

Screen Guilds of Ireland
Competency Framework

Model Making Department



Fís Éireann
Screen Ireland





Model Making Department

Roles

1. HOD Model Maker
2. Model Maker
3. Assistant Model Maker
4. Trainee Model Maker

HOD Model Maker

The HOD Model Maker is responsible for the delivery of all model makes in terms of quality, budget and deadlines for any given film or TV production. They work closely with the Art and Set Decorating Department to achieve a cohesive design of all the elements fabricated by the model making team in alignment with the overall production design of the project. The HOD Model Maker's job involves an advanced ability to cost and schedule work as well as the ability to supervise the fabrication through to the end of production allowing adequate resources for adjustments and review. They will evaluate which production methods and materials are best suited to each project and be involved in setting up the model making workspace, selecting and hiring crew and ensuring compliance with the Health and Safety policy and guidelines. As supervisor, the HOD will have developed skills to teach and demonstrate techniques and skills to Trainees and will have extensive knowledge of materials, methods and machinery used in the department, and their capacities and limitations.

Key tasks:

- 1.** Advanced knowledge of materials and machines: theory and use.
 - 2.** Researches and references of props, time periods, genres and the types of materials used to create accurate makes.
 - 3.** Drawing, measuring/scale and survey: advanced understanding of the use of drawings in the production of props/set elements, methods of measuring and units.
 - 4.** Digital skills: intermediate to advanced knowledge and use of various software programmes.
 - 5.** Moulding and casting: advanced understanding of mould types and uses for these moulds.
 - 6.** Sculpting /carving/fabrication: knowledge of sculpting and carving, anatomy and materials used.
 - 7.** Health & Safety regulations: awareness of appropriate safe behaviour for an industrial location.
 - 8.** Stand-by on set: awareness of appropriate safe behaviour for an industrial location. Being aware of the relevant Health & Safety regulations.
-

Task statements

Task statement 1:

Advanced knowledge of materials and machines: theory and use.

Associated activities

- ✓ The knowledge and ability to safely use, measure, materials and to instruct correct use of materials to junior members of the department.
- ✓ Assesses the requirements, quantities and costings of the materials required for each individual job.
- ✓ Safely uses and maintains hand tools and workshop equipment as well as instructs others in doing the same.
- ✓ The knowledge of correct safety procedures for each tool/ equipment and assesses who has the skills and relevant safety courses to use the equipment in the correct way.
- ✓ A knowledge and understanding of - flash point, material strength product names, cure times, applications and limits of the material chemicals and logs and stores up to date safety data sheets on various materials.
- ✓ In depth Knowledge of safety of transport, storage, and recycling of materials and how to supervise and instruct use of materials correctly.

Task statement 2:

Research and referencing of props, time periods, genres and the types of materials used to create accurate makes.

Associated activities

- ✓ Works closely with the Art and Set Decorating Departments to achieve cohesion of the overall style of the production.
- ✓ Understands the requirements for historical accuracy and stability and avoidance of plagiarism.
- ✓ Supervises and instructs the department in use of research and reference material.
- ✓ Uses suitable resources and methods to research the process of generating an historic prop/element.
- ✓ Understands and follows a dedicated design brief. Communicates a brief for the department to follow.
- ✓ Delivers on the brief within the time frame and within budget.

Task statement 3:

Drawing: advanced understanding of the use of drawings in the production of props/set elements.

Associated activities

- ✓ Advanced knowledge of sketches, technical, pattern making, design communication for fabrication.
- ✓ Reads and understands drawings. Skilled in the use of drawing to build/make props. (both hard copy print and digital drawing).
- ✓ Has the knowledge of basic geometry required to interpret a 2D drawing to 3D.
- ✓ Advanced knowledge of file preparation for CNC, 3D printing etc. for fabrication. Interprets and shares to other departments and also to outside companies and specialists.
- ✓ Interprets and shares to other departments and also to outside companies and specialists.
- ✓ Educates junior members of the team how to interpret, use and create drawings for the creation of props and set elements. Supervises and instructs on the breakdown of design drawings.
- ✓ Supervises the creation of drawings by the department.
- ✓ Supervises and instructs the department in use of scale and survey on tasks and how to implement these to replicate an object.

Task statement 4:

Digital skills: intermediate to advanced knowledge and use of various software programs.

Associated activities

- ✓ Knowledge and the ability to use Microsoft Office, Photoshop, 3D drawing software.
- ✓ Advanced knowledge and skills of the systems and methods available for digitally assisted fabrication.
- ✓ Produces files suitable for use in CNC and or 3D printing in the absence of an issued drawing.
- ✓ Knowledge of 3D scanning and its advantages and disadvantages as part of the workflow.

