

HOUR 1



Basics

The Flash environment is deceptively simple. It's possible to get started drawing and animating right away. However, Flash might not act the way you expect.

To make sure that you get off on the right foot, it pays to first cover some basics. Although Flash is consistent with other types of software in several ways, there are many more ways in which Flash is different. Experienced users and novices alike should understand the basics covered this hour.

In this hour, you will:

- See how easy you can draw and make a quick animation
- Become familiar with Flash's workspace
- Organize panels and learn how they're used
- Learn how the new Properties panel constantly changes to show you important information
- Learn the common file types related to Flash

NEW TERM

Panels are special tools in Flash (similar to what Macromedia calls *inspectors* in its other products) that give you access to see and change most any setting while editing a file. The Properties panel will prove

to be the most useful because it automatically changes as needed. For example, when you select text, the Properties panel allows you to change the font style and size.

Jump Right In

It's actually possible to learn to make a Flash animation in a matter of seconds! Although this task won't cover all there is to learn, it should prove to you that it's possible to get rolling very fast.

Task: Make an Animation in 30 Seconds

Just to prove that it can be easy, you'll make a simple animation in a matter of seconds. Follow these steps:

1. Open Flash MX and make sure that you see a large white square in the center of your screen (it's called the Stage). If not, simply select File, New.
2. Press the letter R to turn your cursor into a Rectangle tool. (You should also notice that the Rectangle tool becomes active in the Tools panel on the left.)
3. On the left side of the Stage, click and drag down to the right to draw a medium-sized rectangle. This will be how our animation begins.
4. Make sure that the Timeline panel is visible (if not, select Window, Timeline). The frames in the Timeline are numbered. Click the cell directly under frame 20. Then press F7 to insert a blank keyframe. This is where we will draw how we want the animation to appear at frame 20 (see Figure 1.1).
5. Now press the letter O to turn the cursor into an Oval tool. Click on the right side of the Stage and drag to draw a medium-sized oval.
6. Finally, return to frame 1 (where the animation will begin) by clicking the dot right underneath the "1" (for frame 1) in the Timeline.
7. Make sure that the Properties panel is visible (if not, select Window, Properties). Because the Properties panel changes based on what's selected, you should see properties for frame 1 (because that's the last thing you clicked). If the Properties panel doesn't look like Figure 1.2, then click once on the dot underneath frame 1 in the Timeline. Finally, select Shape from the Tween drop-down menu on the Properties panel. That's it!
8. To view your animation, simply press the Enter key.



If you're using a Macintosh, you'll be happy to know Flash is nearly identical to the Windows version. Macintosh keyboards are different so use the following legend to translate keyboard commands from Windows.

if Windows uses: then use this Macintosh key:
 Ctrl Command (the apple icon key)
 Alt option
 Right Mouse Click control click

For example, if you see in this book Ctrl+X, just use Command X (if you're on the Mac).

The function keys (like F8) are the same. Finally, if you have a third-party mouse that includes a right button, you should program it to invoke the control key.

Of course you'll learn much more about making animations, but it's almost scary how easy this one was. In a way, this is what makes Flash so challenging—you can see success quickly, but then it's easy to get carried away and neglect to learn the basics. This book concentrates on the foundational skills necessary so that you can grow on your own. Don't worry—it will be fun. It's just best to get the basics first.

FIGURE 1.1

After selecting frame 20 in the Timeline, we insert a blank keyframe by pressing F7.

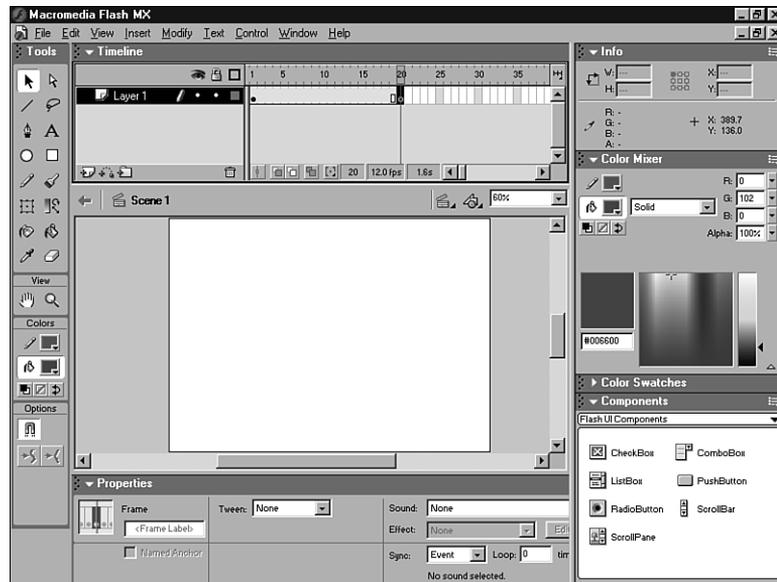
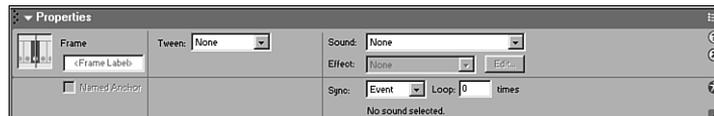


FIGURE 1.2

When a frame is selected, the Properties panel appears as shown.



Getting Your Bearings

The key to understanding Flash is always knowing “where you are.” You’re given the power to edit everything: static graphics, animations, buttons, and more. At all times, you need to be conscious of what you’re currently editing. It’s easy to become disoriented about exactly what element is being edited. This section helps you get your bearings right away.

Let’s take a quick tour of the Flash workspace:

- The Stage is your visual workspace. Any graphics placed in this area will be visible to the user.
- The Tools panel contains all the drawing tools in Flash, of which there are many. These are covered in depth in Hour 2, “Drawing and Painting Original Art in Flash.”
- The Timeline panel contains the sequence of images that make an animation. The Timeline can also include many layers of animations. This way, certain graphics can appear above or below others, and you can have several animations playing simultaneously.
- Panels are “docked” next to other panels around the outside of the stage. Alternatively, you can undock them so that they appear to float above everything else. You can even dock two or more floating panels together. Basically, you can organize panels to suit your work style.

NEW TERM

User is a general term to refer to the person watching your movie or visiting your Web site. Within this book, I’ll refer to the user frequently. Occasionally, I’ll call the user the *audience*. I’ve even heard the user referred to as the *witness*. It really doesn’t matter which term you use—just realize that there’s you (the author, creator, designer) and then there’s the user (or audience, witness, or whatever term you like). As the author, you’ll be able to make edits to the Flash movie, whereas the user can only watch and interact with the movie.

The Stage

The large white rectangle in the center of Flash’s workspace is called the *Stage*. Text, graphics, photos—anything the user sees—goes on the Stage (see Figure 1.3).

