

New Product Design and Development

Level 2 Award, Certificate, Diploma

Entry codes 10258, 10259, 10260

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1 Qualification overview

Title	OCR Level 2 Award in New Product Design and Development			
OCR entry code	10258	Qualification Number (QN)		600/3845/7
Age group approved	Pre-16	16-18	18+	19+
	✓	✓	✓	✓
This qualification is suitable for	<ul style="list-style-type: none"> • Candidates studying in preparation for employment in the design element of the engineering and manufacturing sectors • Candidates wishing to gain a Level 2 qualification to support further study in Further Education (FE) and Higher Education (HE) in the engineering and manufacturing sectors • Candidates wishing to gain a Level 2 qualification to support further study in FE or Higher Education (HE) in any other sector or subject area 			
Entry requirements	There are no formal entry requirements for this qualification.			
Credit requirement	a total credit of 10			
Structure and options	3 mandatory units			10 credits
Assessment model	<p>This qualification is pass/fail.</p> <p>This qualification is internally assessed by centre assessors and quality assurance personnel and externally verified by OCR.</p>			
Last date to enter candidates*	30 November 2016			

*This is the last date that centres can enter candidates for this qualification. OCR will inform centres of any change to this date. Please refer to our website www.ocr.org.uk for current information.

Title	OCR Level 2 Certificate in New Product Design and Development			
OCR entry code	10259	Qualification Number (QN)		600/3712/X
Age group approved	Pre-16	16-18	18+	19+
	✓	✓	✓	✓
This qualification is suitable for	<ul style="list-style-type: none"> • Candidates studying in preparation for employment in the design element of the engineering and manufacturing sectors • Candidates wishing to gain a Level 2 qualification to support further study in Further Education (FE) and Higher Education (HE) in the engineering and manufacturing sectors • Candidates wishing to gain a Level 2 qualification to support further study in FE or Higher Education (HE) in any other sector or subject area 			
Entry requirements	There are no formal entry requirements for this qualification.			
Credit requirement	a total credit of 29			
Structure and options	7 mandatory units			29 credits
Assessment model	<p>This qualification is pass/fail.</p> <p>This qualification is internally assessed by centre assessors and quality assurance personnel and externally verified by OCR.</p>			
Last date to enter candidates*	30 November 2016			

*This is the last date that centres can enter candidates for this qualification. OCR will inform centres of any change to this date. Please refer to our website www.ocr.org.uk for current information.

Title	OCR Level 2 Diploma in New Product Design and Development			
OCR entry code	10260	Qualification Number (QN)		600/3737/4
Age group approved	Pre-16	16-18	18+	19+
	✓	✓	✓	✓
This qualification is suitable for	<ul style="list-style-type: none"> • Candidates studying in preparation for employment in the design element of the engineering and manufacturing sectors • Candidates wishing to gain a Level 2 qualification to support further study in Further Education (FE) and Higher Education (HE) in the engineering and manufacturing sectors • Candidates wishing to gain a Level 2 qualification to support further study in FE or Higher Education (HE) in any other sector or subject area 			
Entry requirements	There are no formal entry requirements for this qualification.			
Credit requirement	a total credit of 56			
Structure and options	13 mandatory units		56 credits	
Assessment model	<p>This qualification is pass/fail.</p> <p>This qualification is internally assessed by centre assessors and quality assurance personnel and externally verified by OCR.</p>			
Last date to enter candidates*	30 November 2016			

*This is the last date that centres can enter candidates for this qualification. OCR will inform centres of any change to this date. Please refer to our website www.ocr.org.uk for current information.

2 Introduction

This centre handbook provides information for centre staff involved in the planning, delivery and assessment of the following qualifications.

OCR entry code	Title	Qualification Number
10258	OCR Level 2 Award in New Product Design and Development	600/3845/7
10259	OCR Level 2 Certificate in New Product Design and Development	600/3712/X
10260	OCR Level 2 Diploma in New Product Design and Development	600/3737/4

The units and any supporting documentation for these qualifications can be found on the OCR website. www.ocr.org.uk.

The information provided in this handbook was correct at the time of production. Occasionally OCR may update this information. Please refer to the qualification webpages for details regarding updates.

It is important that centre staff involved in the delivery of the above have access to and understand the requirements laid down in this handbook.

The awarding body for these qualifications is Oxford Cambridge and RSA Examinations (OCR) and the regulatory body is the Office of Qualifications and Examinations Regulation (Ofqual).

2.1 Funding

These qualifications are regulated in the Qualifications and Credit Framework and may be eligible for funding as determined by:

the Department for Education (DfE) under Section 96 of the Learning and Skills Act 2000
<http://www.education.gov.uk/section96/>

and/or

the Skills Funding Agency: <http://skillsfundingagency.bis.gov.uk/>

For details on eligibility for public funding please refer to the websites.

The QCF Qualifications Number (QN) should be used by centres when they wish to seek public funding for their candidates. Each unit within a qualification will also have a QCF unit code.

2.2 Guided learning hours

Each unit is allocated a number of guided learning hours (glh) which indicates the approximate number of hours for supervised or directed study time and assessment. Information on unit glh is given in the section 'Qualification structures and entry requirements'. Performance figures

For information on these qualifications' contribution to performance measurement please see Ofqual's Register of Regulated Qualifications <http://register.ofqual.gov.uk/>.

2.3 Unique Learner Number (ULN)

It is an Ofqual requirement that Awarding Bodies must capture the Unique Learner Number (ULN) for all candidates who have claimed certification for any of these qualifications. Where a candidate has a ULN, you should enter their number in the ULN field of the entry form. For candidates who do not have a ULN, a claim will still be accepted if you leave this field blank but OCR will not be able to send these achievements to the Diploma Aggregation Service. Further information about this can be found in the *Admin guide: Vocational Qualifications (A850)* <http://www.ocr.org.uk/administration/documents/vocational.html>.

2.4 Supporting OCR candidates

Centres should ensure that candidates are informed of the title and level of the qualification they have been entered for and that Oxford Cambridge and RSA Examinations (OCR) is the awarding body for their chosen qualification.

Centre staff should provide guidance to candidates on the assessment process and help candidates prepare for assessment. Full details on how the units are assessed are in sections [Qualification structures and entry requirements](#) and [Assessment](#).

