

Slide No.	Script (verbatim)
Slide 1	<p>Hello and welcome to this pre-recorded event to help you as you deliver your A level candidates through our qualification. This is an introduction to the qualification at AS and A level, detailing the requirements and giving some useful hints and tips in terms of the delivery.</p>
Slide 2	<p>Our agenda today is to look at the specification requirements and to illustrate the differences between the AS qualification and the A level.</p> <p>We will consider the theory requirements and the coursework requirements (now termed NEA).</p> <p>We will then look at some making exemplar material and conclude with further support information.</p>
Slide 3	<p>This slide sets out the AS qualification requirements.</p> <p>The thing to highlight here is that, compared to the A level, the candidates have to undertake a smaller number of theoretical areas of content, and they do undertake a smaller scale design and make project. We will return to these areas of subject content a little later.</p> <p>The split of theory to project is 50/50. This, of course, should be at a level beyond the GCSE qualification. The theory content has seven areas of subject content that must be covered.</p> <p>The project must fulfil the contextual challenge set by the board; for example, conservation. Again, we will return to look at this later.</p> <p>In terms of the assessment of the portfolio, the first grids of the assessment criteria set the tone for the initial assessment criteria of the portfolio as the contextual challenge does need to be referred to, indeed, to contextualise the work submitted as relevant to the challenge.</p>

Slide 4	<p>The A level qualification includes further theoretical areas of content, units 8-12, and the NEA is a student-led activity.</p> <p>The split of theory to project is again 50/50. The theory element has to cover all of the 12 areas of subject content as set out in the specification; the later strands often have an evaluative/analytical slant. For example, AS has a focus on knowledge of materials as stated in the specification, whereas A level students may be asked to evaluate 'cleaner' design and technology processes.</p> <p>This begins to discern the difference between the levels of the qualifications, as in the AS Level NEA has a contextual challenge, whereas at A Level NEA is much more open-ended.</p> <p>The A Level NEA element should have a commercial feel to it, showcasing the candidate's ability to work as a commercial designer might work, responding to the client's input in an iterative manner. At all stages this should be apparent in the portfolio.</p>
Slide 5	<p>In both the AS and A Level there is 15% mathematical content. The appendices shown are especially useful and the table really sums up the breadth of the content. Remember, these principles will all be related to D&T scenarios and so they will all be applied; therefore candidates will need to interpret the questions and apply the correct mathematical principles.</p>
Slide 6	<p>This slide looks at the non examined assessment (NEA) which was the term for coursework. There has been a reduction in the weighting of this element from 60% to 50% of the qualification marks. And in all cases the students do need to produce a design and make project.</p> <p>However, there are some differences between the AS qualification and the full A Level qualification.</p> <p>At AS level a design brief is developed in response to a contextual challenge which is set by the board. A final prototype is then designed based and made around that particular design brief. At the A Level, a final prototype based on design brief made by the students. This should be a client led activity and have a more commercial feel to it.</p>

Slide 7	<p>This slide reiterates the requirements of the AS and A level NEA.</p> <p>The difference between the NEA for AS and A level is fundamentally broken down into:</p> <ol style="list-style-type: none"> 1. The choice of problem is directed by the board at AS and at A level by the candidate in consultation with user group(s) or clients. 2. A level: the stakeholders are very much the centre of the end design; the candidates should focus on the needs wants and values of a client or users/stakeholders. 3. The candidates should, for both qualifications, have demand at the advanced level but at A level we may see more complex processes and skills. Please note that group projects and separate design and make tasks can no longer be undertaken.
Slide 8	<p>This slide shows the assessment objectives and their weighting. Note that the weightings are the same for both qualifications and that 15% of AO3 is assessed in the theory paper and all 35% of AO4.</p>
Slide 9	<p>We will now take a brief look at the two specifications and, in the first instance, possible delivery strategies. It is important here to recognise that the delivery strategy you choose must suit your cohort and that the last AS cohort will be examined in 2020.</p>
Slide 10	<p>The courses are essentially stand alone in that the AS is separate to the A level, but that does not mean that candidates cannot do both.</p> <p>The AS can be taught over one or two years, or the AS can be taught in the first year and A level in the second year. This can be hard going with two exams and two projects, but it is possible. Some centres feel that this prepares the candidates well.</p> <p>The more popular model appears to be one whereby the A level is taught over the two years.</p> <p>Essentially these are the options</p> <ul style="list-style-type: none"> • AS over two years • AS in one year

