Shelving guidelines for school libraries

This information sheet outlines types of shelving suitable for storing and displaying your school library resources.

We include step-by-step help on planning your shelving layout and choosing shelving styles that display resources effectively. Practical advice is also given on how to calculate your shelving requirements, using charts with the average storage capacity for shelving types. Additional information is given on display stands and shelving accessories such as book ends, indicator blocks, shelf labels and signage.

Contents

Shelving guidelines for your school library ........................................................................ 1
Section 1: Planning your shelving layout.................................................................... 1
Section 2: Choosing your shelving style..................................................................... 2
Section 3: Calculating your shelving requirements in 8 steps.............................. 5
Section 4: Using shelving charts for shelf dimensions................................. 6
Section 5: Calculate shelving accessories ................................................................. 11

Section 1: Planning your shelving layout

When planning your library’s shelving and layout, visualise how you can use resources to create a welcoming and inclusive environment.

- Decide where you can locate face-out displays of resources, including different languages and cultural themes, to create a vibrant and culturally inclusive environment.
- Identify types of activities to take place in the library and traffic flows. This will have implications for the types of resources to be shelved in close proximity.
- Ensure flexible spaces near shelving, which you can adapt for individual, small or large group use.
- Decide if any additional display shelving is required for resources borrowed from external organisations, such as National Library Services to Schools.
- Consult with school staff to assess the needs of students requiring learning support (previously called ‘special education’). Identify:
  - types of resources and required shelving style, size and height for ease of access
  - adequate aisle space for people using wheelchairs, walkers, strollers or crutches.

Need help? Call our 0800 LIB LINE for school library support (0800 542 5463) Monday to Friday from 8:00am to 5:00pm or email schoollibraryadvice@dia.govt.nz or visit www.natlib.govt.nz/schools.

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• Determine types of shelving/storage required in the library office / work area for activities such as processing new resources and maintaining existing resources.

For inspiration and practical ideas:

• Read our page about Designing library spaces which includes video of Modern library environments in Christchurch schools (4.49).

• Become familiar with the Universal Design for Learning framework for designing inclusive and responsive library spaces, furniture, equipment, and technologies.

• Visit other recently remodelled libraries (school, public and tertiary) for ideas on shelving layout and styles.

Using the information you have gathered, start planning the location, layout and design of your shelving.

Section 2: Choosing your shelving style

As a starting point, we’ve identified the following choices to be made when deciding on your style of shelving:

• Weigh up the benefits of using adjustable shelving in preference to built-in/fixed shelves. The advantages include the flexibility to easily interchange shelves and to be able to reconfigure your library layout.

• Decide whether to have walled shelving, or free-standing shelving, or rollaway units on castors, or a combination.
  ○ Check the wall studs and nogins will match the height and width of any planned walled shelving so you can attach wall channels securely. Otherwise you may need free-standing shelving.
  ○ Note placement of windows, power points and light switches.
  ○ Check health and safety requirements, e.g. Floor loading for island shelving, seismic bracing for standalone shelves, and aisle spacing. (1.5m for wheelchair turning space. See NZS 4131:2001).

• Ensure maximum height of shelving bays is suitable for the age level of your students and students with learning support needs, e.g. up to 1500mm for primary/intermediate and up to 1800mm for secondary.

• Choose style of shelves for each bay. See: Shelving features — pictorial overview on pages 3-4.

• Calculate the number of shelves that will fit in each bay and work out the number of bays required for each collection type. See: Section 4: Using shelving charts for shelf dimensions.

• Select the colour for your shelves to complement / add to library’s colour scheme.

• Choose shelving accessories, e.g. book ends, indicator blocks, shelf labels and signage. See Section 5: Calculating shelving accessories.

You are now ready to finalise your shelving plan in consultation with shelving suppliers.