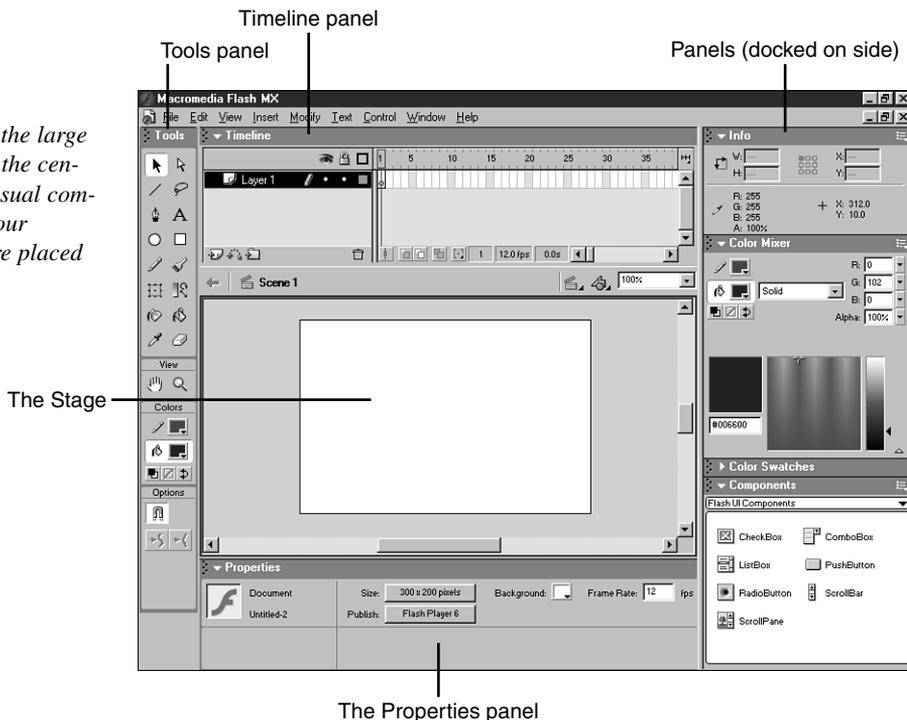
Think of the Stage as the canvas on which a painter paints or the frame in which a photographer composes pictures. Sometimes you’ll want a graphic to begin outside the Stage and then animate onto the Stage. Off the Stage is the gray area around the outside of the white area. You can see the “off Stage” area only when the View menu shows a check mark next to Work Area. (Selecting this option toggles between checked and unchecked.) The default setting (Work Area checked) is preferable because it means that you can

position graphics off the Stage. Realize, however, that any changes you make to the View menu affect only what you see. Changes here have no effect on what the user sees.

There's not too much to learn about the Stage—it's simply your visual workspace. However, two important concepts are worth covering now: Stage size and zoom level. By default, the Stage is a rectangle with the dimensions of 550 pixels wide by 400 pixels tall. Later this hour, you'll see how to change the width and height of your movie (in the "Movie Properties" section). However, the specific dimensions in pixels are less important than the resulting shape of the Stage (called the *aspect ratio*). The pixel numbers are unimportant because when you deliver your Flash movie to the Web, you can specify that Flash *scale* to any pixel dimension.

FIGURE 1.3

The Stage is the large white box in the center. All the visual components of your animation are placed on the Stage.



NEW TERM

Aspect ratio is the ratio of height to width. Any square or rectangular viewing area has an aspect ratio. For example, television has a 3:4 aspect ratio—that is, no matter how big your TV screen is, it's always three units tall and four units wide. 35mm film has an aspect ratio of 2:3 (such as a 4×6-inch print), and High Definition Television uses an 11:17 ratio. In the case of computers, most screen resolutions have an aspect ratio of 3:4 (480×640, 600×800, and 768×1024). You can use any ratio you want

in a Web page; just remember the portion of the screen you don't use will be left blank. A "wide-screen" ratio (as wide as 1:3, like film) will have a much different aesthetic effect than something with a square ratio (1:1).

NEW TERM

To *scale* means to resize as necessary. A Flash movie retains its aspect ratio when it scales, instead of getting distorted. For example, you could specify that the Flash movie in your Web page scale to 100% of the user's browser window size. You could also take a movie with the dimensions 100×100 and scale it to 400×400.

Not only can you deliver your Flash movie in any size (Flash scales well), but while working in Flash, you can zoom in on certain portions of the Stage for a closer look without having any effect on the actual Stage size. Try the following task, where I introduce a couple tools important to the Stage.

Task: Change Your View on the Stage

In this task, you'll explore view settings. Follow these steps:

1. Open Flash. You'll be faced with a blank, unsaved document called Untitled 1.
2. Instead of working from scratch, open an existing file. Select File, Open and find the file called *stiletto fla*. It should be located adjacent to your installed version of Flash inside a folder called *FlashIntro*, which is inside the *Tutorials* folder. In Windows, this is most likely under this path `C:\Program Files\Macromedia\FIash MX\Tutorials\FIashIntro\`.
3. Notice the zoom control at the top right of the Stage (see Figure 1.4). This control provides one way to change your current view setting. Other ways include using the View, Magnification menu and the Zoom tool (the magnifier button in the Tools panel), which you'll see in more detail next hour.
4. Change the zoom control to 400%. Notice how everything is bigger. You haven't really changed anything, except your view of the screen.
5. Likely you can't see the whole Stage (unless you have a huge monitor). However, you can view the other parts of the Stage in one of two ways: by using the standard window scrollbars on the right and bottom or by using the Hand tool. The Hand tool is best accessed by simply holding down your spacebar. Go ahead and hold down the spacebar; then click and drag. You're *panning* to other parts of the stage without actually moving anything. It's important to understand that the Hand tool only changes your view port onto the whole Stage. The best thing about using the spacebar to select the Hand tool is that it's "spring loaded"—that is, the Hand tool is only active while you hold down the spacebar. Next hour, you'll learn about other spring-loaded tools.

FIGURE 1.4

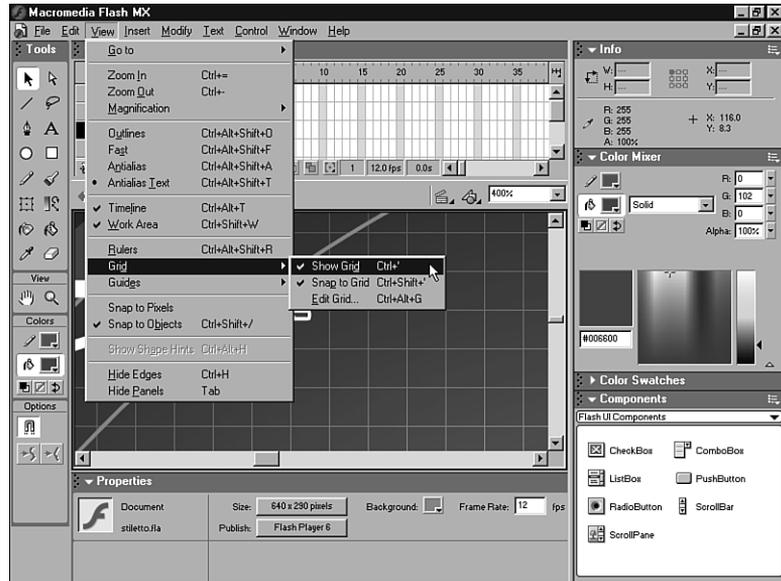
The zoom control allows you to zoom in on or zoom out of the Stage. This has no effect on what your audience sees.



