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## Overview

This standard covers the competences you need to demonstrate how to improve the quality and reliability of scientific or technical activities in the workplace in accordance with approved procedures and practices.

You will be required to demonstrate that you can make recommendations for improvements to working practices or the work area, which are consistent with the objectives of your team and your organisation in accordance with the relevant workplace procedures.

The activity is likely to be undertaken by someone in a science related work setting, including individuals working in hospitals, scientific laboratories, schools and universities.

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## Performance criteria

- You must be able to:*
- P1 ensure that your work is carried out in accordance with workplace procedures
  - P2 use safe practices and the appropriate personal protection equipment (PPE) when performing scientific or technical activities
  - P3 monitor activities at intervals in order to identify potential improvements in working practices or the work area
  - P4 obtain views, when appropriate, of relevant people on potential improvements to the working practices or the work area
  - P5 agree plans for improvements and timescales with relevant people in sufficient detail to allow effective planning
  - P6 identify any considerations which may affect the implementation of potential improvements
  - P7 make recommendations for improvements to working practices or the work area which are consistent with the objectives of your team and your organisation
  - P8 monitor the implementation of improvements to identify any problems and take appropriate action
  - P9 evaluate the effectiveness of the improvement
  - P10 work safely at all times, complying with health and safety, environmental and other relevant regulations and guidelines
  - P11 communicate the required information about the work done, in accordance with departmental and organisational procedures

## Knowledge and understanding

- You need to know and understand:*
- K1 the health and safety requirements of the area in which you are carrying out the scientific or technical activities
  - K2 the implications of not taking account of legislation, regulations, standards and guidelines when conducting scientific or technical activities
  - K3 the scientific or technical techniques and processes you must use correctly in the workplace.
  - K4 the importance of wearing protective clothing, gloves and eye protection for scientific or technical activities
  - K5 the importance of correct identification, and any unique workplace coding system
  - K6 the organisational requirements for maintaining the security of the workplace
  - K7 the lines of communication and responsibilities in your department, and the links with the rest of the organisation
  - K8 the limits of your own authority and to whom you should report if you have problems that you cannot resolve
  - K9 the organisational procedures for determining when and how quality assurance activities should be undertaken
  - K10 the processes and specifications for the activity being quality assured
  - K11 how to obtain the quality criteria that could be used for the different types of scientific or technical processes
  - K12 the current quality assurance methods that are in use
  - K13 the people who should be involved in the quality assurance process
  - K14 the impact that quality assurance methods have on the organisation
  - K15 the people who require information on quality assurance, and the procedures for informing them
  - K16 how to make recommendations for improvement
  - K17 how to ensure that the recommendations are consistent with objectives of your team and/or your workplace
  - K18 how to communicate suggestions for change and improvements
  - K19 what methods can be used to implement the improvements
  - K20 how to plan and agree appropriate timescales for improvements
  - K21 how to identify problems and the actions that are appropriate to take in the event of them
  - K22 how to evaluate and monitor improvements
  - K23 how to ensure that quality improvement recommendations are followed up
  - K24 the importance of making sure that all information used is accurate
  - K25 the format and procedure for maintaining quality assurance records
  - K26 the document control and reporting procedures that should be used
  - K27 the reasons why effective communication is important, and the methods used for communicating effectively

## Scope/range

1. discuss quality improvements with one of the following people:
  - 1.1 supervisor
  - 1.2 team leader
  - 1.3 health and safety officer
  - 1.4 manager
  - 1.5 head of department
  - 1.6 teacher or trainer
  
2. consider all of the following for potential quality improvements:
  - 2.1 adherence to COSHH and other relevant safety regulations
  - 2.2 changes required to quality control specifications and related documents
  - 2.3 estimated costs v benefits, implementation timescales and other inputs required
  - 2.4 the approval needed to implement the identified quality improvement activities
  - 2.5 all the personnel and workplace processes that will be effected by quality improvement activities
  
3. identify potential quality improvements related to two of the following scientific or technical activities:
  - 3.1 biological equipment and/or instruments
  - 3.2 chemical equipment and/or instruments
  - 3.3 electronic equipment and/or instruments
  - 3.4 weighing and measuring equipment and/or instruments
  - 3.5 information technology equipment
  - 3.6 engineering machines, equipment and/or instruments
  - 3.7 other technical equipment or instruments
  
4. record and communicate details of work done, to the appropriate people, using:
  - 4.1 verbal report plus one method from the following:
  - 4.2 written or typed report
  - 4.3 computer-based record
  - 4.4 specific workplace documentation
  - 4.5 electronic mail

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