3 Qualification structures and entry requirements

3.1 About these qualifications

These qualifications:

- are high quality and nationally recognised
- are vocationally-related
- are credit-based
- support achievement of Functional Skills
- relate to national occupational standards (NOS)
- are regulated in the Qualifications and Credit Framework (QCF)
- appear on the Register of Regulated Qualifications
- are supported by SEMTA, the sector body for Science, Engineering and Manufacturing Technologies.

They provide valuable opportunities for candidates to:

- develop skills
- gain underpinning knowledge and understanding
- demonstrate competence in the workplace
- provide progression to further/ higher education and apprenticeships
- improve employability
- continue professional development.

3.2 Qualification aims/objectives

The OCR New Product Design qualifications have been developed to recognise candidates' skills, knowledge and understanding of product design functions, environments and operations. The qualifications accredit candidates' achievements in a modern and practical way that is relevant to the workplace. They are work-related qualifications which will support progression to an apprenticeship or workplace and specifically aim to:

Develop candidates:

confidence to design, make and modify products for identified purposes, selecting and using resources effectively

knowledge and understanding of the design and manufacture of new products and demonstrate skills needed to manufacture in a real business environment

skills, knowledge and understanding in contexts that are relevant to employment situations, thereby enhancing their employability within the manufacturing sector

ability to work autonomously and effectively in a business context

decision-making skills through individual and collaborative working both independently and as a member of a team.

Encourage candidates to:

develop understanding of work-related learning and the principles of sustainable design and production systems

consider the uses and effects of new technologies and modern materials on product design and manufacture

access further programmes or occupational training on a full-time or part-time basis

enter employment or enhance their current employment status

make informed decisions about further learning opportunities and career choices.

3.3 Entry requirements

These qualifications are available to anyone who is capable of reaching the required standards. They have been developed free from any barriers that restrict access or progression thereby promoting equal opportunities.

There are no formal requirements for entry to these qualifications.

All centre staff involved in the assessment or delivery of these qualifications should understand the requirements of the qualification and match them to the needs and capabilities of individual learners before entering them as candidates for one of these qualifications.

3.4 Recognition of Prior Learning

Within the QCF, recognition of prior learning (RPL) is defined as 'A method of assessment that considers whether a learner can demonstrate that they can meet the assessment requirements for a unit through knowledge, understanding or skills they already possess and do not need to develop through a course of learning.' (Regulatory arrangements for the Qualifications and Credit Framework Ofqual/08/3726). OCR encourages the use of RPL and centres should advise their learners that they can bring forward any relevant learning (gained either informally or formally) so that, it can be assessed against the assessment criteria specified in the unit, or units, the learner aims to complete. It is important that centres make it clear to their learners that the RPL process is concerned with how the learner has acquired the knowledge, understanding or skills, it does not mean the learner is exempt from the assessment.

The currency of knowledge and ability, is often important when recognising skills and competences. Where assessment is devolved to centres through assignments or portfolio-building,

centre staff must judge the relevance of prior learning in all its aspects (including currency) to the qualification being assessed, before OCR will quality assure and authorise certification.

3.5 Qualification structure and rules of combination

Candidates do not have to achieve units in any particular order and the learning programmes should be tailored to meet individual needs. It is recommended that, wherever possible, centres adopt a holistic approach to the delivery of these qualifications and identify opportunities to link the units.

If a candidate is not able to complete the full qualification, their achievements will be recognised through the issue of a unit certificate listing the units and credit achieved.

The rules of combination for the qualification specify the:

- total credit value to be achieved
- mandatory unit credit

When combining units for these qualifications, it is the centre's responsibility to ensure that the following rules of combination are followed:

3.5.1 Table of units for OCR Level 2 Award/Certificate/Diploma in New Product Design and Development

The following table contains the mandatory units for all three qualifications. Click on the unit title to access the units on the OCR website www.ocr.org.uk.

Mandatory units					
OCR Unit No	Unit title	Unit Reference No (URN)	Credit value	Level	GLH
1	Develop preliminary specification and plans from a design brief	A/503/5851	3	2	24
2	Research techniques in design	J/503/5853	3	2	24
3	Concept development	L/503/5854	4	2	34
4	Application of maths within design	Y/503/5856	5	2	38
5	3D realisation for product development	D/503/5857	4	2	40
6	3D solid modelling	K/503/5859	5	2	42
7	Creating drawings from 3D solid models	D/503/5860	2	2	20
8	Creating 3D CAD assemblies	H/503/5861	2	2	20
9	An introduction to rapid prototyping and additive manufacturing	K/503/5862	5	2	40
10	Materials and material application	M/503/5863	7	2	50
11	An introduction to manufacturing techniques for product production	T/503/5864	6	2	50
12	Personal and professional communication development	A/503/5865	4	2	40
13	Introduction to business enterprise	F/503/5866	6	2	50

3.5.2 Entry code 10258 OCR Level 2 Award in New Product Design and Development

To achieve this qualification a candidate must achieve the following:

a total of 10 credits from mandatory units 1, 2 and 3	10 credits in total
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There are no barred combinations, equivalencies or exemptions for this qualification.

Entry code 10259 OCR Level 2 Certificate in New Product Design and Development

To achieve this qualification a candidate must achieve the following:

a total of 29 credits from mandatory units 1, 2, 3, 4, 5, 6 and 9.	29 credits in total
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There are no barred combinations, equivalencies or exemptions for this qualification.

Entry code 10260 OCR Level 2 Diploma in New Product Design and Development

To achieve this qualification a candidate must achieve the following:

a total of 56 credits from all 13 mandatory units	56 credits in total
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There are no barred combinations, equivalencies or exemptions for this qualification.

4 Centre assessor and quality assurance personnel requirements

4.1 Assessment centre requirements

The occupational expertise of those undertaking the roles of assessment and internal quality assurance is one of the key factors underpinning valid, fair and reliable assessment. The integrity of assessments and quality assurance is of paramount importance.