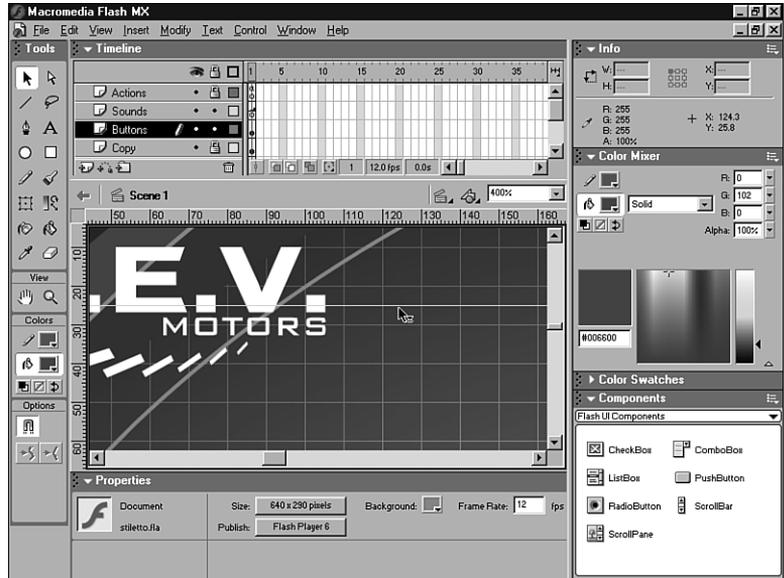
6. Now change the View control to Show All. No matter what your screen size, Flash scales the Stage to fit your window.
7. Several interesting tools are available from the View menu, including grids and guides. Select View, Grid, Show Grid. Behind all the graphics onstage, you'll see a grid (which the user won't see), as shown in Figure 1.5. You'll see next hour how the grid can help you line up graphics perfectly. Notice that from View, Grid you can select Edit Grid, where you can edit the color and spacing of the grid. Turn off the grid now by selecting View, Grid, Show Grid (so that there's no check mark next to this menu item).
8. Guides are just like the grid, except that you drag them into place where you want. First, select View Rulers (so that there's a check mark next to this item). Now you can click either ruler and drag toward the stage to create and put into place a single guide, as shown in Figure 1.6. You make vertical guides by dragging from the left-side ruler and horizontal guides by dragging from the top ruler. To remove the guides, drag them back to the ruler. As with the grid, you'll find the option to edit the guide settings from View, Guides, Edit Guides... in addition to a way to lock the guides in place.

FIGURE 1.5

Turning on the grid allows you to align objects.

**FIGURE 1.6**

Guides are similar to the grid, but you can position the vertical and horizontal lines wherever you want.



9. Close this file without saving.

Tools Panel

The Tools panel is the panel with which you will likely become most familiar. Any time you create or edit anything on Stage, you'll need one tool selected from the Tools panel. Like many toolbars, the Tools panel is dockable. The default location is locked to the left side of the Flash interface (or, on Macintosh, floating on the left).

Although the Tools panel is used primarily to draw onto the Stage it's also used to edit what you've already drawn. You'll see it's actually broken into several sections: Tools, View, Color, and Options, as shown in Figure 1.7.

FIGURE 1.7

The Tools panel has tools for drawing, editing, and viewing, plus options that vary depending on the currently selected tool.



The Tools section enables you to create graphics and text (via the Line tool and the Text tool), to edit graphics (via the Eraser tool and the Paint Bucket tool), and to simply select graphics (via the Arrow tool, the Subselect tool, and the Lasso tool). You'll see all these tools next hour. The View section lets you change your view of the Stage (like you did in the preceding task). The Colors section gives you control over the color of objects drawn. Finally, the Options section is dedicated to additional modifiers for certain tools. Depending on the selected tool, you might not see anything in this section.

You'll look at these tools in detail in the next few hours (Hour 2 and Hour 4, "Applied Advanced Drawing Techniques," in particular). For now, go ahead and play with these tools. Make sure that you understand how to dock the toolbars and what each tool's purpose is.

The Timeline

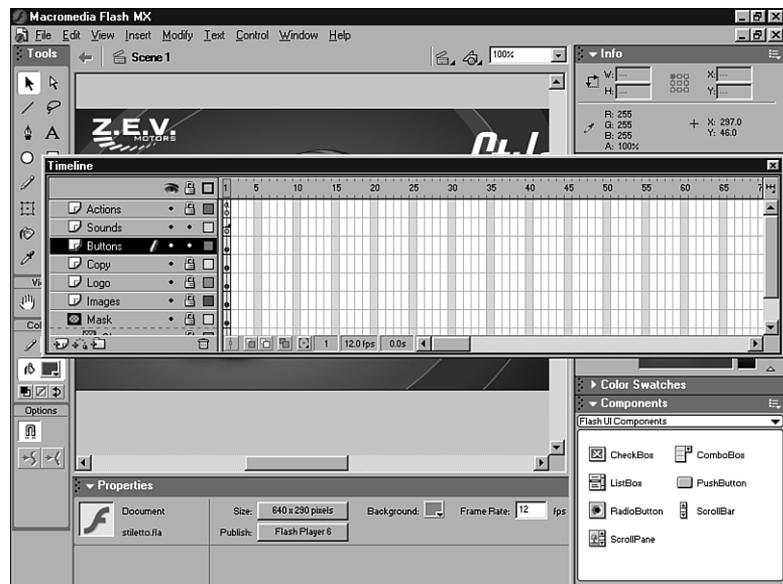
You'll look at the Timeline in depth when you start animating in Hour 7, "Animation the Old-Fashioned Way." Nevertheless, you'll take a brief tour of the Timeline now. The

Timeline contains the sequence of individual images that make up an animation. When the user watches your animation, he sees the images on frame 1 followed by frame 2, and so on. It's as if you took the actual film from a conventional movie and laid it horizontally across the screen, with the beginning on the left, and the end toward the right.

Like many other windows, the Timeline can be undocked so that it floats above everything else, as shown in Figure 1.8. Docking is just one more way to organize your workspace. If you want, you can dock the Timeline under the Stage—or wherever you want. People with two monitors have even greater flexibility in the way they organize their workspace. Personally, I like the default arrangement with the Timeline above the Stage and the Tools panel to the left. I use this arrangement for most of the figures throughout this book. If you close the Timeline to make more space (only possible when it's floating), you can always get it back by selecting Window, Timeline. (See the section “Organizing Panels into Sets” later this hour for more details.)

