

# 2025 ASSESSMENT REPORT

## CGD315118 COMPUTER GRAPHICS AND DESIGN

### Folio Component

The majority of portfolios closely followed the submission guidelines, presenting as a zip file containing the design process and a video file. Approximately 20% of portfolios were submitted as a single pdf document. It was the second year in a row where most portfolios were generally of a higher overall quality and standard.

Portfolios successfully demonstrated a clear and logical progression aligned with the design process and guidelines, and the majority included an appropriate industry essay. Candidates and educators should take care to ensure the industry essay is closely aligned with the chosen industry's relation to Computer Graphics, as in some cases there was little to no discussion of computer graphics' effect on the industry. To improve presentation, it is recommended that each portfolio begin with a cover page displaying the project title, the candidate's TASC ID, and an image of the final design. Furthermore, we again recommend presenting a standalone video showcasing the final design, rather than embedding it within the documentation as an excellent way for candidates to demonstrate a broader range of skills.

Some final design solutions demonstrated highly complex skills; however, some candidates would have benefited from expanding on their design process. Future candidates would benefit from annotating their screenshots further. Answering "what" they did, "how" they did it and "why" they did it that way is a reliable way for the markers to be able to find further evidence of higher understanding for the rubric.

There was an increase in candidates clearly and accurately discussing the Design Elements and Principles associated with their design solutions, but a large number of candidates failed to use in-text referencing thoroughly, especially when it came to labelling images such as those found in their mood boards.

Research and precedents generally exhibited strongly this year, with the most successful candidates including relevant research and discussions of how past examples would influence their own design solutions. In general, the design iteration process that comes after research was a little lacking this year, with fewer candidates than usual effectively demonstrating their alternative design solutions and the evolution of their design solution through sketches, digital sketches and/or storyboards before moving on to the digital creation process.

The large majority of candidates used appropriate compression and codecs for the creation of their video files; however, a few candidates submitted their video files in unusual formats or aspect ratios. It is essential that candidates follow TASC guidelines when exporting the final video to be submitted.

Frequently, 2D-based projects lacked a sufficient variety of demonstrated computer graphics and design techniques to score as well for Criterion 8. While some did, it was apparent that a huge amount of time had been spent on these. It is the recommendation of this panel that 2D design

solutions such as logos, fonts, posters, etc. be incorporated into a broader project scope such as applying logos to 3D rendered merchandise, posters to billboards in a 3D environment, etc.

Approximately 6% of candidates submitted portfolios of the highest standards. Demonstrating a high understanding of the design process steps in the manner listed below.

### Key Components of a High-Level Portfolio:

- a. Design Brief: A concise statement of project goals and expectations, supported by a design scenario, client, context, functional objectives and target audience.
- b. Research of Precedents: Well-analysed including relevant research aligned with the design brief's intent.
- c. Exploration and Experimentation: Comprehensive sketching and idea development including analysis against the brief and elements and principles.
- d. Production Process Documentation: Annotated screen captures demonstrating computer graphics techniques used.
- e. Industry Analysis Essay: An analysis of a design industry with a strong connection to the design context and computer graphics processes, adhering to academic integrity requirements.
- f. Evaluation and Reflection: Insightful analysis of learning and design outcomes in response to the brief.
- g. Final Project: A complete, industry-standard design with appropriate references for all non-candidate-generated content.

By adhering to these guidelines, candidates can produce portfolios that not only meet TASC standards but also showcase advanced design and technical skills.

## Written Component

### Question 1

54% of candidates attempted this question. 27% of all candidates achieved higher than a C rating for their response. Most candidates responded by discussing the 3 or 5 R's. With some higher-level responses discussing Life Cycle Assessments. Better responses provided rationale as to why the R's are important while weaker responses only identified what the R's are. Some candidates mistook Sustainable Design Principles for Elements and Principles of Design and thus did not answer the question appropriately.

### Question 2

38% of candidates attempted this question. 14% of all candidates achieved higher than a C rating for their response. Most candidates were able to identify an appropriate design solution. Stronger responses were able to discuss the design solutions impact on society in detail, while weaker responses were unable to identify the impact the design object had on their way of life.

