

# 3 WORKING WITH SELECTIONS

## Lesson overview

In this lesson, you'll learn how to do the following:

- Make specific areas of an image active using selection tools.
- Reposition a selection marquee.
- Move and duplicate the contents of a selection.
- Use keyboard-mouse combinations that save time and hand motions.
- Deselect a selection.
- Constrain the movement of a selected area.
- Adjust the position of a selected area using the arrow keys.
- Add to and subtract from a selection.
- Rotate a selection.
- Use multiple selection tools to make a complex selection.
- Erase pixels within a selection.



This lesson will take about an hour to complete. Copy the Lesson03 folder onto your hard drive if you haven't already done so. As you work on this lesson, you'll preserve the start files. If you need to restore the start files, copy them from the *Adobe Photoshop CS6 Classroom in a Book DVD*.







Learning how to select areas of an image is of primary importance—you must first select what you want to affect. Once you've made a selection, only the area within the selection can be edited.

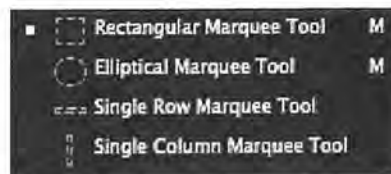
# About selecting and selection tools




**Note:** You'll learn how to select vector areas using the pen tools in Lesson 8, "Vector Drawing Techniques."

Making changes to an area within an image in Photoshop is a two-step process. You first select the part of an image you want to change with one of the selection tools. Then, you use another tool, filter, or other feature to make changes, such as moving the selected pixels to another location or applying a filter to the selected area. You can make selections based on size, shape, and color. The selection process limits changes to within the selected area. Other areas are unaffected.


The best selection tool for a specific area often depends on the characteristics of that area, such as shape or color. There are four types of selections:


**Geometric selections** The Rectangular Marquee tool () selects a rectangular area in an image. The Elliptical Marquee tool (), which is hidden behind the Rectangular Marquee tool, selects elliptical areas. The Single Row Marquee tool () and Single Column Marquee tool () select either a 1-pixel-high row or a 1-pixel-wide column, respectively.

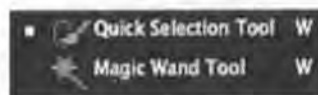


**Freehand selections** The Lasso tool () traces a freehand selection around an area. The Polygonal Lasso tool () sets anchor points in straight-line segments around an area. The Magnetic Lasso tool () works something like a combination of the other two lasso tools, and gives the best results when good contrast exists between the area you want to select and its surroundings.



**Edge-based selections** The Quick Selection tool () quickly "paints" a selection by automatically finding and following defined edges in the image.

**Color-based selections** The Magic Wand tool () selects parts of an image based on the similarity in color of adjacent pixels. It is useful for selecting odd-shaped areas that share a specific range of colors.

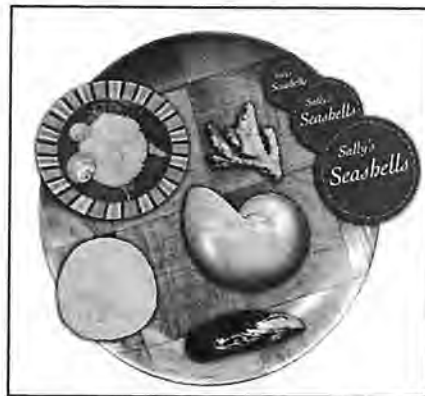


## Getting started

First, you'll look at the image you will create as you explore the selection tools in Adobe Photoshop.

- 1 Start Photoshop, and then immediately hold down Ctrl+Alt+Shift (Windows) or Command+Option+Shift (Mac OS) to restore the default preferences. (See "Restoring default preferences" on page 4.)
- 2 When prompted, click Yes to confirm that you want to delete the Adobe Photoshop Settings file.
- 3 Choose File > Browse In Bridge to open Adobe Bridge.
- 4 In the Favorites panel, click the Lessons folder. Then, double-click the Lesson03 folder in the Content panel to see its contents.
- 5 Study the 03End.psd file. Move the thumbnail slider to the right if you want to see the image in more detail.

The project is a collage of objects, including a piece of coral, a sand dollar, a mussel, a nautilus, a bowl of small shells, a wooden plate, and the "Sally's Seashells" logo. The challenge in this lesson is to arrange these elements, which were scanned together on the single page you see in the 03Start.psd file. The ideal composition is up to you, so this lesson won't describe precise locations. There is no right or wrong position for any of the objects.



- 6 Double-click the 03Start.psd thumbnail to open the image file in Photoshop.
- 7 Choose File > Save As, rename the file **03Working.psd**, and click Save. By saving another version of the start file, you don't have to worry about overwriting the original.

