



Accredited

OCR LEVEL 2 CAMBRIDGE TECHNICAL CERTIFICATE/DIPLOMA IN **PERFORMING ARTS**

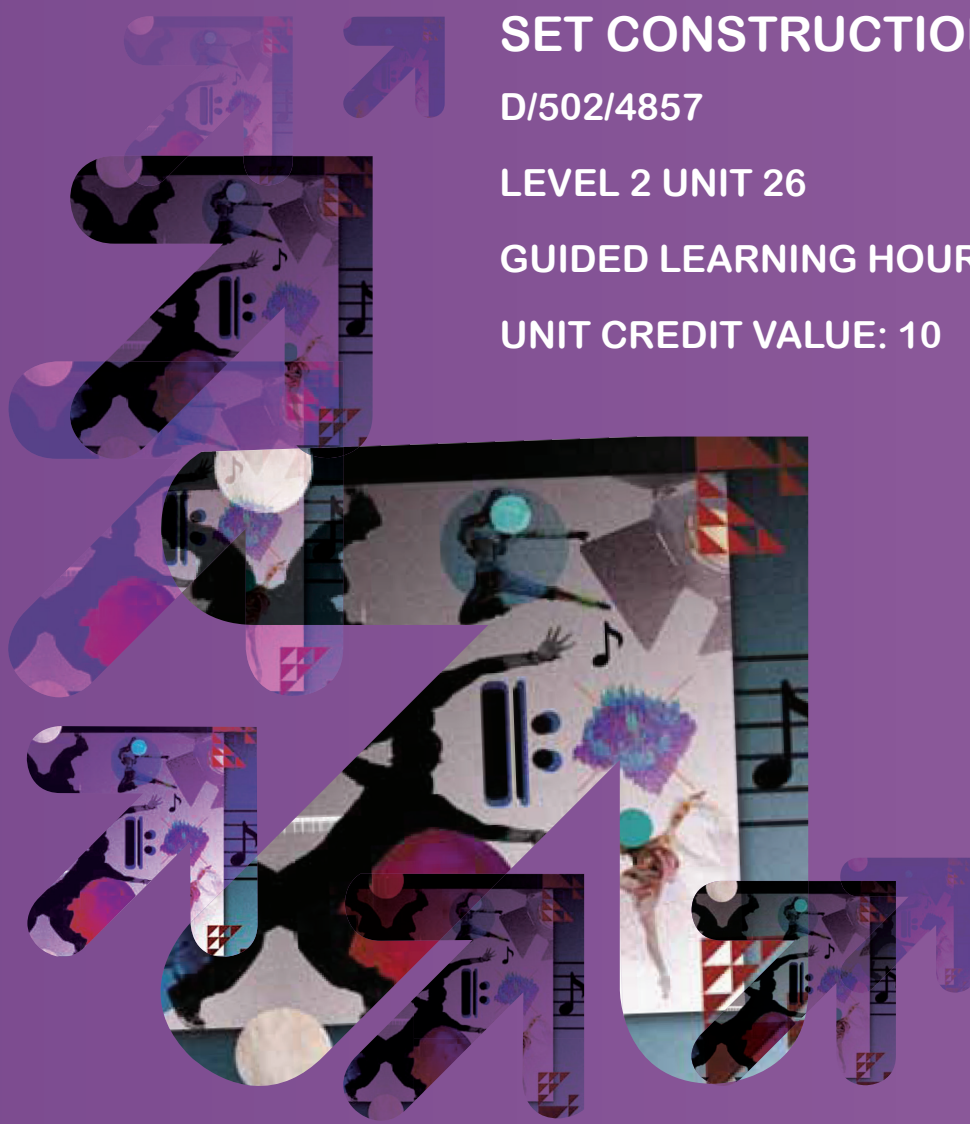
SET CONSTRUCTION

D/502/4857

LEVEL 2 UNIT 26

GUIDED LEARNING HOURS: 60

UNIT CREDIT VALUE: 10



SET CONSTRUCTION

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LEVEL 2 UNIT 26

AIM OF UNIT

The aim of this unit is to investigate the various skills and techniques required to produce a scenic element that will be practical, effective, safe and 'fit for purpose' (see below). At the end of the unit learners will possess a knowledge and understanding of a range of tools and materials commonly used in set construction and will have acquired the basic skills to realise a simple scenic element from scratch.

