

macromedia®

**MINI-LESSON  
MOVIE**

An Integrated Multimedia Project Using Macromedia Flash 5

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First Edition: March 2001

Macromedia, Inc., 600 Townsend St., San Francisco, CA 94103

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# INTRODUCTION

Technology in education has experienced a recent explosion in new interest thanks to innovations in networking and especially multimedia. The ability to manipulate sound and images in order to express ideas has become much more sophisticated, and at the same time, easier to use. Animation, at the vanguard of multimedia development, is a great way to bring excitement and creativity to your lessons and collaborative projects in the classroom.

When a student constructs a multimedia mini-lesson movie, the following skills are developed in addition to learning the computer skills required to create the animation.

- Synthesis of the academic content
- Creative demonstration of learning progress
- Collaboration with peers

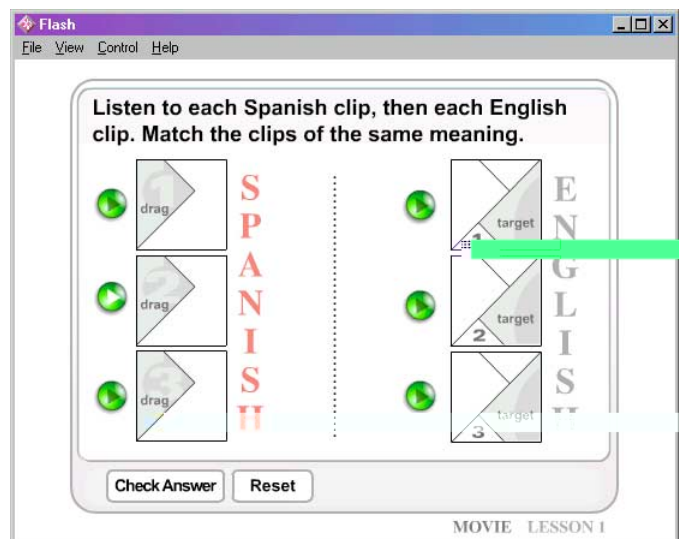
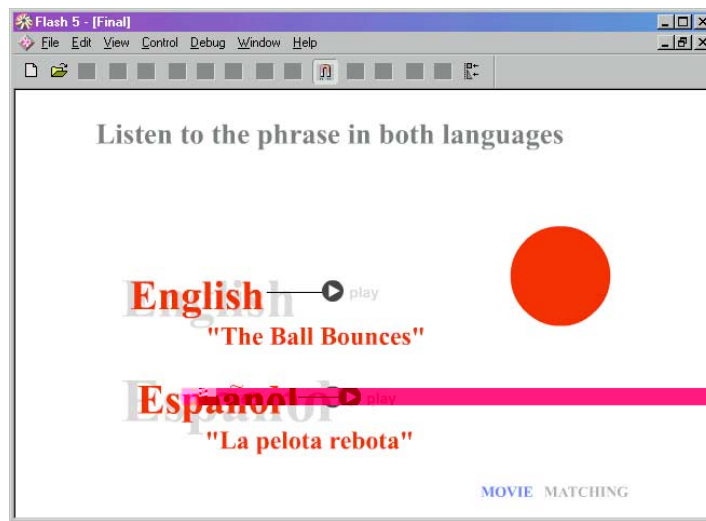
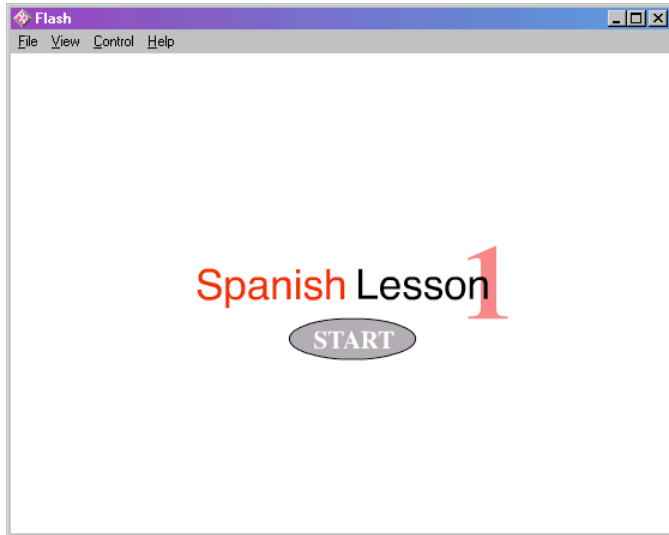
The purpose of this project is to use Macromedia flash to create a multimedia mini-lesson movie of a Spanish language lesson. All of the activities can be easily adapted to other content areas.

## DESCRIPTION

In this project, students create an animation that reflects a portion of a language lesson. They will use Macromedia Flash to create a short Web-ready movie that contains various communication elements: text, images, animation, buttons, sounds, and interactivity. Students will create a complete movie that acts as one mini-lesson. The movie will contain three main elements:

- Introduction sequence
- Sound clip sequence
- Matching exercise sequence

The following images show a static version of the completed movie.



Ideas on how to integrate this project into other grade 7 through 12 classes, project management, role assignments, resources, and educational technology standards can be found in Appendix A. Appendix B provides guidelines for assessing your own and your students' work, with a focus on media and design.

## **PREREQUISITES**

Few prerequisites are needed to begin creating a mini-lesson movie. You and your students should already be familiar with the following concepts:

- Opening and closing software applications
- Procedures for saving files to the hard drive
- File naming conventions
- Vocabulary common to computer file management

If you want to learn the basics of multimedia, refer to the Project-Based Multimedia companion CD and install Training Cafe on your computer. The Multimedia and the Web, and the Browser Plug-ins modules will introduce you to some of the concepts and terminology used when discussing multimedia.

