



Our P.U.R.P.L.E. Curriculum Intent, Implementation and Impact Model

P.U.R.P.L.E. is an acronym that stands for the qualities that we believe all children need to possess to be successful in life. It doesn't just involve implementing a series of learning experiences, but is a complete values set that encompasses everything that we do. It shapes every minute, of every day, for every child in every class at the school. Our aim is that every single child leaves our school, equipped with a toolbox packed full of knowledge, skills and experiences that enables them to confidently shout: 'I AM P.U.R.P.L.E.' ...and that they keep shouting it for the rest of their lives! Our Curriculum Intent, Implementation, and Impact Model for 2021-2022 describes how we plan to achieve that. Staff, children, and governors at Littleton Green Community School have all contributed to this document.

	<u>Intent</u>	<u>Implementation</u>	<u>Impact</u>
	<u>What do we want our children to say?</u>	<u>What will we focus on in 2021-2022?</u>	<u>What will success look like in all subjects?</u>
PROUD	'I am Proud. I am proud of the quality of my learning and the effort that I have put into producing it.'	Ensuring that learning and effort is of the highest order and that this is being celebrated in all subjects.	All children are able to showcase their best learning in pupil interviews, work scrutinies, displays and on dojo.
UNIQUE	'I am Unique. I am an individual who offers many talents. Everybody is good at something.'	Ensuring that all children are supported accordingly by all staff in all subjects.	Every teacher and LSA knows who their SEND and gifted and talented children, and this can be found in their Record Keeping Folder. Children receive the appropriate level of support from adults. This includes the suitable use of targeted questioning, scaffolding of tasks, deployment of adults in the classroom and where necessary additional small group/ one to one interventions. This is visible in work scrutinies, pupil interviews, chequebook walks, provision maps, iep's and planning.
REFLECTIVE	'I am Reflective. I learn from my mistakes and get better at things as a result.'	Ensuring children know how to reflect on their own learning in all subjects.	Children are able to reflect on their learning, demonstrating what has worked well and how they can improve further in work scrutinies, pupil interviews and/ or chequebook walks.
POSITIVE	'I am Positive. I always try my hardest. If at first I don't succeed, I try, try, and try again.'	Ensuring that children use resources appropriately in all subjects.	Children can demonstrate in work scrutinies, pupil interviews and/ or chequebook walks how they use a range of concrete and pictorial resources to become 'unstuck' in all subjects.
LOVING	'I am Loving. I respect and love the world that I live in. I respect and love other people. I respect and love myself.'	Ensuring that children are taught how to work collaboratively with one another in all subjects.	Children can demonstrate in work scrutinies, pupil interviews and/ or chequebook walks how they are able to work effectively with others during partner and group work.



EMPOWERED	'I am Empowered. I can overcome any challenge that comes my way because I own a toolkit packed full of skills and knowledge that I will use for the rest of my life.'	Ensuring that children can retrieve previously taught information in all subjects.	Children can demonstrate in work scrutinies, tests, pupil interviews and/ or chequebook walks previously they can recall and apply previously taught knowledge/ , vocabulary and skills.
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How do we teach Design and Technology?

Design and Technology is part of Connected Learning at LGCS for children in years 1-6. The key features of this are:

- The school year is split into six blocks. If a school holiday falls in the middle of a block of work, teacher set holiday homework challenges to maintain pupil interest.
- Children complete 6 projects connected under an umbrella theme.
- These projects are based around a cross-curricular theme and have a main driver subject such as history, geography or science. Each project will provide coverage for several other subjects as well as focussing on the main driver subject.
- During the Design and Technology sessions, children are referred to as Technologists and are taught the knowledge and skills identified in Cornerstones Curriculum.
- Throughout each project, children produce a product which demonstrates their learning.

What is Cornerstones Curriculum?

We use Cornerstones to support our teaching of Design and Technology.

Cornerstones is broken down into four stages: Engage, Develop, Innovate, Express.

ENGAGE

- Each project begins with 'Hook': a memorable experience either within school or a trip which sets the scene and provides the context for future learning. Teachers then ask questions to find out the children's interests and spark children's curiosity.

DEVELOP

- Children explore themes, concepts and subjects in greater depth. Teachers provide the opportunities for children to gain new skills and knowledge through a range of challenging activities. This enables children to make progress and develop confidence across a range of subjects.

INNOVATE

- Children are offered a range of rich and stimulating scenarios. These scenarios act as provocations encouraging children to think creatively. During this stage children have the opportunity to work both independently and with different groups.

