**How to write examples in competency based application forms**

Giving written evidence of professional competencies can be challenging. This resource is designed to help you understand how to structure a competency based example in an application for a professional award such as RSciTech, RSci, CSci, CSciTeach or CEnv, and to give an indication of the level of detail expected.

In general, we encourage the use of the SHARE format when writing examples in competency based applications. Each letter in the word 'SHARE' represents a different component of a good competency example. Using this model helps you to make sure that you cover all the key information that the assessors will want to see.

**S**ituation: describe the situation, set the scene
**H**indrance: describe the problem or challenge that you needed to overcome, or the task you needed to complete
**A**ction: describe the action that YOU took to overcome the problem
**R**esult: show how the action that you took was the correct one, and describe the outcome
**E**valuation: how the situation turned out. You could even contrast it with what would have happened had you taken no action or a different course of action

You may find that you don't need to go through each part of the SHARE format in order. You might also combine some components within your narrative, eg the **result and evaluation**, or the **situation and the hindrance**. This isn't a problem, but it's important that each component part is there.

The key thing is that the assessors need to see **specific examples** from your work and understand **your personal level of responsibility and impact** in your workplace. As a rough guide, you should aim for **somewhere between 250 and 500 words per competency example**. Examples should ideally be from your **current job**, and **no more than two years old**. However, please check your specific professional award regarding time limits.

In the following tables, we have provided five example answers that could have been given in an application for a professional award. We've described how they might have been strengthened to give assessors an accurate impression of how the applicant is working at the required competency level. This increases the chances of the application being successful in the first instance.

If you have any questions about your application, please contact registers@rsc.org (for RSciTech/RSci), csci@rsc.org, csciteach@rsc.org or cenv@rsc.org.

**Competency A1 from RSciTech**
Apply knowledge of underlying concepts and principles associated with area of work
*eg where you have taken theoretical knowledge learnt at college and applied to a work situation*

| **Original example** | **Commentary on what could be improved** | **Improved version of the example, with changes highlighted**<br>SHARE sections shown for clarity, but would not be part of the submitted example |
|---|---|---|
| One of the required practicals in GCSE and A-level Biology is a microbiology experiment testing bacterial resistance to antibacterial agents<br><br>My responsibility is to prepare a class set of bacterial broth and nutrient agar plates or the plates already inoculated with bacteria for a lesson<br><br>I use aseptic techniques from college to produce the above | • SITUATION is not described; it is helpful to introduce the situation, role and the area of work, in relation to the wording of the competency<br><br>• Application of knowledge is not described, but that is what this competency is about. Details required: what knowledge is being applied, where was this knowledge gained, and what situation is it being applied to?<br><br>• ACTION (using aseptic techniques) is very short. It is helpful to have specific detail about what was done – how was knowledge applied to the situation?<br><br>• There is no RESULT or EVALUATION provided: how has using aseptic technique benefited those involved? What is the impact? | [SITUATION] In my role, I am required to prepare all equipment and reagents for class practicals, which I apply knowledge that I have gained from college and subsequent training courses to do.<br><br>[HINDRANCE] One of the required practicals in GCSE and A-level Biology is a microbiology experiment testing bacterial resistance to antibacterial agents. My responsibility is to prepare a class set of bacterial broth and nutrient agar plates or the plates already inoculated with bacteria for a lesson.<br><br>[ACTION] I use aseptic techniques to produce the above, applying the knowledge that I gained at college while completing my apprenticeship. I shut the door and windows to avoid draughts and I disinfect the working space with VirKon and a lit Bunsen burner. I then prepare sterile nutrient agar by autoclaving it in a pressure cooker. After cooling it to 55°C, I pour it onto sterile petri dishes in the proximity of a roaring Bunsen flame to avoid airborne bacterial contamination. I then prepare sterile nutrient broth by autoclaving and using aseptic techniques such as flaming the neck of the culture while transferring bacteria to the broth with a sterile inoculating loop.<br><br>[RESULT + EVALUATION] By using aseptic techniques, I minimise the risk of developing unwanted bacteria culture on materials supplied to students; students have appropriate apparatus and materials to gain the skills required to investigate the effect of antiseptics on bacterial growth, and teachers are able to move smoothly through the curriculum without delays caused by inappropriately prepared equipment or reagents. |

