CHAPTER 6 **LAYERS**

INFOCUS

As you include more objects into your artwork and it begins to become more complex, you may find that you need a way to effectively organise your artwork so you can work with specific elements at a time.

Fortunately you can use *Layers* to manage your artwork and make it easier to work with. The elements on each *Illustrator* page appear in *layers*. A document may have one layer, meaning that every element or object appears at the same level, or a document may have several layers, where some objects appear on one layer and some on another. Objects in the higher or top layer sit over those on the lower layers. The best way to think of layers is to see them as transparent sheets, each with their own objects that are laid over the top of each other to form a page.

In this session you will:

✓ gain an understanding of layers and sublayers
✓ gain an understanding of the *Layers* panel
✓ learn how to use the *Layers* panel to select objects
✓ learn how to create layers
✓ learn how to name layers and assign colours
✓ learn how to group layers
✓ learn how to move objects to different layers
✓ learn how to rearrange layers and sublayers
✓ learn how to hide and display layers
✓ learn how to lock and unlock layers
✓ learn how to delete layers.

UNDERSTANDING LAYERS AND SUBLAYERS

You can arrange objects in Illustrator by using commands located in the *Arrange* menu. For instance you can use the commands to position objects in front of and behind each other.

Alternatively, you can organise objects into layers using the *Layers* panel. Using layers saves time when editing objects, especially in complex artwork.

Understanding Layers

Layers can be thought of as transparent sheets that are placed over the top of each other on a page. Only the objects on the layers are visible – the rest of the sheet is transparent. For example, if you add elements to a document, such as an image or text, it is placed in a new layer as if on a transparent sheet on top of the original image. By default each new Illustrator document has a single layer called *Layer 1*. As you add elements to an artwork sublayers are created by default and you also have the option of creating additional layers or sublayers.

You can choose to hide or display layers so that only one or two may be visible at a time. This enables you to concentrate on the objects on the current layer(s) and the objects on the hidden layers are effectively protected from inadvertent modification or deletion. For instance, if you place all of the text in a document on one layer and the graphics on another, you can hide all of the graphics and print only the text. This is ideal if you need to proof read the text. Alternatively, you can hide the text layer and display the graphics layer while you import pictures. You can also create additional layers and sublayers to better control, manage and organise your artwork. By using the options in the *Layers* panel, you can isolate objects for editing by hiding or locking surrounding objects. You can also rearrange objects in the layer/sublayer hierarchy. You may find that as you add more elements to your art, you will need to create new layers and move objects/sublayers between layers.

Understanding Sub Layers

Sublayers are layers within a layer. You can view sublayers in the *Layers* panel by clicking on the *expand* arrow to the left of the layer name. Sublayers will appear listed below the layer name they belong to. Sublayers are created by default when you place elements on an artboard. For instance, if you draw a rectangle on *Layer 1*, it will be placed on a sublayer within *Layer 1* named *Rectangle*. Sublayers are useful in that they organise elements of a document within a layer.

Grouping Layers

You can create a layer group by selecting multiple elements on a layer and selecting **Object > Group**. This will create what appears to be a sublayer within the selected layer however it does not work in quite the same way as a sublayer. If you group objects together, their individual sublayers will be merged into a single sublayer called *Group*. If you ungroup the objects they will revert back to their original sublayers.

The Uses of Layers

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Layer clipping mask	Make the top object in a layer a mask for all items within that layer
PDF layers	Export PDF files with layers preserved
Photoshop export	preserve layers in a file to be exported to Photoshop to make it easier to work with inside Photoshop
Animation	When working with animation, layers serve as frames.
CSS	Can be exported to CSS layers when creating web layouts
SVG	Basic building blocks when creating files to be saved as SVG
Variables	XML based variables feature relies on layers
Arranging Objects	Because every item is on a separate sublayer (unless grouped), you are able to stack or position objects on top of or behind other objects by adjusting the sublayer's position in the stack. You can send objects to the back of other objects (lowest in the sublayer hierarchy), or bring them to the front (highest in the sublayer hierarchy). You can also bring an object forward one sublayer (move it up one level) or send it backward one sublayer (to send it behind the next sublayer in the hierarchy). Objects on the same layer can be arranged using the commands in the **Object > Arrange** menu.

UNDERSTANDING THE LAYERS PANEL

The order in which layers appear in the *Layers* panel indicates the order of objects in the document. In the example below, objects in the *Logo* layer are in front of all other objects as it is the top layer. You can use the *Layers* panel to create and delete layers, hide all or parts of a layer and move objects between layers.

