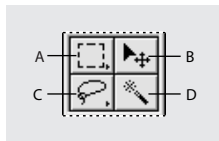


Selection tool overview

In Adobe Photoshop, you can make selections based on size, shape, and color using four basic sets of tools—the marquee, lasso, magic wand, and pen tools. You can reposition your selections using the move tool. You can also use the magic eraser tool to make selections in much the same way you use the magic wand tool.

Note: In this lesson, you will use the marquee, lasso, magic wand, and move tools; for information on the pen tools, see Lesson 7, “Basic Pen Tool Techniques.”



- A. Marquee tool
- B. Move tool
- C. Lasso tool
- D. Magic wand tool

The marquee and lasso tool icons contain hidden tools, which you can select by holding down the mouse button on the toolbox icon and dragging to the desired tool in the pop-up menu.

The *rectangular marquee tool* (☐) lets you select a rectangular area in an image. The *elliptical marquee tool* (○) lets you select elliptical areas. The *rounded rectangle marquee tool* (◕) in ImageReady lets you select rectangular areas with rounded corners. The *single row marquee tool* (≡) and *single column marquee tool* (≡) let you select a 1-pixel-high row and 1-pixel-wide column. You can also use the *crop tool* (✂) to crop an image.

The *lasso tool* (☞) lets you make a freehand selection around an area. The *polygon lasso tool* (☞) lets you make a straight-line selection around an area. The *magnetic lasso tool* (☞) in Photoshop lets you draw a freehand border that snaps to the edges of an area.

The *magic wand tool* (☞) lets you select parts of an image based on the similarity in color of adjacent pixels. This tool is useful for selecting odd-shaped areas without having to trace a complex outline using the lasso tool.

ImageReady includes the basic marquee selection tools, the lasso and polygon lasso tools, and the magic wand tool familiar to users of Photoshop. For more convenience in working with common shapes, ImageReady adds an extra marquee selection tool: the rounded rectangle marquee tool.

Getting started

Before beginning this lesson, restore the default application settings for Adobe Photoshop. See “Restoring default preferences” on page 4.

You’ll start the lesson by viewing the finished lesson file to see the image that you’ll create as you explore the selection tools in Photoshop.

1 Start Adobe Photoshop.

If a notice appears asking whether you want to customize your color settings, click No.

2 Choose File > Open, and open the 02End.psd file, located in the Lessons/Lesson02 folder on your hard drive.


An image of a face, constructed using various types of fruits and vegetables, is displayed.

3 When you have finished viewing the file, either leave the 02End.psd file open for reference, or close it without saving changes.

Selecting with the rectangular marquee tool

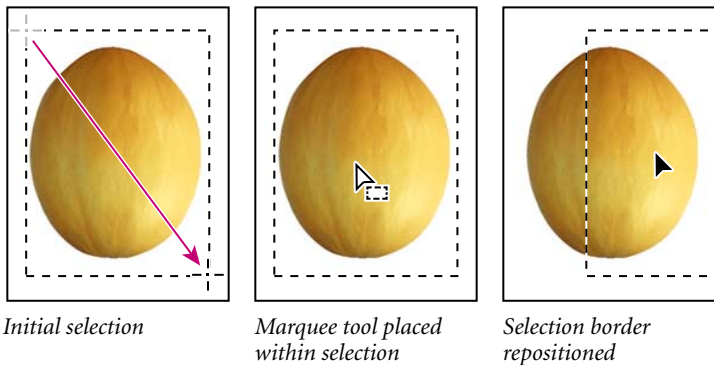
You’ll start practicing selection techniques using the rectangular marquee tool.

1 Choose File > Open, and open the 02Start.psd file, located in the Lessons/Lesson02 folder on your hard drive.

2 Select the rectangular marquee tool ()

3 Drag it diagonally from the upper left corner to the lower right corner of the melon to create a rectangular selection.

You can move a selection border after you've drawn it by positioning the pointer within the selection and dragging. Notice that this technique changes the location of the selection border; it does not affect the size or shape of the selection.



4 Position the pointer anywhere inside the selection surrounding the melon. The pointer becomes an arrow with a small selection icon next to it.


5 Drag to reposition the border around the melon.

Note: *Repositioning techniques for selection borders work with any of the marquee, lasso, and magic wand tools.*

If you are still not happy with the selection after repositioning it, you can deselect it and redraw it.

