

# Overview of Shifting

## **Introduction**

Shifting is the process by which free space within a collection may be divided up and redistributed amongst the shelves in order to shelve the books more evenly in the collection. Shifting is one of the most important steps necessary to ensure that a collection is maintained in proper order and allowed room for growth. There are multiple factors involved in every shift that need to be taken into account before even a single book is moved. This guide will describe in detail the techniques of shifting and how to handle major and minor (or mini) shifts in the collection.

There are three major parts to this guide. The first part will help you determine what type of shift you require: a mini shift of a small area or a complete shift of the collection. The second section will cover how to set up each type of shift. The final section will cover actual shifting techniques that you can use.

## **Where and when to shift**

While shelving, you may be required to move books from one shelf to another to make room for more books. This is the most basic type of shifting and usually takes only a few seconds to accomplish. However, there may be an area that acquires new books more rapidly than the rest of the collection, or a new series or a gift collection may require more space than is available on your shelves. When it becomes necessary to move a large number of books in order to shelve correctly you will need to shift.

If there is only one area of your collection that needs room, a mini-shift would be the most appropriate type of shift. Planned shifts of the entire collection should be scheduled based on the needs of your collection. If you determine that there have been significant changes in the space distribution of your collection that make shelving difficult, you should consider a full shift of your collection. Consult your unit and/or collection management supervisor before proceeding.

## **Mini-shifting**

Mini-shifting is in essence: a small, unplanned, spontaneous shift that usually occurs while shelving. When a shelver is shelving books, occasionally they encounter a section where a book needs to be placed on the shelf, but the shelf is full. In this situation, the shelver should first find the closest available shelf with free space on it. After identifying which shelf is the most likely candidate for the beginning of the mini-shift, the shelver should then move the books in call number order to the shelf with free space, so that when the shelver is finished there is room on the appropriate shelf for the book to be shelved. We will cover the in-depth techniques used to accomplish this later.

The most important part of planning your mini-shift is locating the closest available space to shift. A good technique is to count the number of shelves that require space and then multiply that number by the free space you would like to have on each shelf. Please take note that different areas will require a different amount of free space, and designate enough space to ensure that you will not have to shift the same section again in the near future.

For example, if we have 10 shelves that should have 3 inches of space on each shelf, we would need 30 inches of space to make room for incoming books. Once you have an idea of how much space you require you can start looking for the space in the surrounding area.

When you are looking for free space to use, your highest priority is finding space that you do not expect to use in the near future. If you take space from a section of your collection where you have high growth, you may wind up in a situation where you require 2 mini-shifts in the near future instead of one.

The second priority when selecting an area to remove space from is the proximity to the location that you will be shifting to. Remember that you will have to move every book from the area that you select until you reach the area that you are trying to fix. The closer the free space is, the easier it will be to shift and the less time it will take.

Usually there are no empty shelves in a collection. The way that you can get room from a collection that is entirely composed of occupied shelves is to take small amounts of space from shelves that have some free space on them.

## Overview of Shifting

Each section of the collection should have *maximum shelf height*. This *maximum shelf height* should be same throughout the collection. To determine your maximum shelf height, speak with the collection management coordinator or unit supervisor in your library. Maximum shelf heights will vary from unit to unit and are determined by needs of the collection, fire codes and by the comfort and safety levels required by your patrons.

Shelf heights between shelves are also standardized based on collection. If possible, please try to tie the standard shelf height between shelves to the maximum size for the collection. While shifting, if a book is larger than the standard shelf height, review the item to see if it should be in an oversize collection. If the book is not large enough to belong to an oversize collection but cannot be shelved standing up, please lay the book on its spine. No item should ever be shelved on its fore-edge. The book should also have a shelving tag made up, so that its call number is visible on the shelf. Please contact the collection management coordinator to discuss shelving tags for items shelved on their spines.

You should always try to move the books down so that gravity works in your favor, and to ensure that there will be enough room for every book to stand vertically.

To add space to a tight area of the collection, first determine how much space you require. In our previous example we determined that we would require 30 inches of free space for our problem section.

Next, check the books in the surrounding area to see if they would be adversely affected by removing some of the space from their shelves. Find the closest section that you can use that will not be adversely impacted by taking away available space.

To remove space from your selected area, estimate how much space you can safely remove from the section. 1 inch per shelf is generally a safe number. You will then need to divide the number of inches that you need for the problem section by the number of inches you will remove from your donating section. In this case, we are removing 1 inch from each shelf, and we require 30 inches of space, so there will be 30 shelves donating space.