Task statement 5:

Moulding and casting: advanced understanding of mould types and uses for these moulds.

Associated activities

- ✓ Completes various moulding methods to achieve the desired outcome. Is able to design/communicate on advanced moulding techniques.
- ✓ Casts of resin, rubber, foam, silicone and fibreglass from different moulds. Uses armatures where appropriate.
- ✓ Advanced knowledge in all types of resin/rubbers/PU foams/silicone/foam latex/fibreglass/plaster and other compounds- specialist casting - multi materials-vac chamber.
- ✓ Fabricates breakaways - colouring/fillers/in cast finishes.

Task statement 6:

Sculpting, carving and fabrication techniques: knowledge of sculpting and carving, anatomy and materials used.

Associated activities

- ✓ Advanced knowledge of model making work including: white card model making/ miniatures and scale models for concept analysis and planning/scale sets for animation.
- ✓ Advanced knowledge of paint effects work including: wood/metals/stone/plaster/foams/body parts/ageing and distressing.
- ✓ Advanced knowledge of paint materials, theory and chemistry and the ability to use the most appropriate materials for the task required and to do so safely and efficiently.
- ✓ Advanced knowledge of body making and creature work including: silicone/creatures/body parts/hair punching/flocking.
- ✓ Researches references of shape, size and anatomy to make realistic bodies and creatures.
- ✓ Knowledge of electronics. Understands 12V lights/motors/LED-servos/motors and other controls - and basic understanding of capability of Arduino/Raspberry Pi, basic programming.
- ✓ Liaises with other departments involved with electronics within a make.

Task statement 7:

Safety awareness of appropriate safe behaviour for an industrial location. Being aware of the relevant Health & Safety Regulations.

Associated activities

- ✓ Identifies safety issues, acts on them and communicates to the department about safe working practices.
- ✓ Supervises the department, to maintain a high standard of safety within the workshop.
- ✓ Conducts and amends risk assessments where applicable.
- ✓ The knowledge of safety regulations and the skills to implement them.
- ✓ Knowledge of courses required and ability to oversee the completion of all mandatory safety courses, safe pass, set pass, abrasive wheel, manual handling, and chemical awareness.
- ✓ Liaises with different departments and the Safety Officer on what activities are taking place.
- ✓ Conducts induction training for the department showing the facilities of the workshop and also safety issues and PPE requirements for the tasks. Communicates the production's safety procedures.
- ✓ In depth knowledge of PPE and what is required for each task and competency to advise on the correct use of PPE in the workshop.

Task statement 8:

Standby on set: awareness of appropriate safe behaviour for an industrial location. Being aware of the relevant Health & Safety Regulations.

Associated activities

- ✓ Set etiquette.
- ✓ Understands the responsibilities of Standby Model Maker.
- ✓ Manages the prep area.
- ✓ Understands of walkie talkie etiquette.
- ✓ Being present as a standby preparing for set up changes and being time efficient for changeovers/reset.
- ✓ Communicates, listens, and conducts themselves and their team on set.
- ✓ Is an active member of the team who is helpful and professional in a pressure orientated environment.

Technical competencies

Area	Indicators
Administrative Skills and knowledge	<ul style="list-style-type: none"> ✓ Thorough understanding and competence with scheduling, budgeting, stock-taking, basic office paperwork, breaking down scripts and schedules ✓ The skills to break down scripts, assess their requirements and crew levels. The ability to reconcile multiple variables in the shooting schedule ✓ The knowledge of stock taking and inventory records/data sheet collection for H&S and waste management and the ability to maintain appropriate records, safe management of confidential material, GDPR protocols and non-disclosure agreements ✓ The knowledge of general office documentation including and the ability to help and manage the department crew with various forms and admin ✓ Knowledge of art department schedule, shooting schedule, call sheets, script breakdowns, keeping informed regarding script changes ✓ The ability to follow and instruct others to follow continuity notes and references when applicable
Health and Safety	<ul style="list-style-type: none"> ✓ Good understanding of their responsibilities as a manager around, facilities/hygiene/ staff management/fire safety/chemical handling and storage/PPE/record keeping/ safety protocols and reporting ✓ The knowledge of safety compliance competencies- ability to conduct risk assessments, method statements, toolbox talks and induction training
Materials and Machines theory and use	<ul style="list-style-type: none"> ✓ Expert understanding of machinery and equipment safe use in the workplace ✓ Advanced knowledge of materials used. Ability to assess the suitability of materials
Research and referencing	<ul style="list-style-type: none"> ✓ Understanding requirement for historic accuracy and stability ✓ Understanding and following a design brief ✓ To educate and demonstrate use of research and reference material
Drawing and Measuring	<ul style="list-style-type: none"> ✓ Intermediate to advanced drawing skills and advanced skills at file prep for digital fabrication ✓ High level drawings of a prop, mould or make to aid other departments ✓ Intermediate-advanced scaling/surveying/3D modelling/maquettes ✓ Surveying a space/object and using scale on a task. Photography/accurate measurement/ scaling and being able to replicate an object or space using survey notes ✓ Skilled at drawings of a prop, mould or make to aid in construction or the ability to relay an idea to someone ✓ Knowledge of scale and applying scales ✓ The ability to work to scale and with correct measurements. The ability to use these measurements to accurately recreate objects and sets ✓ The skills to successfully measure and survey sites and objects. Skills to use measurements, photography, drawing and notes to be able to replicate an object or a space