6 Choose Select > Deselect, or click anywhere in the window outside the selection border to deselect the selection.

7 Reselect the melon using the rectangular marquee tool.

 *To back up one action at any point in the lesson, choose Edit > Undo. In ImageReady, you can set the number of undos in the ImageReady preferences. (The default is 32.)*

Selecting with the elliptical marquee tool

Next you'll use the elliptical marquee tool to select eyes for the face. Note that in most cases, making a new selection replaces the existing selection.

1 Select the zoom tool (🔍), and click twice on the blueberry to zoom in to a 300% view.

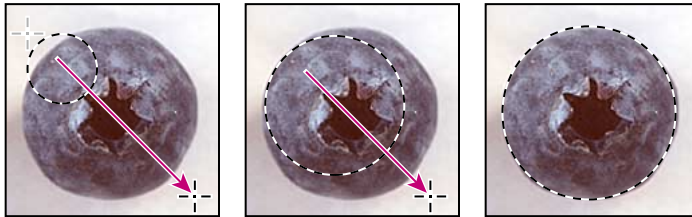
2 Select the elliptical marquee tool (🍷) hidden under the rectangular marquee tool.

3 Move the pointer over the blueberry, and drag it diagonally across the blueberry to create a selection. Do not release the mouse button.

Repositioning a selection border while creating it

If a selection border isn't placed exactly where you want it, you can adjust its position and size while creating it.

- 1 Still holding down the mouse button, hold down the spacebar, and drag the selection. The border moves as you drag.
- 2 Release the spacebar (but not the mouse button), and drag again. Notice that when you drag without the spacebar, the size and shape of the selection change, but its point of origin does not.



*Incorrect point of origin
(Click and drag)* *Corrected point of origin
(Spacebar depressed)* *Adjusted border
(Spacebar released)*

3 When the selection border is positioned and sized correctly, release the mouse button.

Selecting from a center point

Sometimes it's easier to make elliptical or rectangular selections by drawing a selection from the center point of the object to the outside edge. Using this method, you'll reselect the blueberry.

- 1 Choose Select > Deselect.
- 2 Position the marquee tool at the approximate center of the blueberry.
- 3 Click and begin dragging. Then without releasing the mouse button, hold down Alt (Windows) or Option (Mac OS) and continue dragging the selection to the blueberry's outer edge.

Notice that the selection is centered over its starting point.

4 When you have the entire blueberry selected, release the mouse button first and then release Alt/Option.

If necessary, adjust the selection border using one of the methods you learned earlier.

Moving a selection

Now you'll use the move tool to move the blueberry onto the carrot slice to create an eye for the face. Then you'll duplicate and move the selection to make a second eye.

1 Make sure that the blueberry is selected. Then select the move tool (⇧+V), and position the pointer within the blueberry's selection. The pointer becomes an arrow with a pair of scissors to indicate that dragging the selection will cut it from its present location and move it to the new location.

2 Drag the blueberry onto the carrot slice.



Move tool placed within blueberry selection



Blueberry moved onto carrot slice

3 Choose Select > Deselect.

4 Choose File > Save to save your work.

Moving and duplicating simultaneously

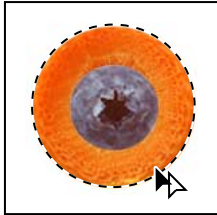
Next you'll move and duplicate a selection simultaneously.

1 Choose View > Fit on Screen to resize the document to fit on your screen.

2 Select the elliptical marquee tool (⌘+M).

3 Drag a selection around the carrot slice containing the blueberry. If necessary, adjust the selection border using one of the methods you learned earlier.

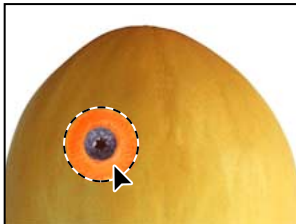
4 Select the move tool (⇧), hold down Alt (Windows) or Option (Mac OS), and position the pointer within the selection. The pointer becomes a double arrow, which indicates that a duplicate will be made when you move the selection.



