

Assessment plan for Animal Technologist Apprenticeship (Level 3)

Summary of Assessment

The formal end-point assessment will consist of:

- A synoptic interview (informed by a portfolio of evidence developed by the apprentice), reviewing the skills, knowledge and behaviours developed throughout the apprenticeship. This will be assessed by a recognised assessing organisation.
- A work-based scenario based case study under examination conditions to assess applied skills, knowledge and behaviours in a contextually relevant way. This will be assessed by a recognised assessing organisation.

Taken together, the assessments will cover all elements of the apprenticeship standard and will lead to the graded apprenticeship award.

To complete the apprenticeship, the apprentice must achieve at least a pass in both assessment methods.

The final grade will be determined as follows:

Synoptic interview	Scenario case study	Final grade
Pass	Pass	Pass
Pass	Merit	Pass
Merit	Pass	Pass
Merit	Merit	Merit
Merit	Distinction	Merit
Distinction	Merit	Merit
Distinction	Pass	Merit
Pass	Distinction	Merit
Distinction	Distinction	Distinction

End-Point Assessment Overview				
Assessment Method	Area Assessed	Assessed by	Grading	Weighting
Synoptic interview based on reflective portfolio	All areas	Assessing organisation	Fail/Pass/Merit /Distinction	50%
Scenario case study examination	All areas	Assessing organisation	Fail/Pass/Merit /Distinction	50%
On-programme Assessment [if applicable]				
<p>The industry in which these apprentices will work is heavily regulated by the Home Office. Apprentices will be unable to carry out licenced procedures (as defined by the Animals (Scientific Procedures) Act Amendment Regulations 2012) without a Home Office Licence, issued by the Home Office. Before anyone can apply for a licence they must demonstrate they have sufficient knowledge and skills to competently carry out the procedures they apply for on their licence. This Apprenticeship will ensure that the apprentices are sufficiently trained to apply for their Home Office Licence on completion of the apprenticeship.</p> <p>A licenced procedure is, any experimental or scientific procedure applied to a protected animal for a qualifying purpose which may have the effect of causing the animal a level of pain, suffering, distress or lasting harm equivalent to, or higher than, that caused by the introduction of a needle in accordance with good veterinary practice. The apprentice will be able to carry out procedures that are counted as recognised husbandry procedures (iron injection for piglets, subcutaneous injection of ID chips etc.). They can also assist a Licensee.</p> <p>Apprentices will complete a stage of training and formative assessment in the workplace supported by their employer and training organisation to develop the skills, knowledge and behaviours necessary for successful completion of the EPA. Evidence will be collected and used to generate a reflective portfolio, which will form the basis for the Synoptic interview. The apprentice must also successfully complete the IAT Level 3 Diploma in Laboratory Animal Science and Technology,</p>				

which is the standard professional qualification for senior animal technologists and covers the knowledge criteria for this apprenticeship.

Assessment Gateway

There are three elements to the gateway that need to be completed before the apprentice can take the EPA.

1. The apprentice must complete a reflective portfolio of evidence that demonstrates the application of the skills, knowledge and behaviours specified by the Apprenticeship Standard in the workplace. Satisfactory accumulation of evidence will be a joint decision between the employer and training organisation who will sign it as complete and ready for submission to the EPA.
2. The successful completion of the IAT Level 3 Diploma in Laboratory Animal Science and Technology. Successful completion will be confirmed by the IAT issuing a certificate under their role as a recognised Awarding Organisation by Ofqual. Training organisations already offer the IAT level 3 Diploma in Laboratory Animal Science & Technology in a variety of ways so they are accessible to all organisations (face to face, on-line and in-house delivery are already widely used).
3. The successful completion of Level 2 English and maths qualifications.

The reflective portfolio is primarily included as an aid for the apprentice to monitor and reflect on their progress towards the EPA. The apprentice, employer and the training organisation will work together to collect evidence of the apprentice's development throughout the apprenticeship. This evidence will include formative feedback and appraisals from their employer on their performance and reports from the training organisation during their visits. Other activities that would be relevant include attendance at in-house and external training courses, attendance at professional meetings and conferences, in-house assessments and training records. For each piece of evidence, the apprentice will be required to demonstrate their understanding and application of their learning by reflecting on how the evidence helps meet the Apprenticeship standard.

End-point - Assessment

How?

Synoptic interview based on Reflective Portfolio

Once complete, the portfolio will be included in the EPA as part of a summative interview where the apprentice will be assessed by an assessing organisation so they can demonstrate how they have met the Apprenticeship standard. The interview will last for no more than an hour and the Assessing Organisation will develop a structured template for the interview to ensure it is delivered fairly and consistently.