Go to the closest shelf that is donating space to the problem area and count the number of shelves that you will need. In our example we cited 30 shelves, so we would count out 30 shelves from our starting point. Take into account that there will be variances in the amount each shelf can give. You should also take some additional space just in case there are unforeseen problems in your shift. When you find the first shelf you are going to remove space from you have found your *starting point*. Follow the instructions in the section for shifting techniques until you have accomplished your goal.

### **Planned Shifting**

Contrary to mini-shifting, planned shifting requires much more planning to execute. This is because the goal of planned shifting is to redistribute the free space in a collection in order to create room for new book growth over a long period of time. A planned shift is conducted under a project timeline for completion and is labor intensive.

The first step in this type of shifting is to measure your collection shelf by shelf to determine how much free space exists and where this space is located. The following is an example of the shifting measurement form used at the Alexander Library (Figure 1). Shifting forms vary slightly in appearance based on the needs of a particular library's collection.

# Shifting Measurements

Existing Call # Range \_\_\_\_\_

Row # \_\_\_\_\_

*First Range*

	Face 1	Face 2	Face 3	Face 4	Face 5	Face 6	Face 7	Face 8
# of In.								
Class								
# of In.								
Class								
# of In.								
Class								
# of In.								
Class								
# of In.								
Class								
# of In.								
Class								
# of In.								
Class								

Figure 1.

## Overview of Shifting

The shifting measurement form resembles one side of a range, and is double sided so that it can represent one range in the collection. Each square equals one shelf with an area underneath it to mark where a major change in the call numbers is located.

It would be impractical to try and record the call numbers for each and every shelf in your collection. The spaces on the form for call numbers should be used to mark where there is a significant change in the call numbers. For example, the location where Q changes to QA might be significant for your collection if you have a large number of books that are about science. In the box that represents where Q changes into QA write "Q/QA".

It would also be impractical to try and measure the free space on each shelf as exactly as possible. Due to the large number of shelves involved it is better to approximate the measurement to the nearest half-inch.

Note that this sheet contains seven shelves and eight faces. Some ranges have fewer shelves or faces than the sheet does, but it is important to always begin measuring at the top left-hand corner of the sheet. This will keep your measurements organized later when the forms are added and used to create a plan for the shift. If there are not enough shelves on the sheet a bottom row may be drawn on, or the sheet may be altered to better fit your collection layout. A copy of this form can be found in the appendix of this manual as well as on the Collection Management web page.

### **In-Processing Statistics**

After gathering the free space information for the area that you wish to shift, the next step is to calculate how the free space should be divided. Before you can calculate the shift you should examine your collection and decide what call numbers experience the most growth in your collection. To do this is examine the In-Processing statistics for the previous year. In-Processing statistics show how many new books were added to the collection and are divided up by groups of call numbers. These statistics help us to estimate how much we expect an area of books to grow in the coming year. Below is a sample of In-Process statistics taken from the Alexander Library (Figure 2).

<b>Call Number Range</b>	<b>Books acquired in 2000-2001</b>	<b>Percent of growth</b>
<b>PR</b>	<b>888</b>	<b>35.5%</b>
<b>PS</b>	<b>585</b>	<b>23.4%</b>
<b>PT</b>	<b>139</b>	<b>5.6%</b>
<b>PZ</b>	<b>12</b>	<b>0.5%</b>
<b>Q-QR</b>	<b>168</b>	<b>6.7%</b>
<b>R</b>	<b>124</b>	<b>5.0%</b>
<b>S</b>	<b>25</b>	<b>1.0%</b>
<b>T</b>	<b>98</b>	<b>3.9%</b>
<b>U-V</b>	<b>107</b>	<b>4.3%</b>
<b>Z</b>	<b>206</b>	<b>8.2%</b>
<b>ZA</b>	<b>18</b>	<b>0.7%</b>
<b>JUV</b>	<b>2</b>	<b>0.1%</b>
<b>ED-LAB</b>	<b>12</b>	<b>0.5%</b>
<b>FOLIO</b>	<b>118</b>	<b>4.7%</b>
<b>TOTAL</b>	<b>2502</b>	

Figure 2.

This chart shows the number of new books this section has accrued for the last year. Keep in mind that different libraries will divide their In-Process statistics based on the contents of their collections. For example, a library that deals primarily with science would expand their Q-section so that it was divided into smaller parts, while their literature section, the P's, may be condensed to just "P".

## Overview of Shifting

### Shifting Data Template

After examining the In-Process statistics and recording the free space in your collection it is time to calculate the shift. The Shifting Data Template is the most important and useful tool in a shift. The Shifting Data Template is a file created in Microsoft Excel that helps calculate shifting data for each section in an area.