ASSESSMENT AND GRADING CRITERIA

Learning Outcome (LO)		Pass	Merit	Distinction
The learner will:		The learner can:		
1	Know the use of set construction tools and materials	P1 identify set construction tools and their uses		
		P2 identify set construction materials and their uses		
2	Know the set construction process	P3 carry out the set construction planning process competently, with support and guidance	M1 evaluate methodology and technical process	D1 produce strategies for solving construction problems independently
3	Be able to plan and construct a scenic element	P4 demonstrate basic set construction skills in completing the scenic element		
4	Be able to demonstrate safe working practices throughout the set construction process	P5 apply basic safe working practices throughout the set construction process	M2 evaluate health and safety procedures during construction	

TEACHING CONTENT

Know the use of set construction tools and materials

Tools: e.g. power tools, cordless power tools (screwdriver, drill, jig-saw, nail gun/tacker), hand tools (hammer, mallet, chisels, crosscut saw, tenon saw, staple gun, steel tape, rulers, try square, marking gauge, craft knife, canvas pliers, glue gun)

Materials: e.g. timber, sheet MDF, ply, hardboard, PVC, styrofoam, canvas, Vacform, bolts, hinges, ring bolts, coach screws, nails, screws and tacks

Paint, epoxy resins, solvents, Copydex, PVA, wood glue, fire resistant applications, intumescent coatings.

Know the set construction process

Planning: simple plans, ground plan, technical construction drawing, CAD software, measuring; scale, selecting materials

Construction methods: measuring, scaling, marking off, sawing, cutting, drilling, methods of joining materials, texturing, distressing, painting, anchoring, propping and suspension, fire resistance

Working with rostra and pre-formed components such as Dexion and Steeldeck.

Be able to plan and construct a scenic element

It is likely that at this level planning will focus on putting basic design principles and accurate measurements to scale on to paper. This should not preclude the use of CAD (Computer-aided Design) systems where they are available however.

The learning process is best accomplished by practical application and, consequently, it is recommended that a practical, experiential approach be taken which is project-based. The tutor should begin with specific skill sets related to the manufacture of component elements for use in a specific piece of scenery or related to the use of particular equipment or materials. Once learners have become competent in individual techniques, they may progress to work on the complete scenic element. It is recommended that the tutor assists the learner to identify the range of skills needed to complete a simple scenic element to make (for example a flat, rostrum, screen, doorway or item of simple furniture) together with a range of possible tools and materials from which to choose.

Regardless of the scenic element selected, tutors should focus on the key related skills, such as the taking of accurate measurements and selecting appropriate tools for example, rather than seeking to attain perfection in construction.

Planning, the making of: mock-ups, schedules, meeting deadlines, sketches, simple technical drawings

Set construction, the use of: tools; measuring; cutting; joining; following own plan; painting

applying decorative/fire resistant finishes.

Be able to demonstrate safe working practices throughout the set construction process

Safe use of tools and equipment and materials: organisation of workshop space, e.g. cables; maintenance of workshop

space; safe use of tools and materials; adequate protection (safety clothing – hard hats, gloves, boots); understanding of possible hazards, e.g. fire, trip, slip, electrical, splash and spark, danger from above; risk assessment; safe lifting techniques; awareness of relevant health and safety guidelines.

DELIVERY GUIDANCE

Set construction is a process which embraces a vast range of skills and applications within the performance, entertainment and events industries. The range of applications is as wide as that of the materials available to the constructor. In larger organisations and in large budget productions, the designer will usually have identified a range of materials appropriate to the design and the constructor will adapt and interpret these. However, for a variety of reasons, it often falls to the constructor to identify viable alternatives. In the case of smaller scale productions and touring productions, sets need to be cheap, versatile and transportable and again it is often the constructor who provides the knowledge and skills to ensure that the set actually works the way it is intended to. Moreover, it is safe to work with. It doesn't matter how good something looks if it doesn't stand up to the rigors of a production run or if it takes the performer's fingers off.

NB. Structures that are intended to bear the weight of performers must meet current Building Regulations regardless of the length of time they will be in use.

Know the use of set construction tools and materials

Know the set construction process

It is recognised that learners will not have the time to learn about and become adept in the use of the full range of tools and materials available.

