ELC

Design & Technology

Entry Level Certificate **R371-R375**

OCR Report to Centres June 2016

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It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

This report on the examination provides information on the performance of candidates which it is hoped will be useful to teachers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding of the specification content, of the operation of the scheme of assessment and of the application of assessment criteria.

Reports should be read in conjunction with the published question papers and mark schemes for the examination.

OCR will not enter into any discussion or correspondence in connection with this report.

CONTENTS

Entry Level Certificate

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OCR REPORT TO CENTRES

R371 - R375 Design & Technology

General Comments

Centres were able to enter candidates from one or more of the following five materials areas: Electronics, Graphics, Industrial Technology, Resistant Materials and Textiles. The most popular this series were Resistant Materials and Textiles. Industrial Technology in particular attracted very few entries. This may be because it was seen as one of the more modern areas and hence as being harder than the others. This was untrue as all areas had the same degree of difficulty - it is only the content which differs. Centres are increasingly entering candidates for more than one material area. It would be possible for candidates to follow a combined course which covered the work of both Industrial Technology and Resistant Materials or indeed Electronics.

OCR provided a range of themes and tasks from which candidates selected one task involving the designing and making of a single product. Many Centres made use of the writing frames produced by OCR to help provide a framework within which their candidates could successfully complete their design folders (see http://www.ocr.org.uk/qualifications/entry-level-design-and-technology-r371-r375-from-2010/). The standard of practical work observed was good in the majority of Centres, particularly in the range of skills and techniques used in the making of the products. Some very creditable pieces of work were produced. It was evident that most Centres have been successful in submitting their candidates for this qualification. There was very little unfinished work submitted, most was complete, functioning and suitable for the design task selected.

The choice of theme is the key to how successful the candidate is likely to be. Not only does the Centre have to be able to resource the likely outcomes but the tasks have to be open-ended enough for higher ability candidates to fully access the assessment criteria whilst also providing enough direction for lower ability candidates still to be successful.

The presentation and standard of work was very good from the majority of Centres, with folios being clear and well presented with a good range of photographic evidence of the final products shown. Centres are also increasingly providing photographic evidence of the making process to show how the product develops. Where students had been encouraged to label clearly and organise their folios into the separate objectives, moderation was made much easier. Many Centres had used the Coursework Cover Sheets (CCS/R371-375) with annotation explaining how the marks had been awarded - this was very helpful to moderators.

Most Centres have a common theme to their projects which allows them to manage the work efficiently. Some Centres have approached the subject as a group exercise. If this is the approach chosen, care must be taken that it is not too restrictive in what it allows the candidates to contribute. Occasionally it can be a little too closely teacher-directed. Whilst some candidates may need a tightly controlled structure in order to be successful, it can restrict any individual flair or creativity and make it very difficult to identify individual contribution. If care is not taken, the folios in such Centres can also end up with much of the content duplicated.

There was increasing widespread evidence of the successful use of ICT. The vast majority of candidates were able to research information to help their designing. In addition many were able to scan their sketched ideas onto the computer, use CAD packages to model ideas and provide digital images. There is some evidence of the use of CAD/CAM, but this is not extensive. A few Centres submitted their work on a DVD.

A number of Centres are successfully using this qualification for candidates with special educational needs, as well as to engage and motivate disaffected students. Some candidates

start working at GCSE level and for whatever reason cannot complete the course but have managed to continue and complete an Entry Level course. If this is the case, care must be taken that the assessment criteria in all units and Assessment Objectives have been met. In addition, some Centres are using the Entry Level course in year 9 to prepare candidates for GCSE Design and Technology qualifications.

Moderation

Moderators appreciated where Centres had added annotation to their completed cover sheets, which made it clear to see where they had awarded marks. In addition, annotating the cover sheets often helps Centres to fully understand the mark scheme. Centres who had been too severe or lenient with their marking often had not annotated their assessment sheets. Centres are generally very efficient in sending samples to moderators and most had clearly marked folders with candidates' names/numbers. There were very few clerical errors or missing documentation. However, it would be helpful if Centres could indicate on the cover sheets the actual breakdown of marks awarded within each level of response, rather than just a total. This makes it easier for a moderator to agree with the Centres' marks.

Photographic evidence of the final product is a basic requirement of this process, and supporting photographs showing the process of making the product provided moderators with further information. In most cases photographs were taken using a digital camera and the overall quality of these is generally good, often with a good range of photographs, particularly in the making section. A minority of Centres only provided a single photograph of the final product and this sometimes made it difficult to fully appreciate it. It is not necessary to send the actual product. Some Centres send the more two-dimensional products along with the folders to the moderator.