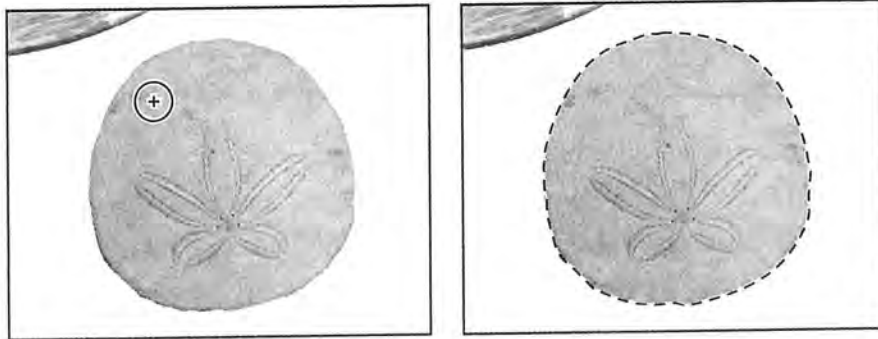
## Using the Quick Selection tool

The Quick Selection tool provides one of the easiest ways to make a selection. You simply paint an area of an image, and the tool automatically finds the edges. You can add or subtract areas of the selection until you have exactly the area you want.

The image of the sand dollar in the 03Working.psd file has clearly defined edges, making it an ideal candidate for the Quick Selection tool. You'll select just the sand dollar, not the shadow or background behind it.



- 1 Select the Zoom tool in the Tools panel, and then zoom in so that you can see the sand dollar well.
- 2 Select the Quick Selection tool (⌘) in the Tools panel.
- 3 Click on an off-white area near the outside edge of the sand dollar. The Quick Selection tool finds the full edge automatically, selecting the entire sand dollar.



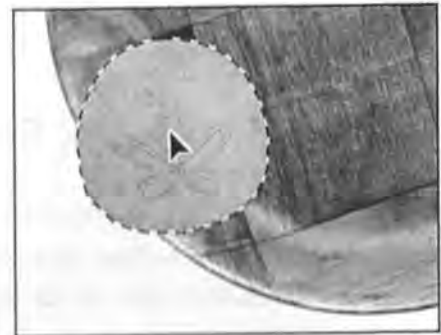
Leave the selection active so that you can use it in the next exercise.

## Moving a selected area

Once you've made a selection, any changes you make apply exclusively to the pixels within the selection. The rest of the image is not affected by those changes.

To move the selected area to another part of the composition, you use the Move tool. This image has only one layer, so the pixels you move will replace the pixels beneath them. This change is not permanent until you deselect the moved pixels, so you can try different locations for the selection you're moving before you make a commitment.

- 1 If the sand dollar is not still selected, repeat the previous exercise to select it.
- 2 Zoom out so you can see both the wooden plate and the sand dollar.
- 3 Select the Move tool (⇧+). Notice that the sand dollar remains selected.
- 4 Drag the selected area (the sand dollar) toward the left of the collage so that the sand dollar overlaps the lower left edge of the wooden plate.
- 5 Choose Select > Deselect, and then choose File > Save.



In Photoshop, it's not easy to lose a selection. Unless a selection tool is active, clicking elsewhere in the image will not deselect the active area. To deliberately deselect a selection, you can choose **Select > Deselect**, press **Ctrl+D** (Windows) or **Command+D** (Mac OS), or click outside the selection with any selection tool to start a different selection.

*Julianne Kost is an official Adobe Photoshop evangelist.*

## Tool tips from the Photoshop evangelist



### Move tool tip

If you're moving objects in a multilayer file with the Move tool and you suddenly need to select one of the layers, try this: With the Move tool selected, move the pointer over any area of an image and right-click (Windows) or Control-click (Mac OS). The layers that are under the pointer appear in the context menu. Choose the one you'd like to make active.

## Manipulating selections

You can move selections, reposition them as you create them, and even duplicate them. In this section, you'll learn several ways to manipulate selections. Most of these methods work with any selection, but you'll use them here with the Elliptical Marquee tool, which lets you select ovals or perfect circles.

One of the best things about this section is the introduction of keyboard shortcuts that can save you time and arm motions.

### Repositioning a selection marquee while creating it

Selecting ovals and circles can be tricky. It's not always obvious where you should start dragging, so sometimes the selection will be off-center, or the ratio of width to height won't match what you need. In this exercise, you'll learn techniques for managing those problems, including two important keyboard-mouse combinations that can make your Photoshop work much easier.

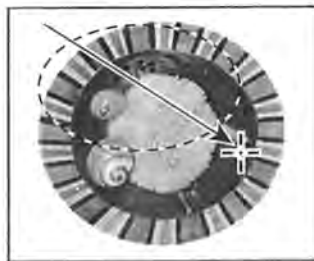
As you perform this exercise, be very careful to follow the directions about keeping the mouse button or specific keys pressed. If you accidentally release the mouse button at the wrong time, simply start the exercise again from step 1.

- 1 Select the Zoom tool (Q), and click the bowl of shells on the right side of the image window to zoom in to at least 100% view (use 200% view if the entire bowl of shells will still fit in the image window on your screen).
- 2 Select the Elliptical Marquee tool (⌘), hidden under the Rectangular Marquee tool (M).
- 3 Move the pointer over the bowl of shells, and drag diagonally across the oval bowl to create a selection, but *do not release the mouse button*. It's OK if your selection does not match the bowl shape yet.

If you accidentally release the mouse button, draw the selection again. In most cases—including this one—the new selection replaces the previous one.