## **SYSTEM REQUIREMENTS**

### **Software Requirements**

- Macromedia Flash 5

### **Hardware – Authoring Requirements**

#### **Windows**

- Windows 95/98 or NT version 4.0 or later
- Pentium processor or equivalent, 133+ MHz
- 32 MB of available RAM
- 40 MB of available hard-disk space to install Flash 5
- 256-color display, capable of 800 x 600 resolution (1024 x 768, millions of colors recommended)
- CD-ROM drive
- Internet connection

#### **Macintosh**

- Power Macintosh (G3 or higher recommended)
- MAC OS 8.5 or later
- 32 MB of available RAM
- 40 MB of available hard-disk space to install Flash 5
- 256-color display, capable of 800 x 600 resolution (1024 x 768, millions of colors recommended)
- CD-ROM drive
- Internet connection

## **Hardware – Playback Requirements**

Macromedia Flash Player is preinstalled in most Web browsers and on most computers. It is included in Windows 98 (including all new Windows 98 computers), Netscape Navigator, Apple Macintosh operating systems, America Online, and WebTV, among others. If you need Macromedia Flash Player 5, you can download it from [www.macromedia.com/downloads](http://www.macromedia.com/downloads).

### **Windows**

- 133 MHz Intel Pentium processor, Windows 95, 98, NT4, 2000, or later
- Windows 95, 98, 2000, ME or NT
- Netscape plug-in works with Netscape 3 or later
- Macromedia Flash Player Java Edition requires a Java-enabled browser
- ActiveX control works with Microsoft Internet Explorer 3 or later (Windows 95 or later, Windows NT)

### **Macintosh**

- Power Macintosh with Mac OS 8.5 or later
- System 8.1 or later
- Netscape plug-in works with Netscape 3 or later, and Microsoft Internet Explorer 3.0 or later
- Macromedia Flash Player Java Edition requires a Java-enabled browser



# MINI-LESSON MOVIE PROJECT PLAN

A multimedia movie is a powerful way for students to demonstrate their understanding of a concept or idea, or to simply add sizzle to a presentation. With Macromedia Flash students can easily share their movies with their peers and family by publishing their work on the World Wide Web. There are two basic components to this project: the academic content within the movie and the Flash authoring procedures for putting that content online. You can define project requirements as your project dictates. The step-by-step activities focus on the Flash authoring components of the movie. The actual curriculum focus is left to you, the educator.

## MEDIA GUIDELINES

In this project, students create a movie that includes an image animation, a text animation, buttons, sound clips, and drag-and-drop learning interactions. Here are some general media and content guidelines to include in the project.

- A minimum of one image animation
- A minimum of one text animation
- A minimum of one button
- A minimum of one sound clip
- One learning interaction

## SCHEDULING

For a class meeting three times per week in 90-minute blocks, you will need approximately three weeks for students to learn how to use Flash to create a movie and to complete a project that incorporates the academic content.

### Week One:

- Introduce academic focus and define the purpose of the movie
- Students select the topic and develop a plan for the movie
- Students prepare sound clips
- Introduce the Macromedia Flash interface

### Week Two:

- Learn to use Flash to create animations
- Add buttons
- Add sound clips
- Add learning interactions
- Test the movie

### Week Three:

- Publish the movie for peer review
- Present project to class

## FLASH AUTHORIZING

The Flash authoring component of the project consists of eight activities:

- Getting acquainted with the Flash Interface and drawing tools
- Creating an animation plan
- Animating images and text
- Adding buttons
- Adding sound
- Combining scenes
- Using the drag & drop learning interaction
- Publishing the Flash movie

## PROJECT MULTIMEDIA ASSETS

To view and use the prepared images and sound clips provided with this project, you will need to copy the following files from the Project-Based Multimedia companion CD into a folder on your computer's hard drive. When you have copied these files, you are ready to begin.

- Graphics can be found in Mini-Lesson Movie Project\Graphics.
- Sound files can be found in Mini-Lesson Movie Project\Sounds.
- (Optional) A copy of the entire project curriculum in PDF format can be found in Mini-Lesson Movie Project\Curriculum.

## INTERACTIVE TRAINING

If you would like to familiarize yourself with Flash before starting this project, install the Macromedia Flash Interactive Training module, which you can find on the Project-Based Multimedia companion CD. The module contains easy-to-follow interactive instructions that build initial skills with Flash as well as a learning assessment, extended lesson plans, and a list of Web-based resources. The module takes 45 to 60 minutes to complete.

## TRIAL SOFTWARE

You can install a fully functioning 30-day trial version of Flash 5 from the companion CD to help you review the project materials. (**Note:** You can install the trial software on a computer only one time.) After you have installed and launched the 30-day trial copy, you have 30 calendar days to use the product.

# CREATING A MINI-LESSON MOVIE

In this project, you will learn the Flash authoring skills you need to

- Create a simple animation
- Create a text animation
- Create sound clips
- Create drag-and-drop learning interactions
- Publish your files