The Panel Options menu
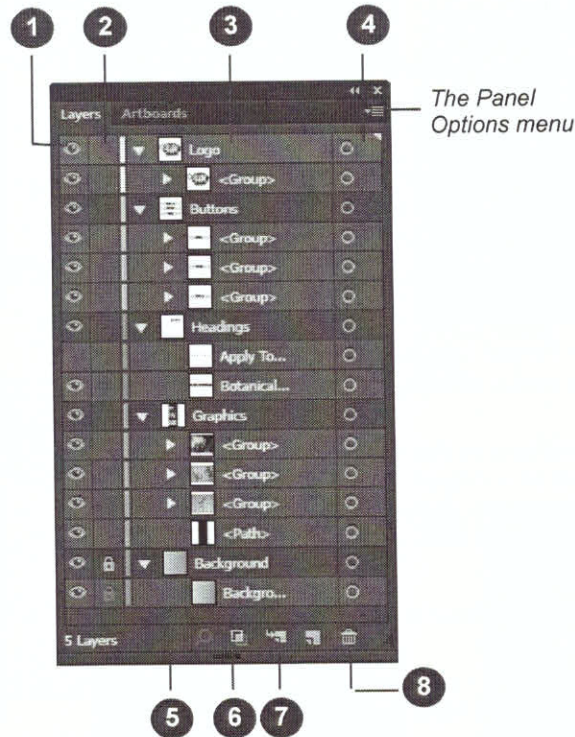
1   The *Visibility* column allows you to turn the visibility of a layer or multiple layers on or off. If the visibility of a layer is turned off, any elements located on that layer are no longer visible and cannot be edited.

2   The *Edit* column allows you to *lock* and *unlock* layers. If a layer is locked, elements on that layer are visible but they cannot be modified in any way. To lock a layer click on the lock box so a lock icon appears. To unlock a layer click on the lock icon so it disappears.

3   The colour that is assigned to the layer appears to the left of the layer name. The arrow to the left of the layer name allows you to expand or collapse the sublayers within a layer.

4   The *Target* column allows you to select all elements on a layer. Click on the *target* icon for the required layer. To deselect the elements click on the *Target* icon again. The area to the right of the *Target* icon is known as the *Selection* column as it allows you to see which objects belong to which layers. If you select an object in your artwork a small icon will appear in the *Selection* column of the layer the object belongs to.

5   If you wish to know the exact location of a selected object, click on *Locate Object*. This expands the relevant layer in the *Layers* panel so that you can see all of its sublayers. The sublayers that contain elements of the selected object appear with the colour icon in the *Target* column.

6   A clipping mask works by clipping the artwork to the shape of the mask so that only elements of the artwork within the mask are visible. Click on *Make/Release Clipping Mask* to either make a clipping mask if there is not one selected, or release a selected clipping mask.

7   Click on *Create New Sublayer* to create a new sublayer in the selected layer. Click on *Create New Layer* to create a new layer.

8   Click on *Delete Selection* to delete the selected layer(s) and/or sublayer(s).

WORKING WITH THE LAYERS PANEL

The *Layers* panel is included in the *Essentials* workspace by default and contains a range of features to help you work with individual objects and groups of objects. You can access the *Layers* panel using a number of different methods. Simply select *Layers* from the panel dock (depending on the selected workspace), select **Window** > **Layers**, or press F7.

Try This Yourself:

Open File

Before starting this exercise you MUST open the file IL1409 Layers_1.ai...

1 Click on *Layers* in the panel dock to display the *Layers* panel

All objects are contained within two layers called Background and Layer 1...

2 Click on the *Target* icon for *Layer 1*, as shown to select all objects on this layer

A blue square next to the Target icon indicates that all sublayers within Layer 1 are selected. Notice that all artboard objects are enclosed in a blue bounding box...

3 Click outside of the bounding box to deselect the objects

Let's expand Layer 1 to see all sublayers within this layer...

4 In the *Layers* panel, click on the expand arrow to the left of *Layer 1* to display it's sublayers

Layer 1 is expanded to show a list of sublayers, each containing objects (groups and paths)...

5 Click on the title bar of the *Layers* panel, drag the panel into the workspace so it appears floating , then point to the bottom right corner of the panel to display a double-headed arrow