Technical competencies

Area	Indicators	
Digital skills	<ul style="list-style-type: none"> ✓ ✓ ✓ ✓ ✓ 	<p>Digital skills- intermediate to advanced knowledge and use of software programs</p> <p>File prep/drawing prep and breakdown for fabrication</p> <p>3D scanning - have some working knowledge of 3D scanning file types and of how to manipulate them into workable formats for fabrication/reproduction</p> <p>CNC/3D printing - advanced understanding of materials/software/limitations - available processes</p> <p>Can digitally produce files suitable for use in CNC and or 3D printing - in the absence of an issued drawing</p>
Moulding and Casting	<ul style="list-style-type: none"> ✓ ✓ 	<p>Advanced understanding of mould types and uses for these moulds</p> <p>Casting - advanced understanding of casting different materials from a mould, resin, rubber, foam, silicone, and fibreglass</p>
Sculpting, carving and fabrication	<ul style="list-style-type: none"> ✓ ✓ 	<p>Sculpting/carving and fabrication techniques - knowledge of sculpting and carving, anatomy and materials used</p> <p>Ability to work competently in the following areas: woodwork, additive and reductive modelling, metal work, sheet plastic/acrylic fabrication, leather work, sewing/fabric, architectural/Art Department model making, painting effects, body duplication/creature making, electronics</p>

Model Maker

The Model Maker role is the delivery of all model makes using a variety of skills, materials and tools for any given film or TV production. The Model Maker needs the ability to be a supportive role to the HOD and work independently within the department. As a Model Maker advances through their career they may become specialists in some areas of model making and may only have an intermediate level of experience in other areas. The Model Maker must be prepared to further develop their abilities and skills and to teach and demonstrate to Trainees the techniques and skills that are required. Model Makers will be required to complete the minimum official training to satisfy legal requirements (eg: Health and Safety) and to attend CPD training to develop their skills and experience as they progress.

Key tasks:

1. Knowledge of materials and machines: theory and use.
 2. Drawing & measuring: A thorough understanding of the use of drawings in the production of props/set elements and methods of measuring and units.
 3. Knowledge of sculpting and carving, anatomy and materials used.
 4. Research and referencing of props, time periods, genres and the types of materials used to create accurate makes.
 5. Moulding and casting: advanced understanding of mould types and uses for these moulds.
 6. Advanced knowledge of administrative work.
 7. Standby on set
-

Task statements

Task statement 1:

Materials and machinery: theory and usage.

Associated activities

- ✓ The knowledge of materials and their appropriate usage for the task.
- ✓ Safely uses, and measures materials and instructs the team in the correct use of materials to junior members of the department.
- ✓ The understanding of hazards and toxicity of various materials, both to self and colleagues.
- ✓ Assesses the requirements, quantities and costings of the materials required for each individual job.
- ✓ Safely uses and maintains hand tools and workshop equipment.
- ✓ The knowledge of correct safety procedures for each tool/equipment and the ability to assess who has the skills and relevant safety courses to use the equipment in the correct way.
- ✓ Understands flash point, material strength product names, cure times, applications and limits of the material chemicals and logs and stores up to date safety data sheets on various materials.
- ✓ In depth knowledge of safety of transport, storage, and recycling of materials and how to supervise and instruct use of materials correctly.

Task statement 2:

Drawing/measuring skills and associated tasks.