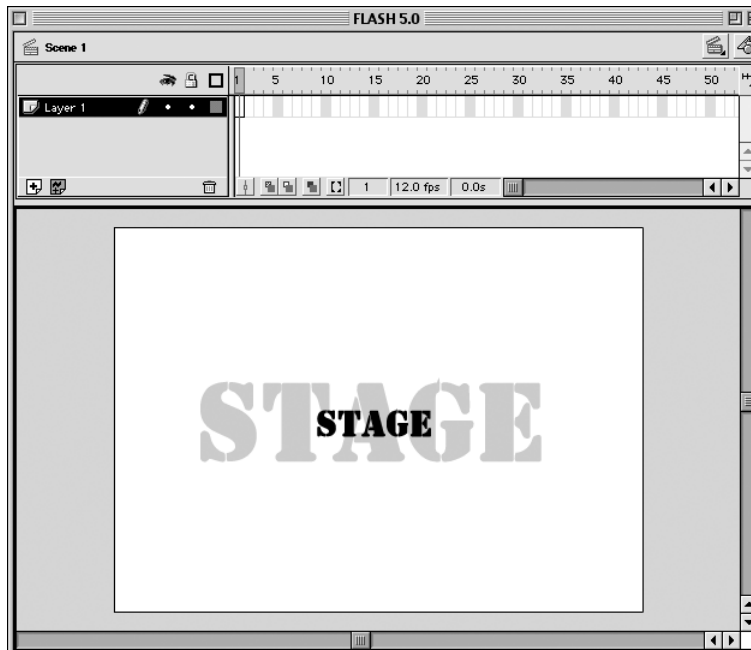
## GUIDED EXPLORATION OF THE FLASH INTERFACE

The following provides a short introduction to Flash. Many of the steps are left open-ended so that you can explore the Flash interface and tool set prior to starting the project. If you desire a more structured introduction to Flash, refer to the Interactive Training module on the companion CD. There are several other resources available that provide introductions to various aspects of Flash. Refer to Appendix A for a listing of other resources.

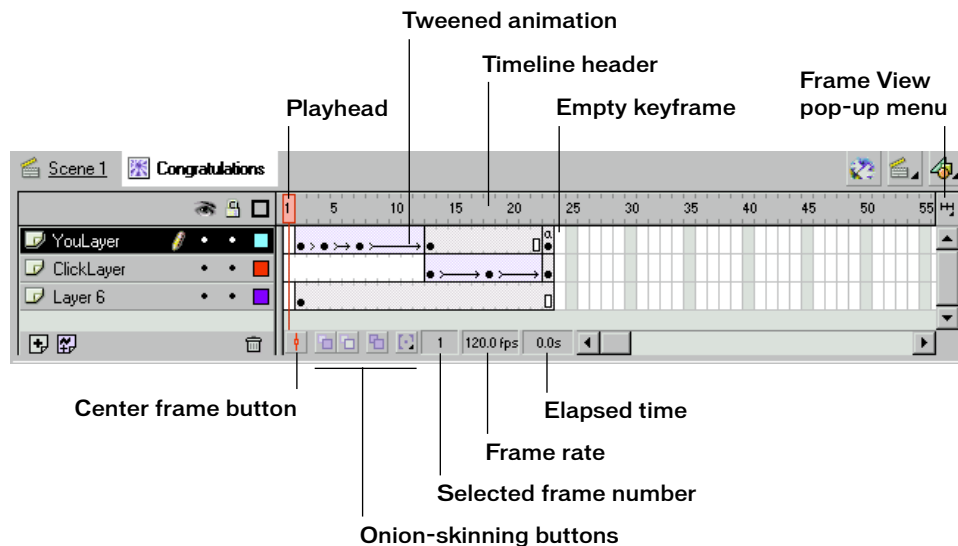
Guided exploration combines step-by-step instructions with open-ended suggestions so that you can compare the results of the different options. Comparing results allows you to see the range of possibilities and sparks creativity and a better understanding of the application. If you are already familiar with Flash, you can skip to Activity 1: Creating a Plan for Your Animation.

### To explore the Flash interface:

1. Open Flash. The main work area is called the Stage. Above the Stage is the Timeline.
2. Notice the title bar at the top of the window. This title bar displays the movie title. When you first open Flash, the new movie is called Movie 1 until you save the file with a new name.
3. Click through the top menu bar to get an idea of the menu selections and locations. Pay particular attention to the Edit, Insert, Modify, and Control menus. These menus contain many of the design element and manipulation functions.
4. Note the location of the following elements. Write down the main menu that each item is found under because you will be using these commands later in the project.
  - Character
  - Library
  - Frame
  - Panels
  - Samples
  - Instance

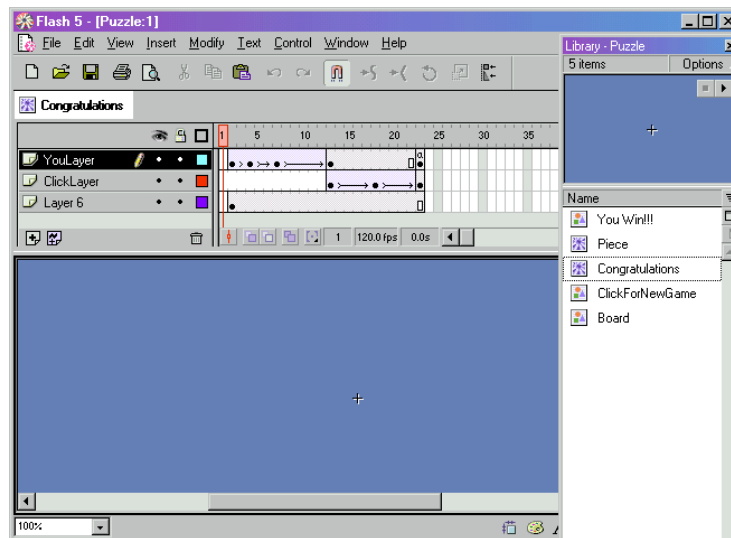


The **Timeline** is a key organizational and navigational tool for your animations. Here graphics are animated over time. You coordinate the timing of the animation and assemble the artwork in separate layers on the Timeline. The Timeline displays each frame in the movie.