Our School library suppliers list contains suggestions for shelving suppliers. You may find other local suppliers in addition to those on this list.
Shelving features — pictorial overview

The following is a selection of shelving styles commonly used by schools. You can view shelving suppliers’ catalogues for the full range of shelving options available. See our School library suppliers list for contact details.

A. Horizontal / flat shelves

Horizontal/flat shelves are suitable for all types of resources. Canopy shelf at top of each bay and sloped shelves can be added for face-out displays.

B. Sloped shelf (single shelf)

Sloped shelves are suitable for all types of resources, new books displays and topical/thematic displays.

C. Sloped shelves (two or three-tiered)

2 or 3–tiered sloped shelves suitable for all types of resources and new books/topical displays.

D. Browser bin shelves

Browser bin shelves are suitable for picture books, graphic novels, and Quick Reads/Quick Picks.

E. Lift-up shelf with storage beneath

Lift-up shelves are an option for displaying latest magazines and storing back copies underneath.
F. Divider / slotted shelves

Divider shelves are suitable for picture books, reference and non-fiction. Look into shelf labelling options, such as indicator blocks.

G. Intermixing shelving styles

An example of intermixing different styles of shelving: 3-tiered sloped shelf above a divider/slotted shelf.

H. Free-standing display units

Free-standing units in a variety of styles are available for displaying resources, including these examples for picture books and big books.
# Section 3: Calculating your shelving requirements in 8 steps

The type and number of shelves will depend on your choice of shelving style.

<table>
<thead>
<tr>
<th>Step</th>
<th>Notes</th>
</tr>
</thead>
</table>
| **Step 1: Weed your existing collection.** | • If you are planning to replace the shelving for an existing collection, cull the resources first to remove items no longer being used.  
• Consult Weeding guidelines on our Services to Schools site for the processes to use, which includes an explanatory video. |
| **Step 2: Identify types of resources and collections to be shelved separately.** | • Types of resources, e.g. picture books, sophisticated picture books, quick picks, graphic novels, non-fiction, reference, magazines, newspapers, DVDs/CDs, games.  
• Fiction shelved by author’s last name (A-Z), or genre.  
• Language collections, e.g. te reo Māori, Pasifika, ESOL.  
• Special collections e.g. iwi resources, resources for students with special learning needs, archives.  
• Displays of resources – new books, topical/thematic.  
• Storage of borrowed items e.g. National Library loans. |
| **Step 3: Calculate number of resources (current and future), to future-proof your shelving within your school’s 10-year Property Plan.** | • Note number of items on shelves and on loan in each collection.  
• Add the average number of resources likely to be purchased/ donated annually for the next 10 years.  
• Subtract the average number of books likely to be withdrawn / lost annually for the next 10 years. (Estimate the amounts by using your library stocktake figures for the last 3-5 years.) |
| **Step 4: Identify location of library’s collections and draft a layout plan in consultation with shelving suppliers.** | • Decide which resources will be on walled shelving and/or standalone units. Take into account floor spaces used for reading and learning activities.  
• Measure how many bays (shelf and posts/strips) will fit along a stretch of wall or on a standalone unit. Take into account placement of windows and easy access to wall sockets. Where shelving meets at right angles in a corner, leave an adequate gap.  
• Check the wall studs and noggins will match height and width of walled shelving so you can attach wall channels securely. Otherwise use standalone L-shaped shelves against the wall.  
• Check health and safety requirements, e.g. floor loading for island shelving, seismic bracing for standalone shelves, and aisle spacing. (1.5m will provide wheelchair turning space. See NZS 4131:2001). |
### Step 5: Prepare shelving charts for walled/standalone/island shelving.

- Choose the shelving style for each type of resource: walled, and/or standalone and/or island shelving with or without castors.
- For ease of shifting, each island unit to be a maximum of two bays.
- Calculate the number of required shelves for each type of resource, using Charts A, B and C in the section below.
- Select the colour scheme for the shelving.