Nonetheless it is necessary for them to have ample opportunity to become familiar with the most commonly used equipment and materials in set construction. Undoubtedly, the best way to achieve this is to augment practical workshop sessions at the centre with, where possible, opportunities to visit commercial workshops that are engaged in the business of manufacturing scenic elements or sets for use in the theatre, music or exhibition industries. If this is not possible then it is important for facilities and circumstances at the centre be made to replicate the professional context as closely as possible. The aim should be to ensure that learners get to observe both the process of construction and the completed set in use so that they may be reminded of the importance of sound construction precepts and of adhering to building regulations as well as strict observance of health and safety practices.

It may well prove beneficial to talk to small-scale touring companies to get their perspective on set construction. These organisations need to have sets that are versatile and above all transportable; hence there are special construction considerations to be made when producing materials of this kind. If a performance workshop is being visited to your learning institution it would be an opportunity to ask their production/stage manager to talk to learners about the company's needs. If this is not achievable then it would be helpful for the centre to create briefs to cover these tasks and augment it where possible with contact with professional scene construction workers.

It will be particularly helpful for learners to reflect on their work at various stages of the process. This means that they should be encouraged to interrogate their process to ascertain if their work is on track for achieving its purpose. This will mean tutor intervention at some points where constructive criticism and suggestion may be given. Obviously this is best built in to the teaching programme in anticipation of the learner encountering difficulties.

Be able to plan and construct a scenic element

Being concerned essentially with the construction process it is likely that this phase of study will be a practical one. Learners should be supported in a gradual progression involving selection of construction processes, assessment of the implications of the choices made, and practical trial and error. It may prove useful at the planning stage for learners to conduct a SWOT analysis of their current skills base to determine their competence to embark on the project. Tutors should give feedback as each stage in the design process is completed and learners should be given guidance on how each stage of the process facilitates the one which follows. Learners should maintain a way of working that reflects professional methodology as closely as is practicable; how this is undertaken will of course be dependant largely upon the construction process being followed.

At Level 2 it is not expected that learners will achieve fully realised or 'professional' results. What is important is that they have endeavoured to adopt Professional Practice. It will be useful at this stage for learners to review their practical achievement in the context of its being 'fit for purpose' i.e. does it do the job it is designed to do? Consequently, it is important that learners are issued with a clearly drawn brief and that they are guided through the process of analysing in advance the requirement of that brief. Tutors would be advised to augment this within the context of a review of construction criteria studied earlier in the process, perhaps revisiting scenic elements which learners have experienced first hand and which they have recognised as 'successful' examples of construction. A check list of what makes a construction 'successful' would prove a useful comparator against which learners may evaluate their own work. On the same principle tutors would do well as part of standard working practice to ask learners to suggest alternative production/construction solutions to problems or challenges which have been identified; an alternative method of fixing or substitute materials for example.

Having identified a scenic element for manufacture the learner will be introduced to the individual skills and process required to complete it. This is likely to involve the basic principles of cutting, joining, fixing, gluing etc. and may involve producing a number of component elements or test pieces involving different methods. However, it is recognised that repetitive actions of this kind are likely to dishearten even the most enthusiastic fledgling constructor and since the focus of the unit at this level is on process, it will prove effective for learners to become involved in project-related scenic element manufacture as soon as (but not before) they are deemed ready. A balance has to be struck between traditional methods designed for longevity and more contemporary and pragmatic solutions designed for short-term applications. In either case the solution selected must be 'fit for purpose' and justified fully.

It is also important that learners are encouraged to review and evaluate their progress at regular intervals. They should be reminded continually of the importance of the concept of 'fit for purpose' so that each stage of the construction process is critically reviewed with this in mind. In order to attain at the higher level learners should also be aware of the need to devise strategies to deal with construction challenges or problems.

be able to demonstrate safe working practices throughout the set construction process