*Make sure that you copy the file from the Staff Resources website to your desktop and save it with a new name!*

The Template will help you determine how you want to divide the free space in your collection. Enter all new information into the new file, not the template. This will leave the template unchanged so that it can be used again in the future. If you make a mistake please notify the Collection Management Group coordinator. A copy of the Shifting Data Template can be found on the RUL staff resources webpage

Here is an example of the Shifting Data Template (Figure 3):

Measured Area	PR	PS	PT	PZ	Q-QR
# Shelves					
Available Space	35	35	35	35	35
Free Space					
Extra Books					
Total Inches of Books	35	35	35	35	35
Fill Ratio	1	1	1	1	1
Aver.Inch. Books/Shelf	35	35	35	35	35
Rounded Value					
Space to be left free	35	35	35	35	35
New Spacing					

Figure 3

First, enter the call number sections for the areas that you will be shifting in the top row of the form. You should have the call number sections from the last step when you were examining the In-Processing statistics. Each column will represent a call section in the upcoming shift. For our example we used a section of the P's and half of the Q's from a shift at the Alexander Library.

Please note that because Alexander Library has a large number of books about literature the form sub-divides the P's (literature) for more detail. There are not many books on science and technology in the Alexander Library, so the Q's have been grouped together. You should try to tailor the call number sections on your form to best represent your collection.

After entering the call number sections into the Shifting Data Template, enter the number of shelves for each section in the "# of shelves" box below the appropriate heading. You will notice that the Excel file changes values in latter parts of the form based on the numbers you have entered. The template will actively calculate based on the information entered into it. However, the final calculation is not complete until all relevant information is entered into the worksheet.

The next step is entering the amount of free space available in each of these sections section. To do this you must add the free space from all of the shifting measurement forms that were collected for each section. This is best accomplished using a separate Excel spreadsheet.

Please note that if you are planning on leaving shelves empty in your upcoming shift that you should not add the free space from them. For example, if your library uses the bottom most shelves in your collection, and then you must omit them as free space (as you will not be using that space for books). You

## Overview of Shifting

will only need to do this if you are omitting shelves during the shift. If you are not, you can skip this procedure.

If you are leaving shelves empty that are currently in use then you should also not count them in the total number of shelves section of the form. The books on the bottom shelves are also going to be moved into the rest of the collection and must be accounted for. To do this, add the free space of all the bottom shelves in your shift. Then count the number of bottom shelves being used. Multiply the number of shelves to be omitted by the width of one shelf and then subtract the free space from the omitted shelves from that number.

For example, if we have 10 shelves on the bottom that will be omitted in an upcoming shift, and they have a total of 97 inches of free space on it we would do the following.

1. 10 shelves x 35.5 inches per shelf = 355 inches.
2. 355 inches of space – 97 inches of free space = 258 inches of *used* space.
3. Now put 258 inches into the box marked “Extra Books”

Alternatively you could take the *inverse* of the free space from these shelves and subtract it from your free space total, but using the “Extra Books” box is easier. The reason for doing this is that the inverse of the free space on the bottom shelves is the space occupied by books. In order for the omitted shelves to be empty after you finish your shift; you must incorporate these books into the rest of the collection. To do this, you will need to find out how much room will be taken up by these books.

For example: Let us assume that there is a shelf that will be omitted from the upcoming shift that contains 23 inches of free space. The total length of this shelf is 35.5 inches. Thus  $35.5 - 23 = 12.5$  inches of books. If the total free space before this was 989.5 inches, then we subtract 12.5 inches and are left with 977 inches of free space. The final total after all the omitted shelves are accounted for is entered into the “Free Space” slot of the appropriate section. After this step the Shifting Data Template will look like this (Figure 4):

Measured Area	PR	PS	PT	PZ	Q-QR
<b># Shelves</b>	1436	967	641	187	348
<b>Available Space</b>	50260	33845	22435	6545	12180
<b>Free Space</b>	4131.5	3664	989.5	382.5	3788
<b>Extra Books</b>			12.5		
<b>Total Inches of Books</b>	46128.5	30181	21458	6162.5	8392
<b>Fill Ratio</b>	0.917797	0.891742	0.956452	0.941558	0.688998
<b>Aver.Inch. Books/Shelf</b>	32.12291	31.21096	33.47582	32.95455	24.11494
Rounded Value					
Space to be left free	<b>35</b>	<b>35</b>	<b>35</b>	<b>35</b>	<b>35</b>
New Spacing					

Figure 4

After you enter in the free space and the extra books, the form calculates the total inches of books in each section for you. The form is set to calculate that information because free space is easier to measure than space occupied by books and is usually a much smaller number.