6 Click and drag down to expand the panel to display all of the sublayers
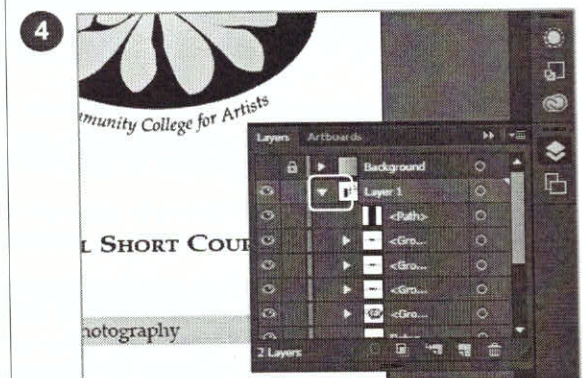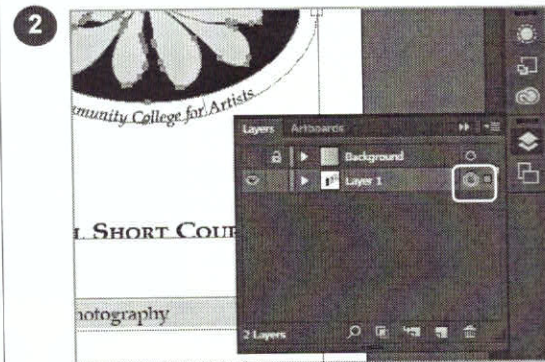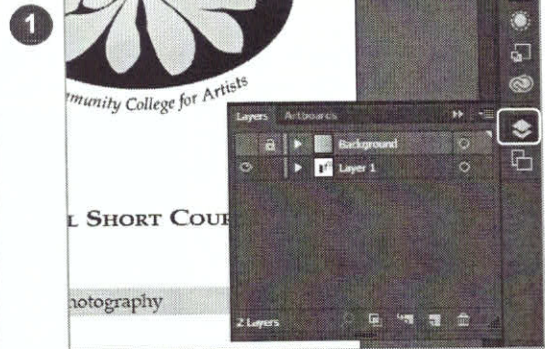
For Your Reference...

To *display* the *Layers panel*:

- Click on *Layers* in the panel dock, or Select **Window** > **Layers**

To *select layers/sublayers* in the *Layers panel*:

- Click on the target icon to the right of the layer or sublayer name

Handy to Know...

- When you select a sublayer in the *Layers* panel, a square appears beside the name of the sublayer and a smaller square also appears beside the name of the (parent) layer. This indicates that one or more objects within the layer are selected (i.e. on the sublayer), but not the (parent) layer itself.

CREATING LAYERS AND SUBLAYERS

Layers are a useful way of keeping your objects organised and making it easier to work with your document. Although each new document in Illustrator only has one layer, you can create and name as many new layers and sublayers as you need for each artwork. You might like to organise your objects by their type, theme, or when they were created.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file IL1409 Layers_2.ai...

1 In the **Layers** panel, click on **Create New Layer**

The new layer is called Layer 3. Let's create another layer using a different method...

2 Click on the panel **Options** menu to display a menu of options

3 Select **New Layer** to create a new layer and display the **Layer Options** dialog box

Let's create a sublayer...

4 Click on **[OK]** to create the new layer with the default settings applied

5 Ensure **Layer 3** is selected in the **Layers** panel

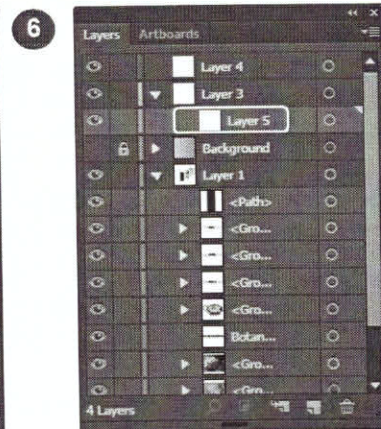**6** Click on **Create new sublayer** at the bottom of the **Layers** panel

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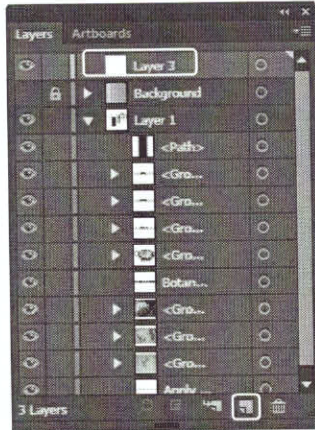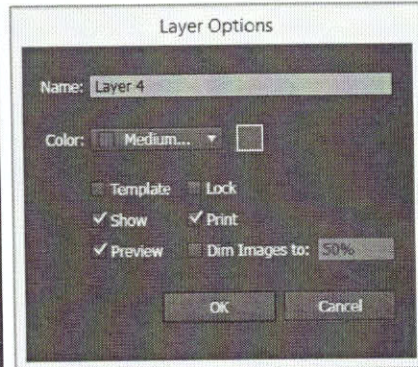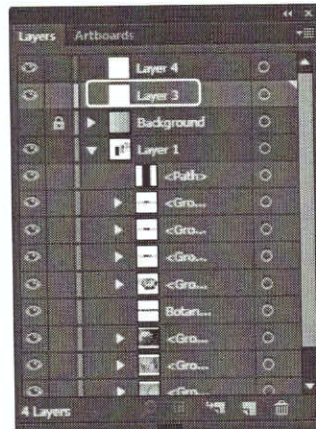
For Your Reference...