### Step 6: Calculate accessories: book ends, display stands, indicator blocks, shelf labels and signs.

- Count the number required and choose your preferred style and colour scheme. See Section 5: Calculate shelving accessories.

### Step 7: Identify shelving requirements for the library office / work area, if applicable.

- Similarly, calculate the number and style of shelves required for the library office / work area.
- An option is compact mobile shelving units that slide along rails, if flooring space is adequate and floor loading requirements are suitable. See School library suppliers list for details.

### Step 8: Finalise layout plan and obtain quotes.

- Check turnaround times with the supplier for processing the materials, delivery and installation. Note: This could take up to 4 weeks after a quote is accepted by your school.

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### Section 4: Using shelving charts for shelf dimensions

- The following Shelving Charts A, B and C provide shelving sizes and quantities suitable for primary, intermediate and secondary schools. An example of how to use the Charts is given in Scenario: primary school with a non-fiction collection of 2500 resources (p. 9).

- The number of shelves in each bay will depend on your choice of shelving style:
  - Shelving types can be intermixed, e.g. A sloped shelf or browser bin shelf can be placed above or below horizontal/flat shelves or divider shelves, for face-out displays.
  - Canopy shelves can be added along the top of the bays for displays such as books and student craftwork. The canopy can be a horizontal/flat shelf, sloped shelf, or a browser bin shelf, depending on the height of the bay for ease of access by students.
  - Up-tilted bottom/base shelf is an option for making it easier to browse book spines.

- Check your shelving supplier has the full range of shelving features for each type of resource format.
## Chart A: Browser bin shelves (wall and free-standing without castors)

<table>
<thead>
<tr>
<th>Resource format</th>
<th>Height of canopy shelf and shelving strips / posts</th>
<th>Number of shelves per bay excl. canopy</th>
<th>Average capacity per browser bin shelf (# books)</th>
<th>Shelf width</th>
<th>Shelf depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picture books and Sophisticated picture books</td>
<td>1200mm 1500mm</td>
<td>2 3</td>
<td>40 40</td>
<td>900mm</td>
<td>300mm</td>
</tr>
<tr>
<td>Quick picks / Quick reads</td>
<td>1500mm 1500mm</td>
<td>3 3</td>
<td>50 50</td>
<td>900mm</td>
<td>200 or 250mm</td>
</tr>
<tr>
<td>Graphic novels</td>
<td>1500mm 1500mm</td>
<td>3 3</td>
<td>50 50</td>
<td>900mm</td>
<td>200 or 250mm</td>
</tr>
</tbody>
</table>
Chart B: Horizontal / flat shelves (wall & free-standing)

Horizontal/flat shelves with a sloped shelf interspersed for face-out display. Height of shelves within in each bay can be staggered from bay-to-bay for visual effect. An up-tilt shelf at the bottom of a bay is an option for ease of reading spine labels.

<table>
<thead>
<tr>
<th>Resource type</th>
<th>Max height of bay including strips / posts / canopy</th>
<th>Number of shelves per bay (exc. canopy)</th>
<th>Average # books per shelf (with space for face-out display at end of shelf)</th>
<th>Shelf width</th>
<th>Shelf depth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pri/Int</td>
<td>Sec</td>
<td>Pri/Int</td>
<td>Sec</td>
<td>Pri/Int</td>
</tr>
<tr>
<td>Non-fiction</td>
<td>1500mm</td>
<td>1800mm</td>
<td>3</td>
<td>4</td>
<td>55</td>
</tr>
<tr>
<td>Reference</td>
<td>1500mm</td>
<td>1800mm</td>
<td>3</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Fiction</td>
<td>1500mm</td>
<td>1800mm</td>
<td>4</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>Quick picks / Quick reads</td>
<td>1500mm</td>
<td>1800mm</td>
<td>4</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>Graphic novels</td>
<td>1500mm</td>
<td>1800mm</td>
<td>4</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>Picture books, Sophisticated</td>
<td>1200mm</td>
<td>1800mm</td>
<td>2</td>
<td>4</td>
<td>60</td>
</tr>
<tr>
<td>picture books</td>
<td>Magazines</td>
<td>1500mm</td>
<td>1800mm</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Display areas</td>
<td>1500mm</td>
<td>1800mm</td>
<td>3</td>
<td>4</td>
<td>Face-out display of book covers</td>
</tr>
</tbody>
</table>
Chart C: Free-standing – Mobile / Rollaway on castors

