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.



This lesson will take about an hour to complete. Please log in to your account on peachpit.com to download the lesson files for this chapter, or go to the Getting Started section at the beginning of this book and follow the instructions under "Accessing the Lesson Files and Web Edition." As you work on this lesson, you'll preserve the start files. If you need to restore the start files, download them from your Account page.



Learning how to select areas of an image is of primary importance—you must first select what you want to affect. As long as a selection is active, only the area within the selection can be edited.

About selecting and selection tools

Making changes to an area within an image in Photoshop is a two-step process. You first use one of the selection tools to select the part of an image you want to change. 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. When a selection is active, changes you make apply only to 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 primary types of selections:

Geometric selections The Rectangular Marquee tool (::) selects a rectangular area in an image. The Elliptical Marquee tool (:), which is hidden under the Rectangular Marquee tool, selects elliptical areas. The Single RowMarquee 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 (Praces 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 (*is* selects parts of an image based on the similarity in pixel color. It is useful for selecting odd-shaped areas that share a specific range of colors.



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

Getting started

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

- 1 Start Photoshop, and then immediately hold down Ctrl+Alt+Shift (Windows) or Command+Option+Shift (Mac) to restore the default preferences. (See "Restoring Default Preferences" on page 5.)
- 2 When prompted, click Yes to confirm that you want to delete the Adobe Photoshop Settings file.
- **3** ChooseFile > BrowseInBridgetoopenAdobeBridge.
- 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 shadowbox that includes a piece of coral, a sand dollar, a mussel, a nautilus, and a plate of small shells. The challenge in this lesson is to arrange these elements, which were scanned together on the single page you see in the O3Start.psd file.



• Note: If Bridge isn't installed, you'll be prompted to install it when you choose Browse In Bridge. For more information, see page 3.

• Note: If Bridge asks you if you want to import preferences from a previous version of Bridge, click No.

- 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 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** Select Auto-Enhance in the options bar.

When Auto-Enhance is selected, the Quick Selection tool creates better quality selections, with edges that are truer to the object. The selection process is a little slower than using the Quick Selection tool without Auto-Enhance, but the results are superior.

4 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 shadowbox and the sand dollar.

Tip: If you deselect an area by accident, you may be able to restore the selection by choosing Edit > Undo or Select > Reselect.

- 3 Select the Move tool (⊕. Notice that the sand dollar remains selected.
- 4 Drag the selected area (the sand dollar) up to the upper left area of the frame, which is labeled "A." Position it over the silhouette in the frame, leaving the lower left part of the silhouette showing as a shadow.
- 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), or click outside the selection with any selection tool.

Julieanne 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 need to select one of the layers, try this: With the Move tool selected, position the pointer over any area of an image, and right-click (Windows) or Control-click (Mac). The context menu that appears lists all layers where content exists under the pointer, so that you can select a different layer.

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; you'll use them here with the Elliptical Marquee tool, which lets you select ovals or perfect circles.

One of the most useful things you may find in this section is the introduction of keyboard shortcuts that can save you time and arm motions.

Repositioning a selection marquee while creating it

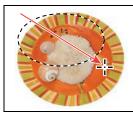
Selecting ovals and circles can be tricky. It's not always obvious where you should start dragging, so sometimes the selection will be off-center, or the ratio of width to height won't match what you need. In this exercise, you'll learn techniques for managing those problems, including two important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

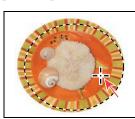
- 1 Select the Zoom tool (Q, and click the plate of shells at the bottom of the image window to zoom in to at least 100% view (use 200% view if the entire plate of shells will still fit in the image window on your screen).
- 2 Select the Elliptical Marquee tool (), hidden under the Rectangular Marquee tool ().
- **3** Move the pointer over the plate of shells, and drag diagonally across the oval plate to create a selection, but *do not release the mouse button*. It's OK if your selection does not match the plate 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 plate.
- 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 plate of shells as closely as possible. If necessary, hold down the spacebar again and drag to move the selection marquee into position around the plate of shells.



Begin dragging a selection.



Press the spacebar to move it.



Complete the selection.

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

- 6 When the selection border is positioned appropriately, release the mouse button.
- 7 Choose View > Fit On Screen 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 shadowbox. 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 plate 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), and move the pointer within the selection.

The pointer icon now includes a pair of scissors \flat_{sc} indicating that the selection will be cut from its current location.