- 4 Still holding down the mouse button, press the spacebar, and continue to drag the selection. Instead of resizing the selection, now you're moving it. Position it so that it more closely aligns with the bowl.
- 5 Carefully release the spacebar (but not the mouse button) and continue to drag, trying to make the size and shape of the selection match the oval bowl of shells as closely as possible. If necessary, hold down the spacebar again and drag to move the selection marquee into position around the bowl of shells.

● **Note:** You don't have to include every pixel in the bowl of shells, but the selection should be the shape of the bowl, and should contain the shells comfortably.



Begin dragging a selection.



Press the spacebar to move it.



Complete the selection.

- 6 When the selection border is positioned appropriately, release the mouse button.
- 7 Choose View > Zoom Out or use the slider in the Navigator panel to reduce the zoom view so that you can see all of the objects in the image window.

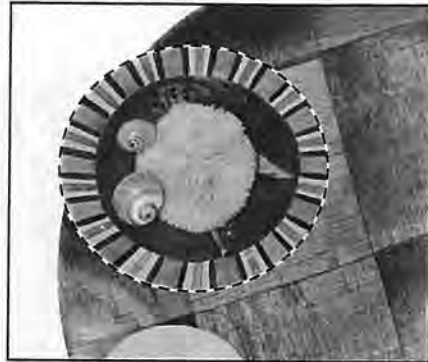
Leave the Elliptical Marquee tool and the selection active for the next exercise.

## Moving selected pixels with a keyboard shortcut

Now you'll use a keyboard shortcut to move the selected pixels onto the wooden plate. The shortcut temporarily switches the active tool to the Move tool, so you don't need to select it from the Tools panel.

- 1 If the bowl of shells is not still selected, repeat the previous exercise to select it.

- 2 With the Elliptical Marquee tool (⌘) selected in the Tools panel, press Ctrl (Windows) or Command (Mac OS), and move the pointer within the selection. The pointer icon now includes a pair of scissors (✂) to indicate that the selection will be cut from its current location.
- 3 Drag the bowl of shells onto the wooden plate so that it overlaps the upper left edge of the wooden plate. (You'll use another technique to nudge the oval bowl into the exact position in a minute.)
- 4 Release the mouse button, but don't deselect the bowl of shells.



● **Note:** You can release the Ctrl or Command key after you start dragging, and the Move tool remains active. Photoshop reverts to the previously selected tool when you deselect, whether you click outside the selection or use the Deselect command.

## Moving with the arrow keys

You can make minor adjustments to the position of selected pixels by using the arrow keys. You can nudge the selection in increments of either one pixel or ten pixels.

When a selection tool is active in the Tools panel, the arrow keys nudge the selection border, but not the contents. When the Move tool is active, the arrow keys move the selection border and its contents.

You'll use the arrow keys to nudge the bowl of shells. Before you begin, make sure that the bowl of shells is still selected in the image window.

- 1 Press the Up Arrow key (↑) on your keyboard a few times to move the oval upward.

Notice that each time you press the arrow key, the bowl of shells moves one pixel. Experiment by pressing the other arrow keys to see how they affect the selection.

- 2 Hold down the Shift key as you press an arrow key.

When you hold down the Shift key, the selection moves ten pixels every time you press an arrow key.

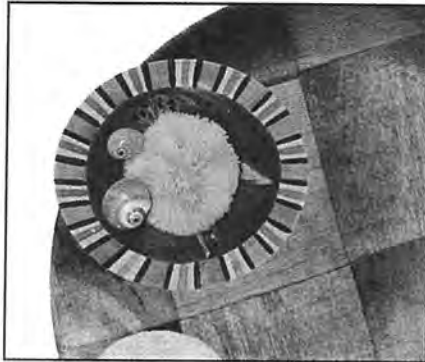
Sometimes the border around a selected area can distract you as you make adjustments. You can hide the edges of a selection temporarily without actually deselecting, and then display the selection border once you've completed the adjustments.



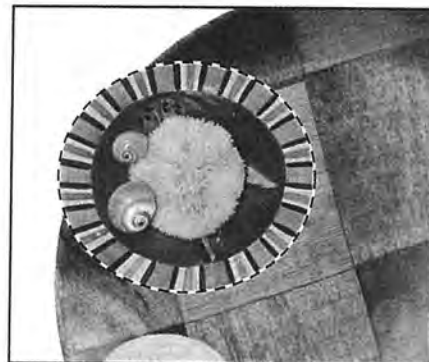
- 3 Choose View > Show > Selection Edges or View > Extras.

Either command hides the selection border around the bowl of shells.

- 4 Use the arrow keys to nudge the bowl of shells until it's positioned where you want it. Then choose View > Show > Selection Edges to reveal the selection border again.

