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## Overview

This standard covers the competences you need to write scientific or technical reports for workplace activities in accordance with approved procedures and practices.

You will be required to demonstrate that you understand the purpose and the scope of the report, how to follow organisational procedures and policies and who to get authorisation from and the time to take to complete the report in accordance with 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) where scientific or technical activities are performed
  - P3 identify and agree the business and scientific or technical requirements of your role in the workplace
  - P4 establish processes that deliver scientific or technical outcomes based on organisational goals and aims
  - P5 establish the scope and purpose of the scientific or technical report to be delivered
  - P6 determine quality and delivery issues, and the resources needed to deliver the report
  - P7 present the report data and content in an appropriate format and structure for the reader(s)
  - P8 implement quality checks according to the workplace procedures and policies
  - P9 include all information that is relevant and sufficient for the scientific or technical activities and quality standards
  - P10 technically review any third party data added to the report for quality, and, where appropriate, provide feedback to the author(s) on your observations/recommendations
  - P11 obtain feedback on your early draft to ensure that the final report meets the stated purpose
  - P12 follow the relevant procedures for authorisation from the appropriate people and for release of the report
  - P13 ensure that the report is completed and issued within the agreed time limits
  - P14 present the results of the work done to the appropriate people, 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 and keeping confidential documents
- K7 the workplace business aims and goals and the planning process
- K8 the workplace organisational structure, its values and culture
- K9 how your scientific or technical activities add value through delivering workplace products, services and processes
- K10 the lines of communication and responsibilities in your department, and the links with the rest of the organisation
- K11 the limits of your own authority and to whom you should report if you have problems that you cannot resolve
- K12 how to identify and assess the scientific or technical requirements of your work roles
- K13 the different ways in which you are set your agreed personal work objectives
- K14 the different perspectives and approaches that are important when exercising autonomy or judgement about scientific or technical activities used
- K15 the types of investigation initiated and used to review the effectiveness or appropriateness of methods, action and results of your scientific or technical work
- K16 the legal responsibilities for health and safety issues relevant to technical reports
- K17 the requirements of any external regulatory bodies, where they are appropriate to the reports
- K18 the legal consequences of breaches of quality procedures
- K19 the systems used to ensure quality of reports within the organisation
- K20 the methods used to monitor these quality systems
- K21 the standards and standard operating procedures appropriate to the writing and publishing of reports
- K22 how to establish the scope of the technical report
- K23 how to establish the purpose of the technical report
- K24 how to access appropriate information
- K25 how to assess the quality and completeness of the data/information

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- K26 the range of methods used to present the data in reports
  - K27 how to structure the report logically, clearly and concisely
  - K28 the appropriate format and 'house style' of the report
  - K29 the structure for a good scientific or technical report
  - K30 how to evaluate the information, draw logical conclusions and make subsequent recommendations from your evaluation of the information
  - K31 to whom to distribute the report, and the appropriate communication channels
  - K32 the authorisation required before the reports can be released for issue

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## Scope/range

1. write technical reports for both of the following situations:
  - 1.1 internal consumption
  - 1.2 external consumption
  
2. publish technical reports in both of the following formats:
  - 2.1 draft form
  - 2.2 final version
  
3. write technical reports that include eight of the following:
  - 3.1 report title
  - 3.2 laboratory and location
  - 3.3 purpose of scientific or technical activities
  - 3.4 procedures and guidelines followed
  - 3.5 data collected from scientific or technical activities
  - 3.6 scientific or technical calculations done
  - 3.7 uncertainty/error analysis
  - 3.8 final results from scientific or technical activities
  - 3.9 discussion on results conclusion
  - 3.10 references used in the report
  - 3.11 summary
  
4. record details of the work done, and communicate the details to the appropriate people, using both:
  - 4.1 verbal report
  - 4.2 laboratory notebook/plus one method from the following:
  - 4.3 written or typed report (e.g. laboratory notebook)
  - 4.4 computer-based record
  - 4.5 specific company documentation
  - 4.6 electronic mail

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