Home-School Learning Collaboration – Engineering

ERDINGTON ACADEMY

Topics in this cycle: Bike Light design	Taught: Autumn 2	Year Group: 9 Engineering

Key knowledge/concepts to be learnt ('Tell me about....')	Websites/blogs/YouTube links and further reading to deepen and consolidate learning
What is engineering Find out about the different type of engineering. What is engineering used for? **Look into bike lights and the varieties available** Look at the range of bike lights available to buy. What types are there? What do you feel makes a good bike light design? **What is CAD? How it is used in 3D Design** What does CAD stand for in Design? Learn how computers are used in 3D Design. What are the advantages / disadvantages of CAD. What softwares are used to create 3D Design. **The four stages of Design** The four stages of design are, planning and researching. Thumbnails- generating design ideas based on research. Rough design- Practicing one of the thumbnail designs you see as a possible final piece. Final design- The final outcome, this would also be the final product. **2 Point Perspective Drawing** Watch the following video on 2 Point Perspective and follow the steps. https://www.youtube.com/watch?v=M6MOIP_mLsc Here is a harder one to try https://www.youtube.com/watch?v=Sqy4davrMJc	Bike lights https://www.youtube.com/watch?v=BjXDSASTJn0 Wheelless Bike https://www.youtube.com/watch?v=BjXDSASTJn0 What is engineering? https://www.youtube.com/watch?v=btGYcizV0iI What makes a brand? https://blog.hubspot.com/agency/develop-brand-identity Pintrest https://www.pinterest.co.uk/chang1717/bike-light/ CAD https://www.techtarget.com/whatis/definition/CAD-computer-aided-design GCSE Design and Technology - BBC Bitesize Free Design Tool: Presentations, Video, Social Media	Canva

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Key Vocabulary and Definitions To Be Learnt		What Will the Assessment Look Like?
Investigate/research	Carry out research or study into, study of materials and sources to establish facts and reach new conclusions.	**Booklets – sketchbook development** **End of Unit test:** 30 minutes • Short answer questions • Multiple choice • Extended writing/design task
Design	A plan or drawing produced to show the look and function or workings of a building, garment, or other object before it is made.	
CAD	Computer Aided Design. The use of computer software to make a 2D or 3D design.	
2 Point Perspective	A drawing technique that helps draw objects at 3D angles.	
Brand	A brand is a company's identity. This includes logos, slogans and imagery.	
3D Design	The planning, designing and creation of a 3D design. The 3D design is usually done in CAD.	**Family Learning Opportunities**
Evaluate	To evaluate is defined as to judge the value or worth of someone or something.	Why are LED lights much better than the halogen lights?
Consumer	A consumer is a person who buys a product or uses a service in the public or private sector.	What are the most popular brands of bike lights? Create a brand for a bike light. Think of a name, choose a font and draw a symbol.