surroundings of the school, children of all ages learn how to use equipment such as fires, saws and scales safely and correctly along with tools to cut, shape, attach and smooth. Within KS1, children are given the opportunity to independently create, build, design and fix freely and creatively during Plan Do Review allowing their curiosity and imagination to flourish. In addition the children are taught to refine techniques for effect through stitching, weaving, sewing, fixing and bonding and love to attend cookery and woodwork after school clubs.

Intent

At Ingoldisthorpe C of V Primary School we strive to inspire creativity and imagination, allowing all children the opportunity to design and make products fit for purpose. Offering a progressive curriculum, Ingoldisthorpe Primary School equips children with the skills to be the problem solvers of the future, encouraging children to learn to think outside the box creatively, take risks, innovate and to solve relevant and practical problems both individually and within a team environment. Skilled teaching staff build children a broad subject knowledge incorporating mathematics, science, engineering, computing and science, equipping them with the practical and technical expertise to critique and evaluate both past and present designs and technology, to create a technical and practical product that fits within a success criteria. In addition all children build an understanding of one of life's key skills, that of food preparation, nutritional values and how to cook and use equipment correctly and safely.

Our curriculum overview

D/T	Cooking Pattern making Christmas	Key knowledge: -experience different fruit -pattern making recognition -likes/dislikes/ trying food	Advent Calendar Cooking Christmas Design, make and evaluate using a range of materials	Key knowledge: -difference in properties of materials and use of materials -to know how to plan, evaluate and make predictions -Raw and cooked foods -to attach materials in different ways	Sculpture / Salt dough fossils	Key knowledge: -What is salt dough and how is it made? -What can it be used for? - Durability, cost-effectiveness, fit for purpose -Consider audience/consumer -grams, degrees, time	Egyptian headdress and death masks Ability to support wider structures, use <i>maner marha</i> , and meet a success criteria	Key knowledge: -how Egyptian death mask looked and what they represented -how to strengthen and support the additional details for a headdress -how to mould, sculpt and complete a death mask
		Key skills: -using tools such as knives -cutting, stirring -hygiene and food safety		Key skills: -identify materials that are fit for purpose -to design, make and evaluate their work -experiment with techniques		Key skills: -using equipment to make accurate measurements (weight) -using objects to imprint, mark making -using tools to make marks, shape, carve -painting with fine detail -evaluating existing products and final pieces		Key skills: -to design, build, support and paint a death mask using <i>maner marha</i> -to use card and straws as support -to work to a success criterion, using Egyptian artefacts as inspiration -to use knowledge of death masks to create their own
		SEN/G&T: -adult support, sensory experience -adapted resources -introduce wider range tools		SEN/G&T: -adult support, adapted resources, differentiated instructions -to add more detail and use a wider range of materials		SEN/G&T: -support with making accurate measurements -simplified expectations -use of tools to experiment with, encourage more complex designs		SEN/G&T: -support to create design, support designing, template, adult guidance -additional success criteria including an animal and pattern inspired by Egyptians, additional challenges

D/T	Sock puppets and hobby horses Bake and decorate mother's day cakes	Key knowledge: - Sock puppets and hobby horses were toys played with a long time ago - Use of materials to decorate toys - Explore ways of fixing materials	Making Microhabitats for mini-beasts, family tree, mother's day baking and card Design, make and evaluate	Key knowledge: -to know the best materials fit for purpose -to identify features and details -to evaluate their work and make adjustments	Pneumatic toys Design, cut, build, fix and paint to create a pneumatic toy	Key knowledge: -pneumatic – air- input output -simple pneumatics have been and are used in toys – nerf -pneumatics are used <u>everyday</u> in tools/heavy machinery	Bridge building Christopher Wren and Frank Lloyd Wright architects	Key knowledge: -to know about famous architects and landmarks in New York/ bridges -to know different types of bridges -to know how to build a bridge, work as a team and how to evaluate your bridge to improve it
		Key skills: - Combining materials to decorate toys - Explore ways of fixing/attaching materials - Plan, make and evaluate designs		Key skills: - to design and combine materials fit for purpose -to work as part of a group -to use a range of materials -explore ways to fix/attach materials -plan, make and evaluate their designs		Key skills: -design a product according to a design brief -know how to evaluate existing products with reference to purpose -cutting (sawing) -designing -fixing -Aesthetics (painting) -evaluating finalised product against design brief		Key skills: -to work as a team -to plan a bridge to hold 5kg including materials and using bridge knowledge to support planning -to test and evaluate your bridge -to improve your bridge construction and strive for more stability -to discuss strengths/ weaknesses -to communicate well with your team
		SEN/G&T: - Adult to model and support children - Suggest certain materials and fixing methods - Sewing techniques for more dextrous		SEN/G&T: -support, outdoor learning, paired/group work differentiated tasks -to lead a group and support others, explain reasoning for choices		SEN/G&T: -support when making -Understand hydraulics – liquid instead of air -testing range of fixing methods and evaluating which works best -saw for cutting		SEN/G&T: -adult support with team work -guidance with building and support with manipulation of materials -holding up to 10kg, leading groups, attempting suspension bridge