	<ul style="list-style-type: none"> • A Level over two years • AS in one year and the full A level continuing in the second year <p>Remember the theory content is modular and runs over both of the qualifications in a range of different modules.</p>
Slide 11	<p>This slide sets out some hints and tips to get through this. The subject content is modular and defined across the two qualifications allowing for flexibility and co-teachability.</p> <p>The AS candidates do need to be taught the 1-7 content whilst engaging in the contextual challenge.</p> <p>A level candidates are also exposed to the subject content but could also undertake some practice NEA activity such as analysis of the needs, wants and values of a client.</p> <p>Experience has also shown that the candidates need exposure to the mathematical content; it is imperative that the candidates practise these skills. Some centres enlist the help of their Maths departments. Remember that there is shared content across the two qualifications and so there is some opportunity to tailor qualifications to candidates.</p> <p>The schemes of work and delivery models, which can be found on the Pearson Edexcel website, are useful.</p>
Slide 12	<p>This slide sets out a co-teachable possibility.</p> <p>Both qualifications can, however, also be taught as a standalone activity.</p> <p>This illustrates the flexible approach to the qualification and demonstrates that centres can tailor the course to the needs of the learners.</p>
Slide 13	<p>So now let us move on to Component One. This is the subject content that culminates in the sitting of the written examination.</p>
Slide 14	<p>This slide shows the component's content – these are all the taught elements of both qualifications. As you can see, Components 1-7 relate to the AS and 8-12 to the full A level qualification and the further headings build on them and complete the full A level paper.</p> <p>Hence potential co-teachability.</p>

Slide 15	<p>The papers ramp in degree of difficulty from the start to the finish and will in general follow a similar pattern year on year.</p> <p>Anything that is in the published specification can be examined and, as mentioned earlier, the mathematical content will be applied and amount to 15%.</p> <p>It is important that the candidates become familiar with those key phrases allowing them to develop their examination technique to understand the level of answer that is required. For example, if it is an <i>explain</i> question, it may well need a number of sentences that explain for instance, a process. In terms of <i>evaluation</i>, that will normally be an extended piece of writing, and there should be pros and cons and a balanced evaluation.</p> <p>The high-level questions are generally in the <i>explain, discuss, evaluate</i> category. In the A level, there will be more of those explain, justify, and evaluate types of questions.</p>
Slide 16	<p>These command words are very important. They need to be taught so that candidates understand the meaning of the command word and then answer the question with the correct response.</p> <p>A list of command words and their definitions can be found in Appendix 5, pages 62-63 of the A Level specification.</p>
Slide 17	<p>Here are some examples of these command words. For example, questions with the command words 'Give, State or Name' might require a simple one-word answer and are likely to appear at the start of the paper, or at the start of a question to help to set the context.</p> <p>'Calculate' clearly prompts a maths answer.</p>
Slide 18	<p>In an evaluative or analytical question, have a demand to come to an argued and supported conclusion. It is good practice to coach your students and indeed teach a little English. A <i>justify</i> question may need a connective in the answer. If it's a <i>justify</i>-style answer, then a single connective may be appropriate. For example, 'it is made from Aluminium BECAUSE' (a connective) which forces a justifying statement.</p> <p>Where a more analytical answer is required this can be helped by linking connectives. For example, 'it is made from aluminium BECAUSE it is in an outside seaside environment THEREFORE it is resistant to saltwater erosion avoiding oxidation MOREOVER this means that it will maintain its appearance for longer etc.'</p>

