

# RYHALL CE ACADEMY

## DESIGN & TECHNOLOGY (DT) OVERVIEW

### 2021-22



YEAR GROUP	TERM 1	TERM 2	TERM 3	TERM 4	TERM 5	TERM 6
1	<b>Ourselves</b>	<b>Castles</b>	<b>Africa</b>		<b>Our School (once upon a time...)</b>	<b>Seaside</b>
	<b>Sliders and Levers</b> Technical knowledge Moving books 'The Gruffalo' Literacy 1.1			<b>Food: Preparing Fruit</b> Fruit Kebab 'Handa's Surprise' Geography 1.5; Science 1.2; 1.5 DT 2.3	<b>Textiles:</b> Templates & joining Techniques	<b>Explore and make</b> Clay fish (x 2 weeks) Literacy 1.6
2	<b>Our Wonderful World</b>	<b>Night Time</b>	<b>Terrific Toys</b>	<b>Fire Fire!</b>	<b>Interesting India</b>	<b>Intrepid Explorers</b>
			<b>Food: Preparing Vegetables</b> Vegetable Soup DT 1.4; 3.3 <b>Technical Knowledge/Evaluate 1/ Explore/ make</b> Hand Puppets DT 1.5, 4.6	<b>Technical Knowledge/ Explore/ Make/ Evaluate 2 - Wheels and Axles</b> Hand Cart (GfoL) History 2.4 DT 4.2		<b>Technical Knowledge/ Explore/ Make/ Evaluate 2- Free Standing Structures</b> DT 3.1


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3	<b>Digging up the Past</b>	<b>Best of British</b>	<b>Swords &amp; Sandals</b>		<b>Europe</b>	<b>Extreme Earth</b>
	<b>Shell Structures</b> Keep safe box for precious stone  History 3.2; Maths 2.4; Science 2.1  DT 2.4; 4.4		<b>Food: Healthy and Varied Diet</b>  Healthy pizza  Geography 3.3  DT 2.3; 5.2			<b>Levers and linkages</b>  Pop-up information book (2 pages)  Geography 3.6  DT 1.1
4	<b>WALK LIKE AN EGYPTIAN</b> Ancient Egypt		<b>WATER, WATER EVERYWHERE</b>	<b>LONDON</b>	<b>TRADERS &amp; RAIDERS</b> Anglo-Saxons & Vikings	
		<b>Electrical Systems: Simple Circuits and switches</b>  Reading light History 4.1, 4.2; Science 4.2 DT 6.2	Rivers & the Water Cycle	<b>Pneumatics</b>  Moving toy for Hamleys  Geography 4.4;  DT 2.6, 3.6, 5.6, 6.4		<b>Textiles: 2D Shape to 3D Product</b>  Viking purse  History 4.6;  DT 1.5, 2.3, 5.4
5	<b>Arogonauts, Monsters and Minotaurs</b> Ancient Greece		<b>'I'm a year 5 pupil ....get me out of here'</b> Rainforests		<b>Location, Location, Location</b> Local History Study & Space	
		<b>Food: Celebrating culture and seasonality</b>  Greek Pita bread  DT 2.3; 3.3  <a href="#">LINK</a>		<b>Textiles: Combining Different Fabrics</b>  Shoes  DT 1.5, 2.3, 4.6  <a href="#">LINK</a>		<b>Pulleys or Gears</b>  Off road buggy  DT 4.4  <a href="#">LINK</a>

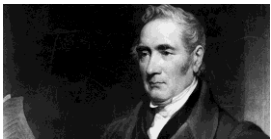




YEAR GROUP	TERM 1	TERM 2	TERM 3	TERM 4	TERM 5	TERM 6
6	Crime and Punishment		Monstrous Mountains		'Hola' Mexico	
		<b>Electrical Systems:</b> <b>More complex switches and circuits</b> Vehicle Alarm  History 6.1, 6.2 Science: 6.2 DT 4.2		<b>Cams</b> Gondola child toy Geography 6.4 DT: 2.6, 3.6, 4.4, 5.6		<b>Frame Structures</b> Gazebo History 6.5, 6.6 DT: 2.4 3.1



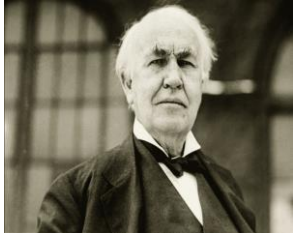
Structures
  Food
  Electrical Systems
  Textiles
  Mechanical Systems


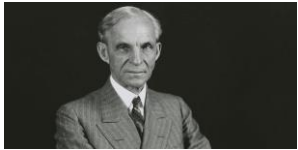


### Significant People who have changed the world

KS2 NC DT Programme of Study: understand how key events and individuals in design and technology have helped shape the world

