

Introduction to Computer Aided Design and 3D Printing

15 CREDITS

**LO1: Use computer software to digitally model different designs and objects.
LO2: Make 3D printed objects from digital CAD models using two different 3D printing technologies.
LO3: Compare and contrast different 3D printing technologies.**

Content

Presentation

Reflection

**80+ -
Exceptional**

Blogs in this grade boundary show outstanding awareness and understanding of the topic. The set of blog posts capture all the processes, materials and equipment used over the unit. These are focussed, well-structured and accurate in terms of fact. Each stage is expertly defined and there are no gaps in the manufacturing process. External references or supplementary information is added to corroborate or enhance the blog. Relevant and useful images, created by the student, have been added in large numbers. Images are cropped to highlight specific areas of focus for the reader. Video (or links to video) have been added occasionally and these are not merely page furniture but add to the content. Blog posts show the date published on the blog. The guidance for content has been interpreted and applied in every aspect.

The blog posts in this grade boundary are expertly written, with no spelling mistakes using a template or theme. Sentences have been carefully written to consider the target audience and have consideration for those who may be unaware or inexperienced with the content. Acronyms are defined and explained. Each blog post will have a creative and alluring title. All images are captioned to show the reader what they are looking at. External hyperlinks to relevant and useful content on the web have been added and these are embedded in the blog text. Different font sizes or colours have been expertly used to break up each section or to distinguish between different parts of the text. The blog is fully accessible in terms of font (e.g. at least 14 point), colour (e.g. muted tones, high contrast), theme (e.g. avoidance of intense graphics, overwhelming wallpapers, and/or moving/flashing objects), navigation (e.g. use of headers, sidebars), and media. A clear and unambiguous menu allows easy navigation through the blog. The guidance for presentation has been impeccably followed.

Blogs in this grade boundary will include an exquisite self-reflection of the students' progress on the unit. This expertly captures the students' perceived strengths and weaknesses at each stage and openly discusses how they overcame hurdles or specific problems. Examples of self-reflection are self-awareness, identifying areas of self-improvement, self-acceptance. There is an exemplary introductory post and similarly excellent summary post at the end of the blog. The guidance for reflection has been interpreted in every aspect.