FIGURE 1.8

The Timeline (and other panels) can be picked up and moved like any floating window. They can also be “docked” back in their original locations. This simply lets you customize your workspace.



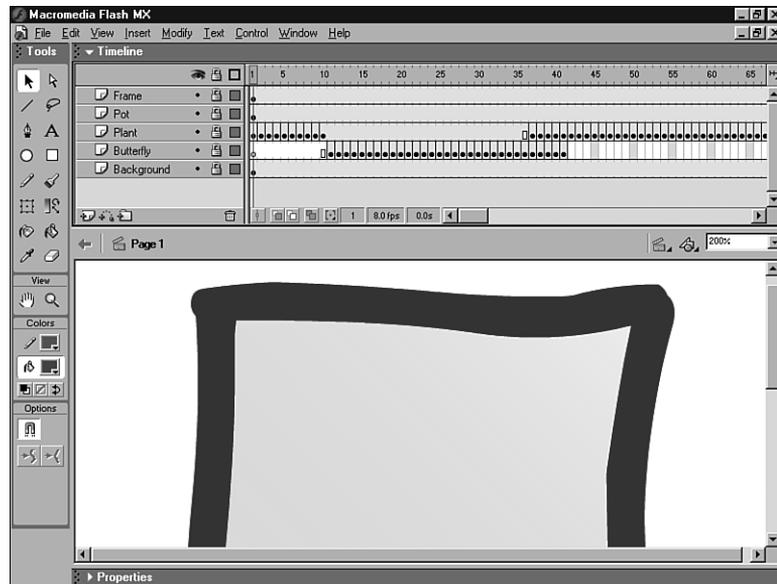
When you start to create animations, the Timeline includes many visual clues to help you. For example, you can quickly see the length of an animation simply by looking at the Timeline. Also, Flash uses a few subtle icons and color codes in the Timeline; this way, you'll be able to see how the animation will play.

In addition to frames, the Timeline lets you have as many layers as you want in your animations. As is the case with other drawing programs, objects drawn in one layer appear above or below objects in other layers. Each layer contains a separate animation. (You may have noticed in the Stiletto example file, earlier this hour, that there were several

layers.) This way, multiple animations can occur at the same time. Using layer names and special effects (such as masking), you can create complex animations. Figure 1.9 shows the Timeline and layers of a finished movie. You'll learn more about layers in Hour 11, "Using Layers in Your Animation."

FIGURE 1.9

Most animations involve many layers. Each layer is independent of the others.



Properties Panel

Certainly, you'll be faced with more windows in Flash than just the Stage, Tools panel, and Timeline (although, these are the basic ones). In this section, you'll look at the multi-purpose Properties panel (also sometimes called the *Properties Inspector* or PI for short).

All panels let you view and change properties of objects. Although you can find nearly two dozen listed in the Windows menu, you will use one panel almost all the time—the Properties panel. The Properties panel displays properties of the currently selected object so that you can make adjustments. For example, when you select a block of text, the Properties panel lets you view and change the font face and size. When you select a filled shape, you can adjust the fill color of that shape. The Properties panel is new to Flash MX where in the past there was a separate panel for each object type. The multi-purpose Properties panel makes things much more easy and intuitive. Although you'll only look at a few variations of the Properties panel this hour, you'll eventually become familiar with all the different panels. (You can see them all listed under the Window menu.) Because there are so many panels, later this hour you'll learn ways to organize them to suit your personal workflow.

As you'll see, using panels is simple. Panels operate in a specific fashion. Although you can have a panel open while nothing is selected, making a change to the panel may not seem to do anything. To view or change properties of a particular object, you must first select it. For example, to change the font size of some text, you just select the text and then make a change in the Properties panel. The key is to keep the text selected while you open the Properties panel. You can also change properties of several objects at once if you first select them and then open the appropriate panel. You'll see this in the following tasks.

Finally, if nothing's selected, you can still make changes to the Properties panel. Although this seems to have no effect, you're actually specifying what will happen the next time you create an object. For example, if you simply select the Text tool and (before clicking to type) you make a change to the font in the Properties panel, you'll see that font change in text you create later.

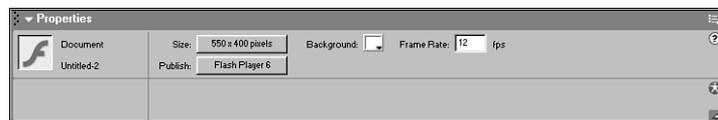
Task: Use the Properties Panel to Inspect and Change Fill Colors

In this task, you'll use the Properties panel to inspect and change the fill colors. Here are the steps to follow:

1. Create a new file (File, New). Make sure that the Properties panel is open. Its default location is below the Stage. If you don't see it, just select Window, Properties. Finally, expand the Properties panel to its full size by clicking the tiny arrow at the bottom-right corner of the panel (as seen in Figure 1.10).

FIGURE 1.10

Click the Expand/Collapse arrow so that the Properties panel opens all the way (as shown).



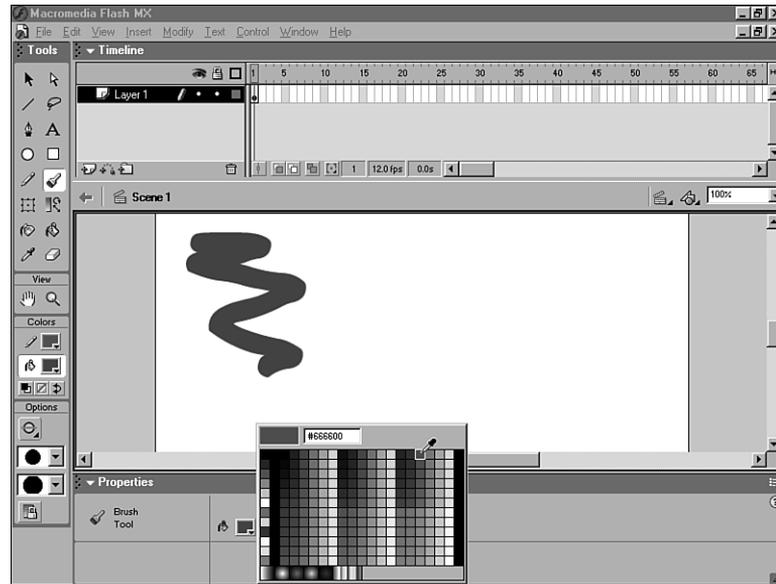
Expand/Collapse arrow

2. Take a look at the Properties panel and notice the type of information listed (Size, Background, and so on). The point is, the Properties panel is about to change.
3. Select the Brush tool by clicking once in the Tools panel (if the Tools panel is not available, you'll need to first select it from the Window menu). Notice that by simply selecting the Brush tool, the Properties panel has changed. Go ahead and paint a squiggly line on the Stage.