**Competency B1 from RSci**
Work autonomously while recognising limits of scope of practice
*eg where you work independently to follow and/or improve existing methods and procedures*

| **Original example** | **Commentary on what could be improved** | **Improved version of the example, with changes highlighted**<br>SHARE sections shown for clarity, but would not be part of the submitted example |
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| I am part of a team that visits UK airports to evaluate ETD operators. As part of the work, training surfaces contaminated with known quantities of explosives are produced.<br><br>These training surfaces are then swabbed by the operators, analysed and the results are recorded.<br><br>Training surfaces must be reproducible and consistent in order to determine the swabbing efficiency of the operator.<br><br>To produce these training surfaces a validated SOP must be adhered to.<br><br>By following this procedure both my team and I are confident in the quality of the training surfaces we provide. | • Examples should be written in the first person, not in third person like formal scientific writing. This helps assessors to understand the personal contribution that an applicant has made, and the level of responsibility and autonomy that they are working with<br><br>• Acronyms, eg ETD, need to be expanded when used for the first time<br><br>• This example would benefit from some more detail regarding exactly what the applicant carries out to produce training surfaces (the ACTION), and how they are made. The assessors are professional scientists, but may have a different background so the technical aspects should be explained to introduce the principles<br><br>• All aspects of the competency should be demonstrated. Here, there is no discussion of the limit of scope of practice. Some thought is required about how this example shows both working autonomously and where additional support has been sought<br><br>• Impact of the work on immediate colleagues has been discussed, but the impact on the users of the work could be discussed (the ETD operators) | [SITUTION] I am part of a team that visits UK airports to evaluate explosives trace detection systems (ETDs) operators. As part of the work I produce training surfaces contaminated with known quantities of explosives. These training surfaces are then swabbed by the operators, analysed and the results are recorded.<br><br>[HINDRANCE] Training surfaces must be reproducible and consistent in order to determine the swabbing efficiency of the operator.<br><br>[ACTION] To produce these training surfaces I must strictly adhere to a validated standard operating procedure (SOP). Firstly, I hand clean the test surfaces following a thorough cleaning procedure. The test surfaces are allowed to dry in a clean, non-contaminated area of the trace lab. I use an analytical standard to produce an explosives solution of the correct concentration. To confirm its concentration I analyse the solution by liquid chromatography-mass spectrometry (LC-MS) using a validated method. I check both system suitability and results criteria are acceptable prior to using the solution. If any of these checks fail or are not acceptable, I must then escalate the results to a senior analyst since this is beyond the limit of scope of my practice. The senior analyst will carry out further investigations and maintenance as required and then, when the instrument is confirmed as fit for use, I can continue working autonomously.<br><br>I spike the solution onto the clean, dry surfaces using a verified glass airtight syringe. The training surfaces are allowed to dry and I package the surfaces, labelling them appropriately.<br><br>[RESULT + EVALUATION] By following this procedure both my team and I are confident in the quality of the training surfaces we provide. By controlling the production of these surfaces we can guarantee that the data we obtain from the ETD operators are reliable, and that results are due to operator performance or the ETD itself. |

**Competency 3b from CSciTeach**
Collaborating with colleagues and the wider professional communities to improve the quality and effectiveness of science education
*eg sharing and jointly evaluating teaching practices and methods*

