

## PIL302A Provide information on integrated plant and animal systems

This competency standard covers the process of providing information on integrated plant and animal systems. The provision of information is likely to be under limited supervision from others with checking only related to overall effectiveness. The provision of information requires the application of sound knowledge of permaculture and a broad range of plant-related skills. The provision of information is normally done within routines, methods and procedures where some discretion and judgement is required.

Element	Performance Criteria
1 Identify the issue	<p>1.1 Contact is initiated with the <b>client</b>, when appropriate, according to <b>enterprise work procedures</b>.</p> <p>1.2 The client is assisted in explaining the <b>issue</b> by the use of attentive listening and questioning techniques according to enterprise work procedures.</p> <p>1.3 The nature of the issue is clarified by gathering all relevant <b>information</b> from the client according to enterprise work procedures.</p> <p>1.4 The issue is defined according to <b>researched and experiential awareness</b> and enterprise work procedures.</p>
2 Decide on preferred solution/s	<p>2.1 Options and/or strategies are identified and devised according to researched and experiential awareness, permaculture practices and enterprise work procedures.</p> <p>2.2 Options and/or strategies are examined and evaluated according to sound problem-solving techniques and enterprise work procedures.</p> <p>2.3 The optimal solution is determined based on reasoned argument, appropriate evidence, availability of resources (human, plant, animal, financial), sound cultural principles, permaculture practices, and enterprise work</p>

procedures.

3	Provide the preferred solution	3.1	The recommended solution, method of application and probable outcomes are clearly explained to the client according to enterprise work procedures and permaculture practices.
		3.2	The original source of the plant/animal species and their cultural requirements in an integrated system are referred to where necessary.
		3.3	Client requests for clarification or expansion are responded to by the use of attentive listening and questioning techniques according to enterprise work procedures.
		4.3	Diagrams and/or flow charts are prepared to show how the systems integrate to increase product, reduce work and eliminate waste.
		3.4	Recommendations are recorded and reports are made to the supervisor/client according to enterprise work procedures.

### Range of Variables

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available.

What type of <b>client</b> may be relevant to this standard?	Clients may include general public, customers, business associates, community groups, staff members and industry counterparts.
What <b>enterprise work procedures</b> may apply to this standard?	Work procedures will be based on sound permaculture practices and may include carrying out supervisors’ oral or written instructions, developing enterprise policy and guidelines, enterprise Standard Operating Procedures (SOP), specifications, producing routine maintenance schedules, work notes, product labels and Material Safety Data Sheets (MSDS), manufacturers service specifications and operators’ manuals, waste, recycling and re-use guidelines, and OHS procedures.  Additionally, enterprise work procedures may address areas such as identifying problems and creating solutions, developing plant and animal systems and integrating systems to increase productivity, reduce work and eliminate waste.

What **issues** may be identified by the client?

Issues may include

- ◆ Meeting Lifestyle needs (special dietary requirements, chemical sensitivities, work/job creation)
- ◆ Ensuring food security
- ◆ Reducing the negative effects of floods and drought
- ◆ Minimising vulnerability to and damage from fire
- ◆ Reducing the energy use in home and in food production.
- ◆ Establishing/maintaining areas of native vegetation
- ◆ Weeds, pest and disease control measures
- ◆ Selection and use of plant materials
- ◆ Basic permaculture design and maintenance
- ◆ Soils, irrigation, plant nutrition
- ◆ Products and services
- ◆ Local geographical variables
- ◆ Habitat conservation and bush restoration
- ◆ Other plant cultural information.

What **information** may be relevant to an issue?

Information may include:

- ◆ Methods of design
- ◆ Pattern Understanding
- ◆ Climatic Factors
- ◆ Trees
- ◆ Water
- ◆ Soils
- ◆ Earthworks
- ◆ Aquaculture
- ◆ Alternative energy
- ◆ Buildings and structures
- ◆ Species selection

What **researched and experiential awareness** may be relevant to this standard?

Knowledge of the species design elements and their culture may be increased through consultation with team members, the supervisor, own knowledge, specific literature, supplier specifications, local historical performance data and permaculture principles.

