Unit 9 Metal processes PLC

Topic Area	**RAG Before Taught**	**RAG After Taught**	**RAG after Assessment**	**RAG after revising**	**RAG after Mocks**
Students should be aware of how metals can be shaped into 3D products. They should be able to describe the different forming methods. They should be able to explain the suitability of the different forming methods for a range of specific products and scales of production. Specific processes to include: • press forming • spinning • cupping • deep drawing • forging • drop forging • bending • rolling • casting: • sand casting • die casting • investment casting • low temperature casting (pewter)					
Students should be aware of the different permanent and temporary joining methods for metals. They should be able to describe the different methods. They should be able to explain the suitability of the different joining methods for a range of specific products and scales of production. Including addition/fabrication processes: • metal inert gas (MIG) welding • tungsten inert gas (TIG) welding • spot welding • oxy-acetylene welding • soldering (soft and hard) • brazing • riveting • temporary joining methods and fasteners: • self tapping screws • machine screws • nuts and bolts.					
Students should be aware of the different wasting processes. They should be able to describe the different processes. They should be able to explain the suitability of the different wasting processes for a range of specific components and products. Specific processes to include: • milling • turning • flame cutting • plasma cutting • laser cutting • punching/stamping.					
Students should be aware of the ways that metals can be finished to enhance their appearance or prevent corrosion. Including applied finishes: • cellulose paint • acrylic paint • electro-plating • dip coating • powder coating • galvanising • sealants • preservatives • anodising • plating • coating • cathodic protection					