Apprenticeship builder

Draft: Occupational standard for an apprenticeship

This submission
Unique occupational standard reference number: ST0903
Trailblazer Group Reference Number: TB0489
Does this standard have core and options? No
Is this proposal a resubmission? No

Title of Occupation: Junior VFX Artist
Name of Trailblazer Group: VFX
Occupation profile

Occupation summary:
This occupation is found in the British and International visual effects (VFX) industries, providing digital content for film, television, advertising, games, corporate and immersive reality industries. VFX companies and studios vary in size and the number of employees they have, and are described as small, medium or large companies. They are to be found across England and the UK. The output and remit of a VFX studio is varied, and they will produce work for a range of clients across advertising, film, television and immersive reality. Some studios specialise in one area, particularly feature films which is the largest area of the industry.

VFX is the term used to describe any imagery created, altered, or enhanced for moving media. This involves the integration of live-action footage and computer generated (CG) imagery to create images, which look realistic but would be dangerous, costly, or simply impossible to capture during live-action shooting such as explosions, car crashes or flooding of cities.. The broad purpose of the occupation is to select and use relevant 3D software to create visually engaging motion graphics, animations or images (assets). This sometimes involves working with two- or three-dimensional models. The animations and graphics they create are stylistically consistent and enhance the visual style of their work. In some cases, a sequence might be entirely computer generated with no live action background elements.

The Junior VFX Artist needs a thorough understanding of 3D camera principles such as lenses, distortion and parallax.

The Junior VFX Artist work out the co-ordinates and the movement of the physical camera and/or objects in a live action shot; they must be able to track cameras and objects quickly and effectively.

The Junior VFX Artist need to be able to deliver work within established project targets and timelines, and to the high-quality standards of their company and clients. They may also support and advise other artists with their tracking tasks. They may also be required to work on visualising complex scenes in a 3D animation (pre-viz, the 3D equivalent of a storyboard) before moving on to the more detailed parts of the process. The motion files/assets created (camera, object or body track) need to be integrated into the VFX workflow pipeline and within the organisational requirements for organising, storing and retrieving assets.. In their daily work, an employee in this occupation interacts with engineers, designers and team leads, other visual effects teams, their supervisor and/or the client. This is a junior level role, and the line management and reporting structure of the team will vary according to the size of the employer. They must be able to take direction and feedback, in order to create the effects required, according to the story being created, the VFX/CG Supervisor and the Director's wishes. An employee in this occupation will be responsible for

- managing their own workload with the VFX production team and/or their lead, generating the required work on time, to meet the brief of the supervisor/client,
- attending dailies/review sessions in order to gain feedback on their work and respond appropriately to that feedback,
- working within the particular workflow pipeline/toolset of the company that they are working for
- working effectively in collaboration with clients, colleagues, partners and suppliers in the VFX industry to ensure that the CG elements are seamlessly incorporated into the shot
- using innovative approaches to solve problems and ensure VFX assets are delivered in line with production requirements

The Junior VFX Artist should understand their place within the production workflow process and the importance of this and being able to organise their VFX outputs using appropriate storage processes and systems..

Typical job titles:
Typical job titles include Junior 3D Artist, Tracker, Matchmove Artist, Layout Artist, Previz Artist.
## Duties

### Off the job training:

### Occupation duties

<table>
<thead>
<tr>
<th>Duty</th>
<th>KSBs</th>
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<tbody>
<tr>
<td>Duty 1</td>
<td>K1 K2 K3 K4 K5 S1 S2 S3 S4 B2 B4</td>
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</table>

**Duty 1**
Assess the requirements set by the client or supervisor brief for the requested VFX. Prepare to create the VFX assets identifying and deciding which tools and techniques best meet the required creative, narrative and technical demands of the production.

**Off the job training**
Please provide a detailed breakdown of the off-the-job activity that will be required to develop the apprentice's competence in this duty:

Specify how this training will typically be delivered: Classroom based learning, Practical workshop, On-line Learning, Mentoring, Masterclasses

Days required to complete off the job training for this duty: 10

Type of training provider: FE College, Specialist provider, Employer

| Duty 2 | K2 K6 K7 S2 S4 S5 S6 B1 |

**Duty 2**
Create VFX assets in line with production requirements, ensuring the output meets the requirements for the workflow process.

**Off the job training**
Please provide a detailed breakdown of the off-the-job activity that will be required to develop the apprentice's competence in this duty:

Specify how this training will typically be delivered: Classroom based learning, Practical workshop, On-line Learning, Mentoring, Masterclasses

Days required to complete off the job training for this duty: 8

Type of training provider: FE College, Specialist provider, Employer

| Duty 3 | K8 K9 K10 K11 K13 K25 S5 S6 S22 B1 |

**Duty 3**
Manage own VFX assets through the workflow (pipeline) in line with production requirements for organising, storing and retrieving assets.