The assessment centre must:

- ensure there are sufficient trained or qualified personnel to assess the number of candidates they anticipate enrolling for the course/qualification
- ensure there are sufficient trained or qualified personnel to internally quality assure for the number of candidates and assessors
- put systems and internal quality assurance personnel in place to ensure that all assessments are valid, reliable, authentic and sufficient and provide quality assured training for centre personnel taking part in assessment
- ensure there is a system of standardisation in place to ensure that all assessments are consistent and fair
- ensure those undertaking the roles of quality assurance and assessment maintain their skills, knowledge and understanding regarding assessment and quality assurance and the associated qualification
- ensure that there is sufficient time to conduct effective assessment and internal quality assurance.

4.2 Centre Assessors

Assessment is an activity that can be performed by a dedicated individual or as part of an individual's wider role eg teacher, tutor, supervisor, manager.

The assessment centre must ensure that those making assessment decisions have the necessary expertise to do so, which may include assessors having, or be working towards, appropriate qualifications, these would include:

- Award in Assessing Competence in the Work Environment
- Award in Assessing Vocationally Related Achievement
- Certificate in Assessing Vocational Achievement.
- Assess candidates using a range of methods (A1)
- D32/33

Where centres use trained assessors they must provide evidence, to OCR, of the training undertaken.

All centre assessors must:

- have the role of assessor identified within their role profile; where assessment forms part of an individual's role
- be occupationally competent in the units they are assessing. This means that each assessor must, according to current sector practice, be competent in the functions covered by the units they are assessing. Assessors must be able to demonstrate consistent application of the skills and the current supporting knowledge and understanding, in the context of a recent role directly related to the units they are assessing as a practitioner, trainer or manager
- be familiar with the units that relate to the qualification and must be able to interpret and make judgements on current working practices and technologies within the area of work
- understand and apply OCR recording requirements.

4.3 Internal quality assurance personnel (IQA)

Internal quality assurance is an activity that can be performed by dedicated individuals or as part of an individual's wider role.

All internal quality assurance personnel must:

- be qualified in quality assurance, appropriate qualifications would include: Award in the Internal Quality Assurance of Assessment Processes and Practice, or as a verifier, (V1, D34). Where Centres use trained quality assurance personnel, they must provide evidence to OCR of the training undertaken
- be occupationally knowledgeable across the range of units for which they are responsible prior to commencing the role
- sample the assessment process to ensure accurate and consistent decisions between centre assessors and against standards
- resolve differences and conflicts on assessment decisions
- ensure that assessment has been carried out by persons who are occupationally competent within the area they are assessing
- maintain their occupational knowledge by actively engaging in continuous professional development activities in order to keep up-to-date with developments within the sector
- be responsible for corrective measures identified by OCR External Verifiers and OCR.

5 Assessment

5.1 Assessment: How it works

Teachers/tutors must make sure that the teaching content for each criterion is fully addressed so that candidates can effectively meet the requirements.

The identified teaching content in the unit is not exhaustive and may be expanded upon or tailored to particular contexts in which the unit is being taught and the assessment criteria applied.

We recommend that teaching and development of subject content and associated skills be referenced to real-life situations, through the utilisation of appropriate work-based contact, vocationally experienced delivery personnel, and real-life case situations.

When centre teachers/tutors are satisfied that the candidate has met all of the requirements for a unit, they must confirm this by signing an evidence record sheet for that unit to show that the assessment process is complete.

If a candidate fails the assessment for a unit, they may be entered again. There is no restriction, other than the life of the qualification, on the number of times a candidate may be entered for a unit/ examination. Unit fees are available for this purpose. The OCR Fees List provides details of all fees applicable to these units/qualifications.

5.2 Authentication

Teachers/Tutors/Assessors must be confident that the work they mark is the candidate's own. This does not mean that a candidate must be supervised throughout the completion of all work but the teacher/tutor/assessor must exercise sufficient supervision, or introduce sufficient checks, to be in a position to judge the authenticity of the candidate's work.

Wherever possible, the teacher/tutor/assessor should discuss work-in-progress with candidates. This will not only ensure that work is underway in a planned and timely manner but will also provide opportunities for teachers/tutors/assessors to check authenticity of the work and provide general feedback.

Candidates must not plagiarise. Plagiarism is the submission of another's work as one's own and/or failure to acknowledge the source correctly. Plagiarism is considered to be malpractice and could lead to the candidate being disqualified. Plagiarism sometimes occurs innocently when candidates are unaware of the need to reference or acknowledge their sources. It is therefore important that centres ensure that candidates understand that work they submit must be their own and that they understand the meaning of plagiarism and what penalties may be applied. Candidates may refer to research, quotations or evidence but they must list their sources.

Where permitted by the specification, the work of individual candidates may be informed by working with others, for example, in undertaking research, but candidates must provide an individual response as part of any task outcome.

Whilst there are no restrictions on the number of times that a candidate can resubmit evidence, it is the responsibility of the teacher/tutor/assessor to ensure that the details of any feedback and guidance are clearly recorded. Any advice to individual candidates over and above that given to the class as a whole should be recorded.

5.3 Direct Claim Status (DCS)

After delivering most verified qualifications for approximately 12 months, if centres have consistently met all the required criteria and delivered high quality assessment, they may be eligible for direct claim status. This is when centres can claim for identified qualifications in between their external verifier visits.

In the centre report, the OCR external verifier may recommend your centre for direct claim status. OCR will then send your centre a contract (DCS declaration form). Each person who the external verifier has checked and who then signs the DCS declaration form will be eligible to submit claims for the qualifications in question.

Once the centre has submitted claims, the external verifier will select a sample of candidates' work, which will be reviewed at the next external verifier visit. The centre must retain all portfolios claimed with direct claim status until the next external verifier visit.

All candidates including any who leave the centre following certification, must be asked to retain their evidence, portfolios and cumulative assessment record (CAR) in good condition for one year as they may be required for audit.

Approval is granted on the basis of information supplied by the centre to OCR and their External Verifier(s).

Withdrawal of DCS

DCS may be withdrawn at any time if in the opinion of OCR any of the centre information given is no longer current, the conditions of the approval are not met or the quality of assessment and quality assurance at the centre is compromised.

Re-instatement of DCS

OCR will apply one of the following two routes:

- Reinstatement DCS at the next External Verifier visit if all action points have been completed
- Centre is required to go through the full DCS process again.