<p>70-79 - Excellent</p>	<p>Blogs in this grade boundary show excellent awareness and understanding of the topic. The set of blog posts capture the vast majority of the processes, materials and equipment used over the unit. These are mainly focussed, well-structured and mostly accurate in terms of fact. Each stage is superbly defined and there are very few gaps in the manufacturing process. In many posts, external references or supplementary information is added to corroborate or enhance the blog. Relevant and useful images, mostly created by the student, have been added in sufficient number. Most images are cropped to highlight specific areas of focus for the reader. Video (or links to video) have been added scantily and these are not merely page furniture but add to the content. Most blog posts show the date published on the blog. The guidance for content has been interpreted and applied in most respects.</p>	<p>The blog posts in this grade boundary are superbly written, with very few spelling mistakes using a template or theme. Most sentences have been carefully written to consider the target audience and have consideration for those who may be unaware or inexperienced with the content. Acronyms are largely defined and explained. Most blog posts will have a creative and/or alluring title. The majority of images are captioned to show the reader what they are looking at. External hyperlinks to relevant and useful content on the web have been added but may not be in the blog text. Different font sizes or colours have been really well used to break up each section or to distinguish between different parts of the text. The blog is mostly accessible in terms of font (e.g. at least 14 point), colour (e.g. muted tones, high contrast), theme (e.g. avoidance of intense graphics, overwhelming wallpapers, and/or moving/flashing objects), navigation (e.g. use of headers, sidebars), and media. A useful menu allows easy navigation through the blog.</p>	<p>Blogs in this grade boundary will include a superb self-reflection of the students' progress on the unit. This excellently captures the students' perceived strengths and weaknesses at the majority of stages and openly discusses how they overcame hurdles or specific problems. Examples of self-reflection are self-awareness, identifying areas of self-improvement, self-acceptance. There is a superb introductory post and similarly superb summary post at the end of the blog. The guidance for reflection has been really well interpreted.</p>
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<p>60-69 - Very Good</p>	<p>Blogs in this grade boundary show very good awareness and understanding of the topic. The set of blog posts capture most of the processes, materials and equipment used over the unit but with some minor omissions. These are focussed, well-structured and generally accurate in terms of fact. Each stage is really well defined and there are just a few gaps in the manufacturing processes. In some posts, external references or supplementary information is added to corroborate or enhance the blog. Relevant and useful images, some of which created by the student, have been added plentifully. Some images are cropped to highlight specific areas of focus for the reader. Video (or links to video) have been rarely added and these are not merely page furniture but add to the content. Some blog posts show the date published on the blog. The guidance for content has been generally interpreted and applied.</p>	<p>The blog posts in this grade boundary are generally well written, with very some spelling mistakes, using a template or theme. Most sentences have been carefully written to consider the target audience and have some consideration for those who may be unaware or inexperienced with the content. Acronyms are sometimes defined and/or explained. Some blog posts will have a creative and/or alluring title. Most images are captioned to show the reader what they are looking at. Some external hyperlinks to content on the web have been added but may not in the blog text. Different font sizes or colours have been generally well used to break up each section or to distinguish between different parts of the text. . The blog is generally accessible in terms of font (e.g. at least 14 point), colour (e.g. muted tones, high contrast), theme (e.g. avoidance of intense graphics, overwhelming wallpapers, and/or moving/flashing objects), navigation (e.g. use of headers, sidebars), and media. A menu allows navigation through the blog but may not be obvious or easy to use.</p>	<p>Blogs in this grade boundary will include a very good self-reflection of the students' progress on the unit. This competently captures the students' perceived strengths and weaknesses at most stages and openly discusses how they overcame hurdles or specific problems. Examples of self-reflection are self-awareness, identifying areas of self-improvement, self-acceptance. There is a well-written and structured introductory post and similarly well-written summary post at the end of the blog. The guidance for reflection has been well interpreted.</p>
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<p>50-59 - Good</p>	<p>Blogs in this grade boundary may demonstrate competency and knowledge of the theory and/or techniques, however, this knowledge may on occasion be used ineffectively, inaccurately or in an unreflective way. The student has competently attempted to structure the blog appropriately. The blog may contain some errors and will may regurgitate some lecture material or class discussion. Some meaningful use will be made of personal experience and observations. In places, the blog may be lacking in content, focus and organisation, or clarity of explanation. It will generally show understanding of the genre or audience(s) for whom it is written. The guidance for content has been interpreted and applied to some respect.</p>	<p>Blogs in this grade boundary will display a suitable, if sometimes inconsistent, standard of presentation. They may make use of descriptive and/or creative titles. However, this usage may be inconsistent, they may be too long, and they may not adequately indicate the content and/or structure the posts. They may make use of images and/or audio-visual material which may, but are unlikely to, have been created by entirely by the student(s). When images or audio-visual materials are used, they mainly have a decorative function. The provision of captions and sources for images may be absent or inconsistent and. An attempt may have been made to use hyperlinks in order to connect with other sources of information, broaden the scope of the blog, and/or illustrate the argument/ideas, however, these may be ineffective and/or not properly embedded in the text. Some consideration may have been given to font size, colour(s) and/or font type to convey ideas/emphasize points/distinguish between sections but the end result may be ill-advised (e.g. hard to read, confusing). The blog will be broadly accessible according to several of the following measures - font (e.g. at least 14 point), colour (e.g. muted tones, high contrast), theme (e.g. avoidance of intense graphics, overwhelming wallpapers, and/or moving/flashing objects), navigation (e.g. use of headers, sidebars), and media.</p>	<p>In this grade boundary, there is only scant self-reflection of the work that students have done, the new things they have learned or identified any areas of strength or weakness. The guidance for what is required may have been somewhat misinterpreted.</p>
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<p>40-49 - Pass</p>	<p>Blogs in this grade boundary may demonstrate satisfactory knowledge of the theory and/or techniques, however, this knowledge may be used ineffectively, inaccurately or in an unreflective way. The student has satisfactorily attempted (at least partially) to structure the blog appropriately. The blog may contain errors and will likely regurgitate lecture material or class discussion. Little, or no, meaningful use will be made of personal experience and observations. The blog will be significantly lacking in content, focus and organisation, or clarity of explanation. It may be written in an overly academic style (e.g. essay format) and show little, or no, understanding of the genre or audience(s) for whom it is written.</p>	<p>Blogs in this grade boundary may display a poor standard of presentation (e.g. bare minimum text and no illustrations). They may make no, or only very limited, use of: descriptive and/or creative titles; images; and/or audio-visual material. When images or audio-visual materials are used, they are unlikely to have been created by the student(s) and/or will have a purely decorative function. The provision of captions and sources for images is likely to be largely absent or inconsistent. Little, or no, attempt may have been made to use hyperlinks in order to connect with other sources of information, broaden the scope of the blog. Little, or no, consideration may have been given to font size, colour(s) and/or font type to convey ideas/emphasize points/distinguish between sections. Very little consideration will have been given to the blog's accessibility in terms of the in terms of the target audience.</p>	<p>In this grade boundary, there is only rudimentary self-reflection of the work that students have done, the new things they have learned or identified any areas of strength or weakness. The guidance for what is required may have been partially misinterpreted.</p>
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<p>0-39 - Marginal Fail</p>	<p>Blogs in the class will demonstrate only very limited knowledge of relevant techniques and stages undertaken in the unit. It will include some coherent discussion and possibly some evidence of original material. It will contain many omissions, errors or inaccuracies, or evidence of misunderstanding.</p>	<p>Blogs in this class may display a generally poor standard of presentation (e.g. few illustrations, very few citations and references). They are likely to make little use of descriptive and/or creative titles, images, and/or audio-visual material. If images or audio-visual materials are used, they are mostly unlikely to have been created by the student(s) and/or will serve mainly a decorative function. The provision of captions and sources for images is likely to be regularly absent or inconsistent. Little attempt is likely to have been made to use hyperlinks, or full web addresses may have been inserted between parts/at the end of the text without meaningful context or explanation. Little consideration will have been given to font size, colour(s) and/or font type.</p>	<p>In this grade boundary, there is very little evidence of self-reflection of the work that students have done, the new things they have learned or identified any areas of strength or weakness. The guidance for what is required may have been misinterpreted.</p>
<p>Below 30 - Fail</p>	<p>A blog in this grade boundary will be incomplete or not started. It will contain very little useful content, if any. No appreciation of blog writing skills.</p>	<p>Blogs in this class may display a very poor standard of presentation (e.g. no illustrations, no citation and referencing). They are likely to make no use of descriptive and/or creative titles, images, and/or audio-visual material. If images or audio-visual materials are used, they are unlikely to have been created by the student(s) and/or will serve only a decorative function. The provision of captions and sources for images is likely to be largely absent or inconsistent. No attempt is likely to have been made to use hyperlinks, or full web addresses may have been inserted between parts/at the end of the text without meaningful context or explanation. No consideration will have been given to font size, colour(s) and/or font type.</p>	<p>With regards to reflection, blogs in this class will provide little or no reflection upon the progress of the unit and the work within it.</p>