The form also calculates the fill ratio. The fill ratio represents the percent to which each section is occupied by books. To get the percentage value, multiply the fill ratio by 100. For example, a fill ratio of .918955 represents a section that is 91.8955% full. Sections with a high fill ratio are hard to shelve books in and usually have a higher percentage of shelving errors and missing books.

## Overview of Shifting

The fill ratio allows the form to calculate the average inches of books on each shelf in a section. The next step is to round that number and enter it into the rounded value box for each section. When you enter in the information the “Space to be left free” value will change. However, though it appears as if the shift has been planned there is one more important step. If you read the section on Mini-shifting, you will recall that we borrowed space from sections that had surplus and used it in areas that required more space.

The principle is the same in this case, we will move the free space from sections that have not grown much in the last year and reallocate it to areas that need the space.

On the In-Process page that displayed the number of books that were added to each section we estimated the percentage of new books that were added to each call number section. To find the percentage, total all of the books that were processed in the last year and divide the number of books processed for each section by the total and multiply it by 100. For example 888 books in PR is divided by 2502 which is the total number of books received that year (for that area) gives us .354916. Multiply .354916 by 100 to get 35.4916%, and round that number up to 35.5%.

The percentage value should give you a better idea of how the free space should be divided between the different sections. This percentage is not meant to be used mathematically in the Excel file, but as a guide for the next step.

The next section will deal with the shortcomings of the Shifting Database. Here is an example of a database that without alteration (Figure 5):

<b>Measured Area</b>	<b>PR</b>	<b>PS</b>	<b>PT</b>	<b>PZ</b>	<b>Q-QR</b>
<b># Shelves</b>	1436	967	641	187	348
<b>Available Space</b>	50260	33845	22435	6545	12180
<b>Free Space</b>	4131.5	3664	989.5	382.5	3788
<b>Extra Books</b>			12.5		
<b>Total Inches of Books</b>	46128.5	30181	21458	6162.5	8392
<b>Fill Ratio</b>	0.917797	0.891742	0.956452	0.941558	0.688998
<b>Aver.Inch. Books/Shelf</b>	32.12291	31.21096	33.47582	32.95455	24.11494
<b>Rounded Value</b>	32	31	33	33	24
<b>Space to be left free</b>	3	4	2	2	11
<b>New Spacing</b>					

Figure 5

The worksheet suggests that Q-QR should have 11 inches of free space per shelf. However, the In-Process percentages show that Q-QR accounts for only 6.7% of the growth for an entire year. Leaving 11 inches on every shelf in Q-QR is using space that could be more effectively distributed in other sections. The basis of this next section is both intuitive and mathematical; therefore, familiarity with your collection is essential.

Before you begin moving space between call number class sections, please note that removing 1 inch per shelf in one section will not create 1 inch of space in another section. Every call number class section has a different number of shelves, and you must account for the size of the areas when you remove and redistribute space.

For example, if you were to remove 1 inch of space from the Q-QR section above you would gain 348 inches. If you tried to redistribute that evenly across the PR section, you would only gain less than ¼ of an inch per shelf.

To move the space between sections it is necessary to convert the free space we remove from a section back into a total number of inches. This is accomplished by multiplying the number of inches to be

## Overview of Shifting

transferred by the total number of shelves. Now let's remove 9 inches of free space from each shelf in the Q-QR section. We must then multiply the 9 inches by the number of shelves in Q-QR (348). The total, 3132, is then written in any free cell off to the side of the database (or on a separate excel worksheet or calculator) and is referred to as a *free space pool*.

To remove the space and allocate it elsewhere subtract from the pool in increments equal to the number of shelves in the section you wish to add space to. The reason that free space is taken from the free space pool in increments equal to the number of shelves in the section is that it will allow us to create 1 inch of free space for every shelf in that section.

For example: The PR section comprises 35.5% of the growth in the last year, but is only set to receive 2 inches of free space on each shelf. To increase the amount of free space to be left in the PR's, remove space from the free space pool in increments equal to the number of shelves in PR. Subtract 1,436 inches from the pool for every inch of space to be left on the shelves in this section.