It is perhaps axiomatic that the set construction process is filled with potential dangers. The use of electricity, sharp tools, heavy loads and toxic substances is however a part of the everyday professional profile and it is absolutely vital that learners are inducted into safe working practices as early as possible in the process. There is no substitute for the inculcation of old-fashioned repeated exercising in the safe use of tools and materials. Similarly, risk assessments are a part of daily working life throughout the entertainment and performance industries and it is essential that the basic process is understood and applied by all learners. Though it is likely that a generic or 'house' risk assessment will cover a number of situations, nevertheless, in every case each individual learner must carry out his or her own risk assessment specific to themselves and the task in hand. Learners should be made fully aware that they have also a group responsibility as regards health and safety and that it is each individual's duty to ensure that the whole working group complies with regulations such as the correct use of tools and wearing of safety gear. Workshop safety needs to be engrained in each and every learner and, furthermore this understanding should extend beyond the construction workshop to the eventual stage application and use of the artefact or scenic element produced. It may prove salutary to show learners widely available video clips (available on Youtube) of events at which the collapse of a stage or rig has resulted in physical injury or even loss of life.

SUGGESTED ASSESSMENT SCENARIOS AND GUIDANCE ON ASSESSMENT

Note on assessment evidence.

At this level is not expected that the learner will necessarily achieve any degree of finesse in manufacturing standards; the accent here is on process rather than aesthetics. However, it is imperative that the scenic element produced is 'fit for purpose'; in other words, it has to be robust enough to withstand the kind of use which might be expected of it during a production run and it has to actually do the job for which it was intended.

Assessment and Grading Criteria P1 & P2

Learners should be given a mini-brief for the construction of a specified scenic element (e.g. flat, rostrum, door frame). For the scenic element created learners should produce an equipment and materials list which should include:

- the name of the tools selected and explain its use
- the name of the materials, adhesives and fittings selected and explain their use

This may be assessed by a combination of written material and a Viva or a recorded interview/demonstration.

Assessment and Grading Criteria P3

Learners will benefit greatly from first producing individual practice elements (e.g. joints, claddings, finishes).

Learners will:

- explain/illustrate how the scenic element they are constructing will be used on stage
- explain the different construction techniques required
- make a construction plan for a number of test pieces or practice component elements
- make a scale drawing of the scenic element to be produced

Assessment evidence may be in written and photographic form as part of a construction log or portfolio. Practical construction stages may recorded onto DVD.

Assessment and Grading Criteria M1

Learners must produce an post-construction evaluation report based on their methodology and technical process which considers the following:

- the selection of materials
- the application of skills
- the effectiveness of the scenic element in the context of its being 'fit for purpose' in terms of use, conveyance and storage.

Assessment and Grading Criteria D1

The learner must produce working diagrams or schematics which:

- identify potential challenges or problems encountered within the construction process
- make realistic and workable recommendations for refinements and adaptations to the construction process in the light of the above

This may be in the form of a journal entry or a separate report or a recorded live presentation.

Assessment and Grading Criteria P4

Learners must:

- complete an appropriate number of test pieces or practice component elements
- combine skills and techniques required to complete the construction of the scenic element itself

Assessment evidence may be in written and photographic form as part of a construction log or portfolio. Practical construction stages may be recorded onto DVD.

Assessment and Grading Criteria P5

Learners must:

- conduct a personal risk assessment for the totality of the construction process
- carry out all construction process safely and efficiently
- handle all materials safely and efficiently

Assessment and Grading Criteria M2

Learners must produce a post-construction evaluation report based on their safe working practices and compliance with current legislation which considers the following:

- competence
- control
- co-operation
- communication

RESOURCES

Construction workshop which can provide sufficient working space for the learning group.

Is fully maintained and monitored such that it can adhere to safe working practice.

An appropriate range of tools suitable for scenic construction.

An appropriate range of construction materials

Internet access.

Staff with knowledge and skills base to match the specific requirements of the unit

Book: Stage Scenery: Its construction and Rigging by Arnold Simpson Gillette

<http://www.hse.gov.uk/entertainment/theatre-tv/index.htm>

www.youtube.com/

<http://www.take1scenicservices.co.uk>

<http://www.clockworkscenery.com/>

<http://www.frosts.tv/>

<http://www.steelthescene.net/>

<http://www.jetsets.com>

LINKS TO NOS

Suite	Ref	National Occupational Standard(s)
Technical Theatre & Live Performance (Workshop)	CCSW9	Plan set construction requirements for a production
Sub-structure Work Occupations (Construction)	COSVR360	Establish work area protection and safety



CONTACT US

Staff at the OCR Customer Contact Centre are available to take your call between 8am and 5.30pm, Monday to Friday.

We're always delighted to answer questions and give advice.

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