The route for reinstatement will depend upon which of the DCS criteria are not in place at the point of DCS withdrawal.

Critical points regarding Direct Claim Status

- Certificates issued under 'Direct Claim' procedures will remain provisional until such time as they are confirmed through a verification visit.
- The quality assurance signature on all DCS claims will be checked to ensure that only quality assurance personnel listed on the Centres' DCS Internal Quality Assurance Team Register have signed the claims.
- Centres must keep assessment and quality assurance records relating to all candidates for at least three years from the date of the claim.
- The decision on whether DCS is awarded, retained or withdrawn lies with OCR.

5.4 Initial assessment of candidates

It is important for centres to carry out an initial assessment that identifies the knowledge and understanding candidates already have and any potential gaps that need to be addressed. This will also:

- allow centre assessors to plan the assessment
- help candidates to identify units which they might find most appropriate
- enable candidates to understand the best place to start collecting evidence.

5.5 Assessment planning

Centre assessors must take responsibility for assessment planning with candidates. This will involve discussing a number of issues with candidates including:

- agreeing the best source of evidence to use for particular units
- determining the best way of assessing the candidate
- confirming the best times, dates and places for the assessments to take place
- agreeing a flexible timetable for unit completion and assessment.

Centre assessors must make a note of their assessment planning and regularly give feedback to candidates.

5.6 Making assessment decisions

It is not necessary for candidates to meet all the criteria every time they carry out an activity, but **it is necessary that all candidates produce evidence to demonstrate they have met all assessment criteria**. In line with the Learning and Development standards, centre assessors should:

- plan with the candidate
- assess candidate performance, knowledge and understanding
- look at the evidence
- question and give feedback to the candidate working towards the qualifications being assessed.

They should also be satisfied that the candidate has demonstrated competence when meeting the assessment criteria.

All criteria in the unit must be completed before the centre assessor can sign the unit off as complete.

Full details of the administration arrangements associated with these qualifications are included in the *Admin guide: Vocational Qualifications (A850)* which can be downloaded from the OCR website <http://www.ocr.org.uk/administration/documents/vocational.html>.

5.7 Methods of assessment

It is the centre assessor's responsibility to agree the best method of assessing a candidate in relation to their individual circumstances. The methods agreed must be:

- valid
- reliable
- safe and manageable
- suitable to the needs of the candidate.

Valid

A valid assessment method is one that is capable of measuring the knowledge or skills in question. For example, a written test cannot measure a candidate's practical skills or their ability to work well with others.

Validity can also be compromised if a candidate does not understand what is required of them. For example, one valid method of assessing a candidate's knowledge and understanding is to question them. If the questions posed are not relevant to the qualification or difficult for the candidate to understand, not in terms of the content but the way they are phrased, the validity of the assessment method is questionable.

As well as assessment methods being valid, the evidence presented must also be valid. Assessors must be confident that the work they assess is the candidate's own. This does not mean that a candidate must be supervised throughout the completion of work but the assessor must introduce sufficient checks, to be in a position to judge the authenticity of the candidate's work.

Wherever possible, assessors should discuss work-in-progress with candidates. This will not only ensure that work is underway in a planned and timely manner, but will also provide opportunities for assessors to check authenticity of the work and provide general feedback.

Candidates must not plagiarise, failure to acknowledge the source correctly could be considered as malpractice and could lead to the candidate being disqualified. Plagiarism sometimes occurs innocently when candidates are unaware of the need to reference or acknowledge their sources. It is therefore important that centres ensure that candidates understand that the work they submit must be their own and that they understand the meaning of plagiarism and what penalties may be applied.

A reliable method of assessment will produce consistent results for different internal centre assessors on each assessment occasion. Internal quality assurance personnel must make sure that all centre assessors' decisions are consistent.

Safe and manageable

Centre assessors and internal quality assurance personnel must make sure that the assessment methods are safe and manageable and do not put unnecessary demands on the candidate and/or the organisation they work for.

Suitable to the needs of the candidate

OCR has tried to make sure that achievement of these qualifications is free from constraints outside the requirements of the unit.

For candidates who have access requirements please see ‘Access arrangements and special consideration’. If centre staff think that any aspect of these qualifications unfairly restricts access and progression, they should talk to their OCR external verifier about this.

OCR, in partnership with Sector Skills Council for science, engineering and manufacturing technologies (SEMTA) has identified the main assessment methods suitable for these qualifications:

- **examining of the evidence** by a centre assessor
- **direct observation** of practice by a qualified centre assessor or by the expert witness for occupational specific units
- **questioning** the candidate or witness by a centre assessor
- **inference of knowledge** from direct observation
- **professional discussion.**

In some situations, the centre assessor can arrange a formal discussion with the candidate to provide evidence of the candidate’s performance and knowledge.

(see 5.11 (Professional discussion))

5.8 Examining the evidence

Approved and qualified centre assessors (see **Centre assessor and Quality assurance personnel requirements**) must examine the evidence for the assessment of these qualifications.

Evidence can:

- reflect how the candidate carried out the process/activity
- be the product of a candidate’s work
- be a product relating to the candidate’s competence.

For example:

The process that the candidate carries out could be recorded in an observation or witness testimony. It is the centre assessor’s responsibility to make sure that the evidence a candidate submits for assessment is authentic and meets the requirements of the qualification.

The requirements of a candidate’s work can be accessed in the ‘evidence requirements’ section of each unit and sets out specific evidence needed to satisfy the unit evidence requirements.

It is important to ensure any evidence is appropriately indexed and organised to enable effective standardisation and assessment to take place. OCR recommend the use of candidate and candidate details when indexing of paper based evidence and the use of appropriate file naming for electronic evidence for example File: centre name_candidate name_ unit number_examination series (12345_1234_Unit 1_June 2011).

After the centre assessor has examined the evidence, they must record an assessment decision and the justification for the decision. They should also give feedback to the candidate.

5.9 Direct observation

Approved and qualified centre assessors (see **Centre assessor and Quality assurance personnel requirements**) may carry out observations for the assessment of these qualifications.

The centre assessor and candidate should plan observations together but it is the centre assessor's responsibility to record the observation properly.