Resources may include enterprise or public library, permaculture-related websites, permaculture consultants, permaculture designed properties, suppliers and contractors, enterprise supervisor and team colleague experience and experts in the local area or industry sector.

## Evidence Guide

### What evidence is required to demonstrate competence for this standard as a whole?

Competence in providing information on integrated plant and animal systems requires evidence that a person is able to respond positively and actively to client requests with information and recommendations and provide active listening and questioning techniques to ensure that the plant and cultural information supplied are appropriate to the clients needs. The skills and knowledge required to provide information on integrated plant and animal systems must be **transferable** to a different work environment. For example, this could include different plants, cultural practices, environments and requests for information.

- ◆ **What specific knowledge is needed to achieve the performance criteria?**
- ◆ Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:
  - ◆ Permaculture principles and ethics
  - ◆ Methods of design
  - ◆ Pattern Understanding
  - ◆ Climatic Factors
  - ◆ Trees
  - ◆ Water
  - ◆ Soils
  - ◆ Earthworks
  - ◆ Aquaculture
  - ◆ Alternative energy
  - ◆ Buildings and structures

- ◆ Species selection
- ◆ Integrated Pest Management
- ◆ Pest and disease symptoms, basic physiology and life cycle of pests and diseases, vulnerable plant growth stages, treatment thresholds, treatment products, effective application of organic procedures and environmental implications.
- ◆ Local plant suppliers, consultants, services, products and contractors and availability of local resources
- ◆ Awareness of duty of care in provision of advice and recommendations to retail, commercial and private clients.

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**What specific skills are needed to achieve the performance criteria?**

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

- Communicate with clients, work team members, supervisors, suppliers, contractors and consultants.
- Interpret information sheets, labels, relevant literature, specifications and design symbols
- Read and interpret maps.
- Prepare maps including contours
- Use proforma reporting and work procedure documents.
- Estimate treatment and product requirements, material sizes and quantities.
- Interpret site designs, ground plans and specifications.
- Calculate ratios, proportions and application rates.
- Coordinate own work activities to gain knowledge plant and animal systems.
- Investigate client requests for information, identify and evaluate options, decide on a solution, and deliver recommendation and information to the client.
- Provide customer service to satisfy the clients need for information.
- Research and access information.
- Inform the client of any recommended solution using verbal explanations, available audio-visual or multimedia materials, literature, and demonstrations of the solution

offered by plant and animal systems.

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### What processes should be applied to this competency standard?

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the **key competencies**, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

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| 1. How can <b>communication of ideas and information (2)</b> be applied?       | Through written, oral and tele- communication of ideas and information relating to the permaculture issues and the recommended solution will be required with the client, work group, supervisor and industry contacts.   |
| 2. How can <b>information be collected, analysed and organised (2)</b> ?       | Through client interview, site inspection, gathering of maps and special information, enterprise work procedures, customer service standards and resources should be consulted, interpreted and applied to coordinate client service and information delivery about plant and animal systems, with further clarification sought from the supervisor when necessary. |
| 3. How are <b>activities planned and organised (2)</b> ?                       | Own work activities, in coordination with the work team, will be planned prior to and adjusted during client service work periods.  |
| 4. How can <b>team work (2)</b> be applied?                                    | The provision of information to clients may require coordination and consultation with team members to deliver effective and accurate information to the client's satisfaction.   |
| 5. How can the use of <b>mathematical ideas and techniques (2)</b> be applied? | Mathematical application will be required to calculate area, quantities, volumes and application rates for plants, products and treatments, and calculate the cost of work so that the stages can be timed to match the availability of resources.  |
| 6. How can <b>problem-solving skills (2)</b> be applied?                       | Problem solving is the basis of a permaculture design. A designer must identify the problems or challenges through adequate data collection. Work within the constraints of the landscape, climate and the resources available to meet the needs of the   |

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client.

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7. How can the **use of technology (2)** be applied?

Technology will be used to gather information, to store the information and then to provide accurate information.

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**Are there other competency standards that could be assessed with this one?**

This competency standard can be assessed on its own or in combination with other competencies relevant to the job function.

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For information about assessing this competency standard for consistent performance and where and how it may be assessed, refer to the **Permaculture International Ltd Course Documentation**.

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