Schools ITQ - Unit 24 Additive Manufacture (Gold Unit 24)

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- General guidance for interpreting QCF qualification levels [3]
- **Link to assessor's guide to interpreting the criteria for this unit** [4]
- Click on the links in the table below for specific guidance on the assessment criteria.
- National Strategies APP criteria [5] are relevant from Entry 3 upwards.
- References to personal learning and thinking skills (PLTS) [6]

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Unit 1, Additive Manufacture (3 credits)

1. use a brief to design 3D objects.

1.1 explain the need for a specified design. [7]

1.2 describe design constraints. [9]

1.3 select appropriate software to develop the design. [11]

1.4 research information to support a design. [13]

1.5 create a set of information on which to base a design, starting from a template, image trace or pre-existing object. [15]

1.6 create a 3D design through customising existing templates or instructions. [17]

1.7 make checks to ensure the model will print. [19]

1.8 amend errors and ensure design quality. [21]

2. enable 3D manufacture from a 3D design.

2.1 export a file for additive manufacture. [8]

2.2 explain the need for appropriate file format and dimensions. [10]

2.3 import files into additive manufacture software. [12]

2.4 use the appropriate settings to create a build file. [14]

2.5 explain possible issues related to print speed, quality, size and overall outcome. [16]

2.6 use the 3D printed final product to identify possible improvements. [18]

2.7 identify how an additive manufacture design can be used alongside or to aid existing design and manufacture processes or systems. [20]

2.8 communicate a written evaluation of the design process to others. [22]

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