# “National Standards for School Science Laboratory Technicians in Australian Secondary Schools”

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# National Forum on the Role and Structures for School Laboratory Technicians in Australian Secondary Schools

**OBJECTIVE 2**: **A commitment to developing guidelines for minimum standards for school science technicians, and for service levels.**

2 step process:

- The development of a role description,

then

- The development of standards.

# PURPOSE

This document aims to describe:

a) Minimum standards for the training required for employment of science technicians in secondary schools and for their induction into the role,

b) A career structure that recognizes the development of skills and experience, and

c) Nationally consistent job specifications for various levels of science technicians to which appropriate salary scales would be linked.

d) Minimum standards for technician servicing of secondary science programs

# PURPOSE

This document notes:

a) the particular challenges faced by rural and remote schools in attracting qualified staff

b) that there are many existing highly competent school science technicians without formal qualifications

c) that these Standards, once accepted, will be used to inform all stakeholders.

# ORGANISATION OF STANDARDS

The Standards have been aligned with

- ASTA National Professional Standards for Highly Accomplished Teachers of Science. (ASTA, 2002)
- Professional Standards for Teachers (AITSL, 2011)

# ORGANISATION OF STANDARDS

The Standards are organised into three Domains

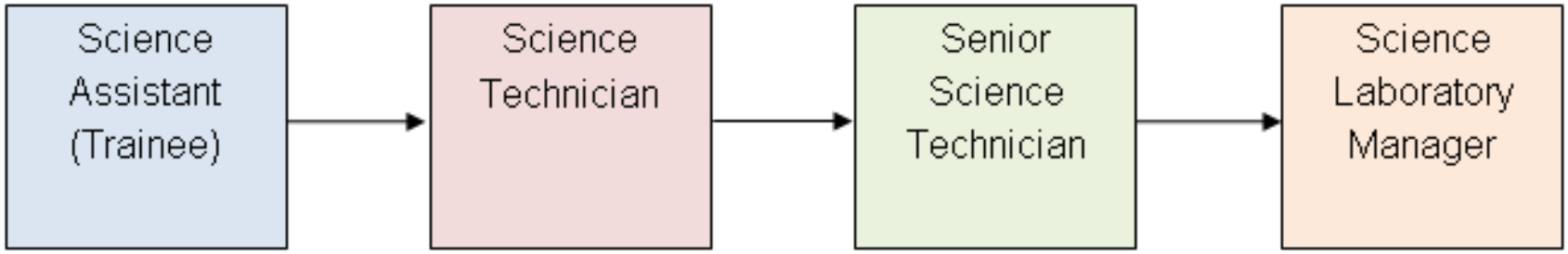
- **Professional Knowledge**
  - What technicians should know
- **Professional Practice**
  - What technicians should be able to do
- **Professional Attributes**
  - How technicians should engage with others

# ORGANISATION OF STANDARDS

| DOMAINS | | |
|---|---|---|
| **PROFESSIONAL KNOWLEDGE** | **PROFESSIONAL PRACTICE** | **PROFESSIONAL ATTRIBUTES** |
| **STANDARDS** | | |
| 1. Relevant scientific concepts. | 6. Delivery of the practical aspects of the Science Curriculum. | 11. Demonstrate effective communication and interpersonal skills. |
| 2. Content of Australian Curriculum: Science. | 7. Create and maintain safe, efficient and supportive science teaching environments. | 12. Work collegially within their school community and wider professional communities. |
| 3. Technical knowledge. | 8. Sound laboratory techniques. | 13. Engage in relevant ongoing professional learning and reflection. |
| 4. Legislative requirements and safe practice. | 9. Facilitate maintenance and repair of the equipment. | |
| 5. Administrative Practice. | 10. Administrative management of the school Science Department | |

# ORGANISATION OF STANDARDS

## LEVELS OF CLASSIFICATION



# ORGANISATION OF STANDARDS

**DESCRIPTORS:**

- are a statement of the identified components of each standard.
- describe how technicians can demonstrate each standard.
- outline the professional actions technicians engage in as they apply their professional knowledge, skills and attributes to their specific contexts.

# ORGANISATION OF STANDARDS

***7. Create and maintain safe, efficient and supportive science teaching environments.***

| Descriptor | Science Assistant (Trainee) | Science Technician | Senior ScienceTechnician | Science Laboratory Manager |
|---|---|---|---|---|
| 7.1 Storage of chemicals | Follow directions for the safe storage of chemicals. | Have a working knowledge of the correct system for the safe storage of chemicals | Organise and maintain a chemical storage system according with the policies and regulatory requirements | Develop policies and procedures to ensure regulatory requirement are meet |
| 7.2 Storage of equipment | Under direction store equipment appropriately | Have a working knowledge of the storage of laboratory equipment | Organise and maintain a system for storage of equipment | Develop an inventory for laboratory equipment, updating as required. |
| 7.3 Labelling | Follow correct procedures for the labelling of all laboratory chemicals | Label all laboratory chemicals according to policies and regulations | Ensure all laboratory chemicals are labelled according to policies and regulations | Develop a labelling system for the correct labelling of all laboratory chemicals, ensuring it meets regulatory requirements |
| 7.4 House keeping and organisation | Follow direction to maintain the laboratories “fit for purpose” i.e. clean, equipment in good order and put away. Under direction maintain a safe workplace. | Ensure that all science facilities are fit for purpose, purchase consumable supplies when required. | Maintain a housekeeping system to ensure science facilities are in good order. Organise routine maintenance as required. Order equipment and consumable supplies as needed. | Develop systems of work to maintain science facilities in good working order. Prepare a budget for annual expenditure including large capital items. Seek quotes on large expenditure items. |
| 7.5 Provide appropriate advice on safety issues | Follow advice on safety issues. Give basic safety advice to teachers and students. | Provide advice on safety matters to co-workers, teachers and students regarding the practical activities. | Instruct teachers, students and co-workers on safety practices in the laboratories and explain Risk Assessment information | Develop safe practices for the science facility. This includes developing Risk Assessments in conjunction with teachers. Formally instruct teachers and other staff on safety in the laboratories, including Induction Training sessions. |
| 7.6 Safety audits | Participate in safety audits of the science laboratories under direction | Assist in the safety audit process. | Carry out safety audits of the science facilities following the school’s policy. | Develop a safety audit policy and procedures. Ensure regular safety audits are undertaken in the science department. |

# ACKNOWLEDGEMENTS


The Working Party:

Chair

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