CSci
Chartered
Scientist

Science Council

Assessing a Chartered Scientist Competence Report

Advice to assessors

Applicants for CSci will need to demonstrate competence across five areas. Guidance on what assessors should be looking for under each competency is provided below but the examples are just indicative – there will be many other valid examples that could be used by applicants.

Here are some tips to bear in mind when assessing the application:

- The examples must have sufficient depth that you should be able to visualise what the applicant did from their description. If you can't visualise what they did, the answer is probably lacking this depth.
- Their answers should be recent, although they can also draw on relevant experience from further back in their career.
- They can use and refer to an example or activity more than once but must ensure they make it clear how and why it applies to the specific competency.
- Some of the competency answers may seem fuller or easier to assess than others – this is normal and is illustrative of the wide spectrum of scientists who wish to become professionally registered.
- They can use examples from broad professional experiences, but they must be able to show how they have applied the skills developed in their job role.
- We expect that in a typical application around 300 words will be sufficient for each competency.

The guidance below is specific to applications you assess for the Science Council as part of the Common Application Process (CAP). Each Licensed Body will have their own guidance to which assessors should refer if assessing direct for a Licensed Body. There will be much overlap and this document can be used by Licensed Bodies as a basis for their own guidance if required, but do check if they have any additional requirements.

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A: Application of knowledge and understanding

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

The A competencies are the applicant's opportunity to demonstrate their scientific knowledge and understanding and how they apply them in the workplace; what knowledge they have gained and how they translate it. There are 3 competencies within the A group which each have a different focus. Examples used 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

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

A1: Demonstrate how you use knowledge, experience, skills and broader scientific understanding to optimise the application of existing and emerging science and technology.

They should provide sufficient detail here to show their deep understanding of their specialist scientific subject and how they have applied it. Further to this, include any examples of where their broader scientific understanding is applied to their area of practice. Examples could include but are not limited to:

- Writing and presenting internal papers, reports or standards;
- Conducting appropriate research to facilitate design and development of scientific processes;
- Writing primary journal articles and patents.

A2: Exercise sound judgement and understand principles of uncertainty in complex and unpredictable situations.

This competency is asking them to identify and be aware of the limit of their own knowledge and professional competence, to demonstrate an ability to manage their own strengths and weaknesses and to recognise the level of risk attached to their actions. Examples could include but are not limited to:

- When they have reacted and dealt with an unexpected outcome;
- When they have approached a piece of work or project flexibly and in a novel or different way, or reacted to an unexpected outcome

A3: Demonstrate critical evaluation of relevant scientific information and concepts to propose solutions to problems.

They should think of this competency in terms of selecting the best methodology, the subsequent data analysis, evaluations and conclusions they draw and how they overcome any barriers or issues.

Have they got the skills to critically evaluate information scientifically that is delivered by their technologies?

Examples could include but are not limited to:

- Engaging in experimental design and testing;
- Reviewing relevant literature, databases, manuals or designs;
- Statistical analysis and numerical modelling.

You may find that their answer to A3 is an extension of A2 - demonstrating how they solved the problem described in A2, especially if they don't work in a laboratory setting.

B: Personal Responsibility

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

The B competencies are focussing on their personal responsibility, specifically in the scientific workplace. There are 4 competencies which look at different aspects. Different areas of their work that they could include are:

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

B1: Work autonomously and take responsibility for the work of self and others.

It is important for this competency to ensure they describe their contribution, responsibility and impact on a certain task or project and make it clear what they personally have achieved i.e. "I" not "we". In formulating their answers and giving relevant examples, they should consider the following:

- They will be expected to undertake their work without day-to-day supervision and so they should demonstrate that they are able to achieve this;
- They should demonstrate their understanding of when they may need to seek guidance from others and how they would obtain this guidance;
- If they are responsible for managing the work of others, they should clearly describe how they discharge those responsibilities.

B2: Promote, implement and take responsibility for robust policies and protocols relating to health, safety and sustainability.