| **Original example** | **Commentary on what could be improved** | **Improved version of the example, with changes highlighted**<br>SHARE sections shown for clarity, but would not be part of the submitted example |
|---|---|---|
| We were noticing a drop in student engagement and interest in STEM subjects at my school. We were beginning to worry that this could facilitate a drop in uptake of these subjects at a post-GCSE level. Our previous methods to try and encourage student involvement seemed to be having minimal effect.<br><br>To help solve this issue, we reached out to other teachers that we have met and asked them for their experiences and guidance.<br><br>Through these discussions we were provided with a range of techniques/activities that they had previously used. We decided on expanding the use of techniques that focus on peer-to-peer learning. The aim was to encourage our students to strengthen their understanding of a subject and cooperatively work towards the answer.<br><br>We immediately began noticing an improvement in our students' understanding and interest in STEM subjects. | • Examples should be written in the first person. This helps assessors to understand the personal contribution that an applicant has made, and the level of responsibility and autonomy that they are working with<br><br>• It would be helpful to know more about the SITUATION<br><br>• The ACTION that was taken needs to be described clearly and in detail. How were the connections to other teachers made – the assessors need to clearly understand how collaboration has been possible<br><br>• More detail on the RESULT would be helpful. A change is noted, but what caused this change? What, specifically, was different? What techniques were used?<br><br>• In the EVALUATION it would be good to have discussion of how the described activities will develop in the future | [SITUATION] I rely on a variety of sources to help maintain my ability to provide an effective and productive learning environment for my students. This involves relying on a range of conventional educational literature as well as more modern formats eg the *Education in Chemistry* Twitter account. However, the most important source of information I have found is the discussions I have with my colleagues as well as those I encounter at conferences.<br><br>[HINDRANCE] My colleagues and I were noticing a drop in student engagement and interest in STEM subjects at my school. We were beginning to worry that this could facilitate a drop in uptake of these subjects at a post-GCSE level. Our previous methods to try and encourage student involvement seemed to be having minimal effect.<br><br>[ACTION] To help solve this issue, I reached out to other teachers that I had met through attending a range of education conferences (HEA STEM, MICER) as well through my work as part of a STEM-Teacher network. I asked them for their experiences and if they could provide any guidance on how they responded when encountering this problem in their classroom. Through these discussions I was provided with a range of techniques/activities that they had previously used. I then shared all this advice with my colleagues so that we could collectively work together to implement any changes. We decided on expanding the use of techniques that focus on peer-to-peer learning. These specifically included the use of open-ended questions to encourage students to explore a subject in more detail, and more small group discussion sessions during the lessons. The aim was to encourage our students to strengthen their understanding of a subject and cooperatively work towards the answer.<br><br>[RESULT] I immediately began noticing an improvement in our students' understanding and interest in STEM subjects. The specific combination of open-ended questions and small discussion groups allowed the students to organically develop their interest. This was reflected in an increased number of students openly talking about taking STEM subjects beyond GCSE level.<br><br>[EVALUATION] I plan to expand peer-to-peer learning and embed it into more of my lesson plans. I aim to use it during difficult topics to maximise its benefits for my students. |

**Competency D2 from CEnv**

Take responsibility for personal development and work towards and secure change and improvements for a sustainable future
*eg demonstrating that you recognise the value of CPD, have a strong desire to learn and value and actively pursue professional development*

| **Original example** | **Commentary on what could be improved** | **Improved version of the example, with changes highlighted**<br>SHARE sections shown for clarity, but would not be part of the submitted example |
|---|---|---|
| My role as an environmental fate modeller and risk assessor means that I interact with a wide range of clients; from small, family-operated businesses to large national and international companies.<br><br>To ensure that my knowledge is up to date, my company puts me through a great deal of internal training to develop my professional skills as required. Examples of this training include Data Gap Analysis and Technical Equivalence training.<br><br>As well as my company's internal training courses, I actively seek opportunities outside of this to develop myself. I have enrolled in, and paid for, five, five-week-long online courses to further my knowledge and CPD. These courses provide me with a broader and deeper view of environmental sustainability issues being faced around the globe. | • Examples should be written in the first person. This helps assessors to understand the personal contribution that an applicant has made, and the level of responsibility and autonomy that they are working with<br><br>• What is important about these specific training courses? What is their impact?<br><br>• It is helpful to provide specific detail of the training courses attended. What was special about the external training course? The assessors need to know why training courses are relevant and what their impact would be.<br><br>• What is the impact of the described activities on personal development? | [SITUATION] My role as an environmental fate modeller and risk assessor means that I interact with a wide range of clients; from small, family-operated businesses to large national and international companies.<br><br>[HINDRANCE] So that I am able to provide the highest quality and most environmentally conscious information to my clients, I need to ensure that my knowledge of environmental issues as well statistical analysis and model development skills are up-to-date.<br><br>[ACTION] Firstly, I do this by attending a great deal of internal training to develop the professional skills required for the work I undertake as a consultant. Examples of this training include Data Gap Analysis and Technical Equivalence training. I use the former to determine what information, data, tests results, or modelling outputs, etc, are missing or lacking as it pertains to thresholds set by national authorities for various regulatory submissions. I use the latter to help me compare and contrast product submissions to allow for alternate sources of products in a competitive free market. As well as my company's internal training courses, I actively seek opportunities outside of this to develop myself. Over the last three years, I have enrolled in, and paid for, five, five-week-long online courses to further my knowledge and CPD. I have completed: (i) Going Places with Spatial Analysis, by ESRI; (ii) Cartography, by ESRI; (iii) Ecosystem Services: a Method for Sustainable Development, by the University of Geneva; (iv) Climate Change and Water in Mountains: A Global Concern, by the University of Geneva; and (v) Ocean Science in Action: Addressing Marine Ecosystems and Food Security in the Western Indian Ocean, by the National Oceanography Centre (UK). These courses provide me with a broader and deeper view of environmental sustainability issues being faced around the globe.<br><br>[RESULT + EVALUATION] By attending these courses I am able to ensure that I am constantly producing the highest quality work for my clients. This ultimately ensures they are well equipped and prepared to carry out their projects in the most environmentally secure way and will hopefully carry forward this best practice in their future endeavours. |

