

Becoming a Registered Science Technician

Competence report – advice to applicants

Applicants for RSciTech will need to demonstrate competence across five areas. Guidance on what the assessors will be looking for under each competency is provided below but the examples are just indicative – there will be many other valid examples you can choose.

Here are some tips you should bear in mind when compiling your application:

- For each competence statement, you will need to give clear examples of the role that **you** play or the contribution that **you** make to a particular task or activity.
- The examples must have sufficient depth that the assessor should be able to visualise what you did from your description. To achieve this, it might be useful to explain what you did, how you went about it and why you did it. Or consider using the STAR format to draft each competency, focusing on describing the **Situation, Task, Action and Result**.
- You may use the same task or activity more than once, but you should ensure you are clear on how it applies to the specific competency you are addressing.
- Some of your competency answers may seem fuller or easier to complete than others – this is normal and is illustrative of the wide spectrum of scientists and technicians who wish to become professionally registered.
- Most of the examples you provide should be fairly recent (within the last three years) but you can also draw on relevant experience further back in your career.
- If you are undecided which examples to use to illustrate the competency, don't forget to read the statement in tandem with the competency group heading. For example, answers to the D competencies should be written through the lens of your professional practice.
- You should aim to write approximately 300 words per competency. *

* Word Limit

Please aim to write around **300 words per competence** - too few words may not give the assessors enough detail to fully understand your strengths, while too many could make your key points less focused and harder for the assessors to follow.

Aim to be concise yet comprehensive, providing clear examples of how you meet the standard without unnecessary detail.

The guidance below is not specific to any Science Council Licensed Body. Each Licensed Body will have their own guidance to which applicants can refer. This document is intended to advise applicants using the Common Application Process or those exploring Science Council registration. It can be used by Licensed Bodies as a basis for their own guidance if required.

A: Application of knowledge and understanding

This competency grouping is looking at how you: Identify and use relevant scientific understanding, methods and skills to complete tasks and address well defined problems.

The A competencies are your opportunity to demonstrate your scientific knowledge and understanding and how you apply it in the workplace; what knowledge you have gained and how you translate it. There are 3 competencies within the A group which each have a different focus, try and think of ways you can evidence these competencies. They could include:

- Investigating new techniques
- Scientific reports
- Data analysis
- Devising, reviewing, selecting, adapting or improving a method
- Optimising a process or equipment using prior knowledge

This is about demonstrating that you understand the science behind what you do and why the method selected is appropriate for your task and how you interpret if the data output is high quality.

In this document the text in green is the competence statement itself. This will be documented in the application form and must be evidenced in your answer. The black text is guidance about what you might want to consider in your evidence but is not intended to be an exhaustive list.

A1: Apply knowledge of underlying concepts and principles associated with area of work.

This competency can be used to describe your routine scientific duties and responsibilities.

What we are looking for here is an example of how you apply your knowledge in your day-to-day work.

This means that you can explain the major reasons for undertaking your work. You may be, for example:

- working in a subject discipline in an applied science area. You should name and describe in technical detail how you use the main components, elements, materials, or designs involved in your work and why you are carrying it out.
- involved in carrying out a procedure or process. You should explain in technical detail why you are using that procedure or process and why it is relevant to that specific work.
- involved in using an experimental model or computer programme. You should explain why you are using that specific model or programme and describe in technical detail how you are using it and what the results might contribute to.

A2: Review and select appropriate scientific techniques, procedures and methods to undertake tasks.

This means that you can explain the underlying reasons for undertaking tasks and why a particular procedure, technique, or process is appropriate. You could describe a specific task or procedure and why you do it that way. What is the outcome using that method and why is this a good thing?

Your example may for instance describe:

- the principles behind the activity that you are undertaking and any associated technology.
- the reasons behind the choice of method used to carry out the activity and the criteria which form the basis of what you need to achieve the end result.

Your answer to this competency could be expanded on in the next competency – this competency is looking at the stated problem, A3 at how you solve it.

A3: Interpret and evaluate data and make sound judgements in relation to scientific concepts.

This means you can explain how you recognise when your activity appears to have been successfully carried out, or not, and what data, observations, or measurements you are evaluating mean, relating it to the underlying principles. You should also be able describe how you present information (e.g. a report, tables, meetings, presentations) in an appropriate manner to explain your judgement.