To **create layers** and **sublayers**:

*   In the **Layers** panel, click on **Create New Layer**, or
1. Select the required sublayers in the **Layers** panel
2. Click on the panel options menu and select **Collect in New Layer**

Handy to Know...

*   You can create new layers by duplicating existing ones. Select the required layer in the **Layers** panel, click on the **Panel options** menu, then select **Duplicate Layer**.

NAMING LAYERS AND ASSIGNING COLOURS

By default, layers are known as *Layer 1*, *Layer 2* and so on. They are also assigned a specific colour – light blue for Layer 1, red for Layer 2, green for Layer 3 and so on. You can change the *layer names* and *colours* to suit your particular project, so that specific objects are easier to locate and display.

## Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file IL1409 Layers_3.ai...

1 Double-click on the *Layer 3* label to select the text

2 Type **Buttons**, then press Enter to rename the layer

3 Repeat step *3* to rename *Layer 4* as **Logo** and *Layer 1* as **Headings**

The colour assigned to both the Logo and Headings layers is blue. As this might be confusing, let's change one...

4 Double-click to the right of the *Logo* layer label (not on the label text) to display the *Layer Options* dialog box

5 Click on the drop arrow for *Colour*, select **Yellow**, then click on **[OK]**

Notice the colour to the left of the Logo layer is now yellow

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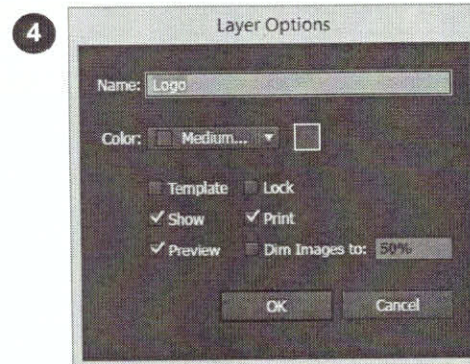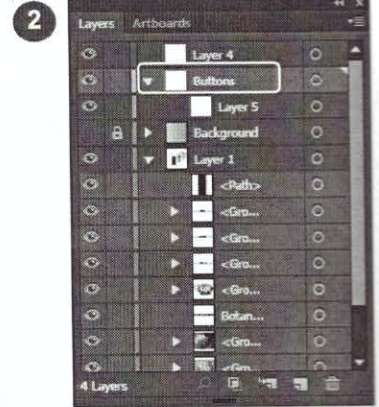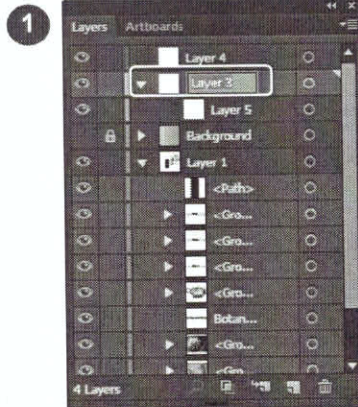
For Your Reference...

To *change* a *layer colour* or *name*:

1. Double-click on the layer name in the *Layers* panel
2. Change the *Name* and/or *Colour*
3. Click on **[OK]**

Handy to Know...

- You can change the number of layers that are visible in the *Layers* panel by selecting **Small Panel Rows** from the *Layers* panel menu button. This option reduces the vertical space each layer name occupies in the panel.

GROUPING LAYERS

Illustrator allows you to group layers by collecting layers and creating one new layer. This is useful if you have a large quantity of layers and sublayers in the **Layers** panel and need to

ensure that layers are grouped in a way that works to your advantage – whether you want to group them based on category, position within the artwork etc.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file IL1409 Layers_4.ai...

1 On the artboard and canvas, select the three photos and the large black rectangle

2 If necessary resize the **Layers** panel so you can clearly view all of the layers and sublayers by clicking and dragging on the border of the panel