### Question 3

68% of candidates attempted this question. 18% of all candidates received higher than a C rating. Most candidates discussed either the functional or the environmental design consideration in detail, while stronger candidates discussed both. Sustainable design considerations included

environmental impact, sustainable materials, energy efficiency, water management, visual impact and biodiversity protection. While functional design considerations included compact multi-use spaces, natural light and ventilation, off-grid capability, transportability and modularity and aesthetic integration. Having studied Housing and Design was beneficial to answering this question.

## Question 4

63% of candidates attempted this question. 19% of all candidates achieved higher than a C rating for their response. Most candidates were able to identify and discuss the social factors and how they would go about researching them. Stronger responses also discussed the ethical and environmental factors. Despite the question only requesting candidates list factors, stronger responses were able to explain what those factors were and justify why they were important.

## Question 5

36% of candidates attempted this question. 13% of all candidates achieved higher than a C rating for their response. Almost all candidates were able to provide a satisfactory response to this question, discussing copyright considerations and ethical implications. Stronger answers examined and compared these implications from the perspectives of both Content Creators and the End Users (Designers).

## Question 6

27% of candidates attempted this question. 12% of all candidates achieved higher than a C rating for their response. Most candidates that attempted this question were able to provide a satisfactory answer. These discussed user experience satisfaction and error reduction. Stronger answers examined the way good user experience design takes into account social and ethical considerations in the form of accessibility.

## Question 7

32% of candidates attempted this question. 9% of all candidates achieved higher than a C rating for their response. Most candidates that attempted this question were able to provide satisfactory answers; these generally discussed form versus function. The strongest answers analysed the nuances of balancing function with form and gave strong examples of innovative design.

## Question 8

82% of candidates attempted this question. 41% of all candidates achieved higher than a C rating for their response. While most candidates successfully answered this question, discussing form versus function and accurately identifying the importance of form in a medical aid designed for accessibility, the strongest answers recognised the importance of aesthetics to the end user in building user acceptance, pride and reducing potential for embarrassment.

## Question 9

69% of candidates attempted this question. 43% of all candidates achieved higher than a C rating for their response. This question was answered with a broad range of detail. Successful candidates identified the key differences between Raster (composed of Pixels) and Vector (mathematical equations). Stronger answers gave detailed differences between the two with examples of file type and practical uses for each file type.

## Question 10

52% of candidates attempted this question. 21% of all candidates achieved higher than a C rating for their response. Satisfactory answers gave a clear explanation of the technical difference between layers and groups, mentioning the purpose of both. Stronger answer included the following explanations and clear links to how they could be used when producing Computer Generated Imagery: Layers were explained with reference to organising content, visibility control and editing benefits. Grouping was explained with discussions based on locking multiple elements together and having the ability to edit as a unit.

## Question 11

30% of candidates attempted this question. 12% of all candidates achieved higher than a C rating for their response. Strong responses demonstrated a clear understanding of systems and a clear process that could be used for creating computer-generated effects replicate one of the designated options. Strong responses defined the use of particle systems, defining potential properties that will help the system simulate the chosen outcome. Many on these included physical properties such as movement constraints, textures and colours.

## Question 12

79% of candidates attempted this question. 36% of all candidates achieved higher than a C rating for their response. This question was answered poorly by most candidates that attempted it, with a limited response covering only one or two advantages and disadvantages. Stronger responses made reference to a broad range of impacts with a strong connection to computer graphics content.

## Question 13

59% of candidates attempted this question. 29% of all candidates achieved higher than a C rating for their response. Some candidates achieved satisfactory results; however, high-quality answers required specific subject matter knowledge. Strong responses discussed technical features such as DPI adjustment in both hardware and software, remappable buttons, latency, and ergonomics.

## Question 14

30% of candidates attempted this question. 6% of all candidates achieved higher than a C rating for their response. While the most successful responses accurately linked the pixelation and framing issues to resolution and aspect ratio settings, a number of candidates struggled with the context. These candidates tended to describe the visual errors presented in the scenario rather than explaining the underlying definitions and implications of the settings.