	In evaluative questions this use of connectives may happen a number of times, but it must culminate in a justified, supported conclusion.
Slide 19	Here is an example of a straightforward 'Give' question; note the examiner's commentary - this can be found on the Edexcel Results Plus service and in the Principal Examiner's report on the Edexcel website, which has also been provided in your delegate pack.
Slide 20	These two examples show a typical Maths-style question and the candidate has interpreted the question correctly and shown the working. That is important, especially if the method is correct but the answer is not. Some credit would be given.
Slide 21/22	<p>This series of examples shows the typical high-level response to an analytical evaluative type question. Note the candidate's response in which the illustration is annotated as an aide memoire and the prose shows reasoned argument followed by justification. About this question, the examiner states:</p> <p>'This is a very good response that was awarded a mark in level 4. The candidate has demonstrated a developed understanding of ergonomic design within the context of the question.</p> <p>This is a well written, in-depth essay that provides insightful connections of concepts throughout the work and has embedded evaluative comments throughout.</p> <p>Although the candidate has not provided a separate conclusion, this is acceptable when concluding arguments are embedded within the response.'</p> <p>Note the need for a concluding statement in the ideal response.</p>
Slide 23	So now we need to move on and look at the NEA. The main focus here will be on the A level but we will look at the AS initially.
Slide 24	<p>The AS contextual challenge is set by the board, the students submit projects that are both in concept and real products but must be using advanced level skills. So for instance, the contextual challenge may well be based around the theme of conservation and then below you can see some of the types of challenges that might be set.</p> <p>For the AS qualification the candidates will undertake a design and make exercise that fulfils the context set by the board. This context will be issued to centres in June of the year of</p>

	<p>examination and the candidates will then respond to this challenge, it is expected that this will be a smaller scale response to the challenge than if this was an A level response.</p>
Slide 25	<p>This slide sets out some of the expectations with regards to the AS NEA. At the AS level the candidates will produce a 'smaller scale' product than A level – containing approximately 30 sides of A3 or electronic equivalent - in response to the contextual challenge that fulfils the challenge and has real justification.</p> <p>The contextual challenge will be issued in the June of the first year of study. The starting points for the contextual challenge were outlined on the previous slide.</p>
Slide 26	<p>The products seen here represent a range of product smaller scale prototypes that could be submitted for AS level.</p> <p>The lamp involves blow moulding, straightforward lamination of timber, vacuum forming and finishing. This is a fully working prototype.</p> <p>The coat hook rack requires a variety of turning techniques, pewter casting and resin infill, again forming a working prototype.</p> <p>The scaled model of the 'monorail station' is a suitable architectural prototype utilising a number of materials and modelling techniques, with detail (see additional photos of access stairs etc.) that would take it from the expected level of demand at GCSE to AS level.</p> <p>Finally, the modelled aftershave bottle prototype has some difficult turning taking place to make the detailed lid and applicator, in addition to which the work demonstrates the use of CAD and graphic manipulation work for the advertising poster. A key aspect in ramping up the level of demand from GCSE.</p>
Slide 27	<p>So now let us look in some more detail at the NEA for the A level. It is important to remember that the assessment criteria for both qualifications are very similar apart from the requirements of the contextual challenge for the AS qualification.</p> <p>However, at the A Level, it is important to also to have a commercial slant to the work and certainly a use of a client or user-group/target-markets are very effective in accessing the higher levels of the assessment criteria.</p>