3 In the **Layers** panel, hold down Ctrl and click on the four sublayers displaying the large blue squares

4 Click on the panel options menu to display a menu of options

5 Select **Collect in New Layer** to move these four sublayers into a single sublayer (**Layer 6**)

6 Rename the layer **Graphics**
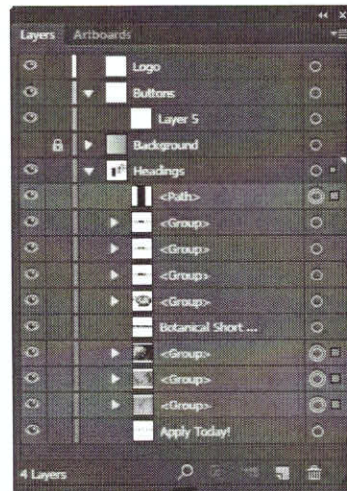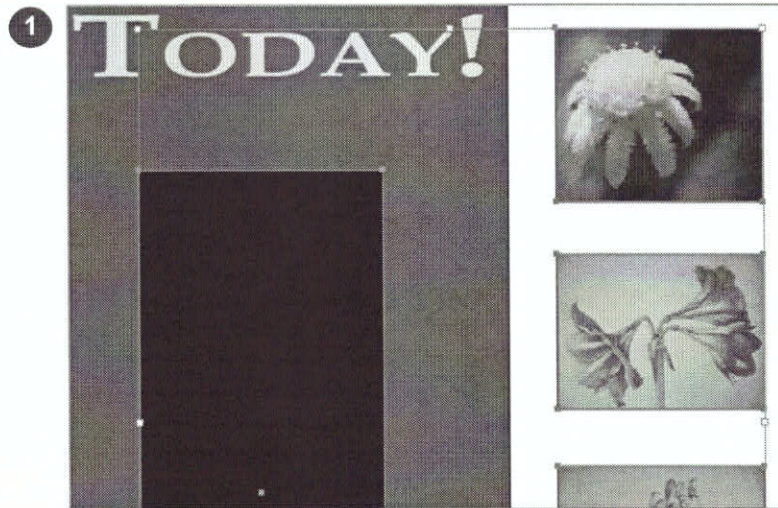
For Your Reference...

To **group layers**:

1. Select the required layers
2. Click on the panel **Options** menu
3. Select **Collect in New Layer**

Handy to Know...

- You can merge layers using the **Merge Layers** option on the panel **Options** menu. Merging layers takes multiple layers and makes them into one single layer. This is useful if you have too many layers and the artwork is becoming difficult to organise.

REASSIGNING OBJECTS TO DIFFERENT LAYERS

No matter how carefully you plan your artwork, it is very likely you will need to move objects from one layer or sublayer to another at some point. For example, you might receive a document with a single layer, and prefer the objects to be arranged on several layers as you work on it. In this case you would simply create new layers and move the objects as required.

Try This Yourself:

Same File

*Continue using the previous file with this exercise, or open the file IL1409 Layers_5.ai...*

1 On the artboard, click on the **Photography** button to select it

A blue bounding box surrounds the object and, in the Layers panel, the sublayer that contains the object displays a large blue square if you are continuing from the previous exercise, or pink if you are using the Layers_3 file...

2 In the **Layers** panel, point to the large blue (or pink) square for the active **Group** sublayer, then click and drag it onto the **Buttons** layer until the square appears green

3 Release the mouse button to complete the move, then if necessary click on the arrow for **Buttons** to expand the layer

The Group sublayer has been moved into the Buttons layer and the Photography button now has a green bounding box...

4 Repeat steps *1* to *3* to move the **Watercolour** and **Drawing** buttons into the **Buttons** layer

5 Click on the logo at the top of the artboard to select it, then repeat steps *2* and *3* to move it into the (yellow) **Logo** layer
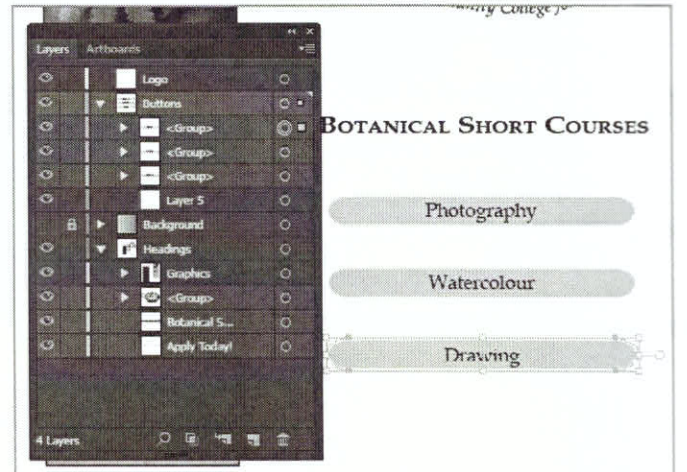
The bounding box will change to yellow
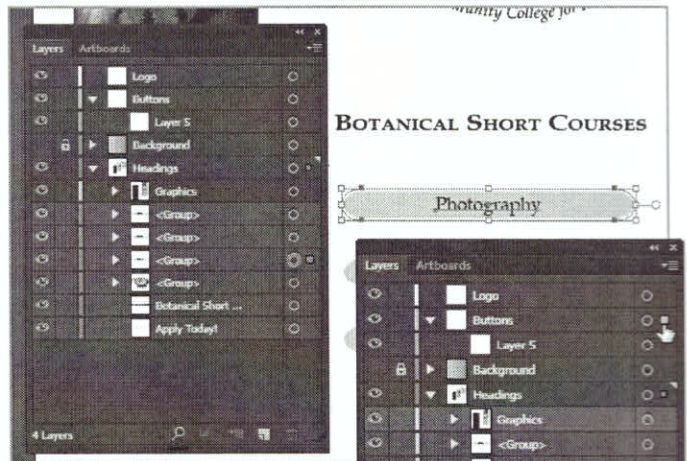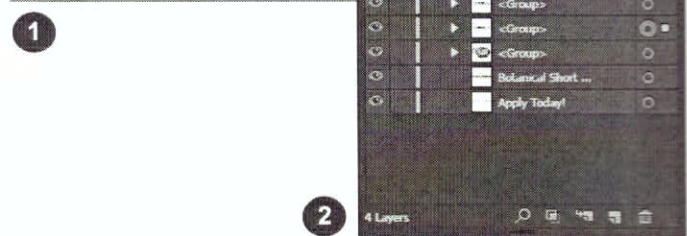
For Your Reference...

