OUR LADY AND
ST HUBERT'S
CATHOLIC PRIMARY SCHOOL

At Our Lady and St. Hubert's, home, school and parish work together, knowing that God is with us in all we do.

Design and Technology

Guidance and Procedures

Intent

The D&T curriculum is one which will allow students to become self-motivated and confident learners, who can work independently and as part of a team. The main aim is to ensure that learners develop technical and practical competencies as well as build upon our 6Cs curriculum. Our priority is for our students to become responsible citizens who see that they can make a positive contribution to society. At OLSH we aim to promote a love of learning and create opportunities for children in the wider world. Our DT curriculum, allows children to be inspired by engineers, designers, chefs and architects to enable them to create a range of structures, mechanisms, textiles, electrical systems and food products with a real life purpose. In line with the school aims, we believe that technology should develop lively and enquiring minds through the ability to question, argue rationally, investigate and process information.

Implementation

We believe that students learn best by 'doing' and by allowing them to experiment and take risks, in a safe and positive learning environment. This is achieved through imaginative teaching that will embrace and engage new technologies and link to the children's world. At the heart of this, is the desire to deliver a curriculum in which children express creativity through their designs and produce high quality outcomes. We approach all of our learning using Rosenshine's principles to support our pupils to know more and remember more of their curriculum and ensure that learning is secure before they move on to new information or skills. Students will have the opportunities to learn about designers/architects and their work, especially British designers. This will be implemented through teaching children about the 3 main processes of successful design; design, make and evaluate. In technology, the children will be given the skills to plan, carry out and evaluate a design project. Design and technology are essentially about providing opportunities for pupils to develop their capability, through combining their designing and making skills with knowledge and understanding, in order to create high quality products. It will stimulate both intellectual and creative abilities and develop personal qualities needed to complete a design project from initial ideas to finished products.

Impact

Students are able to improvise, adapt and overcome problems. Students develop an entrepreneurial eye and welcome a problem to be solved. Students feel supported and secure in making mistakes and do not aim for perfection. To enable students to combine their designing and making skills with knowledge and understanding, in order to design, make, analyse and evaluate products of high quality. Children express their own creativity through their designs and are more socially confident to give their opinions. Collaborative skills are honed so they can work successfully with a group, as well as on their own.

Curriculum planning

In technology, the children will be given the skills to plan, carry out and evaluate a design project. To evaluate, children should be able to evaluate ////their own products against a design criteria. Each of these steps should be rooted in technical knowledge and vocabulary. Design and technology are essentially about providing opportunities for pupils to develop their capability, through combining their designing and making

skills with knowledge and understanding, in order to create high quality products. It should stimulate both intellectual and creative abilities and develop personal qualities needed to complete a design project from initial ideas to finished products. Work should be recorded in DT books, including photo evidences for any practical work

EYFS

The foundation for learning in DT is laid in EYFS within the context of the following area(s) of learning: Expressive Arts and design. At the end of the year, pupils are assessed against the Early Learning Goals for this area, this information being shared with the Y1 teacher to inform planning for the national curriculum in DT. This will also be reported to parents in the aforementioned areas of the ELG.

Key Stage 1

During Key Stage 1 the children learn how to think imaginatively and talk about what they like and dislike when designing and making. They build on their early childhood experiences of investigating objects around them. They explore how familiar things work and talk about, draw and model their ideas. They learn how to design and make safely and could start to use ICT as part of their designing and making.

Key Stage 2

During Key Stage 2 children work on their own and as part of a team on a range of designing and making activities. They think about what products are used for and the needs of the people who use them. They plan what has to be done and identify what works well and what could be improved in their own and other people's designs. They draw on knowledge and understanding from other areas of the curriculum and use computers in a range of ways.

Using the curriculum map to plan DT

1. Use Curriculum mapping document to identify relevant DT units for the term.

2. Use the school medium term planning sheet to identify key activities, resources, questions, learning outcomes. Particular reference should be made to age-related expectations for pupils based on guidance in the national curriculum, their starting points and ability. The medium term planning sheet should be uploaded as a medium term plan to the year group planning folder on Sharepoint.

3. Reference as to which part of the medium term plan is being covered should be made on the weekly planning sheet, with further detail provided where needed by the teacher and so that progress through the unit can be easily identified by the DT coordinator and leadership team.