Various styles of shelving can be used on mobile shelving units—horizontal/flat, sloped, browser bin, divider/slotted and lift-up shelves with storage beneath. End panels can be used with sloped shelves for display purposes or as noticeboards. Each rollaway unit to be either 1 or 2 bays long (maximum) to aid manoeuvrability.

<table>
<thead>
<tr>
<th>Resource type</th>
<th>Height of canopy incl. castors</th>
<th>Number of shelves per bay excl. canopy</th>
<th>Average capacity per shelf will depend on type of shelf e.g. Chart A: Browser bins or Chart B: Horizontal/flat shelf</th>
<th>Shelf width</th>
<th>Shelf depth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pri/Int/Sec</td>
<td>Pri/Int</td>
<td>Pri/Int Chart A</td>
<td>Sec Chart B</td>
<td></td>
</tr>
<tr>
<td>Non-fiction</td>
<td>1200mm–1375mm</td>
<td>2</td>
<td>55 books</td>
<td>900mm</td>
<td>250 or 300mm</td>
</tr>
<tr>
<td>Reference</td>
<td>1200mm–1375mm</td>
<td>3</td>
<td>30 books</td>
<td>900mm</td>
<td>300mm</td>
</tr>
<tr>
<td>Fiction</td>
<td>1200mm–1375mm</td>
<td>3</td>
<td>50 books</td>
<td>900mm</td>
<td>200 or 250mm</td>
</tr>
<tr>
<td>Quick picks / Quick reads</td>
<td>1200mm–1375mm</td>
<td>3</td>
<td>40 books</td>
<td>900mm</td>
<td>200 or 250mm</td>
</tr>
<tr>
<td>Graphic novels</td>
<td>1200mm–1375mm</td>
<td>3</td>
<td>40 books</td>
<td>900mm</td>
<td>200 or 250mm</td>
</tr>
<tr>
<td>Picture books, Sophisticated picture books</td>
<td>1200mm–1375mm</td>
<td>3</td>
<td>50 books</td>
<td>900mm</td>
<td>300mm</td>
</tr>
<tr>
<td>Magazines</td>
<td>1200mm–1375mm</td>
<td>3</td>
<td>4 mags</td>
<td>900mm</td>
<td>300mm</td>
</tr>
<tr>
<td>Display areas</td>
<td>1200mm–1375mm</td>
<td>3</td>
<td>3–4 books face-out</td>
<td>900mm</td>
<td>300mm</td>
</tr>
</tbody>
</table>
Scenario: Example of primary school with 2500 non-fiction books

The primary school’s planning team has decided:

- non-fiction to be on walled shelving
- shelving style to be mainly horizontal/flat shelves – each shelf to have space at the end for face-out display
- a sloped shelf is to be included in every second bay, to enable more face-out displays.

Hence, refer to *Chart B: Horizontal / flat shelves* (wall & free-standing without castors).