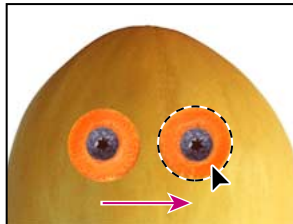
5 Continue holding down Alt/Option, and drag a duplicate of the eye onto the left side of the melon face. Release the mouse button and Alt/Option, but do not deselect the eye. Holding down Shift when you move a selection constrains the movement horizontally or vertically. Using this technique, you'll drag a copy of the left eye to the right side of the face so that the two eyes are level.

6 Hold down Shift+Alt (Windows) or Shift+Option (Mac OS), and drag a copy of the eye to the right side of the face.

7 Choose File > Save.



Eye moved onto left side of face



Duplicate of eye moved with Shift+Alt/Option

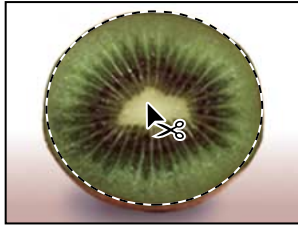
Moving with a keyboard shortcut

Next you'll select the kiwi fruit for the melon's mouth and then move it onto the melon using a keyboard shortcut. The shortcut allows you to temporarily access the move tool instead of selecting it from the toolbox.

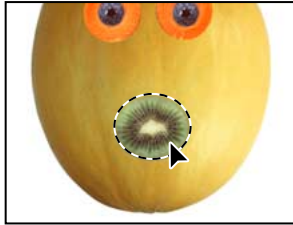
1 Select the elliptical marquee tool (⌘).

2 Drag a selection around the kiwi fruit using one of the methods you learned earlier.

- 3 With the marquee tool still selected, hold down Ctrl (Windows) or Command (Mac OS), and position the pointer within the selection. A pair of scissors appears with the pointer to indicate that the selection will be cut from its current location.
- 4 Drag the kiwi mouth onto the face. Do not deselect.



Selection to be cut



Selection moved onto melon

Moving with the arrow keys

You can make minor adjustments to the position of a selection using the arrow keys, which allow you to nudge the selection 1 pixel or 10 pixels at a time.

Note: *The arrow keys adjust the position of a selection only if you've already moved the selection or if you have the move tool selected. If you try the arrow keys on a selection that has not yet been moved, they will adjust the selection border, not the part of the image that is selected.*

- 1 Press the Up Arrow key (↑) a few times to move the mouth upward.

Notice that each time you press the arrow key, the mouth moves in 1-pixel increments. Experiment with the other arrow keys to see how they affect the selection.

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.

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

The selection border around the mouth disappears.

- 3 Now hold down Shift, and press an arrow key.

Notice that the selection moves in 10-pixel increments.

- 4 Use the arrow keys to nudge the mouth until it is positioned where you want it. Then choose View > Show > Selection Edges or View > Show Extras.

5 Choose File > Save.

Copying selections or layers

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 Copy, Copy Merged, Cut, and Paste commands.

Keep in mind that when a selection or layer 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.

Photoshop and ImageReady contain several copy and paste commands:

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

–From Adobe Photoshop 6.0 online Help

Selecting with the magic wand

The magic wand tool lets you select adjacent pixels in an image based on their similarity in color. You'll use the magic wand tool to select the pear tomato, which you'll use as a nose for the face.

1 Select the magic wand tool (⌘).

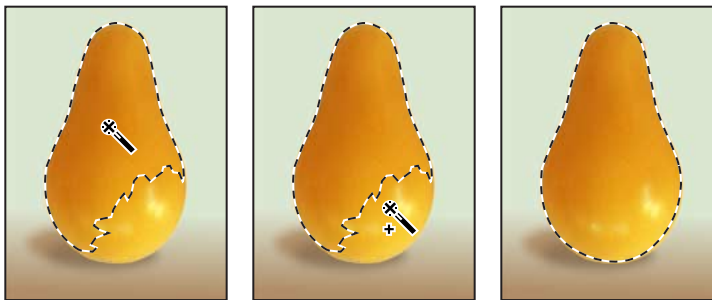
The tool options bar allows you to change the way the tools work. In the tool options bar for the magic wand tool, the Tolerance setting controls how many similar tones of a color are selected when you click an area. The default value is 32, indicating that 32 similar lighter tones and 32 similar darker tones will be selected.