After the observation has taken place, the centre assessor needs to record an assessment decision and the justification for the decision. They should also give feedback to the candidate.

5.10 Questioning

Approved and qualified centre assessors (see **Centre assessor and Quality assurance personnel requirements**) may question a candidate or witness for the assessment of these qualifications.

Questioning the candidate is normally an ongoing part of the assessment process, and is necessary to:

- test a candidate's knowledge of facts and procedures
- check if a candidate understands principles and theories *and*
- collect information on the type and purpose of the activities a candidate has been involved in.

Centre assessors should ask open questions; that is questions where the candidate has to give an answer (other than 'yes' or 'no'). Centre assessors should also be careful to avoid complicated questions which may confuse the candidate.

It is important that centre assessors record assessment decisions after they have questioned the candidate. They must record enough information to justify the decisions they make. This does not mean that centre assessors must record, word for word, the questions put to the candidate and the answers the candidate gives. However, they must record enough information about what they asked and how the candidate replied, to allow the assessment to be verified.

Questioning witnesses is normally an ongoing part of validating written witness statements. However, questioning witnesses should not just be used for this purpose. Centre assessors should be able to speak to witnesses and record, in whatever way is suitable, the verbal statements of these witnesses. A record of verbal statement is a form of witness statement and could provide valuable evidence to confirm a candidate's competence over a period of time.

5.11 Professional discussion

Professional discussion is a structured, planned and in-depth discussion recorded by the centre assessor. It allows the candidate to present evidence of competence and to demonstrate skills, knowledge and understanding through discussing the evidence and showing how it meets the requirements of the qualification. The centre assessor should guide the discussion by using open questioning, active listening and knowledge of the standards.

5.12 Witness testimonies

The witness must be an individual who a person, not related to the candidate, who is in a position to make valid comment about their performance, eg tutors or workplace supervisors.

Witness testimonies can be used as evidence of a candidate's performance. Such testimonies could be made verbally to the centre assessor or could be written in a short note.

If a witness provides a written statement they should include the following:

- the candidate's name
- the date, time and venue of the activity carried out
- a description of the activities performed by the candidate
- the date of writing the testimony
- a description of the witness' relationship to the candidate
- their signature and job title
- their contact details (such as telephone number).

It is not appropriate for witness testimonies to contain a list of the skills to which it relates.

Witnesses must direct the information in their testimonies to describing what the candidate did.

The centre assessor will then judge whether the candidate's activities demonstrate competence to the standards. It is not acceptable for candidates or centre assessors to produce written witness testimonies for witnesses to sign.

5.13 Personal statements

This is a candidate's own account of what they did, backed up by reference to evidence or witnesses. Candidates can also produce logs or diaries, reflective accounts, but someone who can authenticate them as a true account of what took place must countersign these.

5.14 Performance evidence

Performance evidence provides proof of what a candidate can do. Sometimes, performance evidence can also provide inferred evidence of what a candidate knows. Performance evidence can take the form of the following:

- products or outcomes of the candidate's work (for example, things that the candidate produced or worked on). The evidence presented for assessment may be the actual product or a record of the product
- if group work is used as evidence, the candidate's contribution must be clearly identified. Other products (for example, company policies) may have been reproduced by someone else but relate to the candidate and their competence, this must be clearly identified
- proof of the way the candidate carried out their work (that is, the process they went through). An internal centre assessor's observation of a candidate or a witness' testimony both provides performance evidence and would be suitable for these qualifications.

5.15 Where evidence comes from

Evidence may come from a number of different sources, for example:

- performance and knowledge evidence may come from a candidate carrying out workplace activities
- knowledge evidence may come from answering the centre assessor's questions.

5.16 Type of evidence

Evidence can take many forms, for example, photographs, videos, audio tapes, CD-ROMs and paper-based or digitally formatted documents.

5.17 Amount of evidence needed

It is difficult to give detailed guidance regarding the amount of evidence needed, as it depends on the type of evidence collected and the judgement of centre assessors.

For a candidate to be judged competent in a unit, the evidence presented must satisfy all the assessment requirements and assessment criteria.

The quality and breadth of evidence provided should determine whether a centre assessor is confident that a candidate is competent or not. Centre assessors must be convinced that candidates working on their own can work independently to the required standard.

5.18 Cumulative assessment record (CAR)

Templates for the recording documents to be used in a **cumulative assessment record (CAR)** **may be provided by OCR** or they may be designed by the centre and approved during the approval visit or by the OCR external verifier. The forms can be in any format but as a minimum they must contain the information identified in OCR's publication *Admin guide: Vocational Qualifications (A850)*.

Candidates must record, on the relevant documents, all the evidence presented for assessment. These records will also be used by the centre assessor and internal quality assurance personnel to record assessment decisions. They can also be used to record progress towards the achievement of units.

Filling in these documents, is an ongoing process involving discussion and agreement between the candidate and their centre assessor. The candidate should fill in and keep the CAR while working towards their qualification. A centre assessor may help the candidate complete the CAR if necessary. It may be viewed by the centre's internal quality assurance personnel and OCR external verifier for sampling purposes as part of the quality assurance process.

Examples of other forms and recording documents are provided to assist centres and candidates as they work towards these qualifications, please see the OCR website www.ocr.org.uk.

5.19 Verification – how it works

5.19.1 Internal quality assurance

It is the centre's responsibility to appoint internal quality assurance personnel to manage the internal quality assurance process. The purpose of internal quality assurance is to make sure and show that assessment is valid, reliable and consistent, through monitoring and sampling assessment decisions.

Internal quality assurance personnel must agree the use of simulated activities before they take place and must sample all evidence produced through simulated activities (see section **Simulation**).

5.19.2 External verification

OCR will allocate an external verifier who will visit the centre to verify assessments and internal quality assurance.

External verifiers will want to interview candidates, centre assessors and internal quality assurance personnel during their visits. Assessment records and evidence for all candidates must also be available for external verifiers to see if they ask to. It is the centre assessor's (and not the quality assurance personnel or external verifiers') responsibility to 'sign off' each unit of competence.