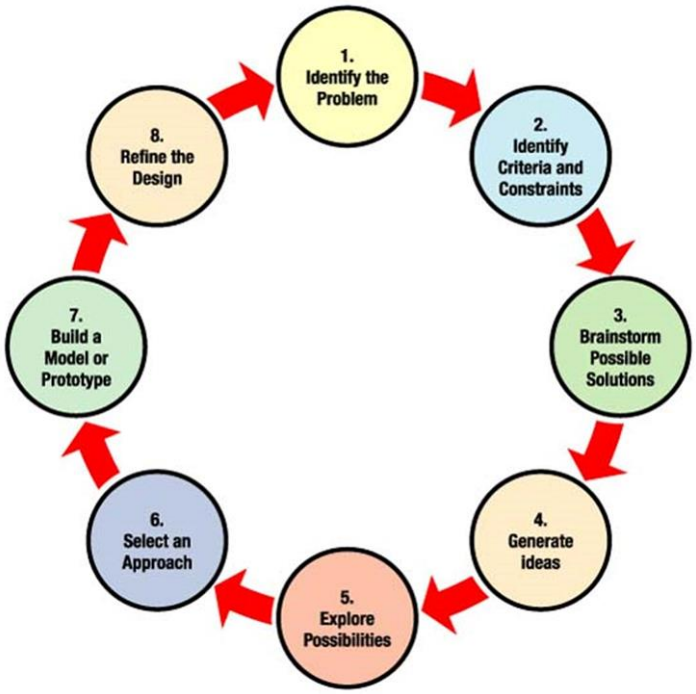
4. Medium term plans should be annotated with outcomes regarding learning that has taken place, learning outcomes and implications for future teaching and learning.

Termly focus areas in each year group throughout KS1 and KS2 as outlined below. Each project to take between 6-9 hours which can be taught weekly, or as a block of lessons during the term.

	Autumn	Spring	Summer
Year 1	Structures Making Castles with drawbridges		Mechanisms Making Toys
Year 2	Textiles Photo Frames and Poppies		Mechanisms Moving Vehicles
Year 3		Structures Mini Greenhouses	Mechanisms Making monsters using pneumatics
Year 4	Textiles Anglo Saxon Purses	Mechanisms Solar/Wind powered Mechanisms	
Year 5	Structures Levers/Egyptian Shadufs	Structures Bug Hotels and Bird Houses	Non-Electrical Mechanisms Rockets/Moving Vehicles
Year 6		Structures African Instruments	Mechanisms PIR Sensors

Fig 2 – Outline of themes taught in each year group.

The Design process – It never changes



Role of the Subject Leader

- To know what proportion of pupils attain at and above age related expectations in DT.
- To know the attainment of SEN and Pupil Premium pupils, ensuring the correct support is given
- To attend CPD courses and share knowledge learnt with teaching staff
- To arrange staff meetings/informal meetings to develop subject knowledge of the curriculum and the teaching of DT
- To carry out termly audits of the school's DT resources, and operate an efficient storage system for these resources to ensure that our children can learn effectively in DT
- To ensure teaching staff are regularly filling in their assessment data on DC Pro
- To monitor the learning and teaching in DT and provide support for staff when necessary
- To take a lead role in organising DT events in school, involving parents/carers where possible
- To review changes to the National Curriculum requirements and advise on their implementation

One of the main jobs of a subject leader, is to ensure monitor teachers' understanding, teaching and assessment of the National Curriculum.

Main strands of learning- National Curriculum					
	Design	**Make**	**Evaluate**	**Technical knowledge**	**Cooking and nutrition**
Key Stage 1	-design purposeful, functional, appealing products for themselves and other users based on design criteria -generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology	-select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] -select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics	-explore and evaluate a range of existing products -evaluate their ideas and products against design criteria	-build structures, exploring how they can be made stronger, stiffer and more stable -explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	-use the basic principles of a healthy and varied diet to prepare dishes -understand where food comes from.
Key Stage 2	-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, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	-select from and use a wider range of tools and equipment to perform practical tasks [for example, 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	-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 -understand how key events and individuals in design and technology have helped shape the world	-apply their understanding of how to strengthen, stiffen and reinforce more complex structures -understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] -understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] -apply their understanding of computing to program, monitor and control their products.	-understand and apply the principles of a healthy and varied diet -prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques -understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed

Fig 1 – National Curriculum Strands

Assessment

Subject planning should be evident in the medium- and short-term planning folder. Planning for subject in long term school curriculum maps. Planning should be in line with school planning methods. The curriculum mapping document identifies the subjects and units to be studied by each year group, along with their timing, which takes into account other topics studied. Teachers should use this to inform their medium-term, objective based planning, identifying the objectives from the scheme to be taught and learnt that term or half-term, activities, resources, use of ICT and cross-curricular links. A weekly planning sheet will identify which lessons are to be taught when. Attainment in DT is reported to parents through parents' evenings and end of year/term reports. All teachers are expected to regularly update Arbor- each term as a minimum. Use of knowledge progression and knowledge organisers support teachers in their assessments of pupils.