2 In the tool options bar, enter **50** in the Tolerance text box to increase the number of similar tones that will be selected.



3 Using the magic wand tool, click anywhere within the pear tomato. Most of it will be selected.

4 To select the remaining area of the pear tomato, hold down Shift, and click the unselected areas. Notice that a plus sign appears with the magic wand pointer, indicating that you're adding to the current selection.



Initial selection

*Adding to selection
(Shift key depressed)*

Complete selection

5 When the pear tomato is completely selected, hold down Ctrl (Windows) or Command (Mac OS), position the pointer within the selection, and drag the tomato nose onto the melon face.

6 Choose **Select > Deselect**.

7 Choose **File > Save**.

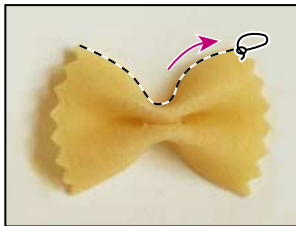
Selecting with the lasso tool

You can use the lasso tool to make selections that require both freehand and straight lines. You'll select a bow tie for the face using the lasso tool this way. It takes a bit of practice to use the lasso tool to alternate between straight-line and freehand selections—if you make a mistake while you're selecting the bow tie, simply deselect and start again.

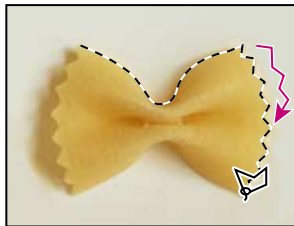
1 Select the zoom tool, and click twice on the bow tie pasta to enlarge its view to 300%.

2 Select the lasso tool (☞). Starting at the upper left corner of the bow tie pasta, drag to the right to create a freehand outline across the curves at the top of the bow tie. Continue holding down the mouse button.

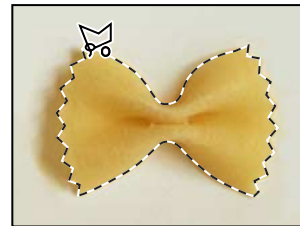
3 To select the right edge of the bow tie, hold down Alt (Windows) or Option (Mac OS), release the mouse button, and then begin outlining with short, straight lines by clicking along the edge. (Notice that the pointer changes from the lasso icon to the polygon lasso icon.) When you reach the bottom right corner of the bow tie, do not release the mouse button.



Freehand outline with lasso tool



Straight-line outline with polygon lasso tool



Completed selection (outline crosses starting point)

4 Release Alt/Option, and drag to the left to create a freehand outline across the bottom of the bow tie. (The pointer returns to the lasso icon.)

5 Hold down Alt/Option again, and click the mouse button along the left edge of the bow tie to draw straight lines.

6 To complete the selection, make sure that the last straight line crosses the start of the selection, release Alt/Option, and then release the mouse button.

7 Choose View > Fit on Screen to resize the document to fit on your screen.

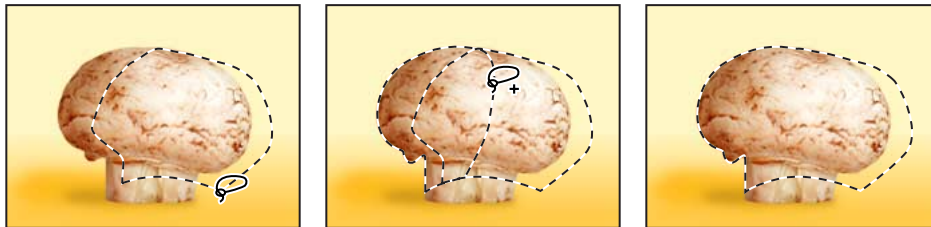
8 Hold down Ctrl (Windows) or Command (Mac OS), and drag the bow tie selection to the bottom of the melon face.

9 Choose File > Save.

Adding and subtracting selections

Holding down Shift while you are selecting an area adds to the current selection. Holding down Alt (Windows) or Option (Mac OS) subtracts from the selection. Now you'll use these techniques with the lasso tool to perfect a rough selection of the mushroom image. The mushroom will become a hat for the melon face.