Centres should have the following available for each external verification visit:

- a list of candidates registered for these qualifications, together with their achievements to date plus certification records
- access to evidence (for example, up-to-date portfolios) and CARs
- access to OCR on-line claim system (Interchange)
- relevant centre assessors and selected candidates as requested by the external verifier (EV), including those whose certificates have been claimed through Direct Claims Status (DCS)
- all portfolios relating to certificates claimed through DCS should be accessible
- a copy of the external verifier's last visit report
- a sample signature list for all centre assessors and internal quality assurance personnel
- details of training curriculum vitae and certificates for new members of the assessment team
- all **centre records** (see **Centre records – assessment and verification** for more details)
- evidence of achieving action points and/or recommendations since the last external verifier visit
- notes of any action carried out following particular points mentioned by an external verifier in any correspondence since their last visit
- recommendations to the external verifier
- if recorded evidence is used, ensure all recordings and appropriate playback equipment is available.

5.19.3 Centre records – assessment and verification

Centres must make sure that assessment and quality assurance records are available for external verification purposes. These must record the following minimum information:

- candidate's name and location
- the title and level of the qualification they are taking
- candidate's start date on the programme and confirmation of registration with OCR
- name of the centre assessor
- name of the internal quality assurance personnel
- date and outcome of the initial assessment of the candidate
- dates and details of candidate reviews and feedback sessions
- assessment method(s) used
- dates of all assessments and their outcomes (that is, the decision whether the candidate has met the requirements or not) cross-referenced to the unit
- enough detail of the assessments to justify the decision made
- an indication of frequency of, and reason for, the use of simulation, if used
- dates and outcomes of internal quality assurance
- action resulting from internal quality assurance
- certification.

Records should show formative assessment decisions (ongoing decision making), summative assessment decisions and feedback to the candidate.

6 Delivery

6.1 Mode of delivery

OCR does not specify the mode of study or specify a time limit for the achievement of these qualifications other than the last entry dates laid down by the regulatory authorities detailed in the qualification overview.

Centres are free to deliver these qualifications using any mode of delivery that meets the needs of their candidates. Whatever mode of delivery is used, centres must ensure that candidates have appropriate access to the resources identified below.

Centres should consider the candidates' complete learning experience when designing learning programmes. This is particularly important in relation to candidates studying part time alongside real work commitments where candidates may bring with them a wealth of experience that should be utilised to maximum effect by centre staff.

6.2 Wider issues

These qualifications provide opportunities for centres to develop candidates' understanding of spiritual, moral, ethical, social and cultural issues and heighten candidates' awareness of environmental issues, health and safety considerations and European developments.

Spiritual, moral, ethical, social and cultural issues

These qualifications offer opportunities for spoken and written activities which contribute to the development of candidates' understanding of spiritual, moral, ethical, social, legislative, economic and cultural issues.

Spiritual development, through helping candidates recognise their own creativity and the creativity of others in finding solutions to problems, and through recognising the tension between material and non-material needs

Moral development, through helping candidates reflect on how technology affects the environment so they can make informed choices when designing and making; through discussing the moral dilemmas posed by introducing new technologies within different value systems and the advantages and disadvantages of new technology to local, national and global communities

Social development, through helping pupils recognise the need to consider the views of others when discussing design ideas

Cultural development, through exploring the contribution of products to the quality of life within different cultures, and through valuing and reflecting on the responses of people from other cultures to design solutions.

Environmental issues, health and safety considerations and European developments

These qualifications support these issues, consistent with current EU agreements, in the following areas:

The qualifications provide opportunities to promote education for sustainable development, through developing knowledge and understanding of the principles of sustainable design and production systems, developing skills in creative problem solving and evaluation, and exploring values and ethics in relation to the application of design and technology.

Whilst candidates will not be specifically assessed in terms of their knowledge and awareness of issues associated with energy usage, it is anticipated that, whenever possible, candidates will be encouraged to consider the benefits and drawbacks associated with the use of different sources of energy.

The specification content includes a requirement to consider issues associated with health and safety and the environment.

European examples should be used where appropriate in the delivery of the subject content. Relevant European legislation is identified within the specification where applicable.

6.3 Centre resources and requirements

OCR strongly advises that teaching and development of subject content and associated skills be referenced to real vocational situations, through the utilisation of appropriate work-based contact, vocationally experienced delivery personnel, and real-life case studies.

Candidates should be encouraged to read around the subject and have an appropriate knowledge of the application of the appropriate legislation (eg Health and Safety).

In addition, each unit will contain guidance on the resources required. Staff conducting assessment must understand fully the requirements of these qualifications. Centres should ensure that appropriate physical resources are made available to candidates.

6.4 Delivery in Wales and Northern Ireland

These qualifications have been regulated by Ofqual for delivery in England/Wales/Northern Ireland during the life of the qualifications.

They have been approved by the Department for Education and Skills (DfES) for use by centres in Wales and by the Council for the Curriculum Examinations and Assessment (CCEA) for use by centres in Northern Ireland.

Candidates in Wales or Northern Ireland should not be disadvantaged by terms, legislation or aspects of government that are different from those in England. Where such situations might occur, including in the external assessment, the terms used have been selected as neutral so that candidates may apply whatever is appropriate to their own situation.

We will provide specifications, assessments and supporting documentation in English.

Further information concerning the provision of assessment materials in Welsh and Irish may be obtained from the OCR Customer Contact Centre: 024 76 851509.

6.5 Access arrangements and special consideration

Adjustments to standard assessment arrangements are made on the basis of the individual needs of candidates.

It is important, therefore, that centres identify as early as possible whether candidates have disabilities or particular difficulties that will put them at a disadvantage in the assessment situation and select an appropriate qualification or adjustment that will allow them to demonstrate attainment.

The responsibility for providing adjustments to assessment is one which is shared between OCR and the centre. Centre staff should consult the 'Joint Council of Qualifications' (JCQ) booklet *Access Arrangements, Reasonable Adjustments and Special Consideration* www.jcq.org.uk.

This document should also be referred to for those candidates who may require a post-examination adjustment, special consideration (to reflect temporary illness, indisposition or injury), at the time of the examination/assessment.

For further guidance on access arrangements and special consideration please refer to OCR's *Admin guide: Vocational Qualifications (A850)* on the OCR website <http://www.ocr.org.uk/administration/documents/vocational.html>.