Monitoring/Reports

The DT coordinator will also conduct a termly monitoring through pupil voice, staff voice and evidence audits to ensure that children are engaged, staff are confident and that all objectives are covered. Assessments will be interpreted and explored, in order for subject leader to offer support where necessary.

SEND, Pupil Premium and Inclusion for all

Statements regarding provision for children with SEN in order to include them in learning and allow them maximum opportunity to develop and progress.

- Lessons and activities from the scheme should be planned and differentiated sufficiently to allow all children to work at their own ability level and access the curriculum, including extending the most able.
- Ideas for differentiation.
- Any special resources/equipment/ICT that will allow children to access subject.
- Role of support staff.
- SENCO as support

Provision for more able

Some pupils will be working well above the level of others in their class and show an aptitude and/or interest in the subject. These pupils should be monitored and then conversations between class teacher and subject leader at the end of the year will determine whether these children meet the requirements to be assessed at Greater Depth. Extension opportunities should be provided for these pupils challenging their DT knowledge and incorporating deeper thinking tasks, using the 6Cs to facilitate this.

6Cs

To succeed in the 21st century, we understand that the children need to be taught- and have time to develop- key learning behaviours that have, in the past, not been catered for in the National Curriculum. We have adapted our curriculum to include the '6Cs of 21st Century learning', which are; creativity, character, citizenship, critical thinking, collaboration and communication.

This is how the DT curriculum incorporates the 6Cs:

The 6Cs and Design and Technology How our 6Cs will be evident through our DT curriculum		
Character	**Citizenship**	**Communication**
The children's character skills will be showcased in DT, where they will regularly be challenged to design and make a product- learning from each attempt, failure or set back. Children will learn to embrace these 'failures' as opportunities to learn and improve.	Through various projects, children will be faced with problems that affect themselves, and/or others around the world. They will use design briefs along with the 'design, make, evaluate' process, to plan ways to solve or support these issues.	Through DT lessons, children will have various opportunities to present and explain their work to a range of audiences. They will also be given opportunities to tailor their products to a design brief- for a specific age range or audience
Collaboration	**Creativity**	**Critical thinking**
Through the design, make, evaluate process there are lots of opportunities for children to work collaboratively. Assessing each person's strengths in a team, making group decisions and working together to achieve one outcome.	Children will be given lots of opportunities to identify problems, and then have chance to design and make products that solve them, incorporating various DT skills and elements. This will develop their 'entrepreneurial eye' and encourage them to take action.	DT lessons will involve children thinking critically throughout the process, about a variety of decisions that they will need to make. This could be regarding choices of materials, use of images to fit a design brief in the best way, decisions regarding packaging or cost etc… Children will be taught how to make these decisions in an informed way, using other curriculum knowledge to help them.

Fig 4 – Outline of the '6Cs' curriculum

Cooking

At OLSH, we believe that learning about food, how to prepare it and the principles of a healthy diet is important for every child. Statistically, almost 20% of children are obese by the time they leave primary school, and families on lower incomes tend to be the most disadvantaged in terms of their culinary knowledge and skills. Our curriculum aims to teach children how to cook simple, healthy dishes, along with key life skills in the preparation and handling of different foods and kitchen equipment. Our idea is that children cook once per half term, building a bank of recipes that they can then share at home. By the time our children leave Year 6, they will have prepared and cooked nearly 50 dishes, with each child receiving a copy of each recipe to keep at home.

Dishes have been allocated to year groups based on the skill level needed in order to prepare and cook them, see below:

	Autumn Term		Spring Term		Summer Term	
	Half term 1	Half term 2	Half term 1	Half term 2	Half term 1	Half term 2
Reception	Toast	Fruit salad / fruit kebab	Pancakes	Berry mess	Pasta Salad	Fruit smoothie
Year 1	Dips and dunkers	Festive Muffins	Pancakes	Pasta bake	Toasted pitta pockets	Apricot whip
Year 2	Pitta pizzas	Blueberry muffins	Chunky pasta soup	Carrot cookies	Cous Cous Salad	Ice lollies
Year 3	Tomato pasta sauce	Chocolate and courgette cakes	Carrot and coriander soup	Tinned fruit crumble	Pizza	Fruit flap jack
Year 4	Bread	Cranberry and cinnamon tray back	Cheese and potato pie	Fruit fool	Quesadillas	Summer pudding
Year 5	Apple and parsnip soup	Christmas cake	Sausage and bean hot pot	Scones	Chickpea and mushroom curry	Fruit crumble
Year 6	Cottage pie	Mince pies	Salmon/tuna fish cakes	Mini Victoria sponges	Vegetable lasagne	Marble cake

Fig 3 – Dishes taught in each year group.