- 1 Select the zoom tool (⌕), and click twice on the mushroom to enlarge its view to 300%.
- 2 Select the lasso tool (⌲), and drag a rough outline around the mushroom (include some of the area outside the mushroom and some of the stem).
- 3 Hold down Shift. A plus sign appears with the lasso tool pointer.
- 4 Drag the lasso tool around an area you want to add to the selection. Then release the mouse button. The area is added to the current selection.



Initial selection

*Adding to selection
(Shift key depressed)*

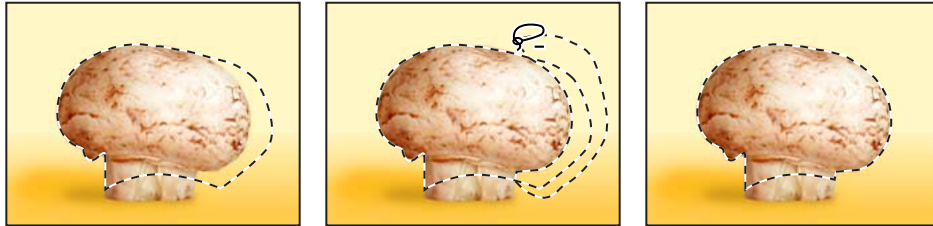
Result

Note: If you release the mouse button while drawing a selection with the lasso tool, the selection closes itself by drawing a straight line between the starting point and the point where you release the mouse. To create a more precise border, end the selection by crossing the starting point.

Next you'll remove, or subtract, part of the selection.

- 5 Hold down Alt (Windows) or Option (Mac OS). A minus sign appears with the lasso tool pointer.

6 Drag the lasso tool completely around an area you want to remove from the selection. Then repeat the process until you've finished removing all the unwanted parts of the selection.



Selection

*Subtracting from selection
(Alt/Option depressed)*

Result

7 Choose View > Fit on Screen.

8 To move the mushroom hat onto the melon head, hold down Alt+Ctrl (Windows) or Option+Command (Mac OS), and drag a copy of the mushroom to the top of the melon.

9 Choose File > Save.

Selecting with the magnetic lasso

You can use the magnetic lasso tool in Photoshop to make freehand selections of areas with high-contrast edges. When you draw with the magnetic lasso, the border automatically snaps to the edge you are tracing. You can also control the direction of the tool's path by clicking the mouse to place occasional fastening points in the selection border. (There is no magnetic lasso tool in ImageReady.)

You'll now make an ear for the melon face by using the magnetic lasso to select the red part of the grapefruit slice.

1 Select the zoom tool (Q), and click the grapefruit slice to zoom in to a 200% view.

2 Select the magnetic lasso tool (L) hidden under the lasso tool.

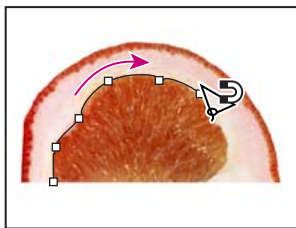
3 Now click once in the lower left corner of the red flesh of the grapefruit slice, release the mouse button, and begin tracing the outline of the flesh by dragging to the right over the curved upper edge.

Notice that the tool snaps to the edge and automatically puts in fastening points.

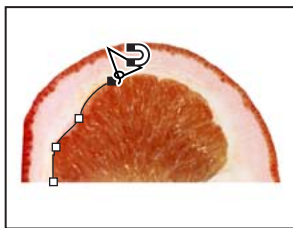
If you think the tool is not following the edge closely enough (in low-contrast areas), you can place your own fastening point in the border by clicking the mouse button. You can add as many fastening points as you feel are necessary. You can also remove fastening points and back up in the path by pressing Delete and moving the mouse back to the last remaining fastening point.

4 When you reach the lower right corner of the grapefruit flesh, double-click the mouse button, which signals the magnetic lasso tool to return to the starting point, and close the selection.

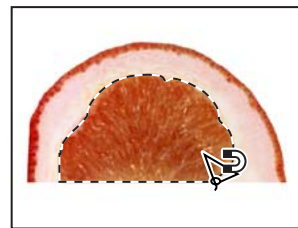
Notice that the tool automatically follows the remaining edge of the flesh as it completes the border.



Laying down fastening points




Removing fastening points



Double-clicking at corner to close path

You can now move the selected part of the grapefruit next to the melon.

