

TECHNOLOGIES

YEAR 8

Design Materials - "Mastering Woodworking Techniques"

In this unit, students will explore the core practices of the woodworking industry with an emphasis on the safe use of hand tools and machinery. The course begins with thorough safety training, focusing on personal protective equipment (PPE) and safe work methods. Following this essential safety foundation, students will progress to constructing a wooden carryall. This project provides a practical application of their skills, enabling them to demonstrate their understanding of the entire design process, from initial concept through to the final product. Key considerations such as sustainability, effective use of materials, and technological integration are emphasized. Through this hands-on experience, students will not only learn to create functional and aesthetically appealing wood products but also understand their impact on society and the environment.

Graphics - "Digital Designers"

Students will deepen their proficiency in computer-aided design (CAD) by evaluating and creating sophisticated designs. The curriculum is structured to enhance students' technical skills in generating, developing, testing, and communicating design ideas, employing appropriate graphical representation techniques and technical terminology. Project management processes will also be integrated, focusing on both individual and collaborative design solution production. Key activities include mastering fundamental and advanced functions in Inventor software, from basic drawing skills to complex assembly tasks involving race car components. Students will engage in practical applications that reinforce their understanding of design principles, project coordination, and the strategic use of digital tools in a professional setting.

Digital Technologies - "Digital Solutions Development"

Students will delve into the realm of digital technologies, focusing on implementing and modifying programs with user interfaces that involve branching, iteration, and functions in a general-purpose programming language. By the end of the academic year, students will be able to distinguish between various network types, explain data representation methods, and manage digital projects efficiently. The unit aims to equip students with the skills to plan and create interactive digital solutions, defining problems in terms of functional requirements and constraints. They will design user experiences, algorithms, and user interfaces, incorporating branching and iterations, and evaluate information systems for their effectiveness, innovation, and sustainability. Through a series of engaging lessons and practical activities, students will develop their problem-solving abilities, algorithm design skills, and critical thinking in digital solutions development.

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Food Specialization - "Use It Up Feast Program"

In this unit, students will explore food waste, innovative solutions for waste reduction, kitchen science, and nutrition over a series of weeks. They will investigate the problem of food waste, research future thinkers in the field, and develop creative strategies to combat food waste and promote healthy eating. Practical activities, such as creating muffins using commonly wasted ingredients, will reinforce their learning and understanding of sustainable food practices.

Through a combination of research, hands-on tasks, and critical analysis, students will engage with real-world issues and explore solutions for a more sustainable food future.

Food, Fibre, and Agriculture - "Sustainable Cultivation"

Students will explore sustainable food production methods, with a focus on cultivating their own wicking beds. They will delve into factors influencing sustainability in agriculture, learn about plant growth, and design graphical representations of their wicking bed plans. Through hands-on activities and research, students will identify solutions to local sustainability issues and craft informative brochures on sustainable gardening practices. The unit aims to develop students' project management skills, design thinking, and understanding of sustainable food production in a practical and engaging manner.