Health and Safety- cooking

Each session is led by a qualified practitioner and children are organised into small groups. General risk assessments are carried out and shared at the start of each year and each teacher is responsible for collating information regarding allergies and intolerances and sharing with the cooking lead. Alterations to recipes and/or ingredient substitutions are made where necessary, in partnership with parents.

See Appendix A – Cooking General Risk Assessment

Health and Safety

Children will be given suitable instruction on the operation of all equipment before being allowed to work with it. Children should be strictly supervised in their use of equipment at all times. Children should be taught to respect the equipment they are using and to keep it stored safely while not in use. They should be taught to recognise and consider hazards and risks and to take action to control these risks, having followed simple instructions.

See Appendix B – DT Risk Assessment

See Appendix C – Tools and Equipment's Risk Assessment

See Appendix D – Electrical Equipment Risk Assessment

Reviewed – January 2023 – Naela Mahboob (Subject Lead)

Date of next Review – January 2024

APPEDNIX A - **OLSH COOKING GENERAL RISK ASSESSMENT**

Hazard / Risk	Who is at Risk?	Normal Control Measures *(Brief description and/or reference to source of information).*	Risk Rating H/M/L
Hot surfaces liquids / Burns, scalds	Staff, pupils	• Adequate supervision and safe working procedures in place • Position pan handles not to overhang the edge of the cooker • Use of oven, lifting lids off pans & kettles, moving hot tins, dishes and water to be restricted to adults only. • Use hot- not boiling water. If boiling water is necessary, teacher must carry out this step. • Ensure children's preparation areas are a safe distance away from any hot surfaces. • Ensure adequate space is available around the ovens at all times when handling hot items.	
Sharp equipment / Cuts See attached doc 'Pictorial guide to knife skills' in folders	Staff, pupils	• Controlled storage and use of knives. • Pupils taught correct techniques for use of knives and use under supervision. (See crib sheet in folders) • Knives are kept sharp as blunt knives can cause serious injuries. • Wash separately do not leave in sink	
Slippery floors / Slips and trips	Staff, pupils	• No obstacles in walkways and regular checking of floors • Prompt maintenance of defects- report to SLT/Mr Cox • Spillages should be dealt with immediately. • Paper towels to be used on small areas of water-based contamination. • Wet floor signs to be used	
Use of cookers (Electric / gas) Electric shock Fire, explosion	Staff, pupils	• Children must be supervised at all times. • If ch are frying vegetables, model where to hold the pans- always having one hand on the handle while stirring. • Use of oven, lifting lids off pans & kettles, moving hot tins, dishes and water to be restricted to adults only. • Fire blanket kept in the area and staff should know how to use it. • *Electrical equipment is subject to regular safety inspection and test ('PAT testing)* • *Gas equipment is under planned maintenance*	
Food hygiene Poor standards of hygiene Incorrect storage of food Cross contamination See attached doc 'Food Hygiene' in cooking folders		**Personal hygiene** • Pupils taught the need for personal hygiene. Staff and pupils to wash hands before handling food and after visits to the toilet. • Ensure that warm water, soap and towels (disposable) are available. • Tie back long hair. • Aprons hygienically maintained **Storage** • "Use by" and "best before" dates should be checked. • Food stored in suitable containers. (covered / protected from contamination) • Foods appropriately covered / wrapped and stored prior to taking home. **Pupils provided with instruction on safe storage / consumption.** **Food handling** • High risk / raw foods kept apart at all times • Separate chopping boards (colour coded) and utensils used for raw and cooked foods. **Cleaning** • Work surfaces cleaned with a multi-purpose cleaner and then disinfected **prior** to any food preparation. • Where a classroom table has to be used for food preparation it should be covered with **a clean plastic sheet** • Adequate rubbish bins for waste food and they must be emptied daily.	
Pupils with food allergies Inadvertent contact Staff not aware of pupil's allergies		• All staff/volunteers are made aware of pupils who are sensitive to foods and food additives. (staff will have filled in box above) • Parent will have been consulted prior to the cooking lesson and preventative measures discussed- ie substitutes.. • Staff should be aware of ingredients/food additives present in ingredients. • Any child with an epi pen must have this available	

All staff from this year group must read and sign the document, ensuring all details have been checked and are correct.