5 Double-click the hand tool () to fit the image on-screen.

6 Select the move tool, and drag the grapefruit ear to the middle of the left side of the melon face. Do not deselect.

7 Choose File > Save.

Softening the edges of a selection

You have two ways to smooth the hard edges of a selection.

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, polygon lasso, magnetic lasso, elliptical marquee, and magic wand tools. (Select the tool to display its tool options bar.) You must specify the anti-aliasing option before using these tools. Once a selection is made, you cannot add anti-aliasing.

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, lasso, polygon lasso, or magnetic lasso tool as you use the tool, or you can add feathering to an existing selection. Feathering effects become apparent when you move, cut, or copy the selection.

- *To use anti-aliasing, select the marquee, lasso, polygon lasso, or magnetic lasso tool to display its tool options bar. Then select Anti-aliased in the tool options bar for the selected tool.*
- *To define a feathered edge for a selection tool, select the marquee, lasso, polygon lasso, or magnetic lasso tool to display its tool options bar. Then enter a Feather value in the tool 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 > Feather. Then enter a value for the Feather Radius, and click OK.*

—From Adobe Photoshop 6.0 online Help

Transforming a selection

Next you'll use the Free Transform command to rotate and scale the melon's left ear, and then you'll duplicate and flip a copy to create a right ear.

- 1 Choose Edit > Free Transform.


A bounding box appears around the ear selection.

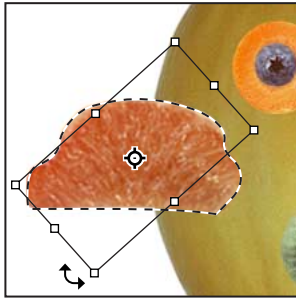
- 2 To rotate the ear, position the pointer outside a corner handle until you see a curved double-headed arrow (↻), and then drag in the direction you want the ear to rotate.

Notice that the ear rotates around the selection's center point (⊕).

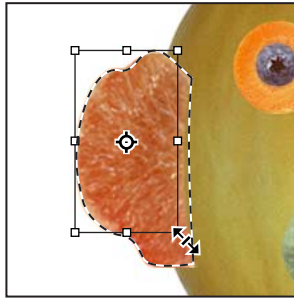
- 3 To scale the ear, position the pointer directly on one of the corner handles, and drag to reduce the size of the ear. To scale the ear proportionately, hold down Shift as you drag.

4 To reposition the ear, place your pointer within the bounding box, but not on the center point, and drag. (If you place the pointer on the center point and drag, you will move the center point.)

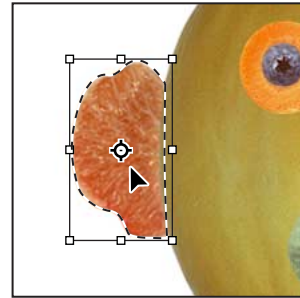
 For information on working with the center point in a transformation, see “Transforming objects in two dimensions” in Adobe Photoshop 6.0 online Help.



Dragging outside border to rotate ear



Dragging on corner to scale ear



Dragging within border to reposition ear

 *If you don't like the results of a Free Transform, press the Escape key and start over.*

5 When you have the ear positioned correctly, press Enter (Windows) or Return (Mac OS) to apply the transformation. The ear remains selected.

Now you'll move a copy of the ear to the right side of the face, flip the ear horizontally, and fine-tune its placement.

6 Position the pointer within the ear selection, hold down Shift+Alt (Windows) or Shift+Option (Mac OS), and drag a copy of the ear to the right side of the face.

7 With the duplicate ear still selected, choose Edit > Free Transform or Edit > Transform > Rotate.

A bounding box appears around the duplicate ear.

8 Choose Edit > Transform > Flip Horizontal.

9 If needed, place the pointer within the selection, and drag to reposition it next to the melon face.

- 10 If needed, choose Edit > Free Transform, rotate the ear to fit the right side of the face.
- 11 Press Enter (Windows) or Return (Mac OS) to complete the transformation.
- 12 Choose File > Save.

Combining selection tools

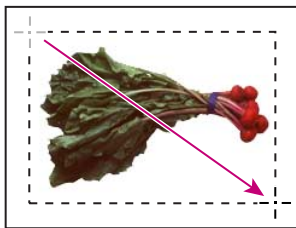
As you already know, the magic wand tool makes selections based on color. If an object you want to select is on a solid-colored background, it can be much easier to select the object and the background and then use the magic wand tool to subtract the background color, leaving the desired object selected.