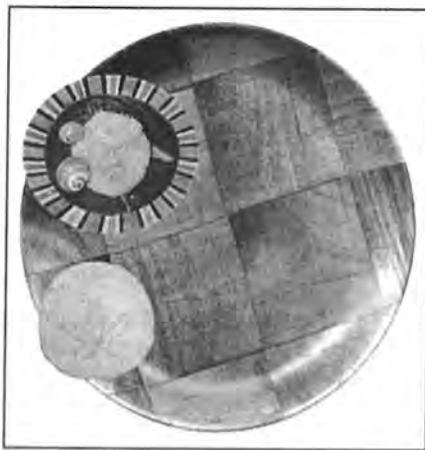


Hidden selection edges



Visible selection edges

- 5 Choose Select > Deselect, or press Ctrl+D (Windows) or Command+D (Mac OS).
- 6 Choose File > Save to save your work so far.



## Selecting from a center point

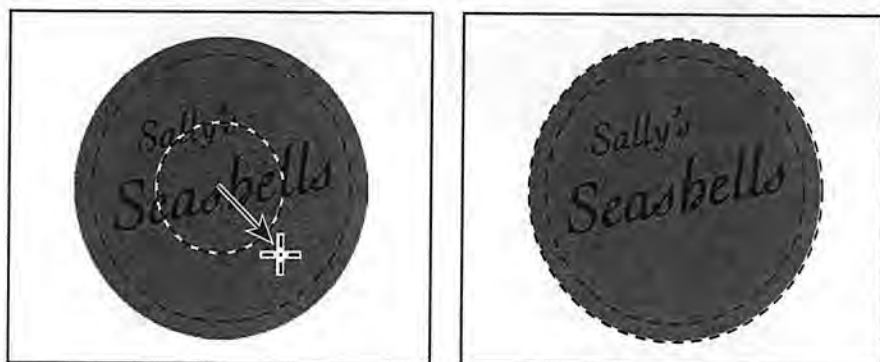
In some cases, it's easier to make elliptical or rectangular selections by drawing a selection from the center point. You'll use this technique to select the logo graphic.

- 1 Select the Zoom tool (Q), and zoom in on the logo to a magnification of about 300%. Make sure that you can see the entire Sally's Seashells graphic in your image window.

- 2 Select the Elliptical Marquee tool (⌘) in the Tools panel.
- 3 Move the pointer to the approximate center of the Sally's Seashells graphic.
- 4 Click and begin dragging. Then, without releasing the mouse button, press Alt (Windows) or Option (Mac OS) as you continue dragging the selection to the outer edge of the Sally's Seashells graphic.

The selection is centered over its starting point.

- 5 When you have the entire Sally's Seashells graphic selected, release the mouse button first, and then release Alt or Option (and the Shift key if you used it). Do not deselect, because you'll use this selection in the next exercise.



► **Tip:** To select a perfect circle, press Shift as you drag. Hold down Shift while dragging the Rectangular Marquee tool to select a perfect square.

- 6 If necessary, reposition the selection border using one of the methods you learned earlier. If you accidentally released the Alt or Option key before you released the mouse button, try selecting the Sally's Seashells graphic again.

## Moving and changing the pixels in a selection

Now you'll move the Sally's Seashells graphic to the upper right corner of the wooden plate. Then, you'll change its color for a dramatic effect.

Before you begin, make sure that the Sally's Seashells graphic is still selected. If it's not, reselect it by completing the previous exercise.

- 1 Choose View > Fit On Screen so that the entire image fits within the image window.
- 2 Select the Move tool (⇧+V) in the Tools panel.
- 3 Position the pointer within the Sally's Seashells graphic selection. The pointer becomes an arrow with a pair of scissors (⇧+V), which indicates that dragging the selection will cut it from its current location and move it to the new location.

- 4 Drag the Sally's Seashells graphic onto the upper right corner of the plate. If you want to adjust the position after you stop dragging, simply start dragging again. The Sally's Seashells graphic remains selected throughout the process.
- 5 Choose Image > Adjustments > Invert.



The colors making up the Sally's Seashells graphic are inverted so that now it's effectively a color negative of itself.

- 6 Leaving the Sally's Seashells graphic selected, choose File > Save to save your work.

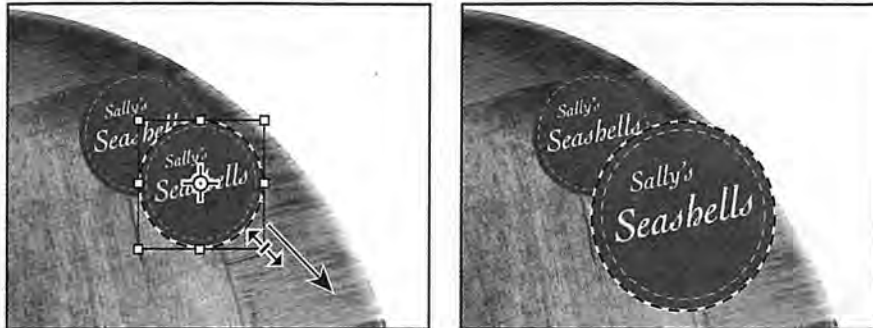
## Moving and duplicating a selection simultaneously

You can move and duplicate a selection at the same time. You'll make a copy of the logo graphic. If the logo graphic image is no longer selected, reselect it now, using the techniques you learned earlier.