APPEDNIX B: **OLSH DT RISK ASSESSMENT**

DT						
Hazard/ Activity	**Persons at Risk**	**Risk**	**Control measures in use**	**Residual risk rating H / M / L**	**Further Action Required**	
					YES	**NO**
Supervision / class sizes	Pupils Staff	Overcrowding	• Group size should be appropriate to the design and size of the room, take account of the nature of the task, the equipment, and the age, ability, aptitude and special education needs of pupils. • Health and Safety forms part of curriculum work where relevant.	LOW		
Use of Equipment	Pupils Staff	Injury	• Ensure that all equipment handed out is returned at the end of the lesson. • Identify and records kept of any servicing, maintenance requirements for equipment. • Identify if there are any training or instruction needs for members of staff. • Identify who is authorised to use the equipment. Identify the management system in place for preventing unauthorised use to ensure that it is removed from service. • Specify any personal protective equipment that users must wear.	LOW		
Storage	Pupils Staff	Fire Slip/trips/falls	• Equipment and substances stored appropriately and do not present a manual handling or trip, slip or fall hazard. • Heavy items stored at the appropriate level. Flammable liquids (paint, white spirit, etc. kept to a minimum and must not exceed 50 litres). All highly flammable substances should be stored in suitably labelled, lockable metal storage bin or	LOW		

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APPEDNIX C: **OLSH DT RISK ASSESSMENT**

TOOLS & MATERIALS						
Hazard/ Activity	**Persons at Risk**	**Risk**	**Control measures in use**	**Residual risk rating H / M / L**	**Further Action Required**	
Tools & Materials					**YES**	**NO**
Electricity, slips/trips, Blocked fire exits, Inappropriate use of equipment, Faulty equipment, Poor housekeeping, Hazardous substances, Hot temperatures Sharp edges, Dusts, Swallowing Small objects, Poor hygiene procedures e.g. sharing balloons.	Staff Pupils	Infections Cuts Burns	• Individual risk assessments have been completed and implemented on craft knives, saws, glue guns and glues/paints. Equipment counted "out" and "in". • High powered equipment is not used e.g. drills or jigsaws. Avoid using wood chisels. • Pupils taught safe use of any equipment. • Relevant safety briefing given at the beginning of each activity. • Equipment appropriate for the maturity, experience and special needs of any group. Good classroom management. • Equipment stored separately and out of reach of pupils. • Equipment visually inspected prior to use. • Appropriate equipment purchased (bought from reputable educational supplier). • Donated equipment is not used. • Manufactures instructions for any equipment followed. • Pupils given clear instruction on how to handle and carry items/equipment around the classroom. • Electrical testing of all equipment is undertaken annually. • Supervision of pupils. • Fire exits kept clear at all times. • First aider available.	LOW		

APPEDNIX D: **OLSH DT RISK ASSESSMENT**

ELECTRICAL EQUIPMENT						
Hazard/ Activity	**Persons at Risk**	**Risk**	**Control measures in use**	**Residual risk rating H / M / L**	**Further Action Required**	
					YES	**NO**
Use of electrical equipment	Site Manager Staff Pupils Visitors	Electrical shock Burns Fire	• Pre-use check conducted by users. • Electrical equipment subject to regular safety inspection and test ('PAT testing'). • All tested appliances to be labelled showing date tested/next test date. • Inventory of all portable electrical equipment kept and maintained by the school. • Site Manager will PAT test items as and when required inbetween contractor PAT testing. • Fixed Installation testing (every 5 years min) and any remedial work actioned. • Records retained of these checks. • Recognised competent contractors used for repairs/ maintenance. • All electrical equipment brought on to the school by contractors must have been electrically tested. • Mains isolating switches must be clearly labelled and accessible. • Mains powered portable equipment to be protected by RCD in higher risk situations, e.g. equipment used outside or in wet conditions, and for equipment where there is a risk of cables being severed.	LOW		
Use of extension leads Trip hazard	Site Manager Staff Pupils Visitors	Power leads present a tripping hazard (Cuts	• Careful location. • Sufficient outlets to support the range of equipment normally used. Use extension leads and adaptors only where necessary.	LOW		