**Off the job training**
Please provide a detailed breakdown of the off-the-job activity that will be required to develop the apprentice's competence in this duty:
Specify how this training will typically be delivered: Classroom based learning, Practical workshop, On-line Learning, Mentoring, Masterclasses

Days required to complete off the job training for this duty: 10

Type of training provider: FE College, Specialist provider, Employer

<table>
<thead>
<tr>
<th>Duty 4</th>
<th>Work autonomously and with clients or customers in the visual effects (VFX) industry, collaborating with other departments as required to ensure that the CG elements are delivered to meet agreed production requirements</th>
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<td>K6 K9 K10 K11 K25 S7 S9 B4 B6</td>
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Please provide a detailed breakdown of the off-the-job activity that will be required to develop the apprentice's competence in this duty:

Specify how this training will typically be delivered: Classroom based learning, Practical workshop, On-line Learning, Mentoring, Masterclasses

Days required to complete off the job training for this duty: 3

Type of training provider: FE College, Specialist provider, Employer

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<tr>
<th>Duty 5</th>
<th>Improve own knowledge and performance in visual effects (VFX) by seeking out information about emerging practice in the visual effects (VFX) industry such as new tools, software, data and other related technology</th>
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<tbody>
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<td>K12 K13 S7 S8 S9 B2 B3</td>
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**Off the job training**

Please provide a detailed breakdown of the off-the-job activity that will be required to develop the apprentice's competence in this duty:

Specify how this training will typically be delivered: Classroom based learning, Practical workshop, On-line Learning, Mentoring, Masterclasses

Days required to complete off the job training for this duty: 5

Type of training provider: FE College, Specialist provider, Employer

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<th>Duty 6</th>
<th>Select and use appropriate technology to render VFX assets for pre-rendered or real-time productions</th>
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<td>K14 K15 S3 S6 S10 S11 B1 B6</td>
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Specify how this training will typically be delivered: Classroom based learning, Practical workshop, On-line Learning, Mentoring, Masterclasses

Days required to complete off the job training for this duty: 5

Type of training provider: FE College, Specialist provider, Employer
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<th>Duty 7</th>
<th>Evaluate VFX assets in line with feedback to ensure production requirements are met and own practice continuously improves</th>
<th>K10 K11 K16 K20 S12 S13 S14 B2 B5</th>
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<td>Duty 8</td>
<td>Use innovative approaches to solve problems and ensure VFX assets are delivered in line with production requirements</td>
<td>K3 K17 K21 K22 S2 S14 S15 S16 S19 S20 B1 B3</td>
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<td>Duty 9</td>
<td>Track cameras, markers and objects to meet production requirements</td>
<td>K18 K19 K20 K21 K22 K23 K24 S2 S17 S18 S19 S20 S21 B1 B2</td>
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<td>Days required to complete off the job training for this duty: 6</td>
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<tr>
<td>Duty 10</td>
<td>Deliver assets to meet production requirements</td>
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Off the job training

Please provide a detailed breakdown of the off-the-job activity that will be required to develop the apprentice's competence in this duty:

Specify how this training will typically be delivered: Classroom based learning, Practical workshop, On-line Learning, Mentoring

Days required to complete off the job training for this duty: 10

Type of training provider: FE College, Specialist provider, Employer
Knowledge

K1: The principles of 3D space, including projections and UV texturing

K2: How to identify production requirements from a brief

K3: The different software and techniques that could be used; the implications of their use, how to customise these and how they can be used to solve problems

K4: How to obtain reference materials and previously created assets

K5: How to plan your approach to the work; techniques, optimisation and schedule

K6: The requirements and expectations of the workflow, and of other team members who will use the assets you create

K7: How to use software to create: a model, a texture map, puppet rig and a blocked animation

K8: The importance of naming conventions, file formats and version control and the impact of not doing this correctly

K9: The value of VFX content and confidentiality to the business and its customers, why it is important to maintain data security, and the legal and regulatory requirements which apply to VFX assets such as copyright and intellectual property rights

K10: How good, timely communication can contribute to productive working relationships with clients and customers

K11: The context within the production of: own role, the production pipeline and how own role interacts with this, the department they are working in, and the subsequent stages of the workflow process

K12: Research methods, techniques and tools that can be used and where to find credible sources of information and how to check their validity

K13: The VFX industry and the terminology, current tools and workflows used

K14: The rendering requirements for the production and how to optimise assets when using the appropriate rendering tools and techniques