4. Before you draw again, select a different color from the Fill Color swatch in the Properties panel. Click the swatch and select a different color (as in Figure 1.11). This specifies what color you're about to paint.

FIGURE 1.11

Before you paint again, you can select a new color.



5. Paint another squiggly line (in the new color) on a blank area of the stage. Now, select the Arrow Tool (by clicking the black arrow at the top left of the Tools panel—or, simply type a “v”).
6. Click once on the first squiggly line to select it. Notice that the Properties panel changes again. Additional information about the shape's coordinates and size appear. While the shape is still selected, change the fill color by clicking on the Fill Color swatch in the Properties panel and picking a new color. (By the way, the swatch with a red line through it—Stroke Color—is for shapes drawn with the Pencil tool.)

NEW TERM

The *coordinate system* in all multimedia tools (including Flash) refers to locations by pixels in the X (horizontal) axis and the Y (vertical) axis. The top-left corner of the screen (or Stage) is considered 0x,0y. As you move to the right, the X coordinate increases—for example, 100 pixels to the right has the location 100x, 0y. As you move down, the Y coordinate increases—the bottom-left corner of an 800×600 screen has the location 0x, 600y. Just remember that Y coordinates increase as you move down (not up, like you might expect). Here's an interesting challenge: What happens if you set the location of an object to -1000x? It's moved offscreen 1,000 pixels to the left.

7. Finally, make both squiggly shapes the same color. Make sure that you still have one shape selected and then click and release on the Fill Color swatch. Then (while the cursor looks like an eye-dropper) click on the other squiggly shape to sample its color. This is just a quick example of how the cursor changes to tell you what will happen when you click.

The Properties panel always adapts to either show you properties of whatever you've selected on the Stage or properties for the tool you've just selected. Let's explore some text options to solidify this concept.

Exploring Text Options

Flash MX has added some really powerful text options. While in a new file or the one you used in the previous task, select the Text tool, click the Stage, and then type a few words. Click the Arrow tool when you're finished typing. From the Properties panel, you can select a different font, change the font size, change the color, and control the text in many common ways. By the way, the Format button (on the Properties panel) includes additional options related to margins. You'll explore these options in depth next hour.

Organizing Panels into Sets

At this point, you've probably explored enough to find that your panels are scattered all over the screen. This brings up an interesting point: You're given a lot of freedom with how you organize your panels. You can dock and undock them any way you see fit. The idea is that you can organize these panels to match your work style. The best way to get an idea of what arrangements are possible, view a couple of the prebuilt panel sets available under Window, Panel Sets.



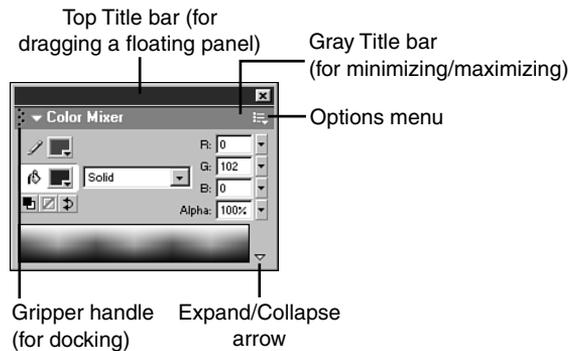
Depending on your screen size, you may find that the panels are preventing you from viewing the Stage. A simple press of the Tab key will temporarily hide all the panels (except Tools and Timeline). Press Tab again to restore them.

You can always restore the “factory set” of panels by selecting Window, Panel Sets, Default Layout. In addition, you can save your own layouts. If you find an arrangement that works well for you, save it. Simply arrange the panels however you want and then select Window, Save Panel Set. You'll be prompted to name the set. The name you give the set appears in the Window, Panel Sets menu.

Arranging panels may become frustrating if you don't know the basics. Because they function unlike many computer standards, the following rundown will bring you up to speed as you follow along with Figure 1.12.

First, every panel has an “options menu” at the top right of the title bar. Additional options related to each particular panel can be found in this menu.

FIGURE 1.12
A panel and its parts.



For organizing panels, realize that any panel can be minimized or expanded by clicking the gray title bar—near the minimize/maximize arrow. When a panel is floating, you can really minimize it by double-clicking the top (drag) title bar. When docked with other panels, maximizing one causes the others to move out of the way. And minimizing one causes the others to fill in the extra space.

When a panel is floating (that is, not docked with others) minimizing causes it to appear as just the gray title bar with an extra title bar above for dragging.

To undock a panel, you must drag by the “gripper” handle (which is the vertical set of dots at the far left of the gray title). You must drag the panel by this handle to undock or redock it with other panels. As you drag, you’ll get a preview of which other panels it will snap to when you let go. You can even dock two floating panels together to make a group. The uppermost floating panel has an extra drag title bar (above the panel’s gray title). Dragging by *this* “drag title bar” moves a panel (or panel group) with no chance of it becoming docked to another. Additionally, this drag title bar includes a button to close the panel.

Finally, the Color Mixer panel (like the Properties panel) has an expand/collapse arrow at the bottom right to reveal additional details. Unless you’re really pressed for screen space, I like to keep these expanded (as you did with the Properties panel previously).

It might take some time to get used to how the panels behave, but it’s worth taking the time to play around. After you “get it,” you’ll be able to organize them as needed.

Library

The Library is the best storage facility for all media elements used in your Flash file. There are many reasons why you’ll learn to love the Library, which are discussed in

further detail in Hour 5, “Using the Library for Productivity.” Media placed in the Library can be used repeatedly within your file, and—regardless of how many times you use that media—it doesn’t significantly add to the file size! For example, if you put a drawing of a cloud in the Library, you can then drag 100 copies of the cloud onto the Stage (making a whole sky full of clouds), but deep inside the Flash file only one cloud exists. Using the Library is one way Flash movies are kept small.

In practice, the Library is used in two basic ways: for editing and for maintaining (or accessing) the Library’s contents. You may need to edit the contents of one Library item (called a *symbol*), so in this case you’ll be editing the contents of the Library. You may also need to access the Library to simply organize all the contents or to drag *instances* of the symbols into your movie. In such a case, you’ll be maintaining the Library (as opposed to editing its contents).

NEW TERM

A *symbol* is the name for anything you create and place in your file’s Library (usually something visual, such as a graphic shape). Although different types of symbols exist, the idea is that by creating a symbol, you’re storing the graphic once in the Library. After it is in the Library, the symbol can be used several times throughout your movie without having a significant impact on file size.