$3132 - 1436 = 1696$ . We can still subtract more space.  $1696 - 1436 = 260$ . After this, there is not enough space left to evenly add 1 inch per shelf to PR. We can now allocate 2 more inches per shelf in the PR sections and still have 260 inches left in the free space pool. Therefore our new Shifting Database for this area will look like this (Figure 6):

Measured Area	PR	PS	PT	PZ	Q-QR	
# Shelves	1436	967	641	187	348	
Available Space	50260	33845	22435	6545	12180	
Free Space	4131.5	3664	989.5	382.5	3788	
Extra Books			12.5			Free space pool
Total Inches of Books	46128.5	30181	21458	6162.5	8392	260
Fill Ratio	0.917797	0.891742	0.956452	0.941558	0.688998	
Aver. Inch. Books/Shelf	32.12291	31.21096	33.47582	32.95455	24.11494	
Rounded Value	32	31	33	33	24	
Space to be left free	3	4	2	2	11	
New Spacing	5	4	2	2	2	

Figure 6.

After all the calculations are finished there should be a small amount of space left over that does not fit evenly into any location. This space is usually left at the end of the shift to provide a starting point for a shift in the future. The free space can either be left as empty shelves or a larger spacer can be used at the end of the shift until the free space is used up. Usually, a combination of these two techniques is used to ensure a better starting point for the next shift, even if the next shift is scheduled years after the current shift is completed.

Please note: Most spacers used in shifting are whole inches. Always round the number of inches of free space *down* to ensure that you will have enough free space to shift. It is always better to underestimate, because unexpected events can occur during or after a shift. I.e.: new book collections added to these areas, last minute changes in spacing, checked-out items returned by patrons, etc.

### Shift Planning through Director's Station

Another method of shift planning involves the use of the Director's Station catalog program by Sirsi. Director's Station can give a real time statistical picture of the collection broken down by the user's needs. The advantage of Director's Station is that it can give insight into the total collection and just not what is on shelf. The downside is that it also reflects errors of the miscataloged and uncataloged books of the collection, which can inflate the total numbers.

## Overview of Shifting

The Director's Station is a web based java application that can be accessed at <http://dstation.rutgers.edu/directorsstation/default.aspx>. Director Station users are trained to use the program by Systems staff and each has their own login and password to access the program. You will not be able to access Director's Station unless you have been authorized and trained by Systems staff.

Director Station can draw data from a series of user generated reports. From this data the shift coordinator can:

- Estimate size of collection
- Estimate average size of a book in the collection
- Estimate the need to shift. If the books fill over 80% of the collection free space a shift is recommended.

To use Director Station the user inputs their username and password to access the program's dashboard site. Under the Swift Links box, the user will select the swift analysis tab and click the All Catalog Measures link (Figure 7):

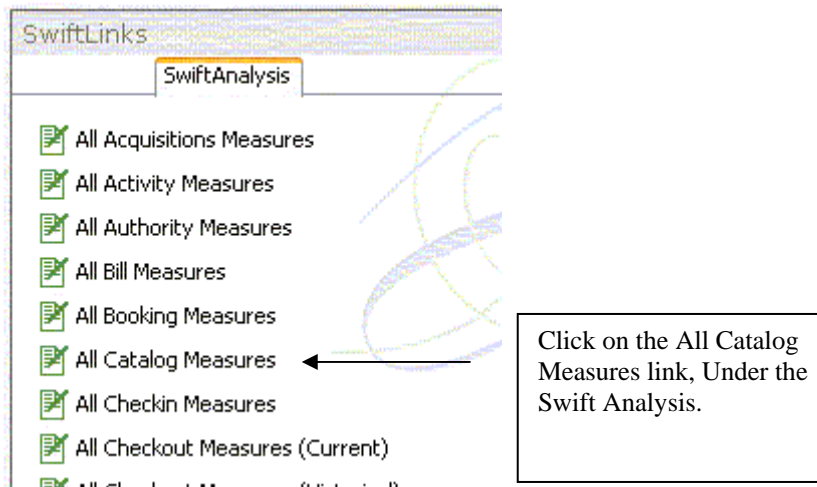


Figure 7.

Once the all catalog measure page is open, we have to set up our table to reflect the collection totals. Select the item type tab from the table and drop it back into the pool of choices. Click on the item type button and select the type of collection you want to shift, for example "STACKS". The next step is to select the Library tab from the pool and choose the library to be shifted (Figure 8):

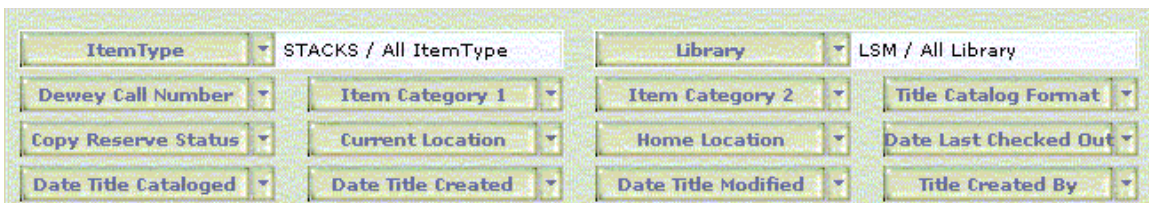


Figure 8.

