

# GCSE Engineering

## Unit 1 Design and Graphical Communication

Product \_\_\_\_\_

Engineering Drawing	Freehand Sketching	Sketching out initial ideas for your alternative ideas, block diagrams to represent different parts of the system. Try to make your drawings appropriate, i.e. 3-D where required, label and use colour if it helps communicate ideas.
	Isometric, Oblique	Show parts or assemblies
	Perspective	
	Block and flow diagrams	Starting and trouble shooting procedures
	Schematic	Assembly of components e.g handed ones
	Circuit	Power and speed control
	First angle	Sub assemblies
	Third angle	Sub assemblies
	Assembly diagram	Whole or component part
	Exploded	Motor, steering, gears etc
	Use of correct symbols	Use PD7308, BS3939, BS4058 These standards show the symbols used so that drawings can be understood by anyone.
		Circuit diagrams must cover: Resistors, thermistors, LEDs, capacitors, bulbs, batteries, motors, buzzers, diodes.
		Mechanical diagrams must cover: Holes, threads, dimensions, radii
		You must do your drawings to an appropriate scale.
	You must include both manual and CAD drawings	
	Decide what sort of drawing is good for the following: Showing how to assemble something Showing how to manufacture components Showing how to repair or replace parts of a system	
Presenting a Design solution	You drawings must be presented to other people.	Say who they are and why they would need to use the drawings. Describe the best way of letting others see and understanding your ideas.