D/T	Making lighthouses Yucky sandwich book Cooking making sandwiches	Key knowledge: -joining techniques -Names of materials and tools -basic food preparation and hygiene	Make a Skeleton with Joints Cooking	Key knowledge: -joining and fixing techniques -basic food hygiene -how to use equipment correctly and safely	Model making - Aqueeducts	Key knowledge: -What is an aqueeduct? What were they used for? What were they made from? -which materials, shapes, designs are best for support/strength? -arches in architecture	Greek pottery- creating own pot or vase from clay Cooking: filo parcels and pasta dishes	Key knowledge: -to know about Greek pottery and pattern on the pottery -to know how to manipulate clay -to know about Greek ingredients and seasonality of dishes
		Key skills: -Use equipment such as scissors and knives correctly and with adult supervision -To follow a simple set of instructions -Making 3D shapes out of 2D shapes		Key skills: -to use mechanisms for movement -to be able to design and evaluate -to follow a recipe to create a healthy meal -to cut shapes accurately and follow instructions -evaluate their work and make adjustments		Key skills: -product analysis/existing products -experimenting with shape and material for strength -Developing ideas in a plan -fixing/bonding materials together -testing and evaluating existing products and final pieces		Key skills: -to plan, create and evaluate a clay pot design, evaluating against a success criteria -to manipulate clay to create a 3D form, to smooth and decorate with acrylic -to plan dishes and cook them following a set of instructions
		SEN/G&T: -adult support, use of simpler techniques and safer tools -use more complex techniques, solve own problems, evaluate		SEN/G&T: -adult support, simplified instructions, paired work -lead a group, explain to peers and extend vocabulary		SEN/G&T: -support with making If required egg cutting corrugated card -exemplar products -Challenge: who can make the longest, or highest or most waterproof/effective product?		SEN/G&T: -smaller amounts of clay to make a dish (not vase), adult support to smooth and decorate, simple instrug. -addition of handles, stand, lids etc. -challenge to create a waterproof item, useable item, dif, success criteria

D/T	Making diva clay pots Making bridges Cooking Indian food; -Barfi sweets Cooking porridge	Key knowledge: -clay is a natural material that changes when left in the air -different materials are used to make bridges -barfi is a traditional sweet given at Diwali -ingredients needed to make porridge	Global gardens -children to create a group global garden based upon a country -researching countries -design, make, evaluate Advent Christmas	Key knowledge: -to research 4 facts about their country -to understand structures/building -to explore materials fit for purpose -to make prototypes and make adjustments	Making Clay Pots – recreating Anglo-Saxon clay pots Cooking – Flatbreads on Open Fire (Forest Schools)	Key knowledge: -the use of clay for cookware in the Anglo-Saxon times -understand that clay can be fired -to layer clay to build a shape -clay as a material, fit for purpose, existing products, ancient artefacts -fire safety -breads being a staple of diets	Cookery: Balanced meal Seasonality Sewing: Sew, strengthen and embroider a drawstring coin purse – evaluating against criteria	Key knowledge: -to understand cooking a healthy meal and how to cook a savoury dish -to learn about prison meals through the ages and create own meal -to design, embroider a design, sew and detail a coin purse -to know a variety of stitches/ <i>sewing</i> -attach a drawstring closure to the purse
		Key skills: -follow instructions -food hygiene and safety -mould clay using hands/surface -create a purposeful design and evaluate finished product		Key skills: -to meet a brief/specification -to create a purposeful design -to evaluate their finished garden -to listen, communicate and contribute in a team -to make a functioning advent calendar and Christmas card		Key skills: -designing pots against a design brief including shape and pattern -comparing existing products -layering, smoothing, decorating -strengthening -following instructions -weighing out ingredients, mixing, stirring, combining, rolling -cooking – temperatures/ measure -evaluating final products		Key skills: -to cook a varied savoury meal -to understand seasonality of produce -to design, develop and sew a coin purse -to choose materials and techniques to strengthen, evaluate against a criteria
		SEN/G&T: -brief/ paired or group work/adult support -extension to bridges		SEN/G&T: -simplified brief/ paired or group work/adult support -extension to movement/bridges more detailed gardens/ leadership		SEN/G&T: -simplified pot design/brief, peer support for weighing out ingredients, adult support -differentiated outcomes for pot design, shape, and size, detailed decoration on the pot		SEN/G&T: -support sewing and embroidering, 1:1 support with design and simplifying -wider range of materials, HA criteria, questioning and challenges to stretch GT