- 1 With the Move tool (⇧+⌘) selected, press Alt (Windows) or Option (Mac OS) as you position the pointer inside the Sally's Seashells graphic selection. The pointer becomes a double arrow, which indicates that a duplicate will be made when you move the selection.
- 2 Continue holding down the Alt or Option key as you drag a duplicate of the graphic down and to the right. The two copies of the graphic can overlap. Release the mouse button and the Alt or Option key, but don't deselect the duplicate graphic.



- 3 Choose Edit > Transform > Scale. A bounding box appears around the selection.
- 4 Press Shift as you drag one of the corner points to enlarge the graphic so that it becomes about 50% larger than the original. Then press Enter or Return to commit the change and remove the transformation bounding box.



As you resize the object, the selection marquee resizes, too. The duplicate graphic remains selected. Pressing the Shift key as you resize the selection constrains the proportions so that the enlarged object isn't distorted.

- 5 Hold down Alt+Shift (Windows) or Option+Shift (Mac OS), and drag a new copy of the second Sally's Seashells graphic down and to the right.

Pressing the Shift key as you move a selection constrains the movement horizontally or vertically in 45-degree increments.

- 6 Repeat steps 3 and 4 for the third Sally's Seashells graphic, making it about twice the size of the first one.
- 7 When you're satisfied with the size and position of the third Sally's Seashells graphic, press Enter or Return to confirm the scale, choose Select > Deselect, and then choose File > Save.

► **Tip:** Choose Edit > Transform > Again to duplicate the logo and enlarge it by twice as much as the last transformation.



For information on working with the center point in a transformation, see "Set or move the reference point for a transformation" in Photoshop Help.

## Copying selections

You can use the Move tool to copy selections as you drag them within or between images, or you can copy and move selections using the Copy, Copy Merged, Cut, and Paste commands. Dragging with the Move tool saves memory because the clipboard is not used as it is with the commands.

Photoshop has several copy and paste commands:

- Copy copies the selected area on the active layer.
- Copy Merged creates a merged copy of all the visible layers in the selected area.
- Paste pastes a cut or copied selection into another part of the image or into another image as a new layer.
- Paste Into pastes a cut or copied selection inside another selection in the same or a different image. The source selection is pasted onto a new layer, and the destination selection border is converted into a layer mask.

Keep in mind that when a selection is pasted between images with different resolutions, the pasted data retains its pixel dimensions. This can make the pasted portion appear out of proportion to the new image. Use the Image Size command to make the source and destination images the same resolution before copying and pasting.



## Using the Magic Wand tool

The Magic Wand tool selects all the pixels of a particular color or color range. It's most useful for selecting an area of similar colors surrounded by areas of very different colors. As with many of the selection tools, after you make the initial selection, you can add or subtract areas of the selection.

The Tolerance option sets the sensitivity of the Magic Wand tool. This value limits or extends the range of pixel similarity. The default tolerance value of 32 selects the color you click plus 32 lighter and 32 darker tones of that color. You may need to adjust the tolerance level up or down depending on the color ranges and variations in the image.




If a multicolored area that you want to select is set against a background of a different color, it can be much easier to select the background than the area itself. In this procedure, you'll use the Rectangular Marquee tool to select a larger area, and then use the Magic Wand tool to subtract the background from the selection.

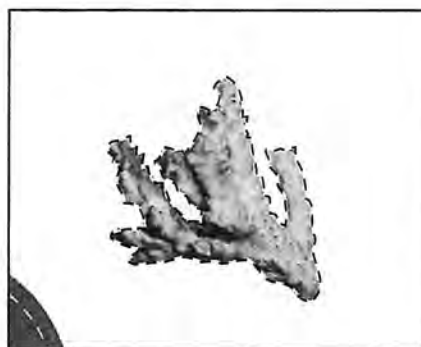


- 1 Select the Rectangular Marquee tool () , hidden behind the Elliptical Marquee tool ().
- 2 Drag a selection around the piece of coral. Make sure that your selection is large enough so that a margin of white appears between the coral and the edges of the marquee.



At this point, the coral and the white background area are selected. You'll subtract the white area from the selection so that only the coral remains in the selection.

- 3 Select the Magic Wand tool () , hidden under the Quick Selection tool ().
- 4 In the options bar, confirm that the Tolerance value is 32. This value determines the range of colors the wand selects.
- 5 Select the Subtract From Selection button () in the options bar. A minus sign appears next to the wand in the pointer icon. Anything you select now will be subtracted from the initial selection.
- 6 Click in the white background area within the selection marquee.



The Magic Wand tool selects the entire background, subtracting it from the selection. Now all the white pixels are deselected, leaving the coral perfectly selected.

- 7 Select the Move tool (⇧+), and drag the coral to the wooden plate, a little to the right and above the center of the plate.
- 8 Choose Select > Deselect, and then save your work.



## Selecting with the lasso tools

Photoshop includes three lasso tools: the Lasso tool, the Polygonal Lasso tool, and the Magnetic Lasso tool. You can use the Lasso tool to make selections that require both freehand and straight lines, using keyboard shortcuts to move back and forth between the Lasso tool and the Polygonal Lasso tool. You'll use the Lasso tool to select the mussel. It takes a bit of practice to alternate between straight-line and freehand selections—if you make a mistake while you're selecting the mussel, simply deselect and start again.