The data pool will reflect the library and the collection to be shifted

Below the data pool is where the totals chart is reflected. To display this chart place the LC Call Number Tab from the data pool into the table as the row heading (left of center). Click on the LC Call Number Tab and deselect the All LC Call Number check box. This will display all the class headings and subjects into the chart. The letters can be clicked to display a further breakdown of subject classes. The final step is to click on the Total Measures tab on top of the chart to display which totals you would like to see (Figure 9):

## Overview of Shifting

LC Call  
number  
Classes

Totals											
Measures	Total Titles	Total Call Numbers	Total Copies	% of Copies to Total Copies	% of Copies to Titles	% of Copies to Call Numbers	% of Call Numbers to Titles	% of Titles to Total Titles	Total Collection Value	Total Checkouts	Turnover Rate
( All Non LC Total )	42,710	119,858	117,082	39.38%	274.13%	97.68%	280.63%	23.28%	82,536.44	37,335	.32
(A) General Works Total	<b>76</b>	<b>625</b>	<b>625</b>	<b>0.21%</b>	<b>822.37%</b>	<b>100.00%</b>	<b>822.37%</b>	<b>0.04%</b>	<b>186.80</b>	<b>38</b>	<b>.06</b>
(AC) Collections, Series, Coll	4	4	4	0.00%	100.00%	100.00%	100.00%	0.00%	0.00	3	.75
(AE) Encyclopedias	8	117	117	0.04%	1462.50%	100.00%	1462.50%	0.00%	16.95		.00
(AG) Dictionaries and other c	6	6	6	0.00%	100.00%	100.00%	100.00%	0.00%	31.90		.00
(AI) Indexes	1	1	1	0.00%	100.00%	100.00%	100.00%	0.00%	0.00		.00
(AM) Museums, Collectors ar	3	4	4	0.00%	133.33%	100.00%	133.33%	0.00%	0.00		.00
(AS) Academies and learned	48	476	476	0.16%	991.67%	100.00%	991.67%	0.03%	137.95	31	.07
(AY) Yearbooks, Almanacs, I	3	14	14	0.00%	466.67%	100.00%	466.67%	0.00%	0.00	3	.21
(AZ) History of scholarship ai	3	3	3	0.00%	100.00%	100.00%	100.00%	0.00%	0.00	1	.33
(B) Philosophy, Psychology, Reli	8,009	8,808	9,339	3.14%	116.61%	106.03%	109.98%	4.37%	60,032.79	72,588	7.77
(C) Auxiliary Sciences of History	214	226	229	0.08%	107.01%	101.33%	105.61%	0.12%	1,457.82	466	2.03
(D) History (General) and Histor	516	541	545	0.18%	105.62%	100.74%	104.84%	0.28%	907.37	704	1.29
(E) History: America	228	230	239	0.08%	104.82%	103.91%	100.88%	0.12%	684.31	953	3.99
(F) History: America	177	180	183	0.07%	104.00%	101.70%	100.00%	0.10%	150.00	610	1.00

Figure 9.

Once the data is displayed, the chart can be exported to an Excel worksheet. The export icon is at the top of the screen in the menu bar. In Excel, the size of each subject class can be estimated by multiplying the average size of a book by subject class total. In our example the average size for non-folio books in LSM is about 1.1 inches. Please contact the Collection Management Coordinator for information on the average size of a book in a collection.

In addition to calculating the current size of a subject class, calculate the in-process totals to estimate how the collection will grow in the time frame set for the shifting project. By adding the current size and future in process growth together the user will have a total estimated measurement of how large their collection will be.

One class subject to keep in mind in a Stacks shift is the Non LC Total row at the top of the Director's Station report (Figure 10):

Measures	Total Titles	Total Call Numbers	Total Copies	% of Copies to Total Copies	% of Copies to Titles	% of Copies to Call Numbers	% of Call Numbers to Titles	% of Titles to Total Titles	Total Collection Value	Total Checkouts	Turnover Rate
( All Non LC Total )	11,425	11,505	11,531	7.70%	100.93%	100.23%	100.70%	8.88%	32,669.79	18,262	1.58

Figure 10.

Books located in these totals may be errors in cataloging and may or may not be in the collection. It is under the shift coordinator's discretion on how to add or subtract these totals from the shift plan.