6.6 Centre malpractice guidance

It is the responsibility of the Head of Centre* to report (in writing) all cases of suspected malpractice involving centre staff or candidates, to the OCR Standards Division.

When asked to do so by OCR, Heads of Centres are required to investigate instances of malpractice promptly, and report the outcomes to the OCR Standards Division.

Further information is contained in the JCQ publication: *General and Vocational Qualifications - Suspected Malpractice in Examinations and Assessments* which is available from www.jcq.org.uk together with OCR's *Malpractice Procedures – A Guide for Centres*.

* The Head of Centre is defined as the most senior officer in the organisation, directly responsible for the delivery of OCR qualifications, eg the Principal of a College, the Head Teacher of a school, the Managing Director of a Private Training Provider or the Group Training Manager of a major company.

7 Certification

Candidates who achieve the full qualification will receive:

- a unit certificate listing the unit or units achieved, with their related credit value and the unit reference number(s), and
- a certificate giving the full qualification title and the qualification number.

Candidates achieving one or more units but who do not meet the credit requirements for a full qualification will receive a certificate listing the units they have achieved along with their credit value.

7.1 Claiming certificates

Certificates will be issued directly to the centre for successful candidates. In order to ensure that these are automatically issued, centres must ensure that the OCR candidate number is **always** used where a candidate has already achieved one or more units. See the *Admin guide: Vocational Qualifications (A850)* <http://www.ocr.org.uk/administration/documents/vocational.html> for full details.

For details on how to make online claims for QCF qualifications see the step-by-step guide for centres *Making online claims for QCF and Functional Skills qualifications* <http://www.ocr.org.uk/interchange/docs/index.html>.

7.2 Multiple certificates recognising candidate achievement

Centres may receive certificates for qualifications that are part of a suite but for which the candidate has not been entered.

As the centre claims units for this qualification, OCR's system will validate the combination of units matches the rules of combination for this qualification.

In the process it will also check against the OCR candidate number for:

- qualifications/units already claimed and if these contribute to this qualification
- identify if this claim contributes to the achievement of the rules of combination for other qualifications.

If this is the case certificates will automatically be generated to recognise the candidate's achievement. eg If candidates are entered for an OCR qualification which is part of a suite, for example a Level 3 Diploma in New Product Design and Development, when the units are claimed the system will check if the combination of units entitles the candidate to any other qualifications such as the Award or Certificate.

7.3 Replacement certificates

If a replacement certificate is required a request must be made to the OCR Operations Division on 024 76 470033, or in writing to the Coventry office, and an application form with further instructions will be sent. If the request is made within six months of the certificate issue date, replacements will be provided free of charge.

8 Administration arrangements

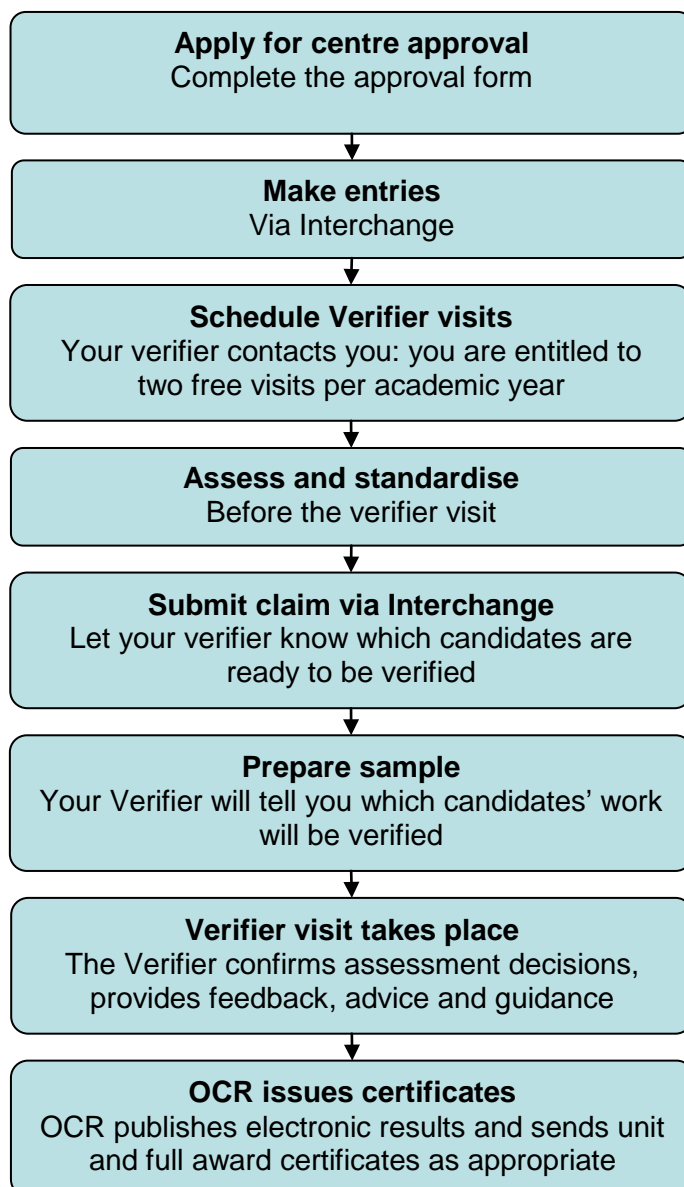
8.1 Administration arrangements for these qualifications

This section provides an overview of the administration arrangements operating for these qualifications. For detailed information centres must refer to OCR's *Admin guide: Vocational Qualifications (A850)* which is available to download from our website.

8.2 Overview of full process

The following flow chart provides a brief summary of how these qualifications are delivered.

Administration flowchart for verification



8.3 How to gain centre approval

Centres can download and complete the electronic Centre Approval Form from the OCR website and return it to OCR Operations (or complete and submit it electronically). Alternatively contact the OCR Customer Contact Centre on 024 7685 1509.

8.4 How to enter candidates

In order to let OCR know which qualifications your candidates wish to take, you need to make entries. Note that the term 'registrations' has been replaced by the term 'qualification entry'.

Making entries must be carried out via OCR Interchange - OCR's secure extranet facility. For full details of the process please see [Making entries using OCR Interchange](#).