Slide 28	<p>Here we have a range of outcomes that represent a more demanding approach to the manufacturing section and so are more appropriate for A level.</p> <ul style="list-style-type: none"> • First, a lit point of sale for jewellery use in department store – laser turning, milling, LED circuits, flat pack. • The second instance shows a piano stool – advanced wood joints, laminating, upholstery, adjusting mechanics. • In the third case, we have a theme park ride– electronics, mechanical movements, advanced modelling techniques. • The fourth is an architectural design – advanced modelling skills and lamination, laser work, and exterior design. • Finally, a Fairtrade portable display unit for exhibition – joints and joining, turning, milling, use of router with jigs. This also flatpacks into a box which was also manufactured by the candidate.
Slide 29	<p>Grid one – identification of a design possibility – means that the candidates need to work in a client-centred or iterative manner. In other words, they really need to look at a particular target market or a client or a user group and hone that down into an initial design brief. The candidates will need to justify their starting points, develop them further so that the initial design brief can then focus the research.</p> <p>In general terms candidates should have:</p> <ul style="list-style-type: none"> • Initial breadth of design opportunities • Relevant client narrative • Honed to an initial design brief <p>It is imperative that the candidates explore the design possibilities in a context that they have identified or look at an issue and then pursue a particular area of concern. BUT always with the aid of a client or stakeholder that can provide reactionary feedback throughout the process.</p>
Slide 30	<p>What might an exemplar page look like?</p> <p>In this good example the candidate does adopt an iterative approach, they hone the starting point and move towards a focus for investigation. This is an excellent way forward.</p>

	<p>THE WORLD PRIMATE CENTRE becomes a focus and so a design possibility is identified. The candidate does explore a range of different possibilities and justifies the scenario well.</p> <p>In essence, this example illustrates the requirements for this section.</p>
Slide 31	<p>The candidates have honed and tuned the needs of the clients – the research remains focused and succinct. The emphasis here needs to be that the research must be selective and focused; it cannot be textbook in style and therefore generic.</p> <p>It is important that the information gleaned from the client/stakeholders direct the candidates to the appropriate research.</p> <p>Anthropometric data must be related, and site visits/client interaction should have a level of reality. At all levels the annotation is key – it must have elements of justification and show real technical knowledge and understanding.</p> <p>The research section should also provide potential trigger points for the candidate to suggest or even generate new iterations of design possibilities.</p> <p>It is important that centres focus on the areas of research that may enable those iterative moments. For instance, a site visit that looks at the tracking of the sun for an architectural product may actually change the nature of the proposal.</p>
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Slide 33	<p>In this slide we see the candidate unpicking the potential proposal; this analysis can then be used to structure the research.</p> <p>This is for a Fairtrade travelling stand to sell products at various fairs etc. The candidate is beginning to tease out relevant issues such as ease of transport this may lead to developing flat pack ability, for instance.</p>

	<p>This again illustrates the importance of client narrative to help structure the research and task analysis in order to avoid unnecessary research and leading to focused research.</p>
Slide 34	<p>Moving on to relevant research, this is for a record storage. The site visit is the area in which it is going to fit – this is imperative in terms of the design of the product so this is a very good example of relevant research – it is tailor made in terms of its design. The second box on the slide might appear to be an irrelevant mood board but it does appear in the analysis of the design context and eventually the style of the twenties comes through in the design of the product. So this research on the 20s is also relevant and may cause the candidate to trigger different design iterations or at least sew those stylistic design themes together.</p>
Slide 35	<p>Now let us move on to Grid Three, the specification. A refined design brief and specification must be produced.</p> <p>The specification must reflect the research.</p> <p>It must also reflect renegotiations that have taken place between stakeholders/client and designer in the research.</p> <p>The specification points must include technical and measurable elements. The importance of this cannot be stressed enough. We see too many specification points that are too generic. For example, “The dining room must be big enough” or “The corridors must be wide enough”. What we are looking for here is that specification points have measurable elements within them such that can be tested during the evaluative commentary at the end of the portfolio. The research is done and the candidate as hopefully researched the width of the corridors in the school building, so therefore can be specific!</p>
Slide 36	<p>The slide shows elements of a typical specification.</p> <p>The measurable elements are substantive and are a product of the research, this is to be commended.</p>