In order to compensate for these cataloging errors, the user should export a list of miscataloged items. The list will detail the call numbers and barcodes of each title. Eliminate any titles that have no or auto-generated barcodes (these titles will not generally be found in the collection). Count the remaining books and multiply the total number by the average size of a book in your collection. Add the inches into your final totals.

### Selecting a starting point

The first step after the planning phase of the shift is completed is to select a point where the shift will start. Typically there are two ways a shift progresses.

- 1) Forward: From the beginning of the call numbers to the end. (A-Z)
- 2) Backward: From the end of the call numbers to the beginning. (Z-A)

## Overview of Shifting

Shifts can also be done from a midpoint outwards, or from two endpoints moving toward a middle section, but shifting in this way is problematic and difficult to calculate. Always try to shift in one direction if it is possible.

When considering where to start a shift, look for the sections on the Shifting Database where you are most likely to gain free space. In our example the Q-QR section above was originally set at 10.5 inches, but is now set for 4 inches per shelf. This means that there will be a net gain of 6 inches for every shelf shifted in this section. If the shift were started at the PR's, the amount of free space would soon be run out, prematurely ending the shift.

Always try to start your shift from the side of the collection that will lose free space, and end it where you will redistribute that space.

### **Shifting Techniques**

By selecting your starting point you have determined the direction of your shift. Shifts will progress in one of two ways, forward or backwards. We will now cover in-depth how to accomplish both of these types of shifts.

With mini-shifts, you can typically accomplish your goal while shelving, or over the course of a few days. You may require a cart if the area between where your shift starts and ends becomes large, but typically this type of shift can be done without much equipment.

Please remember that if you move books around the corner you should replace the stack guides if the call numbers on the stack guides no longer match the call numbers on the shelves. If you will be shifting large sections of a collection, you should also notify the reference librarians as to the progress of the shift.

For large shifts you may need to bring materials with you. If a shift becomes very large, it is recommended that you shift with a two-person team. The following is a list of materials that you should have available if you are working on a large shift.

- Up to two carts for loading and unloading materials.
- Shelf hooks and book ends.
- Dustrags to clean dusty shelves.
- Wooden or cardboard spacers.
- A notepad to record call numbers for new stack guides.
- A sheet to record shifting statistics.
- A centimeter ruler to measure books to determine if they are oversized. If a book meets the size threshold for an oversize collection, it should be forwarded to the appropriate DTS site to be internally relocated.

Please remember to record statistics for shifting for both mini-shifts (over one section shifted) and planned shifts. The Collection Management Group keeps track of time spent in man-hours and the number of sections moved.

Both mini-shifts and planned shifts use the following techniques for shifting forward and backwards, but mini-shifts will most likely not require carts.

### **Forward shifting**

Forward shifting occurs when you shift books from a lower call number towards a higher call number, from A to Z. We will cover the procedures for planned shifting because mini-shifting is essentially a small version of a planned shift.

To begin, find the starting point of your shift. You may be required to load a truck to move the items. To do so, remove the books from the shelf starting at the lowest call number and move towards the highest.

## Overview of Shifting

Load the books onto the truck from left to right, keeping them in call number order. If you wish to load a second row of books, place the second row behind the first row on the top of the cart with the spines facing in the same direction as the first row. This will help prevent confusion when unloading the truck back onto the shelves.

If there is a second person, they should check to see if the shelves are set at the standard shelf height. Consult with your Collection Management unit coordinator to determine what the maximum shelf height is for your collection.

When the shelves are set, check to see if they are clean. If the shelves are dusty, you should wipe them off with a dust cloth before unloading books onto the shelves. Shifting also presents an opportunity to clean shelves using a bucket of warm water and mild cleanser, but make sure the shelf is dry before replacing books. Wet shelves can lead to mold in your collection.

When it is time to unload the cart, place the appropriate spacer on the right hand side of the shelf and place a book end there. Remove the books from the cart in the same order they were loaded, from left to right. If a book does not fit on a shelf, lay it on its spine. Consult the Collection Management Coordinator to order a shelving tag for the book. It is ideal to wait until the end of a shift before requesting shelving tags.

When the books being unloaded reach the spacer stop and adjust the shelf hook or book end to hold the last book in place. Move on to the next shelf below this shelf, or if you have reached the bottom move to the top shelf of the section to your right. If you are about to move around a corner treat the shelf on the upper left side of the next range (or other side of the range) as the next shelf.

Remember, when shifting forward you are moving from the upper left shelf of the side of the range that you are working on and will finish on the bottom right shelf.