This method has been selected to fit in with the existing regulatory frameworks which apply to all organisations operating in this sector regardless of size, specialism or legal organisational status. See Annex A for details of knowledge, skills and behaviours covered.

Who?

- The Assessing Organisation will be on the Register of Apprentice Assessment Organisations (RoAAO). Their assessor will have relevant professional and assessor qualifications.

Scenario case study examination

A bank of contextually relevant synoptic case studies will be developed by the Assessing Organisation to act as an independent end-point assessment calling on the apprentice to demonstrate the relevant requirements as laid out in the apprenticeship standard. Each case study will be contextually relevant and will require the apprentice to cover the broad range of learning outcomes (See Annex A for details of knowledge, skills and behaviours covered). For example, the apprentice could be asked to discuss what needs to be considered when:

- Buying in sheep for a research project involving a significant surgical intervention
- Setting up a research project to create a colony of genetically altered mice
- Carrying out a trial to test the efficacy of a new dietary regime for zebra fish

Each apprentice will be given a maximum of 90 minutes under examination conditions to review and complete one case. The written answers will be marked by the Assessment Organisation.

The apprentice will be graded on the basis of their EPA with a Pass, Merit or Distinction grade. An apprentice failing to reach the desired standard will be given formative feedback to aid their development and allowed one further attempt at the EPA.

End-point – final judgement

The Assessing Organisation will decide the final grade.

Independence

The Assessing Organisation will provide an independent assessment. The assessor should be someone who is not directly involved in the training or employment of the apprentice and is subject to the established standardisation and quality assurance processes.

End-point – Summary of roles and responsibilities

Assessor	Role
Employer	The employer will support and develop the apprentice in the workplace. They will ensure suitable internal audit trails are available and that they maintain their CPD to remain effective as industry standards evolve.
Training Organisation	The Training Organisation will support the employer in ensuring the apprentice has adequate and effective support to develop the knowledge, skills and behaviours required to meet the apprenticeship standard. They will have appropriate professional qualifications and experience.
Assessment Organisation	<p>The Assessment Organisation will be on the Register of Apprentice Assessment Organisations (RoAAO).</p> <p>The Assessment organisation will provide independent assessment by providing a suitable qualified and experienced assessor. The assessor will be responsible for assessing the apprentice against the knowledge, skills and behaviours set out in the standard, and for providing an audit trail for any external quality assurance processes.</p> <p>The assessor will have relevant professional and recognised assessor qualifications (they will have at least a level 4 Animal Technology qualification and an Assessors’</p>

qualification). It would be expected that they have at least 5 years of relevant industry and assessing experience.

Quality Assurance – internal

All Assessment Organisations will be registered on the Register of Apprentice Assessment Organisations, and chosen by the employer.

Assessment organisations are responsible for setting out their quality control processes which must:

- include adequate training and CPD of all staff.
- ensure all assessors have the relevant experience and level of qualification
- promote best practice
- maintain suitable audit trails and reports
- seek feedback from employers and apprentices
- respond to feedback positively and promptly

Standardisation meetings will be held at least once a year, but may be more frequent as apprentice numbers grow.

Quality Assurance – external

As the recognised Professional Body in the field of Animal Technology, the Institute of Animal Technology will take responsibility for the external quality assurance. Standardisation meetings will be held at least once a year, but may be more frequent as apprentice numbers grow. Standardisation meetings will involve employers and assessment organisations with current apprentices, but will also be open to those wanting to take on apprentices in the future. These meetings will randomly sample assessments from across employers, assessment organisations and apprentices.

They will be responsible for ensuring:

- Consistency and quality of approach to assessment across the standard, regardless of which assessment organisation has delivered it
- standardisation across assessing organisations
- all assessors have relevant qualifications, experience and up to date continual professional development
- internal quality assurance processes are adequate
- appropriate records and audit trails are kept
- assessment decisions across the industry meet the standards and that they are fair and robust
- that robust and functional policies and procedures are in place and are followed including (but not limited to) healthy and safety, appeals, and equal opportunities

End-point - Grading

Each assessment is equally weighted.