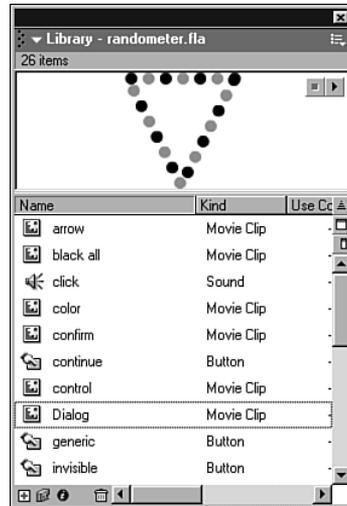
NEW TERM

An *instance* is one copy of a symbol used in the movie. Every time you drag a symbol from the Library, you’re creating another instance. It’s not a “copy” in the traditional sense of the word, because there’s only one master, and each instance has negligible impact on file size. Think of the original negative of a photograph as the symbol and each print as another instance. You’ll see that, like photographic prints, instances can vary widely (in their sizes, for example).

The Library behaves like any panel. It’s available from Window, Library (also by pressing Ctrl+L). Notice how you’ll see the names of every symbol in your Library, as shown in Figure 1.13. You can sort the list by name, date modified, kind, and so on—the same way that you can sort a list of files when managing them on your computer. When one line is selected (just single-click), you’ll see a preview of that particular symbol, and you can make changes via the Library’s Options menu. Options such as Rename, Properties and Move To Folder fall under the category of “maintaining” the Library. To use a symbol from the Library in your movie, simply drag it from the Library window onto the Stage. Finally—and don’t try it yet—you can edit the contents of any symbol in the Library by either selecting Edit from the Options menu or double-clicking the symbol in the Library window (if you double-click the title of the symbol, you’ll just edit the name). This is just intended as an introduction to the Library; it is covered in much more detail starting in Hour 5.

FIGURE 1.13

The typical Library contains many different symbols. The Library provides access to all the media plus management tools for sorting, deleting, and renaming the different symbols.



1

Getting Around

As mentioned, an important concept in Flash is to understand where you are at all times. If you think you're in the Library editing the contents of a symbol, for example, you better hope you are really there. It can be confusing because, although it's always possible to figure out where you are in Flash, the clues are often subtle. You'll now look at how you can determine where you are by reading the subtle clues in the interface.

Current Layer

Although there's just one main Timeline, earlier you saw how you can have several layers within the Timeline. Open a new file and add a layer so that you can explore it (Insert, Layer). One important concept is that you can only be "in" one layer at a time. That is, if you draw or paste graphics, they are added to the currently active layer. The current layer is the layer with the pencil icon, as shown in Figure 1.14. Just single-click another layer to make it the active layer (notice the pencil moves to the layer you click). The key here is to always pay attention to what layer you're currently editing. For example, if the current layer is locked, you won't be able to affect it at all.

Current Frame

In the Timeline, a red marker indicates which frame is currently being viewed (see Figure 1.15). This red current-frame marker can be in only one frame at a time—and

that's the frame you're currently editing. Right now, you'll find that you can't move the current-frame marker past frame 1 unless your file has more frames. You'll have plenty of opportunity to do this later; for now, just realize that the red marker indicates the current frame. If it helps, imagine a time machine. You can visit any moment in time, but only one moment at a time.

FIGURE 1.14

Not only is the current layer highlighted (in black), but also the current layer has the pencil icon, indicating that this is the layer where anything drawn or pasted will go.

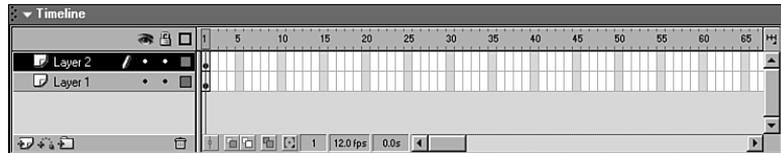
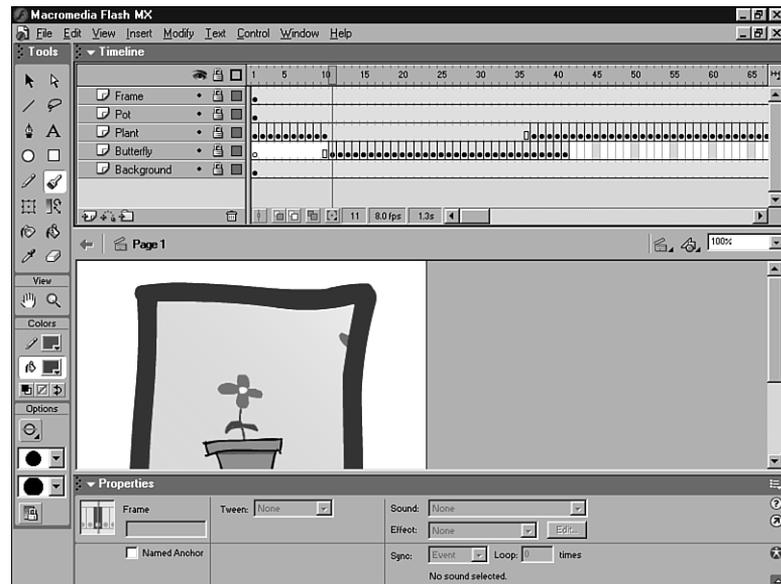


FIGURE 1.15

The red current-frame marker (on frame 11 here) can only be in one frame at a time. It's important to realize where this current-frame marker is located at all times.



Current Scene or Current Symbol

By far, the most difficult concept for new users is this: In Flash, there's more than one Timeline! A large or complicated movie can be broken into several scenes. You can think of scenes as chapters in a novel. Deep inside Flash there's always just one long Timeline

(just like a novel has one continuous story), but if you break your file into scenes, you can access them individually. This is a nice feature because you can easily change the order or sequence of the scenes. Without going into more detail, it should be apparent that at all times you should know in which scene you're currently working. The name of the current scene is always listed above the Stage. I'll refer to this as the *address bar*. The default name is Scene 1, and you should see this next to the icon for scenes—a movie “clapper” (see Figure 1.16).

FIGURE 1.16

Above the top-left corner of the Stage you'll usually see the name of the current scene. The “clapper” icon indicates that this is the name of a scene.



Scene name and clapper icon

The address bar often includes more information than shown in Figure 1.16. As you'll see in Hour 4, when you start drawing, you can group graphics inside other graphics. When you learn more about the Library in Hour 5, you'll see how you can nest symbols inside other symbols. When you double-click a grouped graphic or an instance of a symbol to edit it, everything else on the Stage dims (indicating that they're not editable). The best way to determine exactly which graphic you're currently editing is to look at the address bar. You might see “Scene 1: Group” (as shown in Figure 1.17). This means that you're in a group that, itself, is in Scene 1. Sound pretty hairy? Well, it's not really so terrible because the address bar is very clear—you just have to remember to look there.

FIGURE 1.17

Here, the address bar indicates that you're in a group that, itself, is inside Scene 1.