To **move objects to different layers**:

1. Select the object
2. In the **Layers** panel, click and drag the coloured square to the new layer/sublayer
3. Release the mouse button

Handy to Know...

- You don't have to select the object on the artboard before moving it to another layer or sublayer – sometimes the tiny thumbnail in the **Layers** panel is clear enough to make out which is the target sublayer. You can then click on the target icon for the layer to reveal the square.

REARRANGING LAYERS AND SUBLAYERS

Arranging (or stacking) layers and sublayers enables you to adjust the hierarchy of objects in an artwork. By default, objects will be stacked in the order in which they were created, with the newest at the top. Rearranging layers and sublayers allows you to specify where objects appear in the hierarchy and therefore how visible they are.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file IL1409 Layers_6.ai...

1 On the canvas, select the black rectangle, then position it over the three photos, as shown

In the Layers panel, you can see this sublayer (Path) sits above the photos and therefore obscures them...

2 Select **Object** > **Arrange** > **Send to Back**

The sublayer is repositioned at the bottom of the Graphics layer and now appears behind the other sublayer objects. Let's make the Graphics sublayer into a layer...

3 Collapse all layers except *Headings*, then click and drag the *Graphics* sublayer up until a thick line appears just above the *Headings* layer

4 Release the mouse button to complete the move

5 Select the *Apply Today* text on the pasteboard and position as shown

6 Select **Object** > **Arrange** > **Bring to Front**

This does not work – although the Apply Today sublayer moved to the top of the Headings hierarchy, it is still not above the Graphics layer...

7 Repeat steps *3* and *4* to move the *Headings* layer above the *Graphics* layer
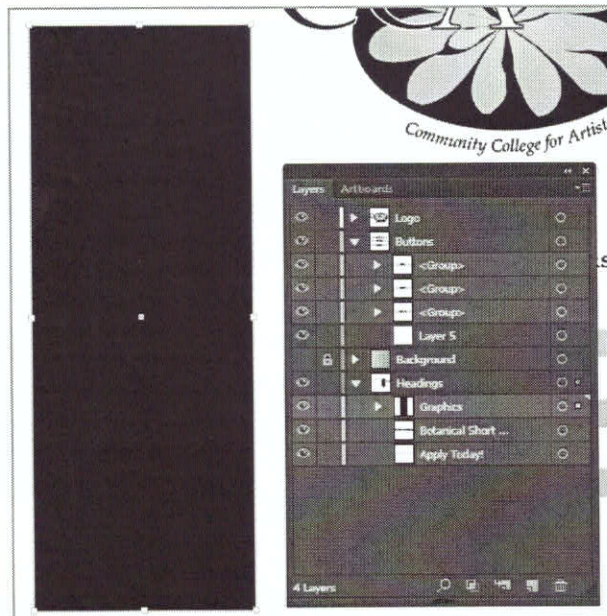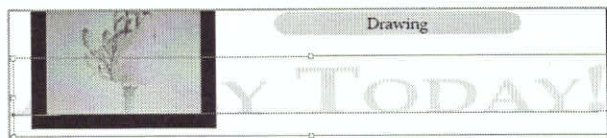
For Your Reference...

To *rearrange layers* and *sublayers*:

- Select the object, then select **Object** > **Arrange** > *option*, or
- Collapse the layers in the *Layers* panel, then click and drag the layer or sublayer to the new position

Handy to Know...

- The **Object** > **Arrange** menu options only move sublayers within a layer – they don't alter the hierarchy of layers. Remember each object is on its own sublayer in a hierarchy determined by order of creation by default. The most recently created object will be on top, obscuring all items directly beneath it.

HIDING AND DISPLAYING LAYERS

When you create artwork in Illustrator, you stack the layers and sublayers so that the objects on the layers are arranged to produce the final result. Some objects are positioned on top of others and therefore obscure parts of the objects directly underneath. In order to edit objects in lower layers, it is easier to temporarily *hide* the layers on top rather than move the objects out of the way.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file IL1409 Layers_7.ai...

