



LITERACY PROFILE:

Carpenter

- Reading**
- Speaking and listening**
- Critical thinking**
- Writing**
- Numeracy**
- Technology**

Reading tasks

"Read" implies that the person reads and understands.

Read signs and short texts

- Site markings – levels, grid lines, measurements
- Safety signs
- Reminders
- Notes
- Product labels
- Display on electronic measuring equipment

Read charts, tables and graphs

- Capacity of lifting equipment
- Schedule of quantities

Read forms on job

- Supplier delivery documents
- Building inspection checklists
- Site safety checklists
- Confined space entry permit

Read plans

- Building plans (both handwritten and computer generated) including abbreviations, symbols, technical terms, 2D and 3D representations
- Site plan drawings

Read memos and notices

- Health and safety brochures or handouts
- Supplier information / updates

Read instructions and more detailed job information

- Evacuation instructions
- Job instructions
- Local authority consent documents
- Site safety manual
- Read product installation guide booklets and brochures
- Details in contracts – responsibilities, timelines, penalties

Read excerpts from legislation, regulations or industry standards

- Building standards documents
- Updates to building standards

Read industry publications

- Brochures and booklets from Department of Housing
- BRANZ bulletins
- Trade journals or magazines

Read employment related information

- Pay slip
- Employment contract
- Company standards or rules about employment

Read training material

Company arranged training

- Health and safety training
- Site safe training
- Product briefings

Apprenticeship training

- BCITO training manual and practical assessment record

Reading skills

Use a key to find graphic material on maps, charts or tables.

Interpret information from graphical material, e.g. tables, price lists, maps, diagrams.

Follow written instructions (may include diagrams).

Report accurately on the information read.

Use a reference source, e.g. index, manual, table.

Predict what will be contained in a text.

Skim a text for "gist".

Scan text / table / label to find specific piece of information.

Identify the main points from a page of text.

Read text thoroughly.

Summarise material read in own words.

Make inferences based on what written material does not say.

Recognise number formats e.g. code numbers, serial numbers, GST numbers.

Underpinning knowledge / understanding

Common vocabulary and abbreviations.

Technical vocabulary and abbreviations.

Mastery of other skills such as word recognition, interpreting meaning.



Writing tasks

Sign off on documents to confirm read and understood

e.g. Induction checklists,
Site safety rules

Write short notes

may be on whiteboard, on paper
or by text message

- Where job is up to
- Instructions to others
- Questions to ask

Write detailed lists

- Materials needed and used
- Records of work completed in own diary (may be electronic diary)

Complete forms independently

On job

- Site audit checklist
- Faxes to architect, project manager, supplier

Employment related

- Job application form
- Employee details form
- Leave application form
- Tax code declaration
- Timesheet

Complete forms with the assistance of others

- Health and safety incident / near miss forms
- Accident report forms
- ACC report forms

Create drawings or sketches

- to supplement any written job instructions
- record construction details

Write for training / learning purposes

- Keep notes during training
- Keep diary records of completed work for practical assessment and ongoing work records – sketches, descriptions, photographs of work completed, materials used
- Write assessment answers for apprenticeship training, other training

Self employed

- Write up quotes



Writing skills

Sign name on forms to indicate understanding (form of binding agreement).

Write simple correct text in appropriate places and in appropriate formats on job sheets and forms e.g.

- stay on the line
- use recognisable spelling and abbreviations
- use legible lettering.

Write lists.

Make sketches that clearly represent job requirements

- longer and shorter parts represented correctly
- geometric shapes represented clearly
- correct abbreviations used
- exact or accurate figures included.

Write notes and short sentences

- use recognisable spelling
- use diagrams and sketches to clarify points
- write points in a logical order
- use recognisable spelling
- use punctuation
- attempt to use correct tenses and verb / subject agreement.

Write short answers to assessment questions

- handwriting must be legible
- abbreviations can be used
- spelling must be correct
- grammar and punctuation must be understandable but do not need to be 100% correct.