EXPRESS

- Children reflect on their learning through talk and opportunities for shared evaluations. Children are provided with the opportunity to explain their learning in different ways and identify next steps. The involvement of parents and carers at this stage of learning enables a shared understanding of progress and achievement.



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Progression of knowledge and skills						
Aspect	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Generation of ideas	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.	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.	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.	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.	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.	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.
Use of ICT	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.	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.	Apply their understanding of computing to program, monitor and control their products.	Apply their understanding of computing to program, monitor and control their products.	Apply their understanding of computing to program, monitor and control their products.	Apply their understanding of computing to program, monitor and control their products.
Structures	Build structures, exploring how they can be made stronger, stiffer and more stable.	Build structures, exploring how they can be made stronger, stiffer and more stable.	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
Investigation	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 range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing).	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 tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing), accurately.	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 tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing), accurately.
Evaluation	Evaluate their ideas and products against design criteria.	Evaluate their ideas and products against design criteria.	Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.	Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.	Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.	Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.



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Food preparation and cooking	Use the basic principles of a healthy and varied diet to prepare dishes.	Select from and use a range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing). Use the basic principles of a healthy and varied diet to prepare dishes.	Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.	Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.	Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.	Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.
Nutrition	Select healthy ingredients for a fruit or vegetable salad. Fruit and vegetables are an important part of a healthy diet. It is recommended that people eat at least five portions of fruit and vegetables every day.	Describe the types of food needed for a healthy and varied diet and apply the principles to make a simple, healthy meal. A healthy diet should include meat or fish, starchy foods (such as potatoes or rice), some dairy foods, a small amount of fat and plenty of fruit and vegetables.	Identify the main food groups (carbohydrates, protein, dairy, fruits and vegetables, fats and sugars). There are five main food groups that should be eaten regularly as part of a balanced diet: fruit and vegetables; carbohydrates (potatoes, bread, rice and pasta); proteins (beans, pulses, fish, eggs and meat); dairy and alternatives (milk, cheese and yoghurt) and fats (oils and spreads). Foods high in fat, salt and sugar should only be eaten occasionally as part of a healthy, balanced diet.	Design a healthy snack or packed lunch and explain why it is healthy. Healthy snacks include fresh or dried fruit and vegetables, nuts and seeds, rice cakes with low-fat cream cheese, homemade popcorn or chopped vegetables with hummus. A healthy packed lunch might include a brown or wholemeal bread sandwich containing eggs, meat, fish or cheese, a piece of fresh fruit, a low-sugar yoghurt, rice cake or popcorn and a drink, such as water or semi-skimmed milk.	Evaluate meals and consider if they contribute towards a balanced diet. A balanced diet gives your body all the nutrients it needs to function correctly. This means eating a wide variety of foods in the correct proportions.	Plan a healthy weekly diet, justifying why each meal contributes towards a balanced diet. Eating a balanced diet is a positive lifestyle choice that should be sustained over time. Food that is high in fat, salt or sugar can still be eaten occasionally as part of a balanced diet.
Origins of food	Sort foods into groups by whether they are from an animal or plant source. Some foods come from animals, such as meat, fish and dairy products. Other foods come from plants, such as fruit, vegetables, grains, beans and nuts.	Identify the origin of some common foods (milk, eggs, some meats, common fruit and vegetables). Food comes from two main sources: animals and plants. Cows provide beef, sheep provide lamb and mutton and pigs provide pork, ham and bacon. Examples of poultry include chickens, geese and turkeys. Examples of fish include cod, salmon and shellfish. Milk comes mainly from cows but also from goats and sheep. Most eggs come from chickens. Honey is made by bees. Fruit and vegetables come from plants. Oils	Identify and name foods that are produced in different places. The types of food that will grow in a particular area depend on a range of factors, such as the rainfall, climate and soil type. For example, many crops, such as potatoes and sugar beet, are grown in the south-east of England. Wheat, barley and vegetables grow well in the east of England.	Identify and name foods that are produced in different places in the UK and beyond. Particular areas of the world have conditions suited to growing certain crops, such as coffee in Peru and citrus fruits in California in the United States of America.	Describe what seasonality means and explain some of the reasons why it is beneficial. Seasonality is the time of year when the harvest or flavour of a type of food is at its best. Buying seasonal food is beneficial for many reasons: the food tastes better; it is fresher because it hasn't been transported thousands of miles; the nutritional value is higher; the carbon footprint is lower, due to reduced transport; it supports local growers and is usually cheaper.	Explain how organic produce is grown. Organic produce is food that has been grown without the use of man-made fertilisers, pesticides, growth regulators or animal feed additives. Organic farmers use crop rotation, animal and plant manures, hand-weeding and biological pest control.