In some cases writing frames and prompts were helpful to candidates in forming appropriate responses. Whilst it is noted that Centres are in the best position to know their own students and their capabilities, Centres have to be careful because this may have restricted some candidates. On occasions, work was over-structured by Centres, resulting in one-word answers. In Entry Level, additional teacher assistance is welcomed but marks may only be awarded for work undertaken and completed by the candidate. Many teachers provided good annotation / witness statements on individual performance, showing clearly how much and where assistance had been given.

Design and Creativity (AO1)

In this objective most candidates were able to recognise a design opportunity or need from the initial theme provided by the Centre. Candidates were able to research their topic, often by using the internet, in response to their brief. There were several examples of very good practice where candidates made visits to relevant places and photographed items for use in researching their chosen task. This is to be commended as an effective design tool. Occasionally candidates need to be more discriminating and focused in regard to the type and amount of research submitted for moderation. There is little point in just putting all work undertaken within Design and Technology lessons into a folder if it is not relevant to the specific task.

Once candidates established a clear starting point, they were able to produce suitable ideas that satisfied their design need or brief. Some candidates found it difficult to express their ideas on paper but then successfully managed to develop their design ideas through the use of modelling. There was evidence of both three-dimensional modelling and computer-based CAD modelling. This is to be particularly encouraged since it helps to show their thought process and allows candidates to overcome problems before construction begins. This information allowed candidates to provide clear evidence of contribution to a more detailed design specification, although this was carried out with varying degrees of success. It would be useful if candidates were encouraged to consider dimensions when producing a specification, and if relevant, where the product could be used and by whom.

Where candidates had carried out a detailed product analysis this gave them all the information required to produce a quality product as they identified the key characteristics of successful product design.

Making (AO2)

One key aspect of making a successful product is successful planning. Although there was evidence that candidates found it difficult, they need to contribute to a plan of making. It was well answered in some cases with clear evidence backed by notes and drawings. It is possible for weaker candidates to do this verbally and for this to be recorded by the Centre.

Candidates need to select and use suitable materials, tools and equipment. Once again, the candidates achieving the higher marks showed clear photographs of themselves using tools and equipment with annotation and sketches to explain the process. There were a number of candidates who found the recording of this difficult and it is here that the Centres' annotation on the Coursework Cover Sheets is important.

Candidates have to use a range of skills and techniques appropriate to the task. Here again the Centres' annotation is vital in helping to record the amount of guidance they required. This is also the area where Centres were sometimes very generous in the marking of candidates who had used a very limited range of skills.

This objective also requires candidates to recognise possible problems in the designing and making process and suggest solutions. This generally seemed to be the weakest aspect of the making process. If Centres are to award high marks in this section there needs to be evidence to support the candidates' suggestions. It is not sufficient to record that candidates would be able to recognise problems and suggest possible solutions if they had not actually done so. The best examples provided product information by way of annotated diagrams and using modelling and testing in real-life situations.

The majority of Centres submitted practical work which was of a high standard and of which the candidates could be proud. There was very little unfinished work submitted.

Evaluation (AO3)

Being the end of the design and make process, this section was weakest with some Centres providing minimal evidence. At times there was little testing of the product and very limited references made to materials, tools and equipment. Conversely, some Centres make a feature of encouraging their candidates to use the product for its intended purpose to test its suitability and suggest some development of the product. The evaluation process can be one of the most important as a learning activity. Some Centres sit down at an 'evaluation picnic' and as a group evaluate their own products and those of others. Centres need to look at the assessment criteria on the Coursework Cover Sheet and direct candidates to the specific requirement to achieve the higher marks. There were some good examples of third-party testing, either by their peers/teachers or by the person for whom the product was intended. Some of the better examples demonstrated testing of the product with some reference to the original specification and a review of the materials and time used. Some Centres provided photographic evidence showing the product in use and on which the candidate could comment.

Administration

It was encouraging to note that the majority of folders were well organised and well presented with clear labelling and secure binding. Please note that the Coursework Cover Sheet (CCS) is required. As one is required per candidate, it is helpful to have this affixed to the front of each

candidate's folio. The Coursework Summary Form (CSF) is an optional form that allows Centres to list all of the candidates on one form and is particularly helpful to the moderation process.

If a candidate begins working towards a GCSE in a related subject area and then changes to an Entry Level course, the Centre should ensure that the work submitted is relevant to the new course and covers the Assessment Objectives.

Conclusion

In general, Centres are to be congratulated on the care and the commitment involved in meeting the requirements for assessment. It is clear that the Entry Level Design and Technology qualification is providing accreditation for a number of candidates who would not have been able to successfully achieve at GCSE. It can provide a valuable course for those with special needs, whilst also motivating and engaging disaffected students. It is designed to work alongside the GCSE, but it is also being used successfully by some Centres in Year 9 as an entry route in preparing for the GCSE. Candidates have been given the opportunity to succeed and reach their true potential, producing quality outcomes and products to be proud of.

Centres are reminded that this specification can be taught over one or two years and candidates may be entered for more than one material area.

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