They should demonstrate that they understand the policies and protocols related to health, safety and sustainability that apply to the work they are undertaking, giving examples where they have implemented and promoted them and describe any responsibilities that they have related to this. In formulating their answers, they should consider the following:

- Demonstrate that they know where these policies and protocols are documented, and that they can apply them in their practice;
- How their work contributes to the update and development of their departments/organisations policies and procedures;
- How they "promote" the awareness and application of these policies and protocols with others, especially peers and more junior colleagues.

Sustainability doesn't only focus on environmental impacts, although this is an important area to address if they do so in their practice. Other aspects that they could use include:

- sustainability of the workforce and succession planning
- financial sustainability
- sustainability in education and training

B3: Promote and ensure compliance with all relevant regulatory requirements and quality standards.

They should demonstrate that they understand which regulatory requirements and quality standards apply to their area of work including data integrity and privacy. In formulating their answers and giving examples, they should consider the following:

- Describe what they do to ensure that these requirements and standards are being followed for those activities for which they are responsible;
- Describe how they "promote" the awareness of regulatory requirements and quality standards amongst peers and more junior colleagues;
- Describe how they safely store and handle data in line with national and international data protection and cyber security regulations.
- If they have to follow different levels of regulatory frameworks e.g. company/government, they should include how the differences impact on your practice.

This is a different focus to Codes of Conduct which are covered in a later competency – this is looking at how they work within these standards and requirements in the workplace.

B4: Oversee the implementation of solutions and demonstrate an understanding of potential and actual impacts of your work on your organisation, on the profession and on the wider community.

They should demonstrate an understanding of the potential and actual impacts of their work on their organisation, on the profession, on the general public and on the physical environment. Examples could include but are not limited to:

- Indicating that they are aware of the sensitivity of their work and show how this understanding translates into the ways in which they carry out their work;
- Showing an awareness of how their profession is portrayed and viewed by the public at large, and how they take responsibility for recognising this in the work they do;
- Describing how they seek to avoid reputational damage related to the work they carry out;
- Explaining how they set a good example to others in the way they discharge the responsibilities related to the work they undertake and the benefits to the organisation.

This is quite a complicated statement with two distinct parts, so applicants should try to address all aspects of it including the impacts of their work – lots of applicants often miss noting the impact on the wider community. This could include an awareness of the impact of their work in your own department, wider organisation or the wider industry.

C: Interpersonal Skills

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

The C competencies are looking for evidence of their interpersonal and communication skills. While most of the examples will be from their workplace, they may use wider evidence if it fits better. There are 3 competencies to address here, examples could include:

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

C1: Demonstrate the ability to communicate effectively with specialist and non-specialist audiences.

A non-specialist audience is anyone working outside of their particular area of expertise, so it would not necessarily be a non-scientist. Their example(s) should indicate how they have communicated in a way that is effective to each type of audience. In formulating their answers, they should consider the following:

- Not just the content of the message but also the mode or style of delivery that is adapted according to the audience;
- The feedback loop to gauge the understanding and improve future communications.

C2: Demonstrate effective leadership through the ability to guide, influence, inspire and empathise with others.

This competence is about understanding their leadership skills and is not reserved for those in management roles, it is applicable to all. Examples could include but are not limited to:

- Experiences of mentoring or coaching they have had; they should consider how effective this was and the overall impact;
- Considering when they have managed change within your organisation or overseen the implementation of any new processes; they should consider how effective this was and the overall impact.

They could consider inclusion and how they demonstrate this in this competency.

C3: Demonstrate the ability to mediate, develop and maintain positive working relationships.

They should describe or define the "working relationship" and provide at least one example which focuses on their handling of a challenging interpersonal situation and demonstrates their ability to mediate and achieve a positive outcome. They should consider how through their approach they have changed or modified the behaviour or attitudes of others to positive effect. Examples could include but are not limited to:

- How they have managed the merger or integration of different teams;
- Managing working relationships across different departments or organisations;
- Interactions with committees, working groups or other professional body activities;
- How they have managed and resolved a difficult relationship situation between members of a team for which they are responsible.