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		are made from parts of plants. Sugar is made from plants called sugar cane and sugar beet. Plants also give us nuts, such as almonds, walnuts and hazelnuts.				
Materials for purpose	Select and use a range of materials, beginning to explain their choices. Different materials are suitable for different purposes, depending on their specific properties. For example, glass is transparent, so it is suitable to be used for windows.	Choose appropriate components and materials and suggest ways of manipulating them to achieve the desired effect. Properties of components and materials determine how they can and cannot be used. For example, plastic is shiny and strong but it can be difficult to paint.	Plan which materials will be needed for a task and explain why. Materials for a specific task must be selected on the basis of their properties. These include physical properties as well as availability and cost.	Choose from a range of materials, showing an understanding of their different characteristics. Different materials and components have a range of properties, making them suitable for different tasks. It is important to select the correct material or component for the specific purpose, depending on the design criteria. Recipe ingredients have different tastes and appearances. They look and taste better and are cheaper when in season.	Select and combine materials with precision. Materials should be cut and combined with precision. For example, pieces of fabric could be cut with sharp scissors and sewn together using a variety of stitching techniques.	Choose the best materials for a task, showing an understanding of their working characteristics. It is important to understand the characteristics of different materials to select the most appropriate material for a purpose. This might include flexibility, waterproofing, texture, colour, cost and availability.
Electricity	Identify products that use electricity to make them work and describe how to switch them on and off. Electricity is a form of energy. Many household appliances use electricity, such as kettles, televisions and washing machines. They can be switched on by completing the circuit to allow the flow of electricity or off by breaking the circuit to prevent electricity from flowing. This can be a switch on the appliance or a wall socket switch.	Create an operational, simple series circuit. A series circuit is made up of an energy source, such as a battery or cell, wires and a bulb. The circuit must be complete for the electricity to flow.	Incorporate a simple series circuit into a model. An electric circuit can be used in a model, such as a lighthouse. It can be controlled using a switch.	Incorporate circuits that use a variety of components into models or products. Components can be added to circuits to achieve a particular goal. These include bulbs for lighthouses and torches, buzzers for burglar alarms and electronic games, motors for fairground rides and motorised vehicles and switches for lights and televisions.	Use electrical circuits of increasing complexity in their models or products, showing an understanding of control. Electrical circuits can be controlled by a simple on/off switch, or by a variable resistor that can adjust the size of the current in the circuit. Real-life examples are a dimmer switch for lights or volume control on a stereo.	Understand and use electrical circuits that incorporate a variety of components (switches, lamps, buzzers and motors) and use programming to control their products. Computer programs can control electrical circuits that include a variety of components, such as switches, lamps, buzzers and motors.
Mechanisms and movement	Use wheels and axles to make a simple moving model. An axle is a rod or spindle that passes through the centre of a wheel to connect two wheels.	Use a range of mechanisms (levers, sliders, wheels and axles) in models or products. A mechanism is a device that takes one type of motion or force and produces a different one. A mechanism makes a job easier to do. Mechanisms include sliders,	Explore and use a range of mechanisms (levers, sliders, axles, wheels and cams) in models or products. Levers consist of a rigid bar that rotates around a fixed point, called a fulcrum. They reduce the amount of work needed to lift a heavy	Explore and use a range of mechanisms (levers, axles, cams, gears and pulleys) in models or products. Mechanisms can be used to add functionality to a model. For example, sliders or levers can be used in moving pictures, storybooks or simple	Use mechanical systems in their products, such as pneumatics and hydraulics. Pneumatic systems use energy that is stored in compressed air to do work, such as inflating a balloon to open a model monster's mouth. These effects can be achieved using	Explain and use mechanical systems in their products to meet a design brief. Mechanical systems can include sliders, levers, linkages, gears, pulleys and cams. Other mechanisms include pneumatics and hydraulics.