- 1 Select the Zoom tool (Q), and click the mussel until the view enlarges to 100%. Make sure you can see the entire mussel in the window.
- 2 Select the Lasso tool (L). Starting at the lower left section of the mussel, drag around the rounded end of the mussel, tracing the shape as accurately as possible. *Do not release the mouse button.*
- 3 Press the Alt (Windows) or Option (Mac OS) key, and then release the mouse button so that the lasso pointer changes to the polygonal lasso shape (⌘). *Do not release the Alt or Option key.*
- 4 Begin clicking along the end of the mussel to place anchor points, following the contours of the mussel. Be sure to hold down the Alt or Option key throughout this process.



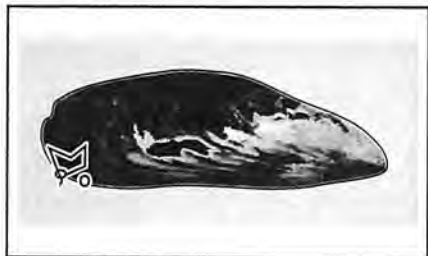
Drag with the Lasso tool.



Click with the Polygonal Lasso tool.

The selection border automatically stretches like a rubber band between anchor points.

- 5 When you reach the tip of the mussel, hold down the mouse button as you release the Alt or Option key. The pointer again appears as the lasso icon.
- 6 Carefully drag around the tip of the mussel, holding down the mouse button.
- 7 When you finish tracing the tip and reach the lower side of the mussel, first press Alt or Option again, and then release the mouse button. Click along the lower side of the mussel with the Polygonal Lasso tool as you did on the top. Continue to trace the mussel until you arrive back at the starting point of your selection near the left end of the image.
- 8 Click at the start of the selection, and then release the Alt or Option key. The mussel is now entirely selected. Leave the mussel selected for the next exercise.



## Rotating a selection

So far, you've moved, resized, duplicated, and inverted the color of selected areas. In this exercise, you'll see how easy it is to rotate a selected object.

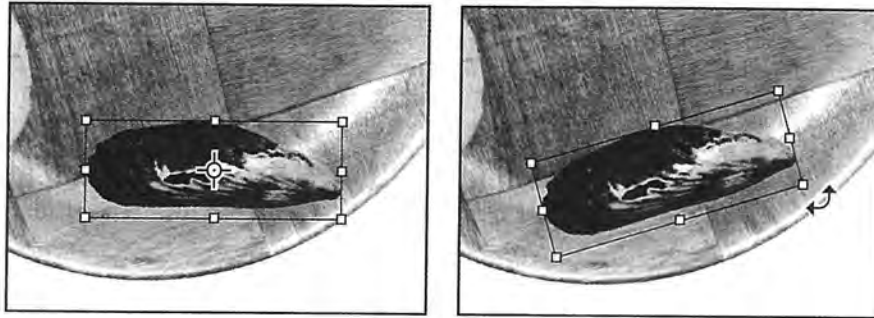
Before you begin, make sure that the mussel is still selected.

- 1 Choose View > Fit On Screen to resize the image window to fit on your screen.
- 2 Press Ctrl (Windows) or Command (Mac OS) as you drag the mussel to the lower section of the wooden plate. The pointer changes to the Move tool icon.



- 3 Choose Edit > Transform > Rotate. The mussel and selection marquee are enclosed in a bounding box.

- 4 Move the pointer outside the bounding box so that it becomes a curved, double-headed arrow (↔). Drag to rotate the mussel to a -15-degree angle. You can verify the angle in the Rotate box in the options bar. Press Enter or Return to commit the transformation changes.



- 5 If necessary, select the Move tool (⇧) and drag to reposition the mussel. When you're satisfied, choose Select > Deselect.



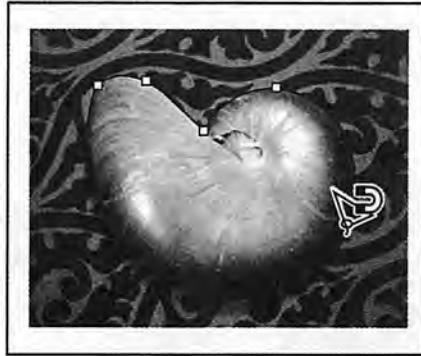
- 6 Choose File > Save.

## Selecting with the Magnetic Lasso tool

You can use the Magnetic Lasso tool to make freehand selections of areas with high-contrast edges. When you draw with the Magnetic Lasso tool, the selection border automatically snaps to the edge between areas of contrast. You can also control the selection path by occasionally clicking the mouse to place anchor points in the selection border.

You'll use the Magnetic Lasso tool to select the nautilus so that you can move it to the center of the plate.