Associated activities

- ✓ Advanced Knowledge of sketches, technical, pattern making, design communication for fabrication of props/set elements.
- ✓ Reads and understands drawings. Uses drawing to build/make props. (both hard copy print and digital drawing).
- ✓ Have the knowledge of basic geometry required to interpret a 2D drawing to 3D.
- ✓ Works to scale and correct measurements. Understands measuring and units. Uses scale and applies scales.
- ✓ Successfully measures and surveys sites, uses photography, drawing, notes and items and to take accurate measurements as part of the model making workflow.
- ✓ Uses these measurements to accurately recreate objects and sets.
- ✓ Knowledge of file preparation for CNC, 3D printing etc. for fabrication. Interprets and shares to other departments and to outside companies and specialists.
- ✓ Digitally understands and produces files suitable for use in CNC and or 3D printing - in the absence of an issued drawing.
- ✓ Interprets and shares to other departments and to outside companies and specialists.

Task statement 3:

Sculpting and carving, fabrication, and associated materials. (As a model maker advances through their career they will become specialists in some areas of model making and may only have an intermediate level of experience in other areas).

Associated activities

- ✓ Advanced knowledge of the following materials: woodwork, additive and reductive modelling, metal work, sheet plastic/ acrylic fabrication, leather work, sewing/fabric, architectural/Art Department model making, painting effects, body duplication/creature making, electronics.
- ✓ Understands the skills and theory of basic sculpting, carving, anatomy, and materials to be used.
- ✓ Undertakes additive and reductive modelling, ability to cut/carve and assemble materials to create sculpture or model in physical form.
- ✓ Follows a design brief, chooses the correct process for the project and implements the sculpture/fabrication using the applicable materials.
- ✓ Develops the use of a variety of materials and skills including, woodworking, metal work, plastic fabrication, leather work, painting effects, electronics, and other techniques of fabrication.
- ✓ Educates/demonstrates model making hard skills: sculpting, carving and fabrication techniques in various materials to junior members of the department.

Task statement 4:

Research and referencing skills to create accurate makes.

Associated activities

- ✓ Researches time periods, styles, materials used to create the process of making an historic prop/element.
- ✓ Presents research materials and findings to colleagues.
- ✓ Works closely with the Art and Set Decorating Departments to achieve cohesion of the overall style of the production.
- ✓ Understands the requirements for historical accuracy and stability and avoidance of plagiarism.
- ✓ Understands and follows a dedicated design brief. Communicates a brief for the department to follow.
- ✓ Delivers on the brief within the time frame and within budget.
- ✓ Carries out research independently and as a group.

Task statement 5:

Key moulding and casting skills and associated tasks.

Associated activities

- ✓ Makes various mould types and the knowledge of stock taking and inventory records/data sheet collection for H&S and waste management and the ability to maintain appropriate records.
- ✓ Understands 3D printing, vac-forming processes and mould making for this process.
- ✓ Works independently and supervises, instructs, and educates junior department members in mould types and methods.
- ✓ Understands the skills and theory of casting with different materials.
- ✓ Carries out complex casting work independently to demonstrate casting competency.

Task statement 6:

Key film administration skills and associated tasks.

Associated activities

- ✓ Understands other departments' roles and the importance of engagement and interdepartmental communication and collaboration.
- ✓ Uses and understands administrative paperwork including, petty cash forms, timesheets, start forms, purchase order forms and contracts for work.
- ✓ Reads and understand scripts, shooting schedules, call sheets, script breakdowns, art dept schedule/workshop schedules and use them as part of the workflow in the department and crew level requirements.
- ✓ Shares files and data, stock taking, inventory records, safe management of confidential material, GDPR protocols and non-disclosure agreements.
- ✓ Assists with the responsibilities around facilities/hygiene/staff management/chemical handling and storage/PPE/record keeping/safety protocols and reporting.
- ✓ Assists in the management of department crew and manages the Model Making Department as it works with other departments.
- ✓ The knowledge of safety compliance competencies - ability to conduct risk assessments, method statements, toolbox talks and induction training. The ability to understand the responsibilities as a manager.

Task statement 7:

Standby on set.

Associated activities

- ✓ Understands the roles of other departments and personnel on a set.
- ✓ Reads and understands scripts, shooting schedules, call sheets, script breakdowns, Art Department schedules and uses them as part of the workflow on set.
- ✓ Communicates, listens, and conducts oneself appropriately when on set and when in a high stress environment.
- ✓ Communicates and listens when using communication devices on set and to be an active member of the team who is helpful and professional.
- ✓ Assists in the supervision and education of junior members of the department in how to work safely, efficiently and skills in working as a team on set.