## Question 15

67% of candidates attempted this question. 45% of all candidates achieved higher than a C rating for their response. This question was attempted by many candidates and was highly successful. The clear wording and requirement for sketches made the concept accessible to most candidates. Responses were generally detailed and of a high standard, with successful candidates demonstrating strong engagement with the core concepts of Boolean geometry modification in 3D applications.

## Question 16

19% of candidates attempted this question. 13% of all candidates achieved higher than a C rating for their response. This question was well-received and effectively answered by the majority of those who attempted it. The clear requirement to distinguish between native and open formats, alongside their classification as raster or vector, provided a structured framework that candidates understood well.

## Question 17

Only a small number of candidates attempted this question. The most successful responses engaged well with the social and ethical dimensions of the task, producing logo concepts that demonstrated inclusivity and empathy. While the standard of sketching and annotation for these factors was generally high, the requirement to justify "environmental factors" proved to be a stumbling block. Many candidates struggled to provide authentic justifications for environmental sustainability for a logo centred around a disability insurance scheme.

## Question 18

17% of candidates attempted this question. 2% of all candidates achieved higher than a C rating for their responses. This question was generally answered well, with most candidates demonstrating a good understanding of the storyboard format. However, differentiation occurred regarding correct annotations highlighting social and environmental messages. Many candidates failed to identify appropriate consultation methods, sometimes describing how they would start developing an advertisement instead of explaining who they would consult with and why.

## Question 19

A quarter of the candidates attempted to answer this question. Most answers successfully identified several social and ethical considerations when designing a mascot to be made into a toy. These considerations ranged from inclusivity and diverse representation to potential materials needed to create toys of different designs. Stronger answers recognised the need to collaborate with community groups in order to be sensitive to a variety of cultures and the differences between cultural appropriateness and broad inclusivity practices. The strongest answers recognised the risk of stereotyping and copyright infringement and outlined appropriate considerations to take to mitigate these risks.

## Question 20

Very few candidates attempted this question. Of those that did, most candidates were able to produce a suitable design, although weaker responses only produced one design or failed to consider how it could flat pack. In addition to completing and annotating all their drawings, stronger responses also included a robust analysis of the consultation process and the desk and packaging materials, using the three or five R's as a framework for their discussion.

## Question 21

Most candidates that attempted this question were able to accurately discuss and analyse box and subdivision modelling, sculpting and 3D scanning, their appropriate use cases and the pros and cons of each. Unfortunately, a high number of candidates struggled to adequately discuss spline modelling and its appropriate use cases. It became apparent in some responses that candidates were unfamiliar with the terminology despite demonstrating some understanding of the process of spline modelling itself.

## Question 22

While this question was one of the most popular in section D, only a very small percentage of candidates performed exceptionally well, demonstrating a granular understanding of the manufacturing processes. The majority of the cohort provided only broad, functional descriptions sufficient for a satisfactory result.

## Question 23

Most candidates that attempted this question were able to accurately identify and describe the typical differences between the 2D and 3D animation processes. While many of these were able to give strong examples about the potential pros and cons of these, it became apparent that some candidates' answers were based on presumptions and misconceptions about the two mediums and were not grounded in relevant research. The strongest answers were able to provide highly relevant examples of the most appropriate use cases for each medium, especially when and how each medium could be combined to play to the strengths of each.

## Question 24

The nature of this question meant that each answer had the potential to focus on vastly different, cutting-edge technologies. As only a small number of candidates tackled this question, it is difficult to provide general feedback on the responses provided. However, stronger answers were able to demonstrate a strong understanding of their chosen technologies and provided appropriate relevant examples of their best use cases. Answers were further enhanced by demonstrating a deeper understanding of the potential implications these technologies would have on the future of the computer graphics and design industry.

## Question 25

11% of candidates answered this question. Some candidates were able to provide a basic differentiation between using a game engine versus a 3D modelling program for creating assets. However, many failed to adequately describe the specific tools and functionality of a game engine. The limited depth of these answers suggests that detailed game engine workflows are not widely covered in many computer graphics classes.

## Question 26

The majority of candidates that answered this question achieved a C rating or higher. Most candidates opted to discuss AR and VR. Most candidates were able to discuss how the emerging trends are currently being used and where they may go in the future. Stronger responses touched on future innovation although few candidates were able to discuss this in detail.