Position the pointer over each icon in the Timeline to read the title. All of the tools on the left side of the Timeline coordinate Layers. **Layers** are like transparent sheets of acetate stacked on top of each other. When you create a new movie, it contains one layer. You can add more layers to help organize the artwork, animation, and other elements in your movie. To understand how Frames and Layers interact on the Stage and how you can control them with the Timeline, do the following:

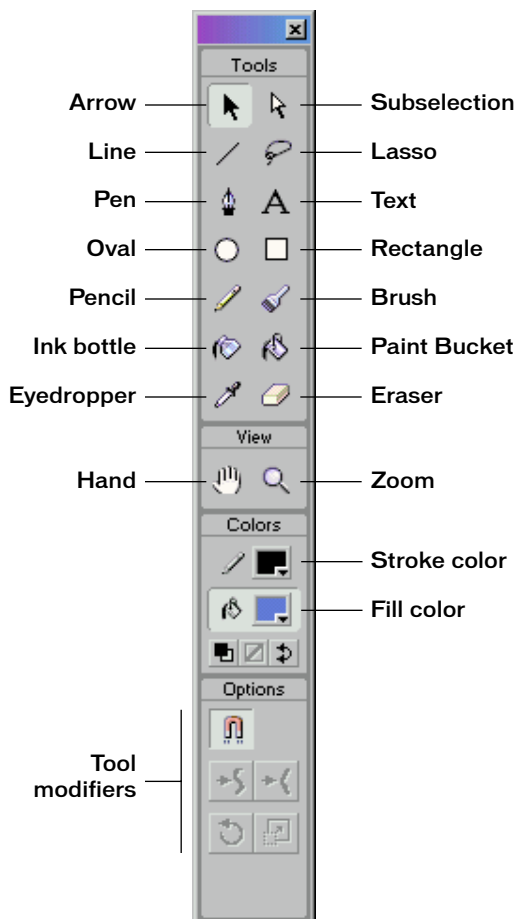
1. Select **Help > Samples > Puzzle**. This opens the Library panel.
2. Double-click the **Congratulations** movie file.



3. Notice that three layers are listed: YouLayer, ClickLayer, and Layer 6.
4. Select **Control > Play**. This will play the short Congratulations movie.
5. Click the **Eye** column next to the YouLayer and ClickLayer. A red X should appear in that space indicating that the layer is hidden.
6. Select **Control > Play** (the keyboard shortcut is **Enter** or **Return**). The only visible object is a dark rectangle in the middle of the screen.
7. Click the **Eye** column next to the layer to view the layer again.
8. Explore the Timeline.
  - Use the Control menu to advance one frame at a time.
  - Click the pointer in a new frame. Why does the pointer turn into the Hand?
  - Notice where the Pencil icon appears when you click different frames.
  - Note what appears on each layer.
9. Close the Congratulations movie. Do not save any changes.

The Stage is the area that contains all the elements that make up a Flash movie. It is what you see when the movie plays in the browser window. You compose individual frames in a movie on the Stage.

The **Toolbox** contains Flash drawing tools and other tools you'll need to create and manipulate graphics in order to make animations. The Tools section contains drawing, painting, and selection tools. The View section contains tools for zooming and panning the application window. The Colors section contains modifiers for the selected tool, which affect the tool's painting or editing operations.



### To use the Rectangle tool:

1. Click the **Rectangle** tool.
2. The pointer turns into a cross. Drag the pointer to draw. Draw a rectangle in the middle of the Stage.
3. Use the Colors controls to select new **Stroke and Fill** colors. Draw three more rectangles of various colors and sizes.
4. To delete any undesired object, element, or effect, select **Edit > Undo**.

**Note:** You must select the Stroke and Fill color before you draw; otherwise, you must select the object with the Arrow tool and select Stroke and Fill color.

## To use the Oval tool:

Flash provides tools for drawing ovals as well as rectangles. Either tool can draw a shape as an outline or as a solid.

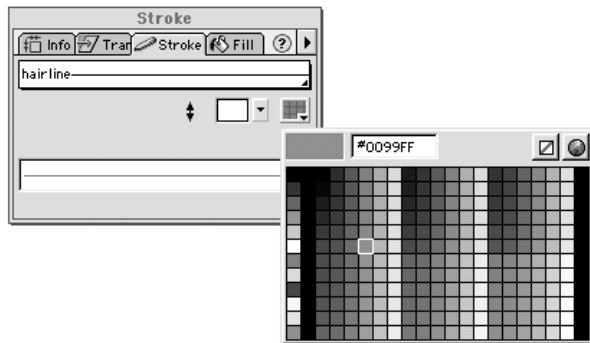
1. In the Toolbox select the **Oval** tool.
2. To activate the Fill-Color box select the **Paint Bucket** icon in the Colors section of the Toolbox.
3. Move the pointer over the Stage. It turns into a plus sign.
4. Drag to create an oval or rectangle with the size and proportions you want.

## USING PANELS

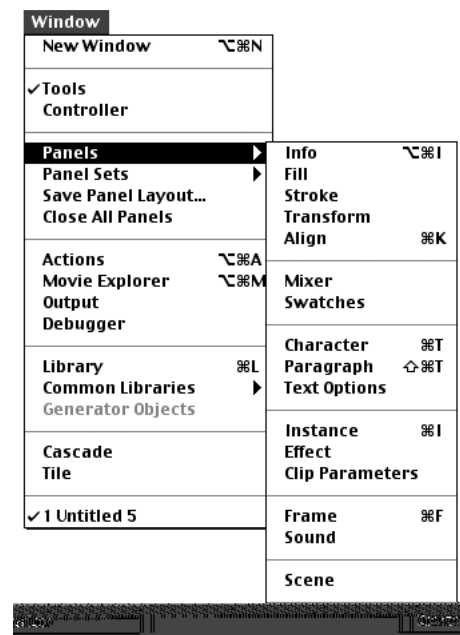
Floating panels help you view, organize, and change elements in a movie. The options available on panels control the characteristics of selected elements. Panels let you work with objects, colors, text, instances, frames, scenes, and entire movies.