**Competency E1 from CSci**
Comply with and promote relevant codes of conduct and practice
*eg how you have applied and promoted the codes of conduct under which you practice and the outcome*

| **Original example** | **Commentary on what could be improved** | **Improved version of the example, with changes highlighted**<br>SHARE sections shown for clarity, but would not be part of the submitted example |
|---|---|---|
| I have committed to following the code of conduct and to uphold the highest standards when undertaking my professional activities.<br><br>To ensure that I meet these requirements I take the lead for all laboratory related H&S aspects. I am proactive in developing my skills in H&S.<br><br>I regularly liaise with all staff to ensure that they understand all associated risk(s) and follow the appropriate laboratory practices described in SOPs and risk assessments. This includes the Head of Operations (who I directly report to) as well as new students/ graduates who join the team.<br><br>My commitment to ensuring compliance with the RSC code of conduct as well as my proactive mentality, has enabled me to develop and advance my H&S skills and knowledge. | • It is not clear which code of conduct is described – it needs to be specifically defined<br><br>• It would be helpful to know if a specific part of the code is followed e.g. anything that relates directly to the role. If so, why is that section of the code particularly important?<br><br>• In the ACTION section, specific details about a proactive approach is needed<br><br>• What is the impact of adherence to this code? How does following this code help colleagues and their work? | [SITUATION] As a member of the RSC, I have committed to following the code of conduct and to uphold the highest standards when undertaking my professional activities.<br><br>[SITUATION + HINDRANCE] While I follow the whole code, my role as Head Laboratory Technician means I have to pay particular attention to 'Environment, Health and safety and other legislation'. This states that 'Members must be aware of the general principles of law relating to health and safety and the environment, negligence, discrimination, data protection, and any other law relating to their field of scientific work'. This falls within my professional responsibilities as the Head of Health and Safety (H&S) at my laboratory.<br><br>[ACTION] To ensure that I meet these requirements I take the lead for all laboratory related H&S aspects, from ensuring COSHH compliance for all laboratory occupants, to preparing risk assessments and standard operating procedures (SOP). I am proactive in developing my skills in H&S and, as such, have attended a number of internal H&S courses and obtained the National Examination Board in Occupational Safety and Health (NEBOSH) Certificate in Occupational Health and Safety. I regularly liaise with all staff to ensure that they understand all associated risk(s) and follow the appropriate laboratory practices described in SOPs and risk assessments. This includes the Head of Operations (who I directly report to) as well as new students/graduates who join the team.<br><br>[RESULT + EVALUATION] My commitment to ensuring compliance to the RSC code of conduct as well as my proactive mentality, has enabled me to develop and advance my H&S skills and knowledge, receiving a NEBOSH certificate along the way. This benefits my colleagues and me as I am able to ensure that my team has a safe working environment. This means they are able to carry out their roles effectively, comfortably and responsibly. |