Speaking and listening tasks

Note: Heavy dependence on oral communication to deliver work instructions and on job training

- Listen to oral instructions from supervisor and/or foreman
- Listen and respond to requests from co-workers e.g. for assistance
- Listen to verbal explanations / training
- Listen to presentations from management and others (toolbox or company meetings)
- Ask questions to clarify oral instructions, requests or explanations from co-workers, supervisor
- Communicate with co-workers (team work) during day-to-day work situations

- Report where work is up to
- Ask for assistance when needed
- Order equipment or materials from suppliers
- Discuss design and construction issues with supervisor, other workers
- Communicate with office staff as required
- Use radio telephone to communicate on large or multi-storied sites
- Give instructions to others about what work they need to do
- Negotiate work timeframes with other subcontractors to co-ordinate work on site

- Discuss issues with sub-contractors if their work is not up to the required standard e.g. joinery scratched, wall not straight
- Communicate in English with people (customers, subcontractors, co-workers) from different language speaking backgrounds to own
- Explain job progress to customers, and answer questions
- Direct customers to make decisions and arrangements to complete stages of building project
- Discuss building project with building inspector
- Answer oral questions during formal assessments
 - on-job assessment
 - block course assessment

Speaking and listening skills

Speak clearly.

Ask for help if necessary.

Give information in a sensible order.

Use suitable body language.



Use questioning techniques including using open / closed questions to gain information, check understanding and encourage further discussion.

Use active listening skills e.g.

- repeat message back to sender
- summarise instructions in own words
- following techniques e.g. saying "aha" or "okay" as you follow what someone is saying.

Use language appropriate to situation and person.

Discuss topics which are appropriate in work context.

Give instructions to others.

Present and defend a viewpoint.

Use negotiation skills e.g.

- identify issue
- suggest possible solutions
- agree on best outcome.

Underpinning knowledge / understanding

Communication is a two-way process.

There is a range of spoken language styles which change with purpose, topic and audience.

There are ways of making positive and negative statements.

There are ways of initiating and concluding conversations.

Summarising can be used for checking and clarification.

Pronunciation and tone can affect the communication process.

Messages are conveyed by body language and facial expressions.

There are barriers to communication, especially cross cultural communication.

Numeracy tasks

- Measure height, width, length, depth
- Work out if building is square, level, correct angle
- Calculate spacing of supports, bearers
- Convert measurements from plans using scale factor
- Calculate volumes e.g. of concrete needed to fill a space, earth to be excavated from a site

- Calculate quantity of materials needed to complete job, allowing for wastage where necessary
- Cut materials to minimise waste
- Estimate time needed to carry out job
- Calculate and record time spent on jobs
- Check pay is correct
- Use correct sizes of fastenings for job (gauge)

- Calculate angles for roofing, framing, bracing, ramp gradient, joins
 - Interpret 2D and 3D representations on drawings (spatial awareness, geometric shapes)
 - Convert between imperial and metric measurements
- Self employed*
- Calculate figures to quote for jobs

Numeracy skills

Add, subtract, multiply and divide whole numbers and decimal numbers.

Be aware of difference between imperial and metric measurements.

Calculate percentages.

Measure accurately using metric measuring systems

- weight
- length
- width
- diameter
- height.

Allow for tolerances in measurement e.g. 10% wastage allowed.

Calculate values using formulae

- area
- volume
- perimeter
- trigonometry.

Perform calculations using a calculator – add, subtract, multiply, divide, formula based calculations.

Recognise common angles such as 15, 30, 45, 90 degrees.

Measure angles accurately.

Convert fractions to decimals and decimals to fractions.

Multiply and divide by scale factor.

Use 12 or 24hr clock to estimate, measure and record time.

Interpret numerical information contained in graphs and tables.

Recognise and use 2D and 3D representation.

Recognise geometric shapes

- triangle
- square
- circle
- rectangle
- cube
- cylinder
- cone
- pyramid.

Recognise and use geometric concepts

- straight
- square
- parallel
- flat
- round
- perpendicular.

Estimate approximate amounts of money.

Calculate money amounts accurately.

Underpinning knowledge / understanding

Numeracy skills are dependent on people understanding the concepts and principles that underpin an action.

Examples of underpinning knowledge / skills might include:

- understand decimal numbers and decimal places
- understand what numerical concepts mean and what they are used for
- recognize a range of formats for presenting data (e.g. pie graph, pictogram, bar chart)
- round numbers up and down
- count on and count back to reach required number.