### To set stroke attributes using panels:

A line has three Stroke Attributes: color, thickness, and style. To set stroke attributes in the Stroke panel:



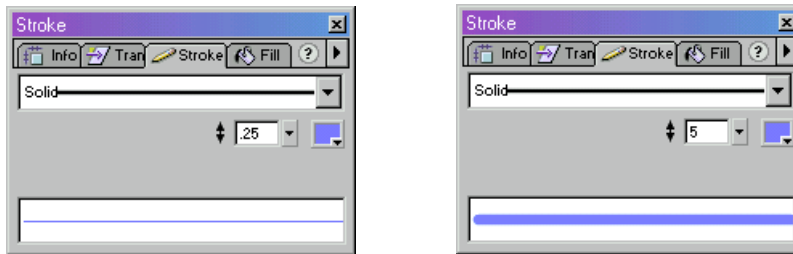
1. Choose **Window > Panels > Stroke**.
2. Click the **Stroke-Color** box. The pointer changes to an eyedropper and a set of color boxes appears. The eyedropper is the default.
3. To select a color, either click a color box or type a hexadecimal value representing a color in the Hexadecimal-Color field. To select none (no color), click the box with a red line through the center. Select one of the many shades of blue.



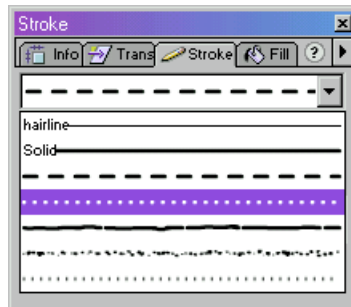
In HTML, colors are expressed either as hexadecimal values (for example, #FF0000) or as color names (red). The colors that are common to Netscape Navigator and Microsoft Internet Explorer on both Windows and Macintosh systems when running in 256-color mode are called *Web-safe colors*. The conventional wisdom is that there are 216 common colors, and that any hexadecimal value that combines the pairs 00, 33, 66, 99, CC, or FF represents a Web-safe color. Testing, however, has revealed that only 212 colors are Web-safe. Internet Explorer on Windows systems does not correctly render the colors #0033FF, #3300FF, #00FF33, and #33FF00.

All of the color palettes in Flash use the 212-color Web-safe palette; selecting a color from the palette displays the color's hexadecimal value. To choose a color outside the Web-safe range, click the World button at the top of the color palette to open the system color picker. The system color palette is not limited to Web-safe colors.

4. To set a line weight in the Stroke-height field, enter a number between 0.25 and 10 or use the slider to set a value. Compare line weights, choose **.25** then choose **5**.



5. To select a line style, click the **Line Style** menu in the Stroke panel. When you select a style, a graphic representation of that style appears in the line-style field. Select **Solid**.



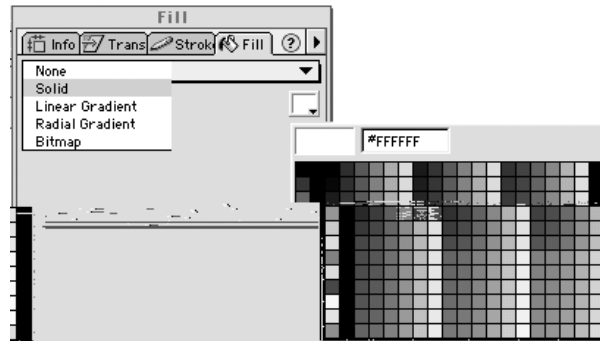
6. Draw several ovals changing the stroke attributes.



## To set fill attributes using panels:

Flash has five fills: none, solid, linear gradient, radial gradient, and bitmap. You set the fill type and related attributes in the Fill panel.

1. Choose **Window > Panels > Fill**.



2. From the Fill menu, choose a fill type. The attributes for that fill type appear in the panel below the menu. Select **Solid**.
3. Click the **Fill**-color box. The pointer changes to an eyedropper and a set of color boxes appears.
4. To select a color, either click a color box or type in a hexadecimal value representing a color in the Hexadecimal-Color field. Choose **light blue**.
5. Draw another oval with the new fill attributes.

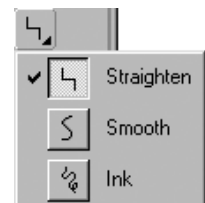
**Note:** To select none (no fill color), click the box with a red line through the center. To open a hidden panel, choose Window > Panels and select a panel (i.e. Info). You can open all panels by selecting Window > Panel Sets > Default Layout.

## To use the Pencil tool:

The Pencil tool allows you to draw with two free-form modes—straighten and smooth—that help you draw precise, smooth shapes.

You can use the Straighten mode to eliminate small inconsistencies that can spoil freehand sketches. Straighten changes your freehand lines into straight lines and regular arcs.

1. In the Toolbox select **Pencil Tool**. The Pencil tool modifiers appear.
2. From the Pencil Mode pop-up menu, choose **Straighten**.
3. Move the pointer over the Stage and the pointer turns into a Pencil icon.



4. Click and draw a curvy line.
  - Flash previews your rough draft.
  - Release the mouse button.
  - Flash turns the line into a set of straight line segments and regular curves.
5. With the Pencil tool in Straighten mode, quickly draw a rectangle or circle. Release the mouse button. Flash recognizes the shape and draws a perfect rectangle or oval.
6. With the Pencil tool selected, choose **Ink** from the Pencil Mode pop-up menu.
7. Move the pointer over the Stage and draw a curvy line.