Examples may include where you have stated whether the activity has worked well or not:

- if successful, your example should describe the rationale/scientific basis behind this conclusion and why the data, observations, or measurements might mean this.
- if not, how you gave reasons why the activity 'failed' and what you proposed to do next time to address this. Your example should also include how you explained/demonstrated the results of the activity. This could include comparing it with results from a number of different activities.

You may find that your answer to A3 is an extension of A2 - demonstrating how you solved the problem described in A2.

B: Personal Responsibility

This competency grouping is looking at how you: Exercise personal responsibility in planning and implementing tasks according to prescribed protocols.

The B competencies are focussing on your personal responsibility, specifically in the workplace. There are 3 competencies which look at different aspects of professional behaviours. Different aspects of your work that you could include could be:

- Crisis management
- Laboratory or team organisation
- Maintaining quality outputs
- Health and Safety responsibilities
- Sustainable practices

B1: Work consistently and effectively with minimal supervision to appropriate standards and protocols and know when to escalate appropriately.

We are looking for an example of how you carry out work with minimal input from your supervisor for certain key tasks, experiments or procedures associated with your role and completing them to the appropriate standards and time frame (for example following Standard Operating Procedures). We are also looking for evidence that you know when to escalate appropriately and that you are able to make a judgement on when to escalate.

This references your personal responsibility, rather than your interpersonal skills, which is a focus in the next group.

This could be an example of independent laboratory work, or of a technical problem that occurred and how you dealt with it.

B2: Demonstrate how you apply safe working practices.

This means that you can explain the safe working practices applicable to your area of work and describe how you follow them.

Your examples could include:

- risk assessments associated with your work
- relevant Health and Safety regulations, e.g. Coshh, Noise, Manual Handling
- relevant Home Office Licences
- safety training courses you have successfully completed for your laboratory role
- any monitoring of safety within your work, e.g. for radioactivity, chemical exposure
- safety equipment and control

Other things to consider, if you come across these in your workplace:

- Sterilisation techniques
- Aseptic techniques
- Hazardous equipment use
- Lab recycling policies
- Safe disposal of chemicals

B3: Take responsibility for the quality of work and the impact on others.

This means that you can describe how you take responsibility for the quality of the work that you undertake and its impact on others within defined parameters and timelines- including if an activity does not work in the way that you expect.

For instance, your example could include how you:

- ensure that an activity is carried out to the agreed standard or protocol (e.g. good laboratory/workshop/design practice) and your example should provide evidence for this.
- understand when something might not have been carried out quite correctly and what impact it could have on the quality and reliability of the outcome.
- point out 'good experimental data' and 'bad experimental data' and the reasons why the bad data might have occurred
- have to follow different levels of regulatory frameworks e.g. company/government you should include the differences impact on your practice. You could show that you understand your role in maintaining quality outputs and safe processes, explaining the impact on yourself and others if this is not achieved

C: Interpersonal Skills

This competency grouping is looking at how you: Demonstrate effective communication and interpersonal skills.

The C competencies are looking for evidence of your interpersonal and communication skills, and that they are appropriate and effective. There is scope to critically reflect on these skills. While most of your examples will be from your workplace, you may wish to use more wider evidence if it fits better. There may be slight overlap between each area so please ensure you have read each of the competencies in this group before starting. There are 3 competencies to address here. Some examples to think about could include:

- Leading meetings
- Giving presentations
- Work with regulators
- Line management

C1: Demonstrate effective and appropriate communication skills.

What we are looking for here is an example that you are an effective communicator. The example can be through appropriate oral, written or electronic means.

Your examples should for instance include a description and details of:

- how you discuss and agree objectives with your supervisor
- how you discuss and agree objectives in team meetings
- how you describe or present your work or other aspects of lab, workshop, or section work (e.g. safety updates, method updates) to your supervisor or colleagues
- how you prepare written reports on your work
- how you train students or staff in the use of equipment or processes
- how you demonstrate the processes or systems
- the part that you play in induction of new staff or students

Think about the different groups you communicate with and how you do this – the language you use in formal reports is different from that used with other people (eg suppliers/trainees).

C2: Demonstrate effective interpersonal and behavioural skills.

This means that you can demonstrate skills that you use to interact with colleagues in a constructive way within the work setting. In these situations, it may be appropriate to discuss these with your supervisor, as an external perspective is often useful.