1 Ensure that no objects are selected, then, in the *Layers* panel, click on the left (*Visibility*) column for the *Background* layer so that an eye icon appears

The Background layer was hidden and is now displayed on the artwork. As this layer is at the top of the hierarchy, it obscures everything else (all other layers and sublayers are beneath it)...

2 With all layers collapsed in the *Layers* panel, click and drag the *Background* layer to the bottom of the hierarchy, until a thick line appears below the *Graphics* layer

3 Release the mouse button to complete the move

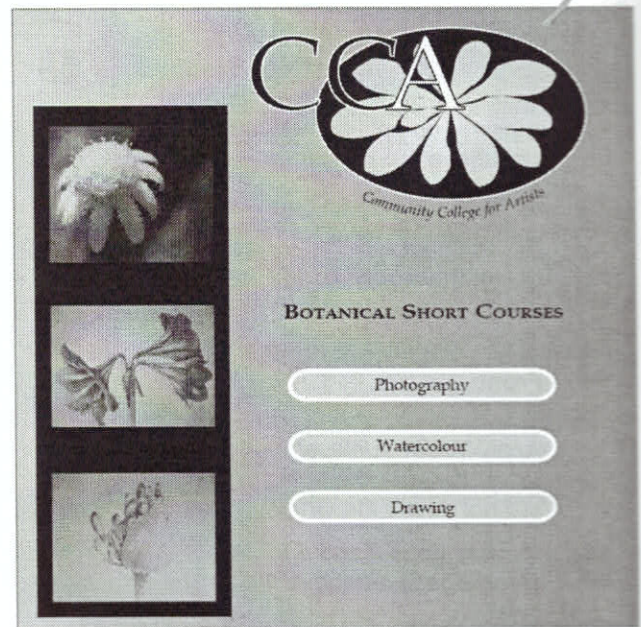*Now the background is positioned behind all other layers and sublayers...*

4 Expand the *Headings* layer, then click on the *Visibility* column for *Apply Today!* so that the eye icon disappears

The sublayer is hidden and the text can no longer be seen on the artwork
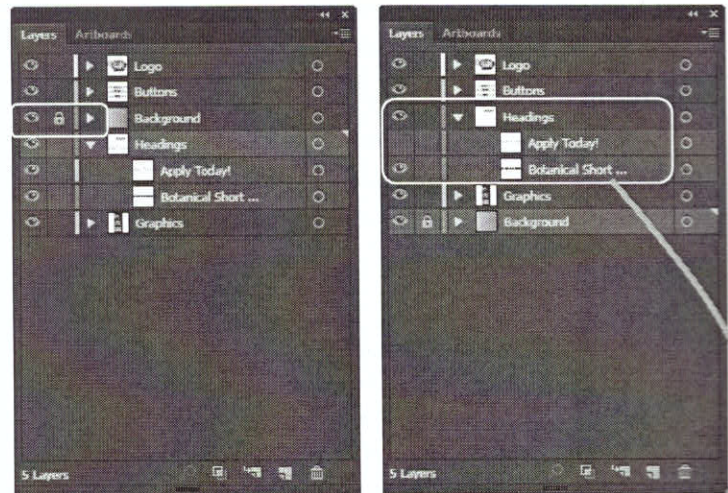
For Your Reference...

To *hide* and *display layers* and *sublayers*:

- Click on the *Visibility* column for the layer or sublayer

Handy to Know...

- Hidden layers cannot be selected using the target icon in the *Layers* panel.

- Hiding layers can also be useful for creating different versions in a single artwork; for example, the same sales brochure for different franchises. You can display layers relevant to each version.

LOCKING AND UNLOCKING LAYERS

To avoid accidentally moving, deleting or editing an object or group of objects, you can *lock* the layer or sublayer they are on. Not only is it not possible to change objects on a locked layer, you cannot even select a layer or sublayer that is locked. Like hiding layers, this is useful when you want to work with certain objects without inadvertently changing others.

Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file IL1409 Layers_8.ai...

1 On the artboard, click on the green background object

The background consists of a gradient-filled square the same size as the artboard. Notice that a bounding box is not displayed around this object – the Background layer is locked and cannot be selected...

2 In the *Layers* panel, click on the lock icon for the *Background* layer to remove the *Lock* icon

The layer is now unlocked...

3 Repeat step *1* to select the background object

This time a bounding box appears around the square on the Background layer. Let's remove the stroke...

4 In the *Tools* panel, click on the *Stroke* box, click on *None*, then click on the canvas to see the result

The thin outline you see now is the edge of the artboard...