- 3 Drag the plate of shells onto the area of the shadowbox labeled "B." (You'll use another technique to nudge the oval plate into the exact position in a minute.)
- 4 Release the mouse button, but don't deselect the plate of shells.



• Note: If you try to move the pixels but Photoshop displays an alert saying "Could not use the Move tool because the layer is locked," make sure you start dragging by positioning the pointer inside the selection.

• 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 a selection 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 both the selection border and its contents.

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

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

Notice that each time you press the arrow key, the plate 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 to deselect the command, hiding the selection border around the plate of shells.
- 4 Use the arrow keys to nudge the plate of shells until it's positioned over the silhouette, so that there's a shadow on the left and bottom of the plate. 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).
- 6 Choose File > Save to save your work so far.

Using the Magic Wand tool

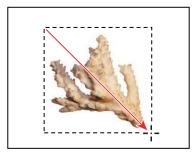
The Magic Wand tool selects all the pixels of a particular color or color range. It's most useful for selecting an area of similar colors surrounded by areas of very different colors. As with many of the selection tools, after you make the initial selection, you can add or subtract areas of the selection.

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.

Tip: Selection edges, guidelines, and other visible items that aren't actual objects are called *extras*, so another way to hide the selection edges is to deselect the Show > Extras command.

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 under 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.

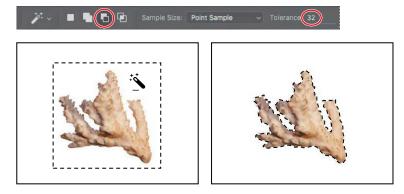


At this point, the coral and the white background area are selected. You'll subtract the white area from the selection so that only the coral remains in the selection.

- 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** Click the Subtract From Selection button (**T**) 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 area of the shadowbox labeled "C," positioning it so that a shadow appears to the left of and below the coral.
- 8 Choose Select > Deselect, and then save your work.



Softening the edges of a selection

To smooth the hard edges of a selection, you can apply anti-aliasing or feathering, or use the Select and Mask 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.

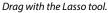
- To use the Select and Mask option, first make a selection, and then click Select and Mask in the options bar to open its dialog box. You can use the Select and Mask option to smooth the outline, feather it, or contract or expand it.
- To use anti-aliasing, select a lasso tool, or the Elliptical Marquee 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.

Selecting with the lasso tools

As we mentioned earlier, 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 If the window magnification is below 100%, select the Zoom tool (2) and click the nautilus to zoom in to at least 100%.
- 2 Select the Lasso tool (CR). 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) key, and then release the mouse button so that the lasso pointer changes to the polygonal lasso shape (*J*). *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.







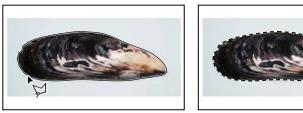
Click with the Polygonal Lasso tool.

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.

• Note: 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 and end points of the selection.

Tip: You can constrain rotation to common angles such as 90 degrees by holding down the Shift key as you drag the bounding box. 8 Click the starting point of the selection, and then release Alt or Option. The mussel is now entirely selected. Leave the mussel selected for the next exercise.



Rotating a selection

Now you'll rotate the mussel.

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) as you drag the selected mussel to the section of the shadowbox labeled "D."

The pointer changes to the Move tool icon when you press Ctrl or Command.

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, two-headed arrow (r). Drag to rotate the mussel to a 90-degree angle. You can verify the angle in the transformation values display next to the pointer, or in the Rotate box in the options bar. Press Enter or Return to commit the transformation.
- 5 If necessary, select the Move tool (+), and drag to reposition the mussel, leaving a shadow to match the others. When you're satisfied, choose Select > Deselect.







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 shadowbox.

- 1 Select the Zoom tool (^Q), and click the nautilus to zoom in to at least 100%.
- 2 Select the Magnetic Lasso tool (), hidden under the Lasso tool ().
- **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 () to fit the image in the image window.

- 6 Select the Move tool (4), and drag the nautilus onto its silhouette in the section of the frame labeled "E," leaving a shadow below it and on the left side.
- 7 Choose Select > Deselect, and then choose File > Save.



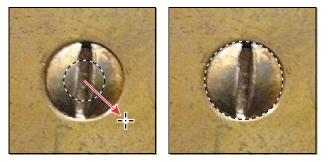
Selecting from a center point

In some cases, it's easier to make elliptical or rectangular selections by drawing a selection from an object's center point. You'll use this technique to select the head of the screw for the shadowbox corners.