Technical competencies

Area	Indicators	
Basic Knowledge of materials and machinery.	<ul style="list-style-type: none"> ✓ ✓ 	<p>Advanced knowledge of materials theory and usage as well as machine and equipment safe use in the workplace</p> <p>Ability to assess the suitability of the material to be used for the specific task</p>
Drawing/Measuring skills and associated tasks.	<ul style="list-style-type: none"> ✓ ✓ ✓ 	<p>Advanced ability for measuring/scale and surveying</p> <p>Skilled at file prep for digital fabrication</p> <p>Skilled at create drawings of a prop, mould or make to aid in construction or the ability to relaying an idea to someone</p>
Sculpting and carving, fabrication, and associated materials.	<ul style="list-style-type: none"> ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ 	<p>Advanced knowledge of cutting/carving/engraving/basic joinery/fixings</p> <p>Skills to make and model objects using various machinery, hand skills and to do so safely and efficiently</p> <p>Advanced knowledge of metal and plastic work including: cutting/machining/fabrication/basic soldering/brazing. The skills to use metal work equipment and materials safely and for plastics: sheet plastic and acrylic fabrication/ bending adhesives and fixing</p> <p>Advanced knowledge of leather work including: dyeing/embossing/carving/shaping/patterns</p> <p>Advanced knowledge of sewing and fabrics work including: fabrics/leathers/lacing/hand stitches/machine stitches/adhesives</p> <p>Advanced knowledge of model making work including: white card model making/miniatures and scale models for concept analysis and planning/scale sets for animation</p> <p>Advanced knowledge of paint effects, ageing, distressing, and painting different types of materials</p> <p>Advanced knowledge of body making and creature work including silicone/creatures/body parts/hair punching/flocking</p> <p>Knowledge of electronics. The ability to understand 12V lights/motors/LED-servos/motors and other controls - and basic understanding of capability of Arduino/Raspberry Pi, basic programming</p>
Key Moulding and casting skills and associated tasks.	<ul style="list-style-type: none"> ✓ ✓ ✓ ✓ ✓ 	<p>Knowledge and understanding of mould types and uses for these moulds as well as casting different materials from a mould, resin, rubber, foam, silicone, and fibreglass</p> <p>The ability to complete various moulding methods to achieve the desired outcome</p> <p>Be able to design/communicate on advanced moulding techniques</p> <p>The ability to identify and troubleshoot issues surrounding trapped air, mould alignment and material choice</p> <p>Advanced knowledge in all types of resin/rubbers/PU foams/silicone/foam latex/fibreglass/plaster, armatures, and other compounds - specialist casting - multi materials-vac chamber - fabrication of breakaways - colouring/fillers/in cast finishes</p>

Technical competencies

Area	Indicators
<p>Key Digital skills and associated tasks.</p>	<ul style="list-style-type: none"> ✓ Digital skills - intermediate knowledge and use of software programs ✓ Ability to file prep/drawing prep and breakdown for fabrication ✓ 3D scanning - some knowledge of 3D scanning file types and of how to manipulate them into workable formats for fabrication/reproduction ✓ To understand digital fabrication and how it can be used as part of the workflow in the absence of an issued drawing. This would include digital modelling, CNC and 3D printing ✓ Have the advanced knowledge and skills of the systems and methods available for digitally assisted fabrication and of 3D scanning and its advantages and disadvantages as part of the workflow ✓ The ability to prepare and finish digitally produced makes ✓ Knowledge and the ability to use the following types of software Microsoft Office, Photoshop, 3D drawing software for the various tasks ✓ Programmes would include Microsoft Office - Excel/Word/PowerPoint, Adobe-Photoshop/Illustrator, 3D drawing software- eg: ZBrush/Rhino/Maya/SketchUp ✓ To be able to use the digital fabrication tools correctly and safely and supervise others
<p>Key Film Administration skills and associated tasks.</p>	<ul style="list-style-type: none"> ✓ Knowledge and understanding of administrative paperwork including, petty cash forms, timesheets, start forms, purchase order forms and contracts and to know how to read and understand -scripts, shooting schedules, call sheets, script breakdowns, Art Department schedule/workshop schedule ✓ Knowledge and understanding of other departments' roles ✓ Competent in file and data sharing ✓ To assist with the responsibilities around H&S
<p>Standby on set</p>	<ul style="list-style-type: none"> ✓ Knowledge of set etiquette ✓ The ability to communicate, listen actively ✓ Ability to use a walkie talkie ✓ Supervising junior members of the department
<p>Health and Safety</p>	<ul style="list-style-type: none"> ✓ Good understanding of their responsibilities as a manager around, facilities/hygiene/ staff management/fire safety/chemical handling and storage/PPE /record keeping/ safety protocols and reporting ✓ The knowledge of safety compliance competencies- ability to conduct risk assessments, method statements, toolbox talks and induction training ✓ The ability to know and understand the relevant Health & Safety Regulations and have up to date relevant safety courses

