



Real Life Context- Malaria <i>Designing a free-standing frame structure for malaria prevention is a multidisciplinary project that draws on various skills, including design thinking, technical knowledge, problem-solving, and awareness of global health issues.</i>	Core Skills	Research: Choosing appropriate materials based on their strength, durability, and availability. Considering the environmental impact of material choices and the manufacturing process, aligning with the principles of sustainable design. Design: Create a concept for the frame structure that is both functional and aesthetically pleasing. Make: Create a scale model to visualise and test the design, allowing for iterative improvements and design refinements. Problem-Solving Skills: Coming up with creative solutions to address challenges, such as making the frame easy to transport and set up. User-Centred Design: Considering the needs of the individuals who will be using the mosquito net. Presentation and Communication Skills: Developing the ability to present and communicate the design choices and the importance of the frame structure for malaria prevention to others. HPL Collaboration and Teamwork: Group Project: Students collaborate and work effectively as a team. Evaluation: Evaluating the model's effectiveness and making improvements based on feedback and testing results.	Problem-Solving and Critical Thinking: Developing a frame structure that effectively supports a mosquito net for malaria prevention involves significant problem-solving and critical thinking skills, aligning with the curriculum's emphasis on these skills. Environmental and Social Context: Understanding the context of malaria prevention adds a valuable dimension to the project, as students learn how their design can have a positive impact on society and the environment. User-Centred Design: Considering the needs of individuals who will use the mosquito net and frame structure reinforces the curriculum's emphasis on user-centred design. Communication and Presentation: Presenting the design choices and the importance of the frame structure for malaria prevention promotes the development of communication and presentation skills. Research and Evaluation: Researching the efficacy of mosquito nets for malaria prevention and evaluating the model's effectiveness align with research and evaluation skills emphasised in the curriculum. Collaboration and Teamwork: Students develop collaboration and teamwork skills, which are vital in D&T projects.	Links from KS2: Basic Design Principles: This project extends student understanding by requiring them to design a functional structure that serves a specific purpose, which is a progression in their design skills. Materials and Their Properties: KS2 introduces students to basic materials and their properties. The project extends their knowledge by having them select materials that need to meet specific criteria, such as strength, durability, and suitability for the context of malaria prevention. Problem-Solving Skills: Problem-solving skills are a central aspect of D&T. At KS3, students encounter more complex problems, such as creating a structure that is effective in preventing the spread of a disease, which is an advancement in problem-solving compared to KS2. Teamwork and Collaboration: Students work on this project collaboratively, further developing their teamwork and communication skills. Environmental Awareness: Building on the concepts of recycling and sustainability introduced in KS2, this project extends the focus on environmental awareness by considering the environmental impact of material choices for the frame structure. Links from previous Y7 rotation: Food & Nutrition- Global issues, User Centred Design, Presentation Skills. Product Design- Polymers, CAD. Textiles- Cotton, Sustainability.	Link to next rotation: Research Design Make Evaluate Environmental Issues User-Centred Design Materials Problem-solving Collaboration/Teamwork
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