Australian Government

Department of Education, Employment and Workplace Relations

CUFSFX401A Create special effects items

Revision Number: 1

CUFSFX401A Create special effects items

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to construct physical special effects items for productions in the screen, media and entertainment industries. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Application of the unit	The construction of physical special effects is related to the construction of props and other elements of sets for productions. However, the scale and nature of special effects items can vary quite dramatically - from models and miniatures to electronic devices to animatronics and creatures. Specialist electronic or engineering skills may be required to complete items, so the ability to work cooperatively on projects is essential. This work is usually undertaken with some supervision and guidance. Skills associated with creating digital visual effects are covered in: • CUFANM402A Create digital visual effects.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
Prepare to create special effects	1. Confirm ***special effects*** requirements in consultation with ***relevant personnel*** and with reference to production ***documentation*** 2. Based on analysis of special effects requirements, suggest changes to specifications if appropriate and confirm final requirements with relevant personnel 3. Discuss with relevant personnel a range of construction methods and ***techniques*** that could be used to meet design and ***production*** requirements 4. Agree on methods and techniques that will provide the best visual interpretation of script requirements, taking into account budget and other ***constraints*** 5. Select required equipment and ***materials*** according to design and production requirements
Create special effects	6. Participate in ongoing discussions with relevant personnel throughout the construction process to ensure special effects design requirements are met 7. Create special effects items using selected materials and production techniques 8. Observe relevant ***OHS and public safety legislative requirements*** throughout the construction phase 9. Participate in ongoing production technique trials to establish the best results and solve any problems that arise during the creation of special effects items 10. Label and store partially completed special effects items to enable easy retrieval and to avoid loss or damage during the production phase
Finalise special effects	11. In consultation with relevant personnel, evaluate and check special effects items for accuracy and compliance with design and production specifications 12. Adjust special effects items as required 13. Label and store finished special effects in readiness for productions 14. Evaluate own performance in the process of creating special effects items and note areas for improvement

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication, literacy and teamwork skills sufficient to:
  - interpret production documentation, special effects construction specifications and instructions
  - work collaboratively as a member of a production team
  - complete workplace documentation
- initiative and flexibility sufficient to contribute ideas about the most efficient way to create special effects to meet creative requirements
- technical skills sufficient to:
  - use hand and power tools to construct special effects items
  - handle hazardous materials in a safe manner
  - draw to scale and correct perspective
- problem solving skills sufficient to make adjustments to special effects items during the construction phase so that requirements can be met
- planning and organising skills sufficient to construct special effects in a logical sequence
- self-management skills sufficient to:
  - work under pressure and meet deadlines
  - follow manufacturer specifications and organisational policies and procedures
  - seek expert advice when problems arise
- numeracy skills sufficient to measure materials

Required knowledge

- industry knowledge, including:
  - roles and responsibilities of art and construction personnel
  - broad understanding of the artistic and technical elements of productions
  - issues and challenges that arise when constructing physical special effects for productions in the screen, media and entertainment industries
- principles of and techniques for constructing physical special effects for screen productions
- sound knowledge of:
  - properties, applications and durability of different types of materials that can be used for special effects construction
  - behaviour of various materials, finishes, painting techniques and colours under lighting
  - properties and characteristics of a variety of materials before and after art

REQUIRED SKILLS AND KNOWLEDGE
finishing • techniques for testing finished and unfinished materials, such as fabric, leather, vinyl, plastic, foam, latex, found objects, straw, paper and cardboard • detailed knowledge of sections of the Australian Recommended Safety Code for Film and Television related to the construction of special effects • OHS procedures as they relate to the safe use of equipment and materials to construct physical special effects for productions

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	

Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the following is essential:
	• creation of special effects items that meet production requirements and demonstrate:
	  • correct interpretation of creative special effects designs
	  • safe handling of hazardous materials
	• ability to meet deadlines
	• collaborative approach to work
	• attention to detail.

Context of and specific resources for assessment	Assessment must ensure: • practical demonstration ofskills through the making of special effects items for at least two productions • access to productions that require the creation of special effects items • access to materials required to make required special effects items • access to appropriate learning and assessment support when required • use of culturally appropriate processes and techniques appropriate to the language and literacy capacity of learners and the work being performed.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance • evaluation of special effects items made by the candidate to determine whether production requirements have been met and correct procedures followed • written or oral questioning to test knowledge as listed in the required skills and knowledge section of this unit.

EVIDENCE GUIDE	
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: • CUFSFX301A Maintain and repair special effects items • CUFSFX402A Coordinate the logistics of special effects operations • CUVCRS06B Make scale models.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	

Special effects items may include:	• animatronics and creatures
	• automated and animatronic devices and controls
	• cables
	• computer controlled devices
	• electrical and mechanical winches
	• electro mechanical devices
	• electronic devices
	• electronic flashing and timing devices
	• floor effects, including:
	  • weather effects
	  • fire and smoke
	  • collapsing and destruction
	  • water
	  • crashes
	  • motion control systems
	• models and miniatures:
	  • demonstration type
	  • real type
	  • figures
	  • landscapes
	  • buildings
	• motion control electronics and systems
	• pneumatics
	• power packs
	• road cases, boxes and crates for storage and transportation
	• sculpture - human, animal and inanimate.

Relevant personnel may include:	• designer • director • director of photography • fire and safety officer

RANGE STATEMENT	
	• floor manager • head of department • medics • performer • personnel with specialist expertise in special effects productions and execution • producer • production designer • production manager • special effects department personnel • special effects production personnel • special effects supervisor and manager • specialist equipment designer • specialist manufacturer • supervisor • technical director • other technical/specialist staff.
Documentation may include:	• budgets • call and running sheets • colour charts • computer generated • confirmation of receipt and dispatch notes • descriptive special effects checklists • fault reports • hire agreements • manually written • manufacture schedules • manufacturer specifications and instructions • measurement charts • memos of instruction • operational and project plans • paint colour formulas • production schedules • scripts • sketches • special effects breakdown lists • special effects construction schedules and plans • special effects design • stock orders

RANGE STATEMENT	
	• stock reports • technical drawings.

Techniques used may include:	• fabrication
	• gluing and cementing
	• metalwork, including:
	  • cutting
	  • welding
	  • brazing
	• moulding materials
	• painting and finishing
	• sculpting and other shaping methods
	• timber construction
	• woodworking.

Productions may include:	• animated productions • commercials • documentaries • feature films • filmed events or performances • live events and entertainment • live or pre-recorded television productions of any type • music videos • short films • theatre productions.

Constraints may include:	• availability of:
	  • personnel
	  • facilities
	  • resources
	• locations:
	  • studio
	  • interior and exterior
	  • outside broadcast
	  • day and night
	• timelines.

Materials may include:	• adhesives • canvas • clay • fabrics • fasteners

RANGE STATEMENT	
	• fibreglass • foam • latex • leather • masonite • metal products, e.g. bars, tubes and sheets • mouldable materials • moulded or cast metal • paper products • plaster • plastics, e.g. moulded sheet • polystyrene • resins • thermoplastic • timber • timber products, e.g. plywood, particle board and craft wood.
OHS and public safety legislative requirements may include:	• commonwealth, state and territory OHS regulations • local government construction rules and regulations • national and international standards, guidelines and codes of practice, e.g. the Building Code of Australia.

Unit Sector(s)

Unit sector	

Competency field

Competency field	Media and entertainment production - special effects

Co-requisite units

Co-requisite units		