Year Group	Inventor		Most Famous for	Information	Curriculum Link
Year 1	<b>Marie Curie</b>		Discovering radium for treatment of disease	A towering figure in the history of chemistry and physics, Marie Curie is most famous for the discovery of the elements polonium and radium. She discovered radiation that could kill human cells. During World War 1 she was sent to work with French builders and she helped design the x-ray.	(also related to Y6 History: Aspect of History beyond 1066: Advances of Medicine)

Year 3	<b>George Stevenson</b>		Built first railway line in the world	Rightly called the 'Father of Railways', George built the first public intercity railway line in the world. He was an English civil and mechanical engineer who invented the rail gauge, which is now the standard gauge for most countries.	Y3 Geography: European Study
Year 3	<b>Sir Isaac Newton</b>		Discovering gravity	An English mathematician, physicist, astronomer, theologian, and author who is widely recognised as one of the most influential scientists of all time and as a key figure in the scientific revolution. developed the principles of modern physics, including the laws of motion and is credited as one of the great minds of the 17th-century Scientific Revolution.	Y3 Science: Forces
Year 4	<b>Marie Van Brittan Brown</b>		Invented the first home security system	Marie Van Brittan Brown was a nurse and an innovator. In 1966, she invented a video home security system along with her husband Albert Brown, an electronics technician. In the same year, they applied for a patent for their innovative security system, which was granted in 1969.	Y4: Electricity
Year 4	<b>Imhotep</b>		Designing step Pyramid of Djoser	Imhotep is the first civil engineer in the world on record, who is known for. But that's not his only contribution to the world, he was the first to introduce the use of columns into architecture and now there is hardly any building constructed without columns.	Y4 History: Ancient Egypt
Year 4	<b>Thomas Telford - (1757 – 1834)</b>		Famous for: Menai Bridge in Wales  London Bridge Proposal	A Scottish civil engineer, architect and stonemason, and road, bridge and canal builder. After establishing himself as an engineer of road and canal projects in Shropshire, he designed numerous infrastructure projects in his native Scotland, as well as harbours and tunnels. Thomas Telford proposed a London Bridge design for a 600ft span cast iron arch bridge across the Thames, 1800.	Y4 Geography: London; Rivers

Year 4	<b>Isambard Kingdom Brunel</b>		Clifton Suspension bridge	Brunel was a popular civil engineer from Britain, responsible for building bridges and also the first major British railway. He was also the first one to build a tunnel under a navigable river. He brought a revolutionary change in the way public transport functioned.	Y4 Geography: Rivers
Year 5	<b>Archimedes</b>		<p>Greatest mathematician of his time</p> <p>The Archimedes screw</p>	<p>Known as a gifted mathematician, engineer, inventor, astronomer and physicist. Made some of the most influential contributions to the field of engineering. He is a true inspiration to all aspiring mechanical engineers.</p> <p>The genius from Greece designed stuff to support his home city – Syracuse. He developed techniques to use heat rays and mirrors to burn the ships of their enemies and developed the famous Archimedes' screw to remove bilge water from ships as well as the block and tackle pulley system. His inventions have been quite useful to his city and the people.</p>	<p>Y5 History: Ancient Greece</p> <p>Y5: DT Pulleys</p>
Year 5	<b>Thomas Edison</b>		Primarily known for inventing the light bulb,	Edison has also invented a number of other things like the motion picture camera, stock ticker, battery for the electric car, a mechanical vote recorder and the phonograph. He was also among the first ones to practice mass production for his inventions, manufacturing on a large scale. He has around 1093 US patents on his name and many more outside the US. He was an excellent engineer.	Y5 Science: Light

Year 5/6	<b>Alan Emtage</b>		Developed the first search engine in 1990	A computer engineer. His design of the first search engine led to the rise of computer technology. Now we can't think of going a day without Google, can we?	KS2 Computing: Search Engines
Year 5	<b>Henry Ford</b>		Mass production of the motor car	Known by the name of the Ford Motor Company, Henry Ford's first invention was a Quadricycle – his first self-propelled vehicle. Later in 1901, he led the foundation of Ford Motor, revolutionizing mass production system which further led to making an affordable car. Without his contribution, having a vehicle of your own would have been a dream for a majority of people.	Y5 Geography: North America  Y5 DT: Pulleys or Gears
Year 5	<b>Leonardo da Vinci</b>		Design of flying objects	Though recognised popularly as an artist, Leonardo da Vinci had a great interest in science and mathematics. His designs of flying objects such as hang gliders and a sketch similar to the present-day helicopter were used widely by scientists from his next generation. The Norwegian highway department also built a bridge in 2001 that was based on one of the designs by da Vinci.	Y5 Science: Forces
Year 6	<b>Nikola Tesla</b>		Design of the modern alternating current electricity supply system	A Serbian-American inventor, electrical engineer, mechanical engineer, physicist and futurist. Tesla worked on real-life projects like the radio, X-ray machines and induction motors.	Y6 Science: Electricity