- 1 Select the Zoom tool (9, and zoom in on the screw to a magnification of about 300%. Make sure that you can see the entire screw head in your image window.
- 2 Select the Elliptical Marquee tool ()) in the Tools panel.
- 3 Move the pointer to the approximate center of the screw.
- 4 Click and begin dragging. Then, without releasing the mouse button, press Alt (Windows) or Option (Mac) as you continue dragging the selection to the outer edge of the screw.

The selection is centered over its starting point.

5 When you have the entire screw head 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.



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, select the screw again.

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.

Resizing and copying a selection

Now you'll move the screw to the lower right corner of the wooden shadowbox, and then duplicate it for the other corners.

Resizing the contents of a selection

You'll start by moving the screw, but it's too large for the space. You'll need to resize it as well.

Before you begin, make sure that the screw 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 (+) in the Tools panel.
- **3** Position the pointer within the screw selection.

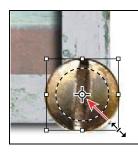
The pointer becomes an arrow with a pair of scissors \flat_{sc} , indicating that dragging the selection will cut it from its current location and move it to the new location.

- 4 Drag the screw onto the lower right corner of the shadowbox.
- ${\small 5} \quad Choose Edit > Transform > Scale. A bounding box appears around the selection.$
- 6 Press Shift as you drag one of the corner points inward to reduce the screw to about 40% of its original size, or until it is small enough to sit on the shadowbox frame. 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. Pressing the Shift key as you resize the selection constrains the proportions so that the reduced object doesn't become distorted.

7 Use the Move tool to reposition the screw after resizing it, so that it is centered in the corner of the shadowbox frame.







8 Leaving the screw 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 copy the screw for the other three corners of the frame. If the screw is no longer selected, reselect itnow, using the techniques you learned earlier.

1 With the Move tool (#selected, press Alt (Windows) or Option (Mac) as you position the pointer inside the screw selection.

The pointer changes, displaying the usual black arrow and an additional white 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 screw straight up to the top right corner of the frame. Release the mouse button and the Alt or Option key, but don't deselect the duplicate image.
- **3** Hold down Alt+Shift (Windows) or Option+Shift (Mac), and drag a new copy of the screw straight left to the upper left corner of the frame.

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

4 Repeat step 3 to drag a fourth screw to the lower left corner of the frame.



5 When you're satisfied with the position of the fourth screw, choose Select > Deselect, and then choose File > Save.

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 commands on the Edit menu. The Move tool uses less memory, because it doesn't use the clipboard.

Photoshop has several copy and paste commands:

- Copy takes the selected area on the active layer and puts it on the clipboard.
- Copy Merged creates a merged copy of all the visible layers in the selected area.
- Paste inserts the clipboard contents at the center of the image. If you paste into another image, the pasted content becomes a new layer.

On the Edit > Paste Special submenu, Photoshop also provides specialized pasting commands to give you more options in certain situations:

- **Paste in Place** pastes clipboard content at the location it had in the original image, instead of at the center of the document.
- Paste Into pastes clipboard content inside the active selection in the same or a different image. The source selection is pasted onto a new layer, and the area outside the selection is converted into a layer mask.
- Paste Outside is the same as Paste Into except that Photoshop pastes the content outside the active selection and converts the area inside the selection to a layer mask.

If two documents have different pixel dimensions, the content you paste between them may appear to change size. This is because the content maintains its pixel dimensions independently of the documents. You can resize a pasted selection, but the image quality of the selection may decrease if it's enlarged.

Cropping an image

Now that your composition is in place, you'll crop the image to a final size. You can use either the Crop tool or the Crop command to crop an image.

- 1 Select the Crop tool (口, or press C to switch from the current tool to the Crop tool. Photoshop displays a crop boundary around the entire image.
- 2 In the options bar, make sure Ratio is selected in the Preset pop-up menu and that there are no ratio values specified. Then confirm that Delete Cropped Pixels is selected.

When Ratio is selected but no ratio values are specified, you can crop the image with any proportions.

Tip: To crop an image with its original proportions intact, choose Original Ratio from the Preset pop-up menu in the optionsbar.

3 Drag the crop handles so that the shadowbox is in the highlighted area, omitting the backgrounds from the original objects at the bottom of the image. Crop the frame so that there's an even area of white around it.



- 4 When you're satisfied with the position of the crop area, click the Commit Current Crop Operation button (✔) in the options bar.
- **5** Choose File > Save to save your work.



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