You'll see how this works by using the rectangular marquee tool and the magic wand tool to select radish eyebrows for the face.

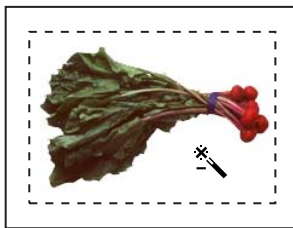
- 1 Select the rectangular marquee tool (☐) hidden under the elliptical marquee tool (◯).
- 2 Drag a selection around the radishes.

At this point, the radishes and the white background area are selected. You'll subtract the white area from the selection, resulting in only the radishes in the selection.

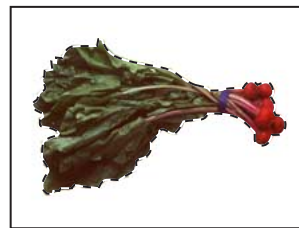
- 3 Select the magic wand tool; then hold down Alt (Windows) or Option (Mac OS). A minus sign appears with the magic wand pointer.
- 4 Click anywhere in the selected white area surrounding the radishes. Now only the radishes are selected.



Initial selection



*Subtracting from selection with
Alt/Option magic wand*



Result

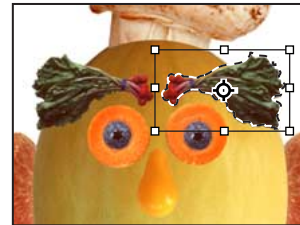
- 5 To duplicate and move the radish eyebrow to the melon face, hold down Alt+Ctrl (Windows) or Option+Command (Mac OS), and drag the radish above the left eye on the melon face. Do not deselect.
- 6 Hold down Shift+Alt+Ctrl (Windows) or Shift+Option+Command (Mac OS), position the pointer within the selection, and drag to duplicate and reposition another eyebrow above the right eye.
- 7 With the right eyebrow still selected, choose Edit > Free Transform or Edit > Transform > Rotate. A bounding box appears around the eyebrow.
- 8 Choose Edit > Transform > Flip Horizontal to adjust the right eyebrow. If you like, reposition the eyebrow using any of the methods you've learned. Then press Enter (Windows) or Return (Mac OS) to complete the transformation.



Left eyebrow placed with Alt+Ctrl/Option+Command



Right eyebrow placed with Shift+Alt+Ctrl/Shift+Option+Command




Right eyebrow flipped horizontally


- 9 Choose File > Save.

Cropping the completed image

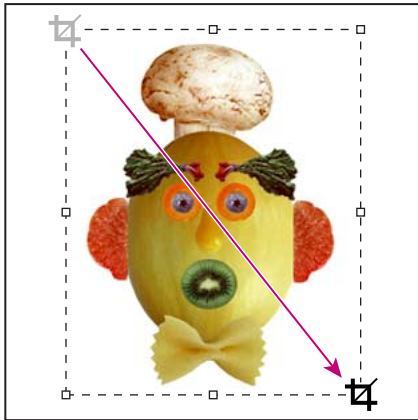
In both Photoshop and ImageReady, you can use either the crop tool or the Crop command to crop an image. You can also decide whether to delete the area outside of a rectangular selection, or whether to hide the area outside of the selection. You can use the Trim command to discard a border area around the edge of the image, based on transparency or edge color.

 *In ImageReady, use the Crop command and the crop tool set to Hide when creating animated elements that move from off-screen into the live image area.*

To complete the artwork, you'll crop the image to a final size.

- 1 Select the crop tool () or press C to switch from the current tool to the crop tool.
- 2 Move the pointer into the image window, and drag diagonally from the upper left corner to the lower right corner of the completed artwork to create a crop marquee.

After dragging in Photoshop, make sure that Perspective is not selected in the crop tool options bar.



- 3 If you need to reposition the crop marquee, position the pointer anywhere inside the marquee and drag.
- 4 If you want to resize the marquee, drag a handle.
- 5 When the marquee is positioned where you want it, press Enter (Windows) or Return (Mac OS) to crop the image.
- 6 Choose File > Save.

The fruit-and-vegetable face is complete.