Address bar

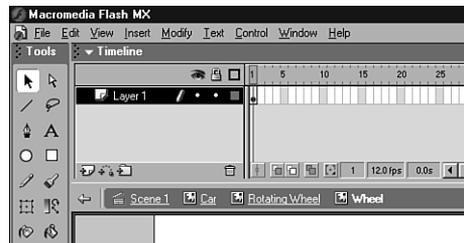
Navigating Through the Interface

You've seen how the interface gives you clues telling you where you are at all times. But how did you get where you are in the first place? And how do you get out? Navigating through your Flash file is easy (maybe that's why it's so easy to get lost). Let's look at a few ways to get around.

The address bar not only contains the hierarchy of your current location, it also provides a means of navigation. You can click the address bar. If, for example, you're inside a symbol within Scene 1, you should see "Scene 1: *SymbolName*." If you simply click "Scene 1," you'll be taken back to that scene (see Figure 1.18). Any time you see the address bar, you can navigate back through the hierarchy. Just realize that the address bar provides information and that it's clickable.

FIGURE 1.18

The address bar provides more than just information—you can click the arrow or any name listed to jump "back." Here, you can click "Scene 1" to jump all the way back to the top.

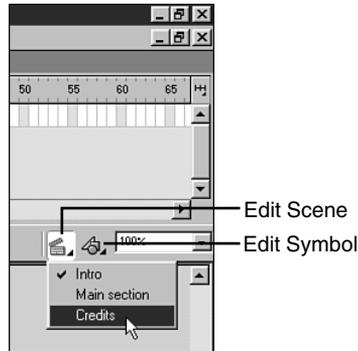


Finally, you'll notice two menus way off to the right of the address bar: Edit Scene and Edit Symbol (see Figure 1.19). From these two menus, you can jump to any scene or symbol in the current movie. Of course, if you have no symbols and just one scene, using these menus won't be very interesting. However, when your files get bigger, these menus provide a quick way for you to get around. If you want, open one of the tutorial files (inside the folder Tutorials, which is adjacent to your installed version of Flash).

There are plenty more ways to get around in Flash, and you'll see them all. For now, try to feel comfortable moving around and be sure to notice all the clues that Flash gives concerning exactly where you are.

FIGURE 1.19

The Edit Scene and Edit Symbol menus are always accessible at the top-right side of the Stage. They provide the most reliable way to navigate to other scenes and symbols.

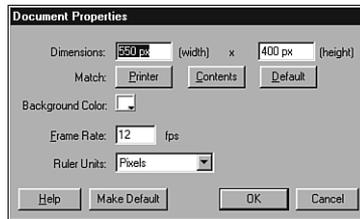


Document Properties

You'll need to specify a few far-reaching settings early in the creation of any movie. Most of these are found in the Document Properties dialog box, shown in Figure 1.20, which you access from the Modify, Document menu or by double-clicking the bottom of the Timeline (where you see "12.0 fps"). Access the Document Properties dialog box now so that you can experiment with a few of its settings. (Notice that most of the same settings appear in the Properties panel if you click the Stage—or otherwise deselect all objects.)

FIGURE 1.20

The Document Properties dialog box provides many global settings that should be determined at the beginning of every project.



First of all, make sure that Ruler Units is set to Pixels. This is the standard unit of measurement in multimedia and Web pages. It's important to set Ruler Units to Pixels because this affects several other dialog boxes (including the previously mentioned Info panel). Next to Background Color, you'll see a white swatch that, when clicked, allows you to change the Stage color. This isn't actually as useful as you might think because at the time you publish your movie to the Web, you can specify any background color you want—it will override this setting. So, feel free to change Background Color any time you want. Maybe gray will be easier on your eyes, or black will make selecting your white graphics easier. Do whatever you want—not only can you change this setting back later, but it also affects only the Stage color while you're editing.

Two other Document Properties settings are important to establish early in any project: Frame rate and Dimensions. Frame rate specifies the rate at which Flash *attempts* to play—that is, how many frames per second. I say “attempts” because some of your users might not have a computer fast enough to keep up, so Flash just can’t display as many frames in a second. Flash will not exceed the frame rate you specify, but it could get bogged down and not keep up. Dimensions are only important to the degree that they affect the aspect ratio of your Stage, as discussed earlier. Decide up front on the shape for your Stage (sorry, it can’t be round). Do you want a wide-screen “CinemaScope” look, or do you want a square Stage. You might even want a vertical rectangle if, for instance, you were building a button bar to appear on the left side of your Web page. You need to consider this early on because the Stage shape influences how you position graphics, and changing it later makes for a lot of repositioning.

People often confuse frame rate with “speed,” which is more of a visual effect. Animators can use tricks to make something appear to speed across the screen even while using a very low frame rate. For example, if you see a picture of a car on the left side of the screen and then a fraction of a second later it’s on the right side of the screen, that may tell your brain that the car is moving fast. However, such a trick requires only two frames—and at a frame rate of 4 fps, the second frame appears only a quarter second after the first! Frame rate controls the visual resolution. That is, how many chunks is each second broken into? Four frames a second may look “chunky”—each change occurs only four times a second. However, 30 fps (equivalent to the frame rate of TV) is such a fine increment that you’re not likely to see the steps between discrete frames (although, of course, that’s what’s really happening). By the way, you can still move a car across the screen in a quarter of a second using 60 fps—it would just involve 15 frames. You’ll explore this topic in great detail in Hour 7 and Hour 21, “Advanced Animation Techniques.”

File Types

Clearly, the most common use for Flash is to create interactive animations for the Web. Sifting through all the different file types involved can be a little confusing. At a minimum, you’ll need to understand three types: source .fla files, exported .swf files, and HTML files (.htm or .html).

Source .fla Files

One of the two main file types in Flash is the source Flash movie that you save while working. It uses the file extension .fla. You can open and edit any .fla file provided that

you own Flash. This is your “source” file. With the source .fla file, you can always restore the other file types—but nothing can restore an .fla file (except, maybe, doing all the work over again).

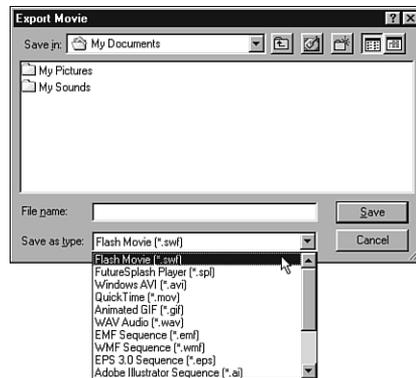
When sharing files with other workers who need to edit the source file, you share the .fla file. Anyone with Flash MX (Mac or Windows) can open and edit the .fla file you create. However, you can't put .fla files into your Web page for people to view—they're just files containing your source content.

Exported .swf Files

When you're finished editing your source file and ready to distribute your creation, you simply export an .swf “Flash Player” file. An .swf file can be viewed by anyone with an Internet browser and the Flash Player plug-in. The audience can't edit the .swf—they can only “watch” it.