<table>
<thead>
<tr>
<th>Step</th>
<th>Calculation</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Note maximum height of non-fiction shelves for a primary school: See <em>Chart B</em>. Ensure height is measured from the floor and not from the top of the skirting board.</td>
<td>1500mm height for shelving bays.</td>
</tr>
<tr>
<td>2.</td>
<td>Calculate number of horizontal shelves required. Non-fiction = 55 books per 900mm shelf, allowing space at end of shelf for display.</td>
<td>2500 books divided by 55 books per shelf = 46 horizontal shelves.</td>
</tr>
<tr>
<td>3.</td>
<td>Calculate number of bays required for the horizontal shelves. 3 shelves will fit a 1500mm high bay.</td>
<td>46 shelves divided by 3 shelves per bay = 15.33 bays = 16 bays.</td>
</tr>
<tr>
<td>4.</td>
<td>Calculate the extra number of bays required if a sloped shelf was inserted in every second bay. 4 sloped shelves will fit a 1500mm high bay.</td>
<td>16 bays divided by 2 = 8 sloped shelves 8 sloped shelves divided by 4 shelves per bay = 2 bays.</td>
</tr>
<tr>
<td>5.</td>
<td>Total number of bays of horizontal shelves with a sloped shelf in every second bay.</td>
<td>16 bays + 2 bays= 18 bays required to shelve all the non-fiction.</td>
</tr>
<tr>
<td>6.</td>
<td>Number of canopy shelves (one per bay).</td>
<td>18 canopy shelves (at maximum of 1500mm).</td>
</tr>
<tr>
<td>7.</td>
<td>Width of shelves : 900mm or 600mm.</td>
<td>900mm width.</td>
</tr>
<tr>
<td>8.</td>
<td>Depth of shelves.</td>
<td>200mm (or 250mm).</td>
</tr>
</tbody>
</table>
| 9.   | Length of shelving strips for walled shelves:  
- As shelving strips tend to be attached above any skirting board, deduct the height of skirting when ordering the lengths of shelving strip.  
- Ensure shelving strips / 'wall channels' don’t extend above the height of the canopy shelf, for visual aesthetics and to allow for wall displays.  
- Check the position of wall studs and noggins match the height and width of the shelves, so that the wall channels can be attached securely. | 1500mm minus height of any skirting board = XYZ mm. Canopy shelf and strips to be at 1500mm. |
| 10.  | Length of posts for free-standing shelves. | 1500mm |
Step | Calculation | Result
--- | --- | ---
11. | Number of shelving strips for walled shelving and shelving posts for standalone shelving (not on castors). | Number will depend on how many bays are shelved in one continuous sequence. e.g. 2 bays will require 3 strips or 3 posts 3 bays will require 4 strips or 4 posts
12. | Number of shelving posts for standalone island shelving on castors. | For ease of shifting, each island unit to be a maximum of 2 bays which will require 3 posts

Repeat the above process for your other collections, using Charts A, B or C.

**Section 5: Calculate shelving accessories**

Calculate the number required for the following and choose your colour scheme:

- Book ends (one for each horizontal/flat shelf) – sizes to vary with size of book types.
- Number of book display stands for horizontal / flat shelves (smaller size for Fiction).
- Indicator blocks for non-fiction (000-900) and fiction (A-Z).
- A-Z indicator blocks for fiction, picture books, quick picks / quick reads, graphic novels, if shelved on horizontal/flat or divider/slotted shelves.
- Shelf labels for fiction if shelved by genre.
- Shelf labels for resources in browser bins and sloped shelves.

Select the forms of signage used to promote each of the library’s collections – wall mounted and/or shelf markers. Use appropriate terminology to describe language collections. It is a good idea to consult with your school communities before making any decisions. Our [School library suppliers list](#) contains information about signage including te reo Māori signage.

![A–Z labelling by the author’s last name](image1.jpg)  ![Shelf labelling of fiction series](image2.jpg)
Find out more

- School library suppliers list provides contact details for a range of shelving and storage options for books, magazines, newspapers, DVDs/CDs and games; and shelving accessories.
- Place and environment provides advice on creating spaces with flexible shelving layouts.
- Arranging library fiction by genre discusses an alternative to arranging fiction A-Z by the author’s surname.

If you would like to discuss your shelving options or to ask other questions, call 0800 LIB LINE (0800 542 5463) or email schoollibraryadvice@dia.govt.nz

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