When you release the mouse button, Flash makes your line less jagged, but leaves your curves as you drew them.

### To use the Eraser tool:

Erasing with the Eraser tool removes strokes and fills. You can quickly erase everything on the Stage, erase individual stroke segments or filled areas, or erase by dragging.

1. Using Normal Mode to erase strokes and fills:
  - Select the **Eraser** in the Toolbox.
  - Choose **Erase Normal** from the Eraser Mode pop-up menu.
  - Choose a size and shape of the eraser from the Eraser Shape pop-up menu.
  - Move the pointer over the Stage and drag to erase.
  - Use the Eraser tool to erase previously created ovals.
2. Using the Faucet Modifier to erase a line:
  - In the Toolbox with the Eraser tool selected, click the **Faucet** button.
  - Place the faucet over the line you want to erase.
  - Click. (Flash deletes the entire line.)
3. Using the Faucet Modifier to erase a fill:
  - Select the modifier for the Eraser tool.
  - Place the faucet over the fill you want to erase.
  - Click. (Flash deletes the fill.)
  - Use the Facet Modifier to erase rectangle fills.
4. To quickly erase everything on the Stage, double-click the Eraser tool.

These are the basic elements of the Flash interface. Each activity that follows will provide you with step-by-step instructions on how to create a movie.

# Activity 1: Creating a Plan for Your Animation

Approximate time to complete: 20 minutes or more depending on the scope of the project

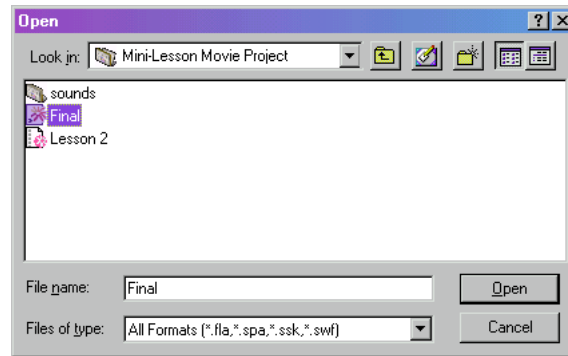
In this activity you will learn to:

- Create a storyboard
- Work with frame animation
- Set the properties for the movie

## To view the completed movie:

Before you start planning the movie, view a completed version of the project to get an idea of what you will create.

1. Open Flash.
2. Select **File > Open**. The Open dialog window opens.
3. Browse to locate the file *Final*. Click **Open**.



**Note:** If you did not copy the project files from the companion CD, you will have difficulty accessing the graphics. Any images or graphics that you use in this project should be stored within the structure of a root folder.

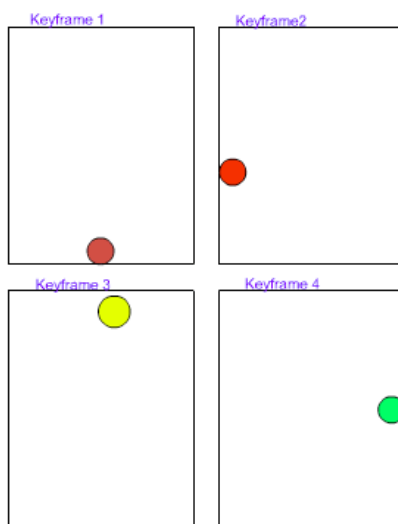
4. Watch the movie play. Click the **Start** button.
5. Click each of the **Play** buttons.
6. Click **Matching** and listen and match.

This is the movie that you will create in this project. You can vary the content by creating your own sound files and text.

## To plan the animation (Flash movie):

A **storyboard** is a plan for your animation. Storyboarding is an important first step in creating a Flash movie. A storyboard is a series of panels with sketches that show how the movie will progress. The storyboard becomes increasingly important the more complex the movie or animation. In an academic setting, planning is part of the Project-based framework. Both students and teacher can evaluate the plan to check that it meets the required criteria.

1. Use notebook paper to draw out a series of panels, similar to a comic book. Each panel represents the Stage, where the action takes place.
2. Use numbers to designate each “frame” of the action on the Stage. These transition actions are called **Keyframes**. Keyframes define the changes in an animated sequence, such as the object’s movement or change in characteristics. The following illustration shows the storyboard for the beginning sequence of the movie.

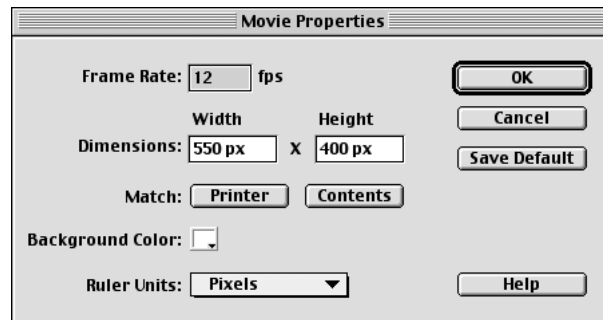


The movie contains three scenes:

- the introduction sequence with the animated ball,
  - the sound interaction sequence with play buttons and bouncing ball, and
  - the matching learning interaction sequence.
3. Create a storyboard for each of the three scenes. Note the viewer control that causes the scene to change. Create a storyboard for the entire movie.

## To set the movie properties:

You can set Stage size and background color in Flash using the Movie Properties dialog box.



1. From the **Modify** menu, choose **Movie**.
2. The Movie Properties dialog box appears (refer to figure for steps 3-4 ).
3. In the Movie Properties dialog box, click the **Ruler Units** pop-up menu.
4. From the pop-up menu, select the units in which you prefer to work. Flash will use these units to calculate all measured items on the Stage: rulers, grid, spacing, and dimensions.