Critical thinking tasks

- Work out order to complete a job in
- Seek help from others when needed
- Select correct equipment and tools to use to do the job effectively
- Decide how to cut materials to produce as little waste as possible
- Understand principle that "time is money" and spend appropriate amounts of time on jobs
- Judge if finished work (own and colleagues) meets professional building standards
- Identify when to make appointment for building inspection, so that inspection will fit in with work flow
- Identify when a proposed change to a plan will need to be referred to local authority
- Deal with contingencies e.g.
 - work not to standard
 - materials cut too short, too long
 - injuries
 - OSH hazard identified
 - problem with a drawing / plan – may involve talking to supervisor or architect
 - problems with work completed by other contractors
 - problems with equipment
 - weather issues
 - power outages
- Reschedule activities when they can not be completed in the original timeframe e.g. concrete pouring



Critical thinking skills

Identify if you have enough knowledge and skill to take action on own.

Identify when you need assistance from others.

Understand the building process and the implications of this for your work role.

Understand the inspection process and the implications of this for your work role.

Apply knowledge of safety requirements / principles to work practice.

Apply knowledge of professional trade practice to work carried out.

Recall and follow specified procedures to deal with contingencies.

Use problem solving methodology e.g.

- identify issue
- identify possible solution
- determine best outcome
- decide on plan of action
- carry out plan.

Apply knowledge of time required to complete tasks to schedule work activities.

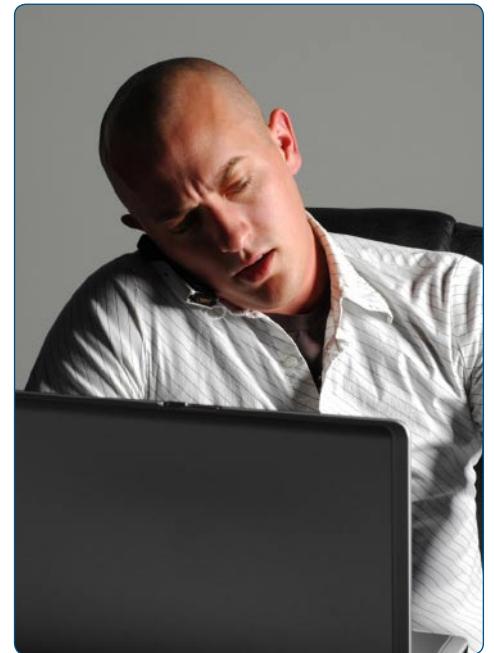
Visualise an object from a drawing or plan and use this to plan the order in which to complete the job.

Technology related tasks

- Use electronic equipment such as:
 - dumpy level
 - theodolite
 - laser level
 - laser plumb line
- Use computer to
 - word process letters, quotes and other documents
 - run accounting package
 - run spreadsheets (could be for accounting or quoting)
 - carry out internet banking
 - download information from the internet e.g. building standards, product information

Emerging

- Use hand held computers on site to access plans, job instructions
- Use GPS based plotting devices
- Use digital diaries to record job information, schedules



Technology skills

Operate electronic measuring and control devices.

Operate a computer (includes hand-held devices)

- start the computer
- log in if needed
- start appropriate application
- exit appropriate application
- turn off computer.

Identify elements of computer applications and the function of the element e.g. menus and menu options, command buttons, icons, toolbars.

Identify appropriate computer application for task e.g. spreadsheet, word processor, e-mail, web browser, drawing, company systems.

Operate computer application(s).

Enter or update data using a computer (using keyboard, mouse or other input devices).

Manage computer files

- copy or move a file to new location
- back-up files using appropriate software
- copy to different media (from hard disk to pen drive, from hard disk to CD-ROM)
- delete a file.

Notes:

This profile relates to carpentry apprentices and is based on roles from a number of companies.

The profile represents a combined skill set. Individuals will have strengths and weaknesses across the areas of workplace literacy described in the profile. Carpentry apprentices will also use different combinations of the skills identified depending on where they are at in their training.

Different companies may require staff to use slightly different subsets of skills from the profile. In some instances companies may have additional tasks and skills required of their staff. The differences will depend on the company systems and management structure.