	<p>However, on occasions candidates miss opportunities. For example, here the candidate may well have undertaken the research into relevant surface protection but it is not reflected in the specification.</p>
Slide 37/38	<p>The design ideas grid, Grid four, should show creative and innovative approaches to the design work. We should a range of different strategies that are used to produce a range of design ideas, which could be things like 2D, 3D, most importantly subassembly details, inspiration materials, the work of other designers, but all of those would be triggering further iterations of the design ideas section.</p> <p>The ideas need to show a link to the client's needs wants and values and have a real illustration of the technical knowledge and understanding of the candidates, especially in terms of the annotation.</p> <p>We must see real detail in the design work; we call this sub assembly design not simply holistic sketches of proposals, but further details that begin to unpick the sub elements of the proposal.</p>
Slide 39	<p>This slide exemplifies what is required in terms of detailed sub assembly design. This candidate has teased out elements of the design and begun to annotate them showing technical knowledge and understanding. This candidate could then go on to model solutions or to discuss the solutions with the client, enabling the product to move forward.</p>
Slide 40	<p>On these exemplar idea pages we see good examples of cultural or stylistic influence, triggering further iterations of the design, and very good use of intermediate modelling, which is holistic, to test ideas and return them to the client.</p> <p>In many cases this is where the candidates think that the iterative approach begins!! This is not the case.</p> <p>We must see this approach throughout the portfolios; a cyclical iterative approach is vital in all of the sections.</p> <p>It is important that this section is characterised by the use of testing and experimentation, for instance, with the modelling, the use of the client /stakeholders and an in-depth understanding of the technical elements of proposals that impact on changes.</p>

	<p>We must see technical annotation that evidences the candidate's understanding of issues regarding materials and processes – clearly in this exemplar, we see lots of technical annotation and a good critique of each of the models from the client and the candidate.</p> <p>Most importantly, modelling must be used to good effect in that the candidate tests aspects of the proposal and then uses feedback to inform further changes – again, an example of an iterative approach at this stage.</p> <p>Some of this is illustrated in the two exemplar pieces you see here.</p>
Slide 41	<p>Moving onto Grid Five, the development section. The candidates should evidence:</p> <ul style="list-style-type: none"> • An iterative approach to the design work with annotation and detailed drawing that resolve issues raised by the client and the situation • Modelling/simulation used to test appropriate features including proportions, scale, function, sub-systems. In 2D and 3D both traditional and CAD. (This means that CAD is not limited to the developmental section it can be seen throughout the portfolio) • Ongoing developmental changes are informed by technical application of research, experimenting, and client/end user feedback in order to improve, refine and realise a design.
Slide 42	<p>In this slide the candidate illustrates intermediate modelling of a seat to very good effect allowing for visualisation of issues to be resolved.</p> <p>The close-up of these images highlight good technical annotation and further opportunities for mechanical and mathematical modelling.</p> <p>The smaller image of the whole page illustrates real detail and a feel for the sub system design that we are looking for at this stage.</p>
Slide 43	<p>This is a good example of the candidate using CAD modelling as a visual, showing some functional application and aesthetic functions in terms of the texture colour etc. It again has an</p>

	<p>analytical element to it as the candidate does go on to suggest further testing that may be required to resolve some of the issues highlighted, again client input here would be great, but it may come later in this section.</p>
Slide 44	<p>Now to Grid Six, the final design solution. The key to unlocking this particular assessment criteria is ensuring the candidates show comprehensive manufacturing detail to enable a third party to manufacture this design solution. Therefore, it should be able to be manufactured from the evidence, remotely.</p> <p>In this section we should see the candidates illustrating, in detail, how the product is to be made. This can be communicated in a number of ways.</p> <p>Orthographic and Pictorial views are commonplace but exploded views and parts drawings can be very helpful, as is high quality technical annotation.</p> <p>The manufacturing specification can also be dealt with in different ways, but it must include the operations that are required to enable each part to be manufactured. This is often most successfully done in a table form. However, detailed parts drawings and cutting lists would also fulfil this requirement.</p> <p>Finally, in this section we should see some calculations especially in referral to materials and quantities. But again, if candidates have found other ways of doing strength calculations, that would be acceptable.</p>
Slide 45	<p>Here is a look at some final design exemplars.</p> <p>The first example shows an overall understanding of relevant manufacturing techniques. There is effective refinement, e.g. the methodology for the curve across the top of the jukebox and we do see good resolution of issues in terms of the press forming.</p> <p>The second example shows a different approach but is effective in terms of the product development plan and manufacturing specification – we can see some of the detail in some of the sub assembly and again the product development plan.</p> <p>The third example shows some high-quality visuals for of the computer desk, again acceptable if supported by other detail</p>