Assistant Model Maker

The Assistant Model Maker has a responsibility to learn and develop additional skills from trainee level; and to assist, to the best of their ability, within the Model Making Department. The Assistant Model Maker needs the ability to be a supportive role and work independently within the department and with the delivery of all model makes using a variety of skills, materials and tools for any given film or TV production. The ability to listen to instruction from senior staff, take directions and guidance when appropriate. The Assistant Model Maker must be prepared to further develop their abilities and skills. The Assistant Model Maker will learn additional skills with other colleagues and departments. They will be required to complete the minimum official training to satisfy legal requirements (eg: Health and Safety) and to attend CPD training to develop their skills and experience as they progress. These aspects will allow the Assistant Model Maker to be more qualified to move up the career path to a Model Maker role.

Key tasks:

1. Materials and machinery: theory, usage and associated tasks.
 2. Drawing/measuring: learns and develops skills to be able to sketch, read and understand drawings.
 3. Sculpts and carves, fabrication, and associated materials.
 4. Researches and references skills and associated tasks.
 5. Key moulding and casting skills and associated tasks.
 6. Key digital skills and associated tasks.
 7. Key film administration skills and associated tasks.
 8. Standby on set.
-

Task statements

Task statement 1:

Materials and machinery: theory, usage and associated tasks.

Associated activities

- ✓ Develops skills and theory to use materials appropriately for a specific task. Learns the materials used, i.e., names, cure times, applications and limits of the materials, chemicals, and others relevant characteristics.
- ✓ Knows the advantages and disadvantages of various materials and how to choose the best materials to use.
- ✓ Uses materials correctly and safely under supervision.
- ✓ Understands the hazards and toxicity of various materials, both to self and colleagues.
- ✓ Learns and develops skills and theory to use machines and tools appropriately for a specific task. This involves learning what machines and tools are used i.e. names, types, hazards, applications, and limits of the tools.
- ✓ Understands the advantages and disadvantages of various tools and how to choose the best tool to use.
- ✓ Uses machines and tools correctly and safely under supervision.

Task statement 2:

Drawing/ measuring skills and associated tasks.

Associated activities

- ✓ Completes drawings in the production of props/set elements.
- ✓ Sketches, reads, and understands drawings.
- ✓ Assists the department to create drawings of a prop, mould or make to aid in construction or relaying an idea to someone.
- ✓ The understanding of measuring and units. Uses scale and the application of scales.
- ✓ Assists the department in doing a survey of a space/object and using scale on a task.

Task statement 3:

Sculpting and carving, fabrication, and associated materials.

Associated activities

- ✓ Understands the skills and theory of basic sculpting, carving, anatomy, and materials to be used. Undertakes additive and reductive modelling, cut/carve and assemble materials to create sculpture or model in physical form.
- ✓ Follows a design brief - choose the correct process for the project and implement the sculpture/fabrication using the applicable materials.
- ✓ Develops the use of a variety of materials and skills including, woodworking, metal work, plastic fabrication, leather work, painting effects, electronics, and other techniques of fabrication.
- ✓ Develops these skills under supervision and to assist the department in these tasks.

Task statements

Task statement 4:

Research and referencing skills and associated tasks.

Associated activities

- ✓ The ability to research time periods, styles, materials used to create accurate makes.
- ✓ Uses the internet, books, and other resources to understand the task and style of a make more fully.
- ✓ Presents research materials and findings to colleagues.
- ✓ Carries out research independently and as a group.

Task statement 5:

Key moulding and casting skills and associated tasks.

Associated activities

- ✓ Makes basic mould types and the understanding of multi part moulds.
- ✓ Assists in basic 1-part block moulds, basic 2-part block moulds, basic MDF block moulds and basic fibreglass jacket moulds.
- ✓ Identifies and troubleshoots issues surrounding trapped air, mould alignment and material choice.
- ✓ Understanding of 3D printing, vac-forming processes and mould making for this process.
- ✓ Carries out as instructed under supervision, and then independently demonstrates moulding competency.
- ✓ Understands the skills and theory of casting with different materials from a mould.
- ✓ Learns the skills to complete and assist in using resins, rubbers, foams, silicones and fibreglass and armatures where appropriate.
- ✓ Identifies and troubleshoots issues surrounding trapped air, mould alignment and material choice.
- ✓ Carries out complex casting work as instructed under supervision, and then independently to demonstrate casting competency.
- ✓ Learns and understands the skills under supervision and to assist the department in these tasks.

