Resistant Materials Overview – Key Stage 3

	The Design and Technology curriculum has evolved into an engaging carousel system, meaning your child will study a range of stimulating subjects allowing them to experience and explore the breadth of contemporary Design and Technology. Depending on which class your child is in, will alter the order in which they move through the carousel. At some point in your child's Key Stage 3 journey, they will study:
Topic(s)	Construction: Papers and Boards
Topic Objectives	Through a variety of creative and practical activities, students explore the knowledge and skills required to engage in the process of designing and making a pop-up greetings card. Students focus on the design and technology fundamentals of: • Investigating • Designing • Making • Evaluating • Applying technical knowledge
Acquired Knowledge/Skills	Students will be able to: • Identify health and safety hazards in the workshop • Understand materials used in Resistant Materials such as Plastics, their environmental impact and sustainability (6Rs) • Develop concept sketches and detailed design specifications using ACCESS FM, rendering, and sketching • Master safe and accurate use of tools like scissors • Measure, cut and assemble a key fob to a high standard • Evaluate the prototype and suggest improvements • Apply safe use of adhesives and product assembly techniques • Apply surface finishing techniques, graphic elements • Complete a product evaluation
Assessments	Students receive 'pink pen points' formative feedback throughout their project. End of top topic assessment comprising of a 24-mark test where students are assessed on the above taught resistant materials content.
Citizenship	KS3 Resistant Materials provides a creative and practical platform for students to develop essential life skills, values, and awareness beyond the classroom. Through engaging projects and collaborative learning, the subject supports: • **PSHE Development**: Implementing health, safety, and wellbeing practices in practical environments, promoting responsible choices in design and manufacturing. Assessing sustainability, ethical production, and the impact of technology on individuals and communities. Collaborative work encourages communication, teamwork, and respect for others, while problem-solving builds resilience and confidence. • **Careers Education**: Introducing pathways in engineering pathways, highlighting employability skills such as problem-solving, communication, and time management, and exploring enterprise and ethical production. • **Fundamental British Values**: Embedding democracy through group decision-making, rule of law via health and safety compliance, individual liberty through creative choice, mutual respect in teamwork, and tolerance. • **SMSC Development**: Exploring the impact of design on society and the environment, fostering moral responsibility and cultural awareness. Innovation and sustainability nurtures spiritual growth through appreciation of human ingenuity and social and moral global impact.

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Topic(s)	Solent Key Fob
Topic Objectives	Through a variety of creative and practical activities, students explore the knowledge and skills required to engage in the process of designing and making a pop-up greetings card. Students focus on the design and technology fundamentals of: • Investigating • Designing • Making • Evaluating • Applying technical knowledge
Acquired Knowledge/Skills	Students will be able to: • Identify health and safety hazards in the workshop • Understand materials used in Resistant Materials such as Plastics, their environmental impact and sustainability (6Rs) • Develop concept sketches and detailed design specifications using ACCESS FM, rendering, and sketching • Master safe and accurate use of tools like coping saws, files, and pillar drills • Measure, cut and assemble a key fob to a high standard • Evaluate the prototype and suggest improvements • Apply safe use of adhesives and product assembly techniques • Apply surface finishing techniques, wet and dry paper • Design and create packaging for the finished product considering branding and logos • Complete a product evaluation
Assessments	Students receive 'pink pen points' formative feedback throughout their project. End of top topic assessment comprising of a 24-mark test where students are assessed on the above taught resistant materials content.
Citizenship	KS3 Resistant Materials provides a creative and practical platform for students to develop essential life skills, values, and awareness beyond the classroom. Through engaging projects and collaborative learning, the subject supports: • **PSHE Development**: Implementing health, safety, and wellbeing practices in practical environments, promoting responsible choices in design and manufacturing. Assessing sustainability, ethical production, and the impact of technology on individuals and communities. Collaborative work encourages communication, teamwork, and respect for others, while problem-solving builds resilience and confidence. • **Careers Education**: Introducing pathways in engineering pathways, highlighting employability skills such as problem-solving, communication, and time management, and exploring enterprise and ethical production. • **Fundamental British Values**: Embedding democracy through group decision-making, rule of law via health and safety compliance, individual liberty through creative choice, mutual respect in teamwork, and tolerance. **SMSC Development**: Exploring the impact of design on society and the environment, fostering moral responsibility and cultural awareness. Innovation and sustainability nurtures spiritual growth through appreciation of human ingenuity and social and moral global impact.