	which is confirmed on the final slide in this series, especially the construction plan.
Slide 46	This is Grid Seven, the review section. This review section can be difficult for the candidates to grasp – the candidates must make sure they are absolutely analytical and evaluative. So, we are expecting to see a balanced view of the final idea. That must include pros and cons and should include an analysis that uses the specification, but furthermore, also uses the client's opinions.
Slide 47	<p>The whole process should have evidence of analysis of the work of others and its influence in terms of that final proposal, which of course, could be from a third party.</p> <p>There are key elements to consider in this section, so the candidates need to:</p> <ul style="list-style-type: none"> - consider materials - consider the views of others - have a balanced view (e.g. some kind of strengths and weakness analysis) - be analytical - be evaluative (e.g. a summative evaluation of the success, or possibly further iterations that are triggered by negotiations in narrative from the clients and/or the user groups). <p>So the review section should be characterised by a critical, balanced analysis, using success criteria (e.g. the candidate specification, and the client/stakeholder opinion). The work should have balance (e.g. a strengths and analysis), and the evaluation must be perceptive, in that it listens to opinions and instigates change, thus fulfilling the iterative design process.</p>
Slide 48	<p>Moving on, here we can see a higher level review of ideas, as we see an evaluative commentary and the candidate offers some real client comments and analysis that does have some balance in terms of its Fairtrade analysis which could trigger further iterations; and indeed this is the case.</p> <p>The second example, from the same candidate, illustrates a more detailed review of the concept with a mature evaluative</p>

	commentary and so again this shows balance. It does need to draw more on the work of other designers, but it does still have access to the highest levels of the assessment criteria.
Slide 49	<p>These two examples show a more formal review which does look at the specification and at further refinements, they are more limited, but they set out changes on the strength of the review which is to be commended.</p> <p>The candidates simply have to take a critical evaluative approach in this section. Although this is developed to a certain extent, some of the commentary needs a mature analytical approach.</p>
Slide 50	<p>Now we move on to Grid Eight, the communication of design ideas. In this section, the candidates must show evidence of the three strands of communication – written, traditional, and CAD.</p> <p>Also, note the use of the word ‘perceptive’ throughout here. This is key. Candidates must choose the best method of communication. All strands do need to be evidenced but this would normally be the case in a portfolio. Centres need to be aware of this. It is important that all aspects of the design portfolio are communicated effectively through those three different strands.</p>
Slide 51	In these slide sets we see the candidate evidence the three strands to good effect, with traditional elements, with very good quality annotation and a mature analysis, and CAD well used to explain both concept and detail, which culminates in a very effective final design.
Slide 52	<p>Grids nine and ten are the manufacturing marks.</p> <p>In grid nine we are looking at the candidates evidencing the skilful use of a range of tools and equipment that allows them to show a real understanding of the processes and tools that they have selected. This can be done through the use of the photographic diary. We should also see at the top level a real understanding of the relationship between the working drawings and the final product with dimensional accuracy.</p>
Slide 53	In Grid Ten, the quality and accuracy assessment criterion, the candidates must produce a prototype that demonstrates high level making skills – so advanced level making skills in relation to a sophisticated design solution.