Task statement 6:

Key digital skills and associated tasks.

Associated activities

- ✓ Understands digital fabrication and how it can be used as part of the workflow in the department. This would include digital modelling, CNC and 3D printing.
- ✓ Assists the department in the preparation and finishing of digitally produced makes.
- ✓ Learns and understands the use of various software programs, digital fabrication tools and the ability to learn the advantages and disadvantages of various digital fabrication tools and how to choose the best tools to use.
- ✓ Programmes would include Microsoft Office - Excel/Word/PowerPoint, Adobe Photoshop/Illustrator, 3D drawing software e.g. ZBrush/Rhino/Maya/SketchUp.
- ✓ Uses digital fabrication tools correctly and safely under supervision and to assist the department in these tasks.

Task statement 7:

Key film administration skills and associated tasks.

Associated activities

- ✓ Understands the roles of other departments and personnel on a production.
- ✓ Uses and understands administrative paperwork including, petty cash forms, timesheets, start forms, purchase order forms.
- ✓ Reads and understands scripts, shooting schedules, call sheets, script breakdowns, Art Department schedule/workshop schedules and uses them as part of the workflow in the department.
- ✓ Learns and understands the skills under supervision and to assist the department in these tasks.

Task statement 8:

Standby on set

Associated activities

- ✓ Understands the roles of other departments and personnel on a set.
- ✓ Reads and understands scripts, shooting schedules, call sheets, script breakdowns, Art Department schedules and uses them as part of the workflow on set.
- ✓ Obtains an understanding of appropriate behaviour when on set and when in a high stress environment.
- ✓ Develops these skills under supervision and to assist the department in these tasks.

Technical competencies

Area	Indicators	
Materials and Machinery Theory and Use	✓ ✓ ✓	The ability to understand the use of materials theory The ability to learn the machinery and equipment safe use in the workplace Ability to assess the suitability of the material to be used for the specific task
Set and behind the scenes	✓ ✓ ✓	Ability to assist in measuring and surveying Ability to assist in creating drawings of a prop, mould or to aid in construction Ability to sketch
Sculpting and carving, fabrication, and associated materials.	✓ ✓ ✓	The ability to understand basic sculpting and materials The ability to do modelling or create sculpture or model and follow a design brief To develop the use of: a) Woodwork b) Metalwork c) Plastic fabrication d) Leather work e) Painting effects f) Electronics
Research and referencing skills and associated tasks.	✓	The ability to research, understand and present findings.
Key Moulding and casting skills and associated tasks.	✓ ✓ ✓ ✓	The ability to make basic mould types and assist in basic 1-part block moulds, basic 2-part block moulds, basic MDF block moulds and basic fibreglass jacket moulds The ability to troubleshoot To learn the skills to complete and assist in using resins, rubbers, foams, silicones and fibreglass and armatures where appropriate The ability to carry out complex casting work as instructed under supervision, and then independently to demonstrate casting competency
Key Digital skills and associated tasks.	✓	To understand digital fabrication and digital modelling and to assist the department in using these for certain tasks
Key Film Administration skills and associated tasks.	✓ ✓ ✓ ✓	To understand the roles of other departments and personnel on a production The ability to use and understand administrative paperwork including, petty cash forms, timesheets, start forms, purchase order forms The ability to read and understand -scripts, shooting schedules, call sheets, script breakdowns, Art Department schedule/workshop schedules and use them as part of the workflow in the department The ability to learn and understand the skills under supervision and to assist the department in these tasks
Standby on set	✓	To understand digital fabrication and digital modelling and to assist the department in using these for certain tasks



Trainee Model Maker

The Trainee Model Maker will have a responsibility to learn and develop skills to interact, work and relate effectively with people within the Model Making Department. The ability to learn and be in a supportive role to the department, with the delivery of all Model Makers using a variety of skills, materials and tools for any given film or TV production. To be able to listen to instruction from senior staff, take directions and a willingness to have an interest in developing their skills. The ability to learn new skills with other colleagues and departments and to develop these skills and experience to be able move up the career path to an Assistant Model Maker.

Key tasks:

1. Learns and develops skills and theory to use materials and machines appropriately for a specific task.
2. Drawing/measuring: learns and develops skills to be able to sketch, read and understand drawings.
3. Sculpting/carving/fabrication and associated materials.
4. Research/referencing skills and associated tasks.
5. Key moulding/casting skills and associated tasks.
6. Key digital skills and associated tasks.
7. Film administration skills and associated tasks.
8. Standby on set.