K15: How to identify and select the different rendering techniques and tools to use, and how to save and duplicate render settings across multiple files

K16: Why is important to evaluate progress and seek feedback on your work in VFX

K17: The production requirements, processes and workflow

K18: The types of data and information you might receive from an on-set environment

K19: Where your shot or assets fit in the sequence or scene

K20: The process of following image features across a series of frames in order to record the position of an object in the source footage

K21: How the camera moves, the impact on the tracking process and how to select the most appropriate method to produce an accurate track

K22: The technical process of tracking and how you can improve the accuracy and efficiency of tracking the shot

K23: Lens distortion, parallax and overscan
K24: The principles of computer systems, IP networks and shared storage systems as applied in VFX
K25: How assets are managed throughout the workflow including: production storage, shared storage, nearline storage and archive, whether on premises or in the cloud

Skills
S1 Identify the information required, and gather the appropriate research and reference materials to carry out your work to expected creative, narrative and technical standards on each production
S2 Select the appropriate software and technique to meet the required standards and brief, taking into account the needs of other departments in the production pipeline
S3 Determine a plan for your approach to the work
S4 Select and use software to create: a model, a texture map, puppet rig and blocked animation to meet the requirements of the brief
S5 Store and organise assets in order to enable their use throughout the rest of the pipeline
S6 Operate within and adhere to agreed organisational policies, standards and procedures such as health & safety, confidentiality, security, asset storage and legal and regulatory requirements
S7 Manage own workload and operate both individually and as part of a wider VFX team, keeping colleagues, clients and/or other departments updated on progress and report any issues arising
S8 Use reliable information to keep-up-to date with the new tools, software, data and other related technology, and how they affect your work
S9 Present your findings and conclusions to meet the needs of different audiences
S10 Identify render errors and fix/escalate them as appropriate
S11 Apply render settings across multiple assets
S12 Review assets created with the relevant people, offering suggestions to assist others with the production
S13 Respond positively to feedback about the assets you create, making refinements as needed
S14 Work in line with agreed workflows, adapting to operational and creative changes as they occur
S15 Trouble shoot VFX problems, taking responsibility for the course of action followed and sharing your solution
S16 Escalate VFX problems to the appropriate person if it can’t be solved, and act on the advice given to solve the problem
S17 Interpret and use on-set data and information
S18 Create accurate point tracks and planar tracks in line with production requirements
S19 Interpret and correct lens distortion, parallax and overscan
S20 Model and manipulate geometry for scene reconstruction
S21 Multitask on simultaneous projects, often for different clients, deciding how to prioritise the work to ensure that all tasks are completed on schedule
S22 Ensure data integrity when moving assets between storage systems
S23 Deliver content in the correct format as required by the employer and clients

**Behaviour**

**B1:** Works with sustained concentration and with attention to detail; able to self-check work for quality control
**B2:** Works on own initiative, is proactive and inquisitive; responds positively to feedback about assets created, making refinements as needed and recognises their own level of authority and when it is necessary to escalate issues
**B3:** Thinks creatively and logically to solve technical problems - contributes to a process continual improvement of workflow and technique. Uses initiative and innovation to problem solve, to provide creative solutions and opportunities for the production
**B4:** Is flexible and can work under pressure- managing and re-organising priorities and bringing multiple tasks to completion within deadlines, communicating progress as required
**B5:** Demonstrates judgement in assessing the use of emerging practice within the constraints of a production environment. Does not willingly accept second best, and is pragmatic about balancing client expectations against the available time and budget
**B6:** Creates and maintains positive, professional, trusting and ethical working relationships with their team and the wider range of internal, external and connected stakeholders
Additional information

Proposed Route:
Creative and Design

Typical duration of apprenticeship (months): 18

Proposed occupational Level: 4

Please select the end-point assessment method/s likely to be used to assess competence against the KSBs as a whole:
Presentation based Project based Discussion based

Qualifications & professional recognition

English and Maths qualifications
Level 3 and above apprenticeships

Level 3 and above apprenticeships Apprentices without level 2 English and maths will need to achieve this level prior to taking the End-Point Assessment. For those with an education, health and care plan or a legacy statement, the apprenticeship’s English and maths minimum requirement is Entry Level 3. A British Sign Language (BSL) qualification is an alternative to the English qualification for those whose primary language is BSL.

Other mandatory qualifications
Does the apprenticeship include any mandated qualifications in addition to the above-mentioned English and maths qualifications?
No

Entry requirements

Are there any statutory/regulatory or other typical entry requirements?:
No

Professional recognition

Does this standard align to any professional recognition?
No

Please specify any professional recognition which you have considered but concluded is not applicable to the occupation.
TBC