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		levers, linkages, gears, pulleys and cams.	object. Sliders move from side to side or up and down, and are often used to make moving parts in books. Axles are shafts on which wheels can rotate to make a moving vehicle. Cams are devices that can convert circular motion into up-and-down motion.	puppets; linkages in moving vehicles or puppets; gears in motorised vehicles or spinning toys; pulleys in cable cars or transport systems and cams in 3-D moving toys or pictures.	syringes and plastic tubing. Hydraulic mechanisms work in a similar way, but instead of air, the system is filled with a liquid, usually water. It is important that the system is air or watertight.	
Compare and contrast	Describe the similarities and differences between two products. Two products can be compared by looking at a set of criteria and scoring both products against each one.	Compare different brands of the same product and explain their similarities and differences. Products can be compared by looking at particular characteristics of each and deciding which is better suited to the purpose.	Explain the similarities and difference between the work of two designers. Work from different designers can be compared by assessing specific criteria, such as their visual impact, fitness for purpose and target market.	Create and complete a comparison table to compare two or more products. A comparison table can be used to compare products by listing specific criteria on which each product can be judged or scored.	Survey users in a range of focus groups and compare results. A focus group is a small group of people whose reactions and opinions about a product are taken and studied. Evaluations can be made by asking product users a selection of questions to obtain data on how the product has met its design criteria.	Create a detailed comparative report about two or more products or inventions. Products and inventions can be compared using a range of criteria, such as the impact on society, ease of use, appearance and value for money.
Everyday products	Name and explore a range of everyday products and describe how they are used. Everyday products are objects that are used routinely at home and school, such as a toothbrush, cup or pencil. All products are designed for a specific purpose.	Explain how an everyday product could be improved. Products can be improved in different ways, such as making them easier to use, more hardwearing or more attractive.	Explain how an existing product benefits the user. Particular products have been designed for specific tasks, such as nail clippers, the spinning top and the cool box.	Investigate and identify the design features of a familiar product. Design features are the aspects of a product's design that the designer would like to emphasise, such as the use of a particular material or feature that makes the product easier to use or more durable.	Explain how the design of a product has been influenced by the culture or society in which it was designed or made. Culture is the language, inventions, ideas and art of a group of people. A society is all the people in a community or group. Culture affects the design of some products. For example, knives and forks are used in the western world, whereas chopsticks are used mainly in China and Japan. The design of products needs to take into account the culture of the target audience. For example, colours might mean very different things in different cultures.	Analyse how an invention or product has significantly changed or improved people's lives. People's lives have been improved in countless ways due to new inventions and designs. For example, the Morrison shelter, designed by John Baker in 1941, was an indoor air-raid shelter used in over half a million homes during the Second World War. It saved the lives of many people caught in bombing raids.
Staying safe	Follow the rules to keep safe during a practical task. Rules are	Work safely and hygienically in construction and cooking	Use appliances safely with adult supervision. Electrical appliances	Work safely with everyday chemical products under	Explain the functionality and purpose of safety features on a	Demonstrate how their products take into account the safety of



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	made to keep people safe from danger. Safety rules include always listening carefully and following instructions, using equipment only as and when directed, wearing protective clothing if appropriate and washing hands before touching food.	activities. Hygiene rules include washing hands before handling food, cleaning surfaces, tying long hair back, storing food appropriately and wiping up spills.	must only be used under the supervision of an adult. Safety rules must also be followed when using electricity: fingers and other objects must not be put into electrical outlets, anything with a cord or plug should never be used around water and a plug should never be pulled out by its cord.	supervision, such as disinfectant hand wash and surface cleaning spray. Chemicals are used in the home every day. They include cleaning products, such as bleach and disinfectant, but also paints, glues, oils, pesticides and medicines. Most chemical products carry a hazard symbol showing in what way the chemical could be harmful. Chemicals should only be used under adult supervision. Appropriate safety precautions, such as wearing goggles and gloves, working in a well-ventilated room, wiping up spills and tying back long hair, should be taken.	range of products. Safety features are often incorporated into products that might cause harm. Some examples include the child-safety caps on medicine bottles, seatbelts in cars, covers for electrical sockets and finger guards on doors.	the user. The safety of the user has to be taken into account when designing a new product. Methods to help keep users safe include providing clear instructions for use; clear indication of the age range for which it is designed; safety features (such as child-resistant packaging); warning symbols and electrical safety checks.
Significant people	Describe why a product is important. The importance of a product may be that it fulfils its goals and performs a useful purpose.	Explain why a designer or inventor is important. Many key individuals have helped to shape the world. These include engineers, scientists, designers, inventors and many other people in important roles.	Describe how key events in design and technology have shaped the world. Key inventions in design and technology have changed the way people live.	Explain how and why a significant designer or inventor shaped the world. Significant designers and inventors can shape the world.	Describe the social influence of a significant designer or inventor. Many new designs and inventions influenced society. For example, labour-saving devices in the home reduced the amount of housework, which was traditionally done by women. This enabled them to have jobs.	Present a detailed account of the significance of a favourite designer or inventor. The significance of a designer or inventor can be measured in various ways. Their work may benefit society in health, transport, communication, education, the built environment or technology. It may enhance culture in different areas, such as fashion, ceramics or computer games.