D: Professional Practice

This competency grouping is looking at how they: Apply appropriate theoretical and practical methods.

The D competencies focus on their 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 could be:

- Trouble shooting a method
- Scoping and then managing projects
- Reducing hazards and waste

D1: Demonstrate how you scope and plan and manage projects.

Applicants should describe an example where they have developed a project scope with clearly defined boundaries and project plans. Any problem-solving techniques used should be highlighted along with potential benefits of the project to the business. They should make it clear the level of autonomy they had while working on the project, especially when the project is large covering multiple areas and a significant time span. They should show how they contributed to determining the resulting courses of action. Examples could include:

- Leading an operational project utilising resources across several disciplines;
- A change management project aligning processes across sites;
- An industry-wide project establishing guidance on technical standards and requirements.

They may not manage large scale projects but should be able to pick some work to focus on in this section, looking at how they scope the tasks, and how they break them into subtasks.

D1 and D2 could be written in tandem, focusing on the same project – this competency is focussing on the planning and D2 on the delivery/outcomes.

D2: Demonstrate the achievement of desired outcomes with the effective management of resources and risks.

Using projects with which they have been involved as examples, they should describe their roles and responsibilities in managing the activities to achieve the desired outcomes. Examples could include but are not limited to:

- Identifying the resources (people and/or money) needed to undertake the activities
- Monitoring and surveillance of the progress of the activities;
- Identification, evaluation and implementation of changes that may be needed to ensure the activities are successfully completed;
- Identification and management of risks that could impact on the successful completion of the activities.

D1 and D2 could be written in tandem, focusing on the same project – this competency is focussing on the delivery/outcomes of the project whereas D1 was focussing on the planning phase.

Getting a desired outcome or an effective solution at the end of it is completely different to managing a project or managing a team so this should have a different focus to the earlier C competencies.

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D3: Take responsibility for continuous improvement within a scientific or technical environment.

Their examples should indicate what actions they take to make improvements to their organisation as a whole. This could be through encouraging the continuous development of junior staff or through improvements to processes within the organisation.

This competency is not about their personal improvement (process improvement rather than personal), but about what they've done to improve their working environment or the company they work for. This could focus on lessons they have learned from practice, and where hopefully, people have at the completion of projects undertaken review and then taken forward any improvements. Examples could include but are not limited to:

- Evaluation of the performance of specialists' methods and tools used;
- Development of recommendations for future enhancements or modifications to procedures or working practices in order to achieve performance improvements
- Description of examples where their actions have led to performance improvement by themselves or others;
- Identification of lessons learned from activities undertaken by them or by others for whom they are responsible, such as what went well, went badly or was lacking.

E: Professional Standards

This competency grouping is looking at how they: 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 their wider interactions. Examples could include:

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

E1: Comply with and promote relevant codes of conduct and practice.

They should provide comprehensive examples of how they have applied and promoted the codes of conduct under which they practice and the outcomes of this.

Examples they may wish to include but are not limited to; equality, diversity and inclusion, reliability and integrity and ethical practices.

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You should look for their understanding of ethical practice as compliance with codes of conduct is only one part of ethical practice. This could include how they see the need for personal accountability in your practice.

E2: Demonstrate a commitment to professional development through continuing advancement of your own knowledge, understanding and competence.

Their answer should provide specific examples of what they have already done in terms of continuing professional development (CPD) and their plans for the coming year. In their examples they must describe how their engagement in CPD has benefited their practice and the users of their work and reflect on its impact.

Examples can be taken from any of the five categories of activity (work-based learning, professional activity, formal/educational, self-directed learning and other).

e.g.

- Application of knowledge acquired on an external course that has benefitted the business – how they acquired the knowledge of a new technology and how they planned, implemented and reviewed its success in their organisation;
- Their work to promote careers in the STEM area including the design of materials and reflection on success.

We are not looking for a list of courses here but evidence of how their CPD benefits their practice and benefits others.

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