Behavioural skills can include being agreeable, non-threatening, reliable.

Your example should also describe how you ensure your method of interaction is appropriate for:

- interacting with researchers, technicians or other members of staff
- interacting with students or trainees face to face
- interacting with external colleagues (such as suppliers, couriers etc)

You could consider inclusion and how you demonstrate this in this competency.

C3: Demonstrate an ability to work effectively with others.

There is potential for overlap in your answers on the C competencies. C3 should be where you focus on team working.

Teamwork can be in a large team or on a 1:1 basis. Your example should illustrate how you worked collectively with others, what your specific role was within the team, and what the outcome was.

For instance, this might include:

- how you work with researchers, technicians or other members of staff
- how you work with students or trainees face to face
- how you work as part of a team, working group, or committee
- the logistics and challenges of working in teams
- what do you do when working relationships are poor

D: Professional Practice

This competency grouping is looking at how you: Apply appropriate theoretical and practical methods according to protocol.

The D competencies focus on your professional practice. They are distinct from the other competencies although there may seem to be overlap on first viewing (especially with the A group). Some examples to consider including could be:

- Trouble shooting a method
- Reducing hazards and waste
- Improving processes after researching alternatives

D1: Recognise problems and apply appropriate scientific methods to identify causes and achieve solutions.

What we are looking for here is an example of where you have problem solved or attempted to problem solve.

It may help to break this competency down into 2 distinct stages – recognising problems then working out how to solve them. For example, discussing the pros and cons of the various techniques or procedures available to you in a particular task, either something routine or something ad hoc.

D2: Demonstrate how you use resources effectively.

This means that you can give examples of work that you have undertaken where the method, procedure, programme, equipment, or materials used was chosen as the best (or most relevant) to use. Your example should describe how you planned and organised these to complete the task, and how you reviewed choices – why the one you selected was the best compared to others that are available.

This might include:

- cost effectiveness
- time taken
- IT considerations
- machine tool time

D3: Participate in continuous process improvement.

What we are looking for is an example of how you have improved the efficiency of a way of working, for example this could include maintenance of stock levels, improved methods, new ways to increase throughput, health and safety or ways to increase cost-effectiveness.

Examples might be your role in:

- looking for cheaper resources
- buying equipment or consumables
- reviewing procedures
- taking part in staff reviews

This competency is not about your personal improvement but about what you've done to improve your working environment or the outputs of your employer. This could focus on lessons that you have learned from practice, and where colleagues have, at the completion of projects, undertaken review and then taken forward any improvements.

Think about how you personally take responsibility for, contribute to or participate in process improvement.

E: Professional Standards

This competency grouping is looking at how you: Demonstrate a personal commitment to professional standards

This section has a different focus from the other areas and should be looked at through the lens of 'professional standards' – not just within the workplace but in your wider interactions. Examples could include:

- Your Professional Body's Code of Conduct
- Codes of Conduct for your employers (e.g. Civil Service Code)
- Your commitment to EDI initiatives
- Your ethical principles

E1: Comply with relevant codes of conduct and practice.

This means that you can give examples of how you comply with a code of conduct (e.g. of your professional Body) or how you work within all relevant legislative, regulatory and local requirements.

This means that you can give examples of how you, for instance:

- comply with your professional body's code of conduct
- manage your work within all relevant legislative, regulatory and local requirements, frameworks such as Health and Safety Legislation, Home Office Regulations, Good Laboratory Practice (GLP), local Codes of Practice, etc.

Assessors will be looking for your understanding of ethical practice and compliance with codes of conduct is only one part of ethical practice. This could include how you see the need for personal accountability in your practice.

E2: Maintain and enhance competence in own area of practice through professional development activity.

This means that you can give an example of an activity you have undertaken to enhance your competence in your own area of practice i.e. Continuing Professional Development (CPD) and reflect on its impact on themselves and others. We are not looking for a list of courses here but evidence of how your CPD benefits your practice and benefits others. Your CPD may

include work-based learning, professional activity, formal/educational, self-directed learning.

You should ensure that the CPD you include is planned, executed and then reviewed after completion to gauge the impact of your CPD, rather than focusing on lists of activities. Consider how the outputs of your CPD may feed forward into your future personal and professional development.

Once you have gained registration you will need to commit to maintaining your Continuing Professional Development as a scientist and comply with Science Council CPD standards.