The grade will be decided by the Assessing Organisation

<p>Synoptic interview based on reflective portfolio</p>	<p>Pass – the apprentice can:</p> <ul style="list-style-type: none">• Describe the business environment and how they contribute to its ethical and legal responsibilities• Describe the importance of organisational policies and procedures and how their role impacts on others• Describe and apply relevant quality assurance and health and safety standards while carrying out scientific and animal husbandry procedures• Describe their legal and ethical responsibilities and obligations• Maintain appropriate levels of biosecurity and animal welfare• Describe the structure and function of physiological systems and their importance in maintaining homeostasis for the species in their care.• Describe the clinical signs of ill health, stress and pain in the species they work with and methods for minimising ill health, pain, suffering or distress (including the use of analgesics, anaesthetics and aseptic techniques).• Discuss suitable methods of euthanasia appropriate to the species under their care• Describe the broad underpinning science supporting the in-vivo studies that they have performed.• Handle, sex and health check the species in their care.• Demonstrate technical/manual dexterity skills sufficient to conduct appropriate scientific and animal husbandry procedures safely, with reference to high standards of animal welfare and good scientific practice consistently and, where appropriate, following the Standard Operating Procedures or other relevant risk management systems.
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- Apply their legal obligations under health and safety legislation, the Animals (Scientific Procedures) Act and the Animal Welfare Act consistently.
- Apply appropriate ethical standards of care at all times.
- Apply good animal care and welfare and be able to advise others on best practice and the 3Rs.
- Recognise pain, suffering or distress in the species under their care.
- Analyse, interpret and evaluate data and identify results requiring further investigation seeking advice of senior colleagues as appropriate.
- Recognise problems and demonstrate how to respond appropriately.
- Communicate effectively using a full range of skills: speaking; listening; writing (including the use of digital or paper based record keeping systems); body language; presentation.
- Demonstrate a commitment to a culture of care towards both animals in their care and colleagues.
- Demonstrate a commitment to the ethical standards required by their organisation at all times.
- Demonstrate a commitment to effective team working irrespective of levels of knowledge, experience and seniority.
- Demonstrate a confidence to work independently and taking responsibility and accountability for initiating and completing tasks.
- Manage time effectively and the ability to complete work to schedule.
- Demonstrate a willingness to handle change and respond to change management processes.
- Demonstrate a commitment to continuous performance development

Merit – in addition to the pass criteria, the apprentice can:

	<ul style="list-style-type: none"> • Demonstrate the ability to critically discuss their role in the context of their own organisation and the wider industry. • Describe and discuss clinical signs of ill health, stress and pain in a range of species. • Evaluate their strengths and weaknesses in relation to their current role and have developed a suitable action plan to address areas of weakness. <p>Distinction – in addition to the pass & merit criteria, the apprentice can:</p> <ul style="list-style-type: none"> • Evaluate the roles of professional organisations relevant to their organisation and its legal and business environment • Evaluate different strategies for promoting the 3Rs in their organisation • Evaluate and apply different strategies for the housing and husbandry of laboratory animals depending on the scientific need
<p>Scenario case study examination</p>	<p>Pass - the apprentice can:</p> <ul style="list-style-type: none"> • Describe the business environment and how they contribute to its ethical and legal responsibilities • Describe the importance of organisational policies and procedures and how their role impacts on others • Describe and apply relevant quality assurance and health and safety standards while carrying out scientific and animal husbandry procedures • Describe their legal and ethical responsibilities and obligations • Maintain appropriate levels of biosecurity and animal welfare • Describe the structure and function of physiological systems and their importance in maintaining homeostasis for the species in their care.

	<ul style="list-style-type: none"> • Describes the clinical signs of ill health, stress and pain in the species they work with and methods for minimising ill health, pain, suffering or distress (including the use of analgesics, anaesthetics and aseptic techniques). • Discuss suitable methods of euthanasia appropriate to the species under their care • Describe the broad underpinning science supporting the in-vivo studies that they have performed. • Handle, sex and health check the species in their care. • Demonstrate technical/manual dexterity skills sufficient to conduct appropriate scientific and animal husbandry procedures safely, with reference to high standards of animal welfare and good scientific practice consistently and, where appropriate, following the Standard Operating Procedures or other relevant risk management systems. • Apply their legal obligations under health and safety legislation, the Animals (Scientific Procedures) Act and the Animal Welfare Act consistently. • Apply appropriate ethical standards of care at all times. • Apply good animal care and welfare and be able to advise others on best practice and the 3Rs. • Recognise pain, suffering or distress in the species under their care. • Analyse, interpret and evaluate data and identify results requiring further investigation seeking advice of senior colleagues as appropriate. • Recognise problems and demonstrate how to respond appropriately. • Communicate effectively using a full range of skills: speaking; listening; writing (including the use of digital or paper based record keeping systems); body language; presentation. • Demonstrate a commitment to a culture of care towards both animals in their care and colleagues. • Demonstrate a commitment to the ethical standards required by their organisation at all times. 	
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	<ul style="list-style-type: none"> • Demonstrate a commitment to effective team working irrespective of levels of knowledge, experience and seniority. • Demonstrate a confidence to work independently and taking responsibility and accountability for initiating and completing tasks. • Manage time effectively and the ability to complete work to schedule. • Demonstrate a willingness to handle change and respond to change management processes. • Demonstrate a commitment to continuous performance development <p>Merit – in addition to the pass criteria, the apprentice can:</p> <ul style="list-style-type: none"> • demonstrate the ability to critically evaluate the case study and provide more than one solution to the problem <p>Distinction – in addition to the pass & merit criteria, the apprentice can:</p> <ul style="list-style-type: none"> • demonstrate the ability to critically evaluate the case study and provide a strong evidenced case for why their preferred solution is more appropriate than other options.
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Implementation

