Curriculum Long Term Plan

Time	7	8	9
Autumn Term 1	**Health and Safety in the Workshop** **D&M Straw bridges** Structures, forces, problem solving, making design decisions, functional products, select and use appropriate tools and materials, H&S, evaluating skills, responsibilities of designers and engineers, impact on society, material properties. *NC – Design, Make, Evaluate, Technical Knowledge*	**Review H&S** **D&M – Flat pack animal** **Materials – Manufactured Boards** Research, problem solving, making design decisions, functional products, select and use appropriate tools and materials, H&S, evaluating skills, impact on society, material properties. *NC – Design, Make, Evaluate, Technical Knowledge*	**Technical Drawing** Isometric, single point perspective, two-point perspective, use a range of design strategies, *NC – Design, Make, Evaluate, Technical Knowledge*
Autumn Term 2	**Squeezy Torch** Basic electronic circuit, understanding of basic electrical components, planning, evaluating. *NC – Make, Evaluate, Technical Knowledge* **Materials – Acrylic** **D&M – Key-ring** User needs, design skills including annotation, select and use tools and equipment, H&S, planning, evaluation, properties of materials, functional product *NC – Design, Make, Evaluate, Technical Knowledge*	**D&M – Flat pack animal** **Materials – Manufactured Boards** Research, problem solving, making design decisions, functional products, select and use appropriate tools and materials, H&S, evaluating skills, impact on society, material properties. *NC – Design, Make, Evaluate, Technical Knowledge*	**D&M – Cardboard 3D Letter** 3D Modelling, problem solving, making design decisions, select and use appropriate tools and materials, H&S, evaluating skills, material properties, Sustainability, environmental impact, 6 R's *NC – Design, Make, Evaluate, Technical Knowledge*
Spring Term 1	**Materials – Acrylic** **D&M – Key-ring** User needs, design skills including annotation, select and use tools and equipment, H&S, planning, evaluation, properties of materials, functional product *NC – Design, Make, Evaluate, Technical Knowledge*	**D&M – Flat pack animal** **Materials – Manufactured Boards** Research, problem solving, making design decisions, functional products, select and use appropriate tools and materials, H&S, evaluating skills, impact on society, material properties. *NC – Design, Make, Evaluate, Technical Knowledge*	**D&M – Cardboard 3D Letter** 3D Modelling, problem solving, making design decisions, select and use appropriate tools & materials, H&S, evaluating skills, material properties, Sustainability, environmental impact, *NC – Design, Make, Evaluate, Technical Knowledge*
Spring Term 2	**Materials – Acrylic** **D&M – Key-ring** User needs, design skills including annotation, select and use tools and equipment, H&S, planning, evaluation, properties of materials, functional product *NC – Design, Make, Evaluate, Technical Knowledge*	**Use of CAD and 3D Printing** Designing using CAD, use of CAD as a design tool, refine ideas, new and emerging technologies, *NC – Design, Make, Evaluate, Technical Knowledge*	**Use of CAD and 3D Printing** Designing using CAD, use of CAD as a design tool, refine ideas, new and emerging technologies, *NC – Design, Make, Evaluate, Technical Knowledge*
Summer Term1	**Use of CAD** **D&M – Keyring** Introduction to Techsoft as part of C.A.D. Designing using CAD, use of CAD as a design tool, refine ideas *NC – Design, Make, Evaluate, Technical Knowledge*	**Use of CAD and 3D Printing** Designing using CAD, use of CAD as a design tool, refine ideas, new and emerging technologies, *NC – Design, Make, Evaluate, Technical Knowledge*	**Use of CAD and 3D Printing** Designing using CAD, use of CAD as a design tool, refine ideas, new and emerging technologies, *NC – Design, Make, Evaluate, Technical Knowledge*
Summer Term 2	**Use of CAD** **D&M – Keyring** Introduction to Techsoft as part of C.A.D. Designing using CAD, use of CAD as a design tool, refine ideas *NC – Design, Make, Evaluate, Technical Knowledge*	**Biomimicry, smart and modern materials** Ergonomics, new and emerging technologies, environmental impact, properties of materials *NC – Design, Make, Evaluate, Technical Knowledge*	**Sustainability & Recycling** Environmental impact, properties of materials