## To set Stage size:

The Stage is the area where all of the action takes place. Just like in a theater production, it is the area in which the actors perform for the audience.

1. Enter the **Height** and **Width** in the appropriate fields of the Dimension section.
2. Click **Printer** to have your stage size match the maximum print area currently available to you.
3. You can click **Contents** to create a stage area just large enough to cover the elements in your movie. However, for this project we will use the default size of 550px x 400px. If you change the Ruler Units the width and height dimensions of the Stage will stay the same. Flash will automatically calculate and convert the size into the requested equivalent units.

### **To set Background Color:**

The Background Color is the color of your backdrop for the Stage. It is the actual Background Color for your movie.

1. Click the **Color** box in the Background Color section of the Movie Properties dialog box.
2. For this project select the Background Color **White**.

### **To set the Frame Rate:**

A frame is one single still image among the many that make up a movie. The Frame Rate is the number of frames per second of a Flash movie.

1. Leave 12 as the value for Frame Rate. The total number of frames times the frame rate determines the length of the movie. This is the default set in Flash. The majority of computers can display this frame rate smoothly.
2. Once you have made all of the changes, click **Save Default**.

**Note:** A frame rate that's too slow makes the animation appear to stop and start; a frame rate that's too fast blurs the details of the animation. A frame rate of 12 frames per second (fps) usually gives the best results on the Web (the standard motion-picture rate is 24 fps). Most QuickTime and AVI movies have a frame rate of 12 fps. Flash allows only one frame rate for the entire Flash movie, so a good idea is to set this rate before you begin creating an animation.

## Activity 2: Creating a Short Animation

Approximate time to complete: 20-40 minutes

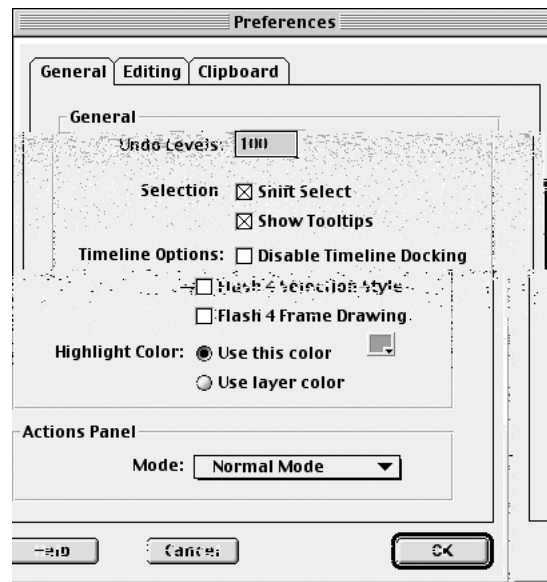
In order to create a short movie, the following topics are covered in this activity:

- Understanding animation
- Frame Types: Empty, Key, Regular, Tweened
- Inserting a frame
- The Playhead
- The Timeline: Ruler, Status Bar
- Creating an animation
- Modifying attributes
- Creating a shape tweened animation

Open Flash, if it is not already open.

### To use Tooltips:

1. If the Tools panel is not already open, select **Window > Tools**.
2. To turn on Tooltips (annotations appear when the pointer is positioned at a button or icon), from the Edit menu choose **Preferences**.
3. In the Preferences dialog box select the **General** tab.
4. Check the **Show Tooltips** box.



## To create a simple bouncing ball:

1. Click **File > New**.

Flash automatically creates a document with one layer and a keyframe in Frame 1 of the Timeline.

2. Click **File > Save As**.

3. In the Save As dialog box next to File Name, save your file as *Bounce*.

**Note:** Create a file folder to save the movie. Place the folder on the main hard drive of the computer, preferably in the same root folder where the project graphic and sound file folders were copied.

4. Click **Save**.

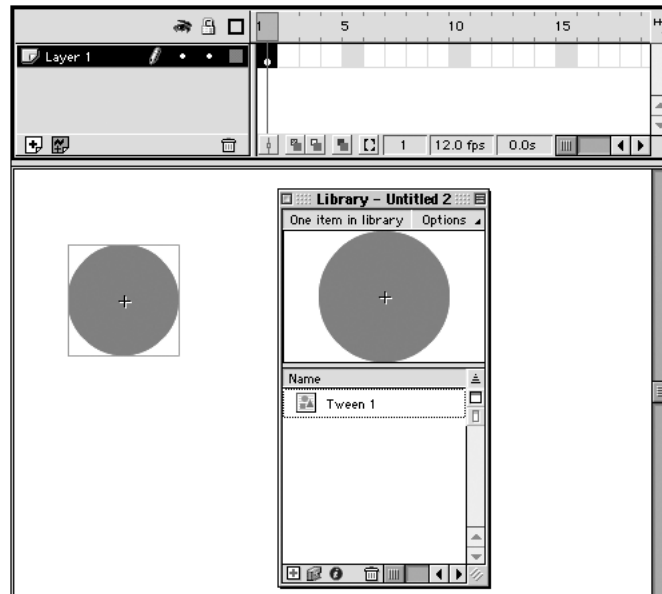
5. In the Timeline, click **Frame 1** to select it.

6. In the Toolbox select the **Oval** tool.

- Set the Stroke color to none (see "To set stroke attributes using panels").
- Set the Fill color to **orange**.

**Note:** To help orient the drawing on the Stage, you can turn on the rulers and grids. Choose **View > Rulers and View > Grid > Show Grid**.