D/T	Plan and make alien puppets -listing materials -planning with visuals -evaluating with smiley faces	Key knowledge: -to understand ways of fixing materials together -exploring a range of materials	Weather Instruments -design, make and evaluate a rain gauge and wind vane -evaluating uses of materials	Key knowledge: -to understand the design process -to know why some materials are suited to certain uses	Masks -paper Mache masks from Mayan culture -designing, analysing, evaluating and considering improvements	Key knowledge: -to understand joining and strengthening the mask -how to plan their mask -know why masks were used	Create a model Solar system -using a range of materials (pom poms, card, paper) -use pulleys to add movement	Key knowledge: -to know pulleys can create/emphasise movement/force -to know the solar system layout -to know how to plan, construct and evaluate an orrery
		Key skills: -cutting, gluing -planning and evaluating -making/creating		Key skills: -to design, make and evaluate -to use a range of materials -to decide which materials work best -cutting, attaching and fixing -making predictions and problem solving		Key skills: -working to a success criteria -moulding/forming/ wire cutting -evaluation of their prototype		Key skills: -to use pulleys -to plan and draw your design -to strengthen, create, build and fulfil your design -to design, create, build, plan and evaluate their model -evaluate against a criteria
		SEN/G&T: -simplified materials/ visual resources to recreate -simple sewing/fixings		SEN/G&T: -visual resources, adult support, paired work, simplified tasks -additional detail, lead a group		SEN/G&T: -simplified choice of animal/form -less detail required/ support -additional detail and limbs		SEN/G&T: -simple model and pulleys with proforma, supported resources -hanging model/ mixed medium

D/T	Create a dinosaur habitat Salt dough eggs Cooking: swamp smoothies and dinosaur biscuits	Key knowledge: -what do animals need to survive – food, water, shelter, air -link to dinosaurs when creating habitat	Rafts -design, make and evaluate a raft -evaluating uses for materials	Key knowledge: -to know why we use the design and evaluation process -to know what materials are waterproof and best suited for purpose	Create a Trinket Box Cooking – making fruit ice lollies	Key knowledge: -seaside souvenirs -know how souvenirs have changed over time -know that a particular material is fit for purpose -know how to safely use a knife and mix ingredients	Design and build a moving robot using cogs, pulleys and axles.	Key knowledge: -to know what a pulley, axle and cogs are and how they can be used -to meet a brief and success criteria -to know how to plan and design -to evaluate the use of materials, -how to join and attach materials together accurately and with stability
		Key skills: -food hygiene and tool safety -follow simple instructions		Key skills: -to decide which materials are best suited for the task -to work as part of a group to design, make and evaluate -to make predictions		Key skills: -product analysis, comparison and design -design a piece in different ways, looking at different orientations -accurate measurements/ cutting -strengthening a product -evaluate final pieces reflecting on changes to be made in future, what was challenging etc		Key skills: -understand a success criteria -design and plan your robot, considering materials for certain purposes -to build your robot using a range of materials of your choice -to strengthen your robot to ensure it moves as designed -evaluate your robots and edit/adapt your weaknesses
		SEN/G&T: -adult support -helping peers		SEN/G&T: -adult support -lead a group, reasoning for uses of materials		SEN/G&T: -adult 1:1 support with measuring and cutting -helping peers, complexity of design -possible differentiation of materials used or means of fixing / strengthening		SEN/G&T: -adult support and small 1:2 groupings, cogs and pulleys already attached, larger wheels, cogs etc -additional materials, extended success criteria to include, moving pieces and a purpose of the invention

SEND in DT

All of our learners are included in all of our lessons where appropriate, and adaptations are made to enable our learners to access the learning. All teachers at Ingoldisthorpe Primary School have extensive knowledge of their students and are able to make reasonable adjustments to enable all children to participate and learn with their peers. Reasonable adjustments will be made in communication with parents and always at an appropriate stage for each specific child.

Adjustments may include;

- Adapted objectives and learning resources to meet a child's cognitive ability
- 1:1 projects with a trusted adult
- Small group projects, crafts and designs
- Coloured and adapted visual resources
- Support in class with an adult
- Limited vocabulary and objectives
- Scaffolded pre learning
- Adapted and bespoke images/ visuals
- Parental support paperwork where needed
- Supported recapping of the learning to avoid misconceptions
- Hands on activities and sensory breaks where needed



In some circumstances, lessons will be adapted and edited for some children and delivered in a separate way on a different day to enable the children to achieve at

their own pace and to ensure the lesson are suitable. However, as Design Technology is a very adjustable subject, where possible all of our children will take part in our lessons with adapted success criteria and materials, and with the support of adults or their peers.

Most able children in DT

Those children who appear to be the most able in Design Technology will have deepened opportunities, wider success criterium, higher expectations and will have lessons adapted to ensure that their talents progress. More able children will have wider ranging materials and in some circumstances less options to encourage creativity and challenge. The more able children will have the opportunity to lead groups, support their peers and share their ideas with the wider community to express their knowledge. Children will also have access to extra-curricular clubs such as modelling and art, as well as competitions and events where available.

Impact

At Ingoldisthorpe Primary School we endeavour to enable every child the freedom to express themselves freely, showcasing their individuality and creativity, and preparing them for their continued growth. Children learn valuable life skills such as cooking, sewing and problem solving, along with building resilience, confidence and positive self-esteem. Gaining new skills that will support self-achievement and well-being, along with the expertise to make knowledgeable risks and use tools confidently and safely, confident in their own abilities. Children acquire the capability to challenge themselves and follow instructions, confident in their adeptness to design and build prototypes fit for purpose to meet a success criteria, editing their designs and making adjustments, whilst setting realistic expectations.

