

How to use the Science Skills Framework

The Science Skills Framework is for use in recruitment, performance management, career planning and development by scientists in The Scottish Government. The Framework sets out the skills that all scientists in the Scottish Government should have. It is intended to be the principal source of competency descriptors for scientific work though it is neither exhaustive nor prescriptive. It should be supplemented by competencies taken from the Skills for Success Framework, if appropriate and required particularly in areas such as staff management and leadership. It should be viewed as a guide rather than a checklist, therefore some competencies detailed within it will be more relevant than others for individual posts.

The Framework supports the Scottish Government's People Strategy commitment to having "the right people in the right places, with the right skills at the right time" and is intended to underpin recruitment and performance management. Although the range of roles performed by scientists working in the Scottish Government is vast and varied, the intention is that staff will be able to demonstrate skills from each of columns listed for A, B or C bands. The competencies for each band are progressive, building to reflect extra demands and complexity, therefore a C Band scientist will still be required to demonstrate Self Awareness in the way they work.

By way of an example, an A band scientist must take responsibility for their own health and safety, be able to work on multiple tasks, manage their time effectively, be able to ensure their work meets minimum standards, have the ability to record technical data in a clear, concise and traceable manner and is able to handle general enquiries. A C band scientist however must be able to demonstrate all of the above and, in addition, take responsibility for the development of themselves and the staff in their care, have a clear understanding of the statutory environment in which they operate, be able to serve as an adviser to policy colleagues, take a strategic view of their work, have a broad knowledge of recent advances in their field and is able to use financial tools as part of project management or in the delivery of services.

In summary, the Framework is intended to be used in three broad areas; performance management, personal development and recruitment. It provides a structure for assessment and a platform for coaching and role development, a means of identifying development needs and a route map for career development. Finally it can be used as a framework to define the requirements of a post and a structure from which to design a competency-based interview and assessment centre design.

A Band

Self-Awareness	Team Work	Customer Service	Information Management	Communications and Engagement
Takes responsibility for their own health and safety and is aware of the impact of their actions on others and the wider environment	Works across multiple projects within and across teams. Manages own time and costs as appropriate	Ensures work meets standards set by client including any quality and accreditation standard	Collects and records technical data in an accurate, traceable and appropriate format	Provides general advice and guidance to internal customers on technical aspects of work
Understands the statutory/commercial significance of their work		Acts as an ambassador for the organisation when meeting members of the public	Identifies and challenges unexpected or anomalous results	Explains process and method in clear and simple terms to specialist and non-specialist colleagues
Demonstrates knowledge of basic scientific, technical and mathematical concepts, practices and procedures. Actively maintains and develops these skills		Understands the significance of results and the likely impact on customer and implications for wider stakeholder groups/industry	Understands the requirements of and maintains personal accreditation in line with customer requirements	Communicates ideas in a clear and competent manner to an internal audience
Follows SOPs for processes and equipment maintenance				

Additional skills to be drawn from the General Skills for Success Framework

B Band

Self-Awareness	People Management	Communications & Engagement	Improving Performance	Analysis and Use of Evidence	Financial Management
Takes responsibility for their own health and safety and is aware of the impact of their actions on others and the wider environment	Works within and across teams taking responsibility for discrete areas of work and projects	Builds expertise within their specialism and is able to provide detailed analysis of their work	Reviews and develops new methodologies identifying links with broader developments and innovations	Understands and objectively applies basic scientific/technical principles e.g. gathering information, building evidence, designing experiments, defining theories, etc.	Is aware of potential sources of and actively seeks external funding for appropriate projects
Demonstrates knowledge of scientific, technical and mathematical concepts, practices and procedures. Actively maintains and develops these skills and assists others with their development	Takes responsibility for the development and wellbeing of students and staff within their area	Engages with the wider scientific community through networks, conference presentation and peer-reviewed publication	Undertakes proactive research, anticipating trends in their subject area and framing future questions	Applies knowledge to solve problems and develop new solutions	Understands project finance and procedures. Monitors project expenditure throughout the year
Has a detailed understanding of the statutory/commercial significance of their work and is able to source supplementary information/detail	Provides guidance on technical and quality assessment of work undertaken by staff and contractors	Communicates ideas in a clear and competent manner to a wide audience	Participates in the scientific community e.g. internal audit, peer review etc.	Develops specialist scientific skills in data analysis, interpretation and presentation of results	Manages and maintains internal resources including the management of maintenance contracts and service level agreements
	Able to remain objective and communicate issues sensitively with the team	Able to mentor, train and supervise staff in the use of a range of methodologies	Identifies gaps in knowledge/data and is able to propose innovative approaches in response	Experience of project management. Able to design and manage to a successful conclusion a defined body of work	Strives for greater efficiency in terms of cost and/or use of resources

Additional skills to be drawn from the General Skills for Success Framework

C Band

People Management	Leading Others	Communications & Engagement	Improving Performance	Analysis and Use of Evidence	Financial Management
Takes responsibility for staff development, promotes CPD and the maintenance of up-to-date expertise in staff	Has a clear understanding of statutory requirements, regulators and quality assurance requirements where appropriate. Able to communicate this to the wider team	Promotes the advantages of scientific/intellectual skills, advising/strengthening decision making drawing on high quality research outputs	Maintains up to date scientific and technical knowledge. Actively undertakes CPD. Supports and develops this in others.	Takes a broad view of science, building an interdisciplinary knowledge base and building links between different sources of evidence	Has broad knowledge of research paths and funding streams
Identifies skills gaps and takes a forward looking approach to meet future challenges. Ensures succession plans are in place so that key skills are not lost	Identifies, understands and engages with a range of stakeholders. Uses Professional standing to balance conflicting demands and ensure technical advice takes into account stakeholder issues	Explains the nature and significance of relevant scientific issues to a diverse audience	Takes an overview of the quality control process including providing advice and interventions where appropriate	Develops specialist scientific skills in data analysis, presentation, and interpretation	Uses finance tools to produce accurate reports detailing the full economic cost of chargeable activities for external customers
Has a detailed understanding of the statutory/commercial significance of their work and is able to prioritise, motivate and organise team to ensure objectives, targets, etc. are met	Understands current paradigms and future directions in relevant scientific fields.	Communicates impartial technical advice clearly and concisely to both analysts and non-analysts incorporating limitation of that advice and any inherent risks	Identifies, develops and implements new approaches to data collection and working to maximise efficiency and improve outputs	Critically analyses existing data sources identifying strengths and limitations of approaches	Understands project finance and procedures and ensures value for money. Monitors project expenditure throughout the year and makes transfers between projects where appropriate
	Leads across a range of projects providing advice and challenge at key stages.	Performs a linking role between profession and policy makers. Presents at national and international professional conferences, meetings and workshops	Able to take a strategic view of regulation/statutory frameworks and suggest modifications/improvements, working closely with policy	Able to collate and synthesise information from a variety of sources and able to clearly explain the strengths and weaknesses when combining disparate data sources	

Additional skills to be drawn from the General Skills for Success Framework