5 In the *Layers* panel, click on the second (*Lock*) column for the *Background* layer until the lock icon appears

The layer is locked again
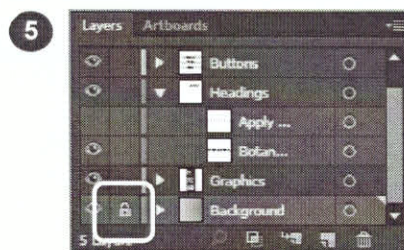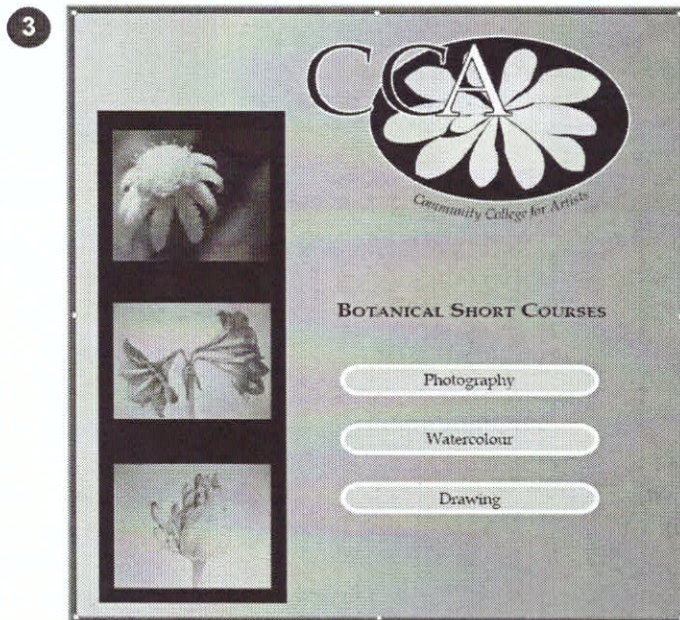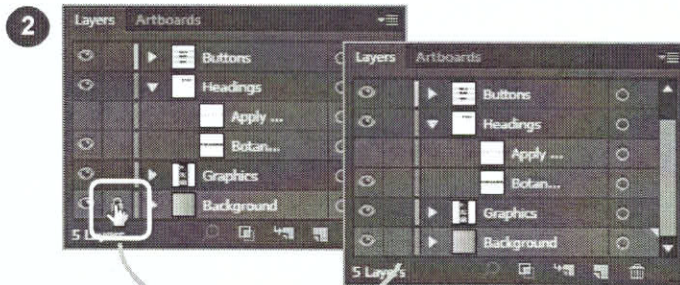
For Your Reference...

To *lock* and *unlock layers* and *sublayers*:

- In the *Layers* panel, click on the *Lock* column for the layer or sublayer to lock/unlock it – the option toggles on and off with each click

Handy to Know...

- You cannot add an object to a locked layer.

DELETING LAYERS

There are going to be times when you need to delete layers. Perhaps you have overestimated and created too many layers, or you decide you no longer need one of the layers in your document. Whatever the reason Illustrator provides you with a number of ways to delete layers from your document.
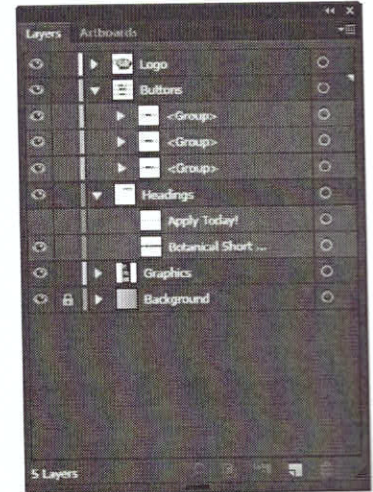
Try This Yourself:

Same File

Continue using the previous file with this exercise, or open the file IL1409 Layers_9.ai...

1 Click on the expand arrow for **Buttons** layer to display all of the sublayers

2 Click on **Layer 5** to select it

3 Click on **Delete** in the bottom of the **Layers** panel
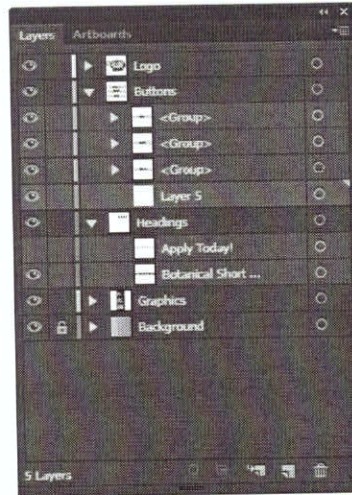
2

3

For Your Reference...

To **delete** a **layer** or **sublayer**:

1. Select the layer in the **Layers** panel
2. Click on **Delete**

Handy to Know...

- You can delete layers by selecting the layer in the **Layers** panel, clicking on the panel menu icon and selecting **Delete**. Alternatively you can select the layer and press ⌴Del⌴.