8.5 Entry options

Options for candidate entry:

- Full award entry – Candidates can be entered for the full award when they are intending to complete the whole qualification rather than just individual units. This is often a more cost-effective way to make entries. Please note, however, if a candidate does not complete the full award, the remaining units cannot be transferred to another candidate. Following qualification achievement, if a candidate wishes to upgrade to the next size of qualification e.g. from an Award to a Certificate, they should claim unit entry for the additional units required, indicating that they are being claimed for the larger qualification.
- Unit entry – It is possible for candidates to build up their qualification unit by unit. This may be useful if a centre is unsure whether a candidate is intending to complete the full qualification.

Candidates should be entered either for the full award or individual units. They should not be entered for both.

Routes for making entries:

- Named entry – This is where you provide specific candidate information (e.g. name and date of birth) for each qualification. The advantage of named entry is that materials we supply are personalised, requiring less manual work later. In general, this is OCR's preferred entry route.

8.6 How to make claims

All claims should now be carried out via OCR Interchange. For full details of the process please see [Making a claim using OCR Interchange](#).

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9 SUPPORTING DOCUMENTATION

9.1 OCR assessment documents

The OCR assessment documents for use in Candidates assessment record OCR include:

- Evidence Record Sheet
- Record of achievement
- Witness list

Centres must use these, or an approved equivalent form capturing the same information for the summative assessment of candidates. These forms are available to download from the New Product Design and Development qualification page of the OCR website.

Evidence Record Sheet (one to be completed for each verified unit)

For verified units this form (or a suitable alternative) is mandatory for candidates' CARs (see cumulative assessment record). It is the vehicle for linking the evidence to the assessment criteria. The evidence for the unit should be listed (as it is gathered) down the left hand side. The Evidence Record Sheet, where possible, should be completed by the candidate with the help of an assessor if necessary.

You are free to design alternative recording sheets for your candidates and centre to use. The sheets must meet certain criteria and be approved by your external verifier. Full details on the design and approval of recording sheets are described in the *Admin guide: Vocational Qualifications (A850)*.

Record of Achievement

For use by candidates to record progress through their chosen units. The use of this form is **optional**.

Witness List

This form is designed to capture all the necessary information about witnesses who have contributed to a candidate's evidence of competence. The use of this form is **optional**.

10 Mapping and signposting

10.1 National Occupational Standards (NOS) Mapping

These qualifications provide a key progression route between education and employment (or further study/training leading to employment). It is directly relevant to the needs of employers and relates to National Occupational Standards (NOS) in:

Engineering technical support suite 2 2007	(Semta)
Mechanical manufacturing engineering suite 2 2008	(Semta)
Metal processing and allied operations	(Semta)
Performing manufacturing operations suite 1 and 2 2003	(Semta)
Freelancing in the creative and cultural industries	(Creative and Cultural Industries)
Design	(Creative and Cultural Industries)
Design and draughting	(Engineering Construction Industry Training Board)
Business enterprise	(Council for Administration)

Each unit contains details of the signposting to the NOS.

NOS can viewed on the relevant Sector Skills Council's website or the Occupational standards directory at www.ukstandards.co.uk

10.2 Functional skills signposting

Training provided for unit 4, unit 12 and unit 13 may help to prepare candidates for the functional skills assessment (eg report writing may be good preparation for English). It is likely however that further training would be needed to fully prepare candidates for functional skills assessment.

Each unit contains details of the signposting to functional skills.

11 Further support and information

This Centre Handbook and the *Admin guide: Vocational Qualifications (A850)* contain the information needed to deliver and administer these qualifications. If there are any queries about these please see below for contact details. Support is also available on the OCR webpages at www.ocr.org.uk.

11.1 Interchange

OCR Interchange has been developed to help you to carry out day to day administration functions online, quickly and easily. The site allows you to register and enter candidates online. In addition, you can gain immediate, free access to candidate information at your convenience. Sign up at <https://interchange.ocr.org.uk>.

11.2 Enquiries

For enquiries relating to any of OCR's vocational qualifications, please contact the OCR Customer Contact Centre on:

Telephone: 024 76 851509
Fax: 024 76 851633
Email: vocational.qualifications@ocr.org.uk

Alternatively, you could visit OCR's website at www.ocr.org.uk for further information on OCR qualifications.

11.3 Customer feedback

We welcome feedback from customers on all aspects of our provision. Comments relating to this documentation should be sent to:

The OCR Qualification Manager
New Product Design and Development
Customers, Curriculum and Qualifications
OCR
Coventry Office
Westwood Way
Coventry
CV4 8JQ

11.4 Results enquiries and appeals

Please refer to the *Admin guide: Vocational Qualifications (A850)* which can be downloaded from the OCR website www.ocr.org.uk.

11.5 OCR training events

View up-to-date event details and make online bookings at www.ocreventbooker.org.uk or view our new training e-books at www.ocr.org.uk/training.

If you are unable to find what you are looking for, contact us by e-mail training@ocr.org.uk or telephone 02476 496398.

11.6 OCR publications

The OCR Publications Service offers support to OCR customers, centres, parents and candidates. It offers a wide range of up-to-date materials for sale which relate to our key qualifications. These materials include specifications, past papers, mark schemes and a range of support materials.

The OCR Publications Catalogue holds the full list of materials currently available to order. To obtain a copy of this and to order publications, please go to <http://publications.ocr.org.uk> or call our dedicated order line on 0870 770 6622.

Orders can also be emailed to publications@ocr.org.uk or posted to the address on the order form printed in the OCR Publications Catalogue.

11.7 Documents related to these qualifications

*Admin guide: Vocational
Qualifications (A850)*

<http://www.ocr.org.uk/administration/documents/vocational.html>

*Making entries for Vocational
qualifications via Interchange*

<http://www.ocr.org.uk/interchange/docs/index.html>

*Making online claims for QCF and
Functional Skills qualifications*

<http://www.ocr.org.uk/interchange/docs/index.html>

JCQ publications:

- *Access Arrangements,
Reasonable Adjustments and
Special Consideration*
- *Instructions for Conducting
Examinations*
- *Suspected Malpractice in
Examinations and Assessments*