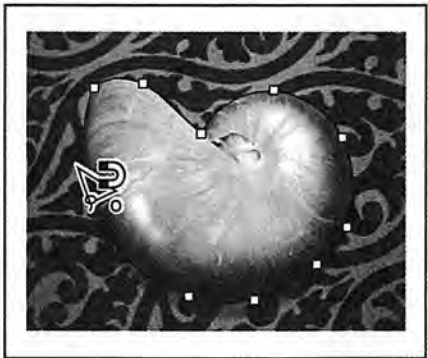
- 1 Select the Zoom tool (Q), and click the nautilus to zoom in to at least 100%.
- 2 Select the Magnetic Lasso tool (W), hidden under the Lasso tool (L).
- 3 Click once along the left edge of the nautilus, and then move the Magnetic Lasso tool along the edge to trace its outline.



► **Tip:** In low-contrast areas, you may want to click to place your own fastening points. You can add as many as you need. To remove the most recent fastening point, press Delete, and then move the mouse back to the remaining fastening point and continue selecting.

Even though you're not holding down the mouse button, the tool snaps to the edge of the nautilus and automatically adds fastening points.

- 4 When you reach the left side of the nautilus again, double-click to return the Magnetic Lasso tool to the starting point, closing the selection. Or you can move the Magnetic Lasso tool over the starting point and click once.

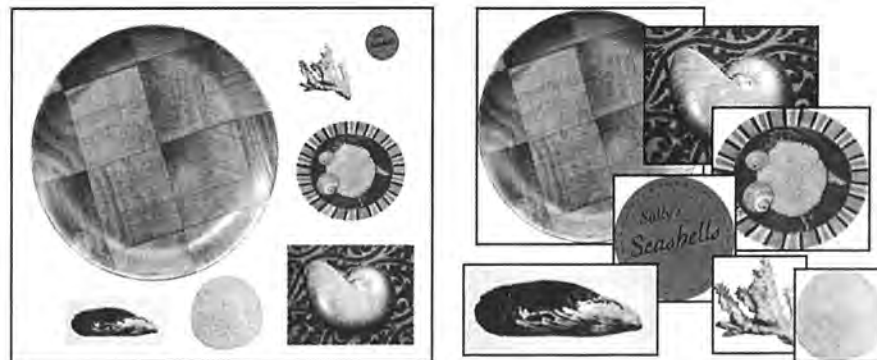


- 5 Double-click the Hand tool (H) to fit the image in the image window.
- 6 Select the Move tool (V), and drag the nautilus onto the plate.
- 7 Choose Select > Deselect, and then choose File > Save.



## Separating portions of an image into different files

To quickly create multiple images from one scan, use the Crop And Straighten Photos command. Images with a clearly delineated outline and a uniform background—such as the 03Start.psd file—work best. To try it, open the 03Start.psd file in the Lesson03 folder, and choose File > Automate > Crop And Straighten Photos. Photoshop automatically crops each image in the start file and creates individual Photoshop files for each. You can close each file without saving.




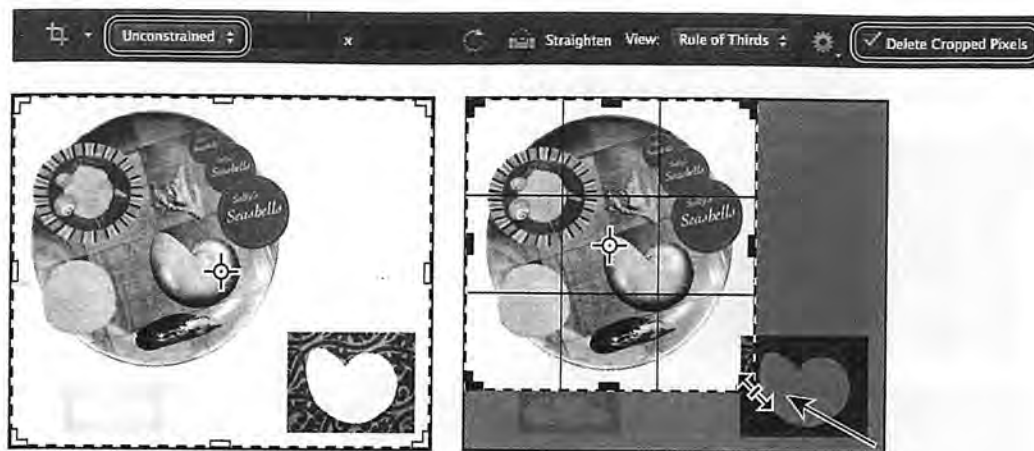
Original image

Result

## Cropping an image and erasing within a selection

Now that your composition is in place, you'll crop the image to a final size and clean up some of the background scraps left behind when you moved selections. You can use either the Crop tool or the Crop command to crop an image.

- 1 Select the Crop tool () or press C to switch from the current tool to the Crop tool. Photoshop creates a crop boundary around the entire image.