Task statements

Task statement 1:

Learns and develops skills and theory to use materials and machines appropriately for a specific task.

Associated activities

- ✓ Learns the materials used i.e. names, cure times, applications and limits of the materials chemicals and others relevant materials.
- ✓ Learns and develops skills and theory to use machines and tools appropriately for a specific task.
- ✓ Learns what machines and tools are used i.e. names, types, applications, and limits of the tools.
- ✓ Learns the advantages and disadvantages of various tools and how to choose the best tool to use.

Task statement 2:

Drawing/measuring skills and associated tasks.

Associated activities

- ✓ Learns the skills and theory of drawings in the production of props/set elements.
- ✓ Learns the skills and theory of measuring and units. The ability to learn scales and applying scales.

Task statement 3:

Sculpting/carving/fabrication and associated materials.

Associated activities

- ✓ Learns the skills and theory of basic sculpting, carving, anatomy, and materials to be used.
- ✓ Learns the skills under supervision and to assist the department in these tasks.

Task statement 4:

Research/referencing skills and associated tasks.

Associated activities

- ✓ Learns the skills in using the internet, books, and other resources to understand the task and style of a make and to demonstrate the ability to carry out research independently and as a group.

Task statement 5:

Key moulding/casting skills and associated tasks.

Associated activities

- ✓ Learns the skills and theory of basic mould types and uses for these moulds.
- ✓ Carries out tasks under supervision, and then independently to demonstrate competency.
- ✓ Learns the skills and theory of casting different materials from a mould.
- ✓ Carries out as tasks under supervision, and then independently to demonstrate competency.

Task statement 6:

Key digital skills and associated tasks.

Associated activities

- ✓ Assists the department in the preparing and finishing of digitally produced makes.
- ✓ Uses the digital fabrication tools correctly and safely under supervision.

Task statement 7:

Key film administration skills and associated tasks.

Associated activities

- ✓ Learns the roles of other departments and personnel on a production.
- ✓ Learns a basic knowledge of administrative paperwork including, petty cash forms, timesheets, start forms, purchase order forms.
- ✓ Learns a basic knowledge of reading-shooting schedule, call sheets, script breakdowns, Art Dept. schedule/workshop schedule.
- ✓ Learns the skills under supervision and to assist the department in these tasks.

Task statement 8:

Standby on set

Associated activities

- ✓ Understands the roles of other departments and personnel on a set.
- ✓ Develops these skills under supervision and to assist the department in these tasks.

Technical competencies

Area	Indicators	
Basic Knowledge of materials and machinery.	✓ ✓	Understands the advantages and disadvantages of materials and how to choose them To be able to use machines and tools correctly and safely under supervision
Basic ability to draw a prop and make a mould as well as basic sculpting, carving, anatomy skills.	✓ ✓	Can assist in creating basic drawings of a prop, mould or make to aid in construction or relaying an idea to someone Can follow a design brief
Surveying a space/object.	✓	Can assist in surveying of a space/object and using scale on a task
H&S Competency	✓ ✓	Has read and can understand the H&S Statement and knows what applies to the Model Making Department Has shown ability to follow Health and Safety protocols on set and location
Research	✓	The ability to learn the skills, theory and understand the need to research time periods, styles, materials used to create historically accurate makes
Key Moulding and casting skills and associated tasks.	✓ ✓	Can complete and assist in basic 1-part block moulds, basic 2-part block moulds, basic MDF block moulds and basic fibreglass jacket moulds Can assist in using resins, rubbers, foams, silicones and fibreglass and armatures where appropriate.
Key Digital skills and associated tasks.	✓ ✓	Understands the theory of digital fabrication including digital modelling, CNC and 3D printing and assists the department in the preparing and finishing of digitally produced makes Understands the use of various software programs, digital fabrication tools and the ability to learn the advantages and disadvantages of various digital fabrication tools and how to choose the best tools to use
Key Film Administration skills and associated tasks.	✓	Has basic knowledge of administrative paperwork including, petty cash forms, timesheets, start forms, purchase order forms
Standby on set	✓ ✓ ✓	Can read and understand scripts, shooting schedules, call sheets, script breakdowns, Art Department schedules and use them as part of the workflow on set Understands the appropriate behaviour when on set and when in a high stress environment 7+ weeks minimum of standby on set experience or on min 3 different shows/movies



Fís Éireann
Screen Ireland