Affordability: Initial indications suggest the cost of the EPA will be no more than 20%

Upon completion of this apprenticeship, the apprentice will be eligible to apply to become a full member of the IAT (<http://www.iat.org.uk/#!education/c1q9n>) and use the initials M.I.A.T. after their name.

Volumes: 50 apprentices each year

What	How	Annex A Who
<u>Knowledge</u>		
1. Understand the business environment in which the organisation operates including their role within it, the appropriate ethical practice and codes of conduct and how their role contributes to the organisation meeting its ethical and legal responsibilities.	<ul style="list-style-type: none"> • Interview based on Reflective Portfolio 	Assessing organisation
2. Understand how their role impacts on others including their own team and the researchers they work with, and the importance of their organisation's policies on diversity, equality and discrimination.	<ul style="list-style-type: none"> • Interview based on Reflective Portfolio 	
3. Understand how to conduct appropriate scientific and animal husbandry procedures to meet the requirements of quality standards relevant to the workplace, for example, the use of Standard Operating Procedures.	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	
4. Understand their legal and ethical responsibilities and obligations, including the application of the 3Rs of Reduction, Replacement and Refinement .	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	
5. Understand suitable animal husbandry and animal management systems with reference to appropriate standards of biosecurity and animal welfare.	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	

<p>6. Understand the structure and function of physiological systems and their importance in maintaining homeostasis for the species in their care.</p>	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	
<p>7. Understand the clinical signs of ill health, stress and pain in the species they work with and methods for minimising ill health, pain, suffering or distress (including the use of analgesics, anaesthetics and aseptic techniques).</p>	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	
<p>8. Understand methods of euthanasia appropriate to the species under their care.</p>	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	
<p>9. Understand the broad underpinning science supporting the in-vivo studies that they have performed.</p>	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	
<p><u>Skills</u></p>		
<p>10. Handle, sex and health check the species in their care.</p>	<ul style="list-style-type: none"> • Interview based on Reflective Portfolio 	<p>Assessing organisation</p>
<p>11. Demonstrate technical/manual dexterity skills sufficient to conduct appropriate scientific and animal husbandry procedures safely, with reference to high standards of animal welfare and good scientific practice consistently and, where appropriate, following the Standard Operating Procedures or other relevant risk management systems. For example, appropriate animal restraint,</p>	<ul style="list-style-type: none"> • Interview based on Reflective Portfolio 	

manipulation of equipment used to administer or withdraw biological samples.		
12. Apply their legal obligations under health and safety legislation, the Animals (Scientific Procedures) Act and the Animal Welfare Act consistently.	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	
13. Apply appropriate ethical standards of care at all times.	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	
14. Apply good animal care and welfare and be able to advise others on best practice and the 3Rs.	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	
15. Recognise pain, suffering or distress in the species under their care.	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	
16. Analyse, interpret and evaluate data and identify results requiring further investigation seeking advice of senior colleagues as appropriate.	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	
17. Recognise problems and demonstrate how to respond appropriately.	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	

<p>18. Communicate effectively using a full range of skills: speaking; listening; writing (including the use of digital or paper based record keeping systems); body language; presentation.</p>	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	
<p><u>Behaviours</u></p>		
<p>19. Commitment to a culture of care towards both animals in their care and colleagues.</p>	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	<p>Assessing organisation</p>
<p>20. Commitment to the ethical standards required by their organisation at all times.</p>	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	
<p>21. Commitment to effective team working irrespective of levels of knowledge, experience and seniority.</p>	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	
<p>22. Confidence to work independently and taking responsibility and accountability for initiating and completing tasks.</p>	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	
<p>23. Managing time effectively and the ability to complete work to schedule.</p>	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	

<p>24. Willingness to handle change and respond to change management processes.</p>	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	
<p>25. Commitment to continuous performance development</p>	<ul style="list-style-type: none"> • Case study examination • Interview based on Reflective Portfolio 	