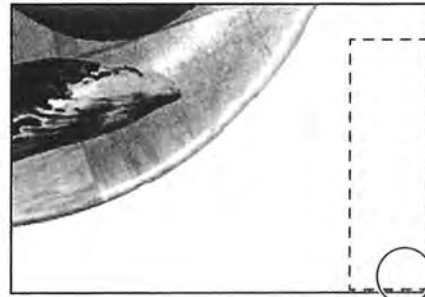
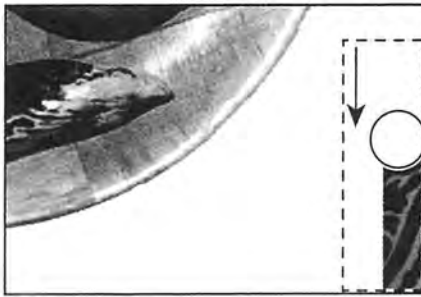
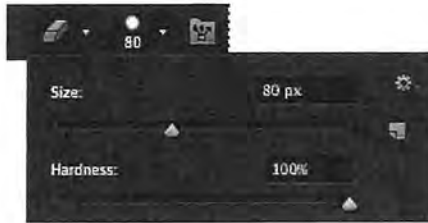


- 2 In the options bar, choose Unconstrained, and then select Delete Cropped Pixels. With Unconstrained selected, you can crop the image with any proportions.
- 3 Drag the crop handles so that the plate is in the highlighted area, deleting the backgrounds and drop shadows that were left behind from the items that were arranged outside the plate.
- 4 When you're satisfied with the position of the crop area, click the Commit Current Crop Operation button (✓) in the options bar.

The cropped image may include some scraps of the background from which you selected and removed shapes. You'll fix that next.

- 5 If a scrap of background color or leftover drop shadow protrudes into the composition, use the Rectangular Marquee tool (□) or the Lasso tool (⌲) to select it. Be careful not to include any part of the image that you want to keep.
- 6 Select the Eraser tool (🧼) in the Tools panel, and then make sure that the foreground and background color swatches in the Tools panel are set to the defaults: black in the foreground and white in the background.
- 7 In the options bar, open the Brushes pop-up panel, and specify an 80-pixel brush with 100% hardness.

- 8 Drag the Eraser tool across the area you want to remove. You can erase quickly, because the Eraser tool affects only the selected area.



- 9 Repeat steps 5–8 to remove any other unwanted scraps of background.  
10 Choose File > Save to save your work.



You've used several different selection tools to move all the seashells into place. The collage is complete!

## Softening the edges of a selection

To smooth the hard edges of a selection, you can apply anti-aliasing or feathering, or use the Refine Edge option.

Anti-aliasing smooths the jagged edges of a selection by softening the color transition between edge pixels and background pixels. Since only the edge pixels change, no detail is lost. Anti-aliasing is useful when cutting, copying, and pasting selections to create composite images.

Anti-aliasing is available for the Lasso, Polygonal Lasso, Magnetic Lasso, Elliptical Marquee, and Magic Wand tools. (Select the tool to display its options in the options bar.) To apply anti-aliasing, you must select the option before making the selection. Once a selection is made, you cannot add anti-aliasing to it.

Feathering blurs edges by building a transition boundary between the selection and its surrounding pixels. This blurring can cause some loss of detail at the edge of the selection.

You can define feathering for the marquee and lasso tools as you use them, or you can add feathering to an existing selection. Feathering effects become apparent when you move, cut, or copy the selection.

Once you have a selection, you can use the Refine Edge option to smooth the outline, feather it, or contract or expand it. Click Refine Edge in the options bar to open its dialog box.

- To use anti-aliasing, select a lasso tool, or the Elliptical Marquee or Magic Wand tool, and select Anti-alias in the options bar.
- To define a feathered edge for a selection tool, select any of the lasso or marquee tools. Enter a Feather value in the options bar. This value defines the width of the feathered edge and can range from 1 to 250 pixels.
- To define a feathered edge for an existing selection, choose **Select > Modify > Feather**. Enter a value for the Feather Radius, and click OK.

## Review questions

- 1 Once you've made a selection, what area of the image can be edited?
- 2 How do you add to and subtract from a selection?
- 3 How can you move a selection while you're drawing it?
- 4 When drawing a selection with the Lasso tool, how should you finish drawing the selection to ensure it's the shape you want?
- 5 What does the Quick Selection tool do?
- 6 How does the Magic Wand tool determine which areas of an image to select? What is tolerance, and how does it affect a selection?

## Review answers

- 1 Only the area within an active selection can be edited.
- 2 To add to a selection, click the Add To Selection button in the options bar, and then click the area you want to add. To subtract from a selection, click the Subtract From Selection button in the options bar, and then click the area you want to subtract. You can also add to a selection by pressing Shift as you drag or click; to subtract, press Alt (Windows) or Option (Mac OS) as you drag or click.
- 3 To reposition a selection, without releasing the mouse button, hold down the spacebar and drag.
- 4 To make sure that the selection is the shape you want when you use the Lasso tool, end the selection by dragging across the starting point of the selection. If you start and stop the selection at different points, Photoshop draws a straight line between the start point of the selection and the end point of the selection.
- 5 The Quick Selection tool expands outward from where you click to automatically find and follow defined edges in the image.
- 6 The Magic Wand tool selects adjacent pixels based on their similarity in color. The Tolerance value determines how many color tones the Magic Wand tool will select. The higher the tolerance setting, the more tones are selected.





*[Faint, illegible text visible on the right side of the page, possibly bleed-through from the reverse side.]*