	<p>The product should be a fully functional prototype which of course does encompass architectural modelling also and indeed concept modelling. The prototype must fully meet the design specification and we would expect to see a sophisticated application of an iterative approach to manufacture. For instance, we may see the use of jigs and fixtures to enable the manufacture which would be included in this particular assessment criteria. Or we might see particular small elements of tooling to enable perhaps intricate marking out, which again would be included in this assessment criterion.</p>
Slide 54	<p>Now we will look at a high-level performance. Here we see a high level use of tools and equipment, especially the use of a jig that was purpose built for routing. The candidate evidences the preparation of mitred steel elements for the welding of components – so again, this submission would access the highest levels in Grid Nine and Ten.</p> <p>Advanced levels skills include processes such as milling, casting, centre lays and wood turning, or lamination and bending, in modelling processes or indeed more complex plastic forming processes. Though this list is not exhaustive.</p>
Slide 55	<p>On this slide we show some further examples of product manufacture.</p> <p>In the top left, the candidate has submitted an outdoor play area, or house with an external climbing wall. The construction is slab in nature with little in terms of construction techniques. The scale appears to be somewhat inaccurate. This is a solid Level 2 in terms of the assessment criteria for Grids Nine and Ten.</p> <p>The candidate in the top right has manufactured a suit stand, and it evidences some high-level manufacturing skills, such as turning and some interesting shaping. It is a Level 3 submission, evidencing some demand and mostly skilful use of tools and equipment, with clear dimensional accuracy. It is a fully functioning prototype, although the use of skills, tools and equipment is a little limiting, so this product would not gain access to the highest assessments for manufacture.</p> <p>On the bottom left is an LED lit knife chopping board and spice rack. It is an elegant solution with a range of manufacturing</p>

	<p>skills. This is not at the very highest levels of the assessment criteria in Grid Nine and Ten, but it is a good Level 4 submission. And finally, the submission on the bottom right is a cycle rack for the interior of an SUV-style vehicle. The work is very crisp with some bought-in components including an aluminium section. That said, the work evidences milling and turning, along with a very sophisticated use of the 3D printer. The printed parts have to interact with each other, for instance, a camlock mechanism. Thus, this is deemed to be complex and advanced, gaining the top marks.</p>
Slide 56	<p>So now we move onto Grid Eleven, the testing and evaluation assessment criteria. In this section, the candidates must discern the difference between testing and evaluating.</p> <p>Testing means putting the product into service.</p> <p>Evaluating means making a critical analysis of a) the testing, b) the specification, and c) evaluation and of the client's needs, values, etc.</p> <p>It is important that any testing does ensure that the product is fit for purpose and whether or not the brief has been met. After completing the testing, it is important to pull those results together, into a kind of summative evaluation. This summation should include information about the needs of the stakeholders being met, the appropriateness of the materials and method of construction.</p>
Slide 57	<p>A key aspect of any design is that it needs to be checked against the specification. It may not be feasible to assess all of the specification points, but the key points do need to be tested and assessed.</p> <p>We are looking for some impact evaluation in terms of the product and the environment – often this can be achieved using a life-cycle analysis. Of course, the lifecycle analysis ought to be related to the product, not a generic version.</p> <p>In the final instance we would be expecting to see some suggested modifications – i.e. 'What else can be done post design to improve the product?' in conjunction with stakeholder and client opinions, and the evaluative use of the specification. Any modifications in this section we would deem to be iterative.</p>

Slide 58	<p>Here are some further examples of the testing and evaluation requirements.</p> <p>In the first instance, we see that the candidate is putting the product into service. This is a Fairtrade display stand, very clearly being used at one of the trade shows, and clearly looks at the needs and requirements of the client. It also goes on to look at user groups and they feel about the particular product.</p> <p>In the next example the product is analysed against the specification to assess different success criteria.</p> <p>Next, we go on to look at an architectural and we see client involvement feeds into the evaluation – the client looked at the specification, and their own needs, wants and values and then produced a further review. This was helpful for the candidate to produce a final evaluative commentary.</p> <p>In the final example, modifications are suggested post manufacture. This is worthy of a great deal of credit – even after the product has been designed and made, the candidate is suggesting further modifications, and thus a further iterative trigger in terms of the development of that product. This mimics what might happen in the commercial world.</p>
Slide 59	For further information, please see these contact details.
Slide 60	Thank you for attending this session.