Home-School Learning Collaboration – Engineering

ERDINGTON ACADEMY

Topics in this cycle: Bike Light design (CAD)	Taught: SUMMER 1	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? 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.
Consumer	A consumer is a person who buys a product or uses a service in the public or private sector.	