The process for creating a new .swf file is simple. You open an .fla file, select the File, Export Movie menu, and specify the name and file location for the .swf file. Although more details are involved, the important point to understand is that exporting involves creating a new file (the .swf file), but the .fla file remains untouched. It's similar to Save As or Save a Copy As, found in some other software programs (see Figure 1.21). Whatever you do, always keep a copy of your .fla file. You can always create more .swf files from it—or make edits and then create more .swf files.

FIGURE 1.21
The Export Movie dialog box allows you to specify what type of file to export (most likely a .swf Flash Player file).



One last thing you need to understand now, which applies if you work in a team environment or otherwise plan to exchange .fla files among different machines: Any .fla file you work on will open fine on anyone's machine with

Flash installed (on a Macintosh, you may need to open Flash and then select File, Open, and on a Windows PC, you may need to make sure that the file is named with an .fla extension).

However, there's one minor catch: The font choice for any text in the .fla file must be present on the machine attempting to create an .swf file. It's not that you can't share a file if one person's machine is missing a particular font—rather, that person cannot edit the text and can't create an .swf file. You can actually select a substitute font. Any time you open an .fla file that contains fonts that you don't have installed, you'll be given the chance to *map fonts*. That is, select what alternative font is used. This situation is easy to avoid by properly installing fonts on everyone's machine or by simply creating the .swf file on the appropriate machine.

HTML Files That Host the .swf File

If you have any experience creating HTML, the basic process of putting your .swf files in a Web page should be simple. If you have no HTML experience, it won't hurt to learn a little HTML, but you really don't have to. For a quick review, when you “visit” a Web page, you're not really “going” anywhere. Rather, your browser software downloads a text file (usually with an .htm or .html file extension) to a temporary location on your hard drive. This HTML file contains not only the words you see on the Web page but additional instructions as well, including the font style and size.

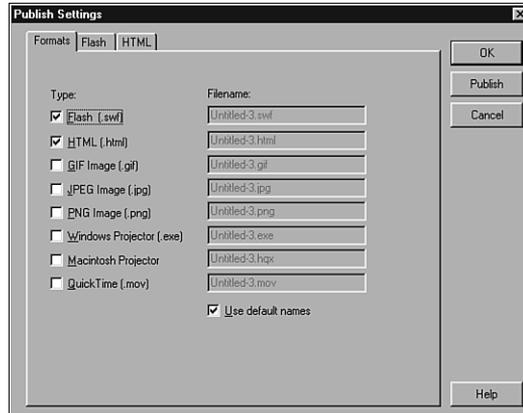
In addition, the HTML file contains details about any of the pictures that are supposed to be seen on the Web page—details such as the image file's name and where it should download to your hard disk temporarily so that you, in turn, can see it. Putting a Flash Player file (.swf) in a Web page is almost as easy as putting a picture in a Web page. A few other details (in addition to the filename of the .swf) can be included, such as the background color, whether you want the movie to loop, and other interesting settings unique to Flash.

To make this process even easier, Flash includes a feature called Publish (discussed in Hour 18, “Linking Your Movie to the Web,” and Hour 24, “Publishing Your Creation”), which walks you through the steps of creating both the .swf file and the .html file. Every detail available can be specified from the Publish Settings dialog box (see Figure 1.22).

FIGURE 1.22

From the Publish Settings dialog box, you can decide all the file formats you intend to distribute.

Additionally, parameters for each can be specified through the tabs that appear (only the tabs for the file types you specify will appear).



Summary

You sure covered a lot of ground this hour without actually creating any finished work. Don't worry, you'll get your hands dirty next hour. Besides, the information covered this hour should be useful throughout your Flash career.

You were introduced to Flash's main workspace, including the Stage, the Timeline, and the Tools panel. You learned how to change the Stage size (through Document Properties) and how to zoom in (with the zoom control). You got to see the Tools panel (which you'll use next hour to create artwork) and how the Properties panel lets you modify graphics onscreen. Although you didn't do much with the Timeline, you learned to pay close attention to clues, such as the red current-frame marker and the pencil icon, which indicate the active layer.

Other interface clues and navigation tools were introduced to help you track your current location at all times. The address bar at the top left always tells you where you are. Also, the two (rather cryptic) menus at the top right let you navigate to other scenes and symbols (provided that you have some).

Finally, you learned about the file formats you'll likely create. It's important to take the time to understand all the files you create. You'll probably create many files, so it's also a good idea to keep your files and folders organized so that you can track what's going on. The old saying is true: Haste makes waste. This is especially true when you have a million files to track. So, just take it easy, pay attention to how the Flash interface changes, and have fun.

Q&A

Q When I hold down the spacebar (to get the Hand tool) and try moving my view over to the left or up, I can't go past the left of the Stage or the top of the Stage. Why is that?

A Most likely the View, Work Area menu isn't selected (that is, it doesn't have a check mark next to it). Only when this is set can you (the author) see outside the Stage. (I recommend leaving this setting in the default "selected" state.)

Q While investigating some of the finished files in the Samples folder adjacent to Flash MX, I found the scene name (clapper icon) to be a useful way to get back to the main Timeline. For some reason, I've done something to make that scene name disappear from the address bar. How do I get back to the main timeline?

A Usually, the address bar contains the "path" to where you're currently working, no matter how deep you go. However, if you edit one symbol and then edit another, you'll find that Scene 1 might not stay in the address bar. In this case, you'll see just the symbol name in the address bar. (This is still useful because it tells you where you are; however, it doesn't provide an easy navigation tool to get back to Scene 1—normally, you can just click the address bar.) For these situations, simply use the Edit Scene menu button at the top right of the interface.

Workshop

The quiz and exercise questions are designed to test your knowledge of the material covered in this hour.

Quiz

1. How do you open and edit an .swf file?
 - A. You can't, and unless you have a backup of the .fla file, you're out of luck.
 - B. Simply use the File, Open menu.
 - C. You can import it from the File, Import menu.
2. How can you make your animation appear to play really fast?
 - A. Crank up the frame rate in the Movie Properties dialog box to 120.
 - B. Trick the user by employing age-old animation techniques.
 - C. Run the movie on the fastest computer you can find.

3. What is the standard unit of measurement for Web pages and multimedia?
 - A. Inches
 - B. Centimeters
 - C. Pixels

Quiz Answers

1. A. Generally, you can't do anything but watch an .swf file. Truth be told, you can actually import an .swf file (as in Answer C). However, this won't work if (when exporting the .swf file in the first place) you specified Protect from Import in the Publish Settings, Flash tab. Also, when you do import an .swf file, just the sequence of frames is imported (no interactivity), so it's rarely very useful.
2. B. Although increasing the frame rate to 120 fps (frames per second) will make Flash try to play quickly, the chances of it actually playing that fast are unlikely (depending on your computer). So, although Answer A is not entirely wrong, using age-old animation tricks (which are covered in Hour 7 and Hour 21) is the best way. Something doesn't actually have to move fast to appear to move fast.
3. C. This isn't an opinion. The standard is pixels.