Ideally, one person will load the truck while another person unloads a second truck. Typically the person who loads will finish before the person unloading does because they do not need to adjust shelves while they are working. While the person loading waits for the person unloading to finish a cart they may adjust shelves ahead of time for shifting, clean dust off of shelves or set the shelf hooks or bookends in place. This will help reduce the amount of time the person unloading requires to make adjustments.

When you finish shifting, make sure to record the call numbers for the first and last book on each side of a range so that new stack guides can be created. Remember to also write down the number of sections that were shifted and the number of man-hours spent on a shift.

### **Backwards shifting**

Backwards shifting occurs when you shift books from a higher call number towards a lower call number, from Z to A. We will cover the procedures for planned shifting because mini-shifting is essentially a small version of a planned shift.

To begin, find the starting point of your shift. You may be required to load a truck to move the items. To do so, remove the books from the shelf starting at the highest call number and move towards the lowest.

Load the books onto the truck from right to left, keeping them in call number order. If you wish to load a second row of books, place the second row behind the first row on the top of the cart with the spines facing in the same direction as the first row. This will help prevent confusion when unloading the truck back onto the shelves.

Before unloading the truck, check to see if the shelves are clean. If the shelves are dusty, you should wipe them off with a dust cloth before unloading books onto the shelves. Shifting also presents an opportunity to clean shelves using a bucket of warm water and mild cleanser, but make sure the shelf is dry before replacing books. Wet shelves can lead to mold in your collection.

## Overview of Shifting

When it is time to unload the cart, place the appropriate spacer on the right hand side of the shelf and place a book end there. Remove the books from the cart in the same order they were loaded, from right to left. Make sure not to set the top shelf or space shelves above the maximum shelf heights.

When the books being unloaded reach the left side of the shelf, stop and adjust the shelf hook or book end to hold the books in place. Move on to the next shelf above this shelf, or if you have reached the top move to the bottom shelf of the section to your left. If you are about to move around a corner treat the shelf on the lower right side of the next range (or other side of the range) as the next shelf.

Remember, when shifting backwards you are moving from the lower right shelf of the side of the range that you are working on and will finish on the upper left shelf.

Ideally, one person will load the truck while another person unloads a second truck. Typically the person who loads will finish before the person unloading does because they do not need to adjust shelves while they are working. While the person loading waits for the person unloading to finish a cart they may adjust shelves ahead of time to make sure there is enough room for the books, clean dust off of shelves or set the shelf hooks or bookends in place. This will help reduce the amount of time the person unloading requires to make adjustments.

When you finish shifting, make sure to record the call numbers for the first and last book on each side of a range so that new stack guides can be created. Remember to also write down the number of sections that were shifted and the number of man hours spent on a shift.

### **Final notes**

In both the forward and backwards shifts, it is essential to watch the call numbers as you shift. If you find errors in the order of the call numbers it could mean that there is a mistake in the loading or unloading of the carts. A few seconds of double checking can save hours of work later, so keep checking as you work.

There are also times when you will need to change the spacer being used during a shift. Make sure that you have the appropriate spacers before you begin, and know where to change from one spacer to another.

After a shift is complete, will is a good time to shelf read that section of your library's collection. There may have been errors that occurred during the shift and shelf reading will help to fix those errors.

### **Periodical Shifting**

The execution of a periodical shift is similar to that of a call number shift but there is difference in the planning phase of the project. Since periodicals are shelved in alphabetical order by title and then by volume number, one can accurately depict how much space is needed to accommodate a title for a set amount of years.

The first step is to receive a list of cancelled titles and a list of continuing titles from the Collection Management Coordinator. These lists can help pick out which titles you need to leave room for.

Next, measure the free space of the periodical collection. Once the total amount of free space has been assessed, measure the size of the continuing volumes. This can be done by taking the average inch measure of a typical volume. In Excel, compile a list of continuing titles in one column followed by a column detailing the average size of volume in inches. Multiply the average inch number of each title by the number of years you want this title to grow. Then total x growth number and compare the sum to the amount of free space in the collection. Adjust accordingly if the projected space exceeds the free space.

The process of shifting the collection also differs in that you will not be leaving a set amount of space per shelf. Instead the shifter will leave space at the end of each continuing titles. The shifter should leave book ends or hooks at the beginning and end of each title, if possible.

## Overview of Shifting

### **Conclusion**

In conclusion, a shift is an essential step in maintaining a collection. Shifting can be very simple on a small scale and very complex on a large scale. However, if done correctly, shifting can ensure enough space for the growth of a collection for an extended period of time and will help keep your collection in order.