7. Near the middle of the Stage draw a circle.



8. In the Timeline select **Frame 1**.

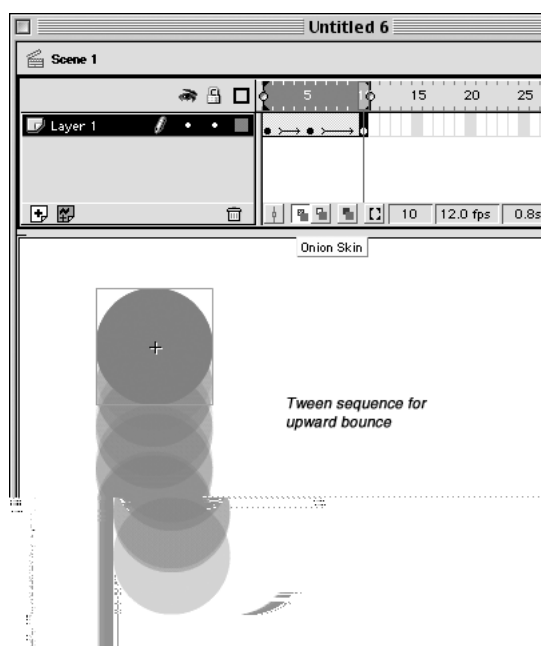
9. From the menu bar choose **Insert > Create Motion Tween**.

10. In the Timeline select **Frame 5**.

11. From the menu bar choose **Insert > Keyframe**.



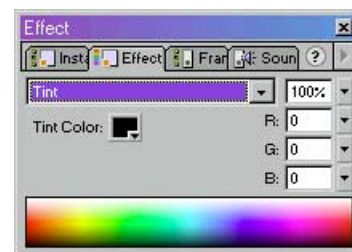
12. Select the Arrow tool and drag the circle to the bottom of the Stage.  
The solid bullet in Frame 5 indicates you have created content in a keyframe.
13. In the Timeline select **Frame 10**.
14. Choose **Insert > Keyframe**.
15. Move the circle back to the middle of the Stage where it began.
16. Choose **Window > Toolbars > Controller**. Click **Play** on the Controller to preview your animation.



### To change the color of the ball:

Using the circle you created, you will add new colors to each “bounce.”

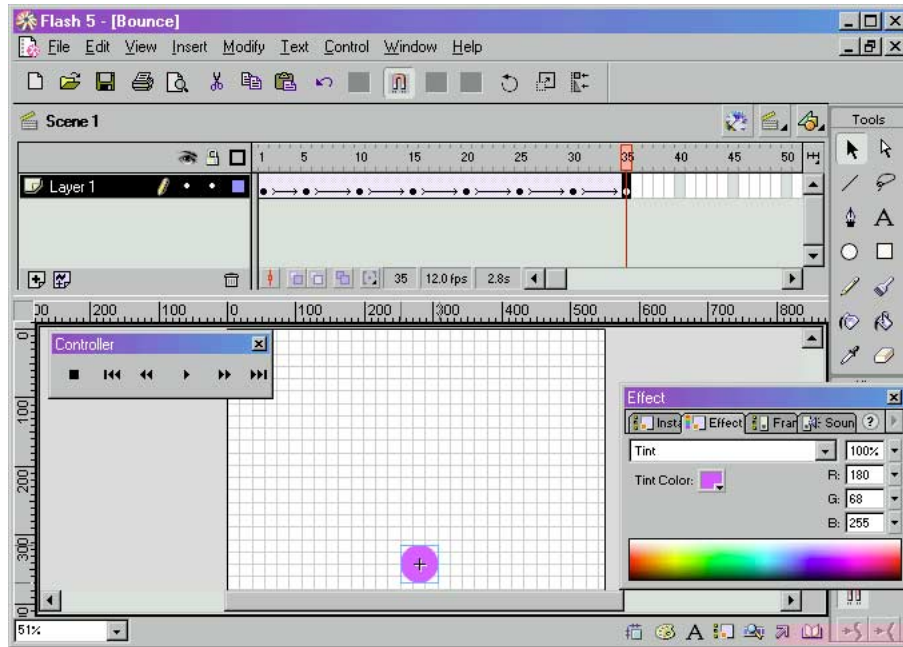
1. Select **Frame 5** and choose **Modify > Instance**.
2. Select the **Effect** tab in the Instance panel.
  - Click the pop-up window and select **Tint**.
  - Choose a tint color.
3. Click **Play** on the Controller to preview your animation.
4. Select **Frame 15** and choose **Insert > Keyframe**.
5. Drag the circle to the bottom of the screen.
6. With **Frame 15** selected, choose **Modify > Instance** and change the tint.



- Repeat steps 4 through 6 every five frames moving the position and color of the circle to create six different colors in all.

**Note:** Ending at Frame 30 leaves the ball positioned at the center of the Stage. Ending at Frame 35 leaves the ball positioned at the bottom of the Stage.

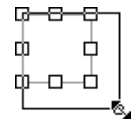
- Test the animation. Click **Play** on the Controller. The circle has turned to a color-changing bouncing ball.



### To adjust the size of the ball:

Using what you have created, you will adjust the size of the “bouncing ball.” You do all the editing through keyframes now that you have created a motion tween.

- Select **Frame 5**.
- With your Arrow tool selected, select your **Scale Modifier** in the Options portion of the Tool panel. (You may need to move the Tool panel to see all of the Options selection.)  
Square handles appear on all four corners of the box surrounding your element.
- Move the pointer over a handle.
  - To change the size of your element, drag one of the corner handles.
  - Make your element smaller.



4. Click **Play** on the Controller to preview your animation.
5. Repeat steps 1-4 every five frames, alternately changing the size from smaller to larger.
6. Test the animation. When you are satisfied with the appearance, save the movie. Choose **File > Save** or use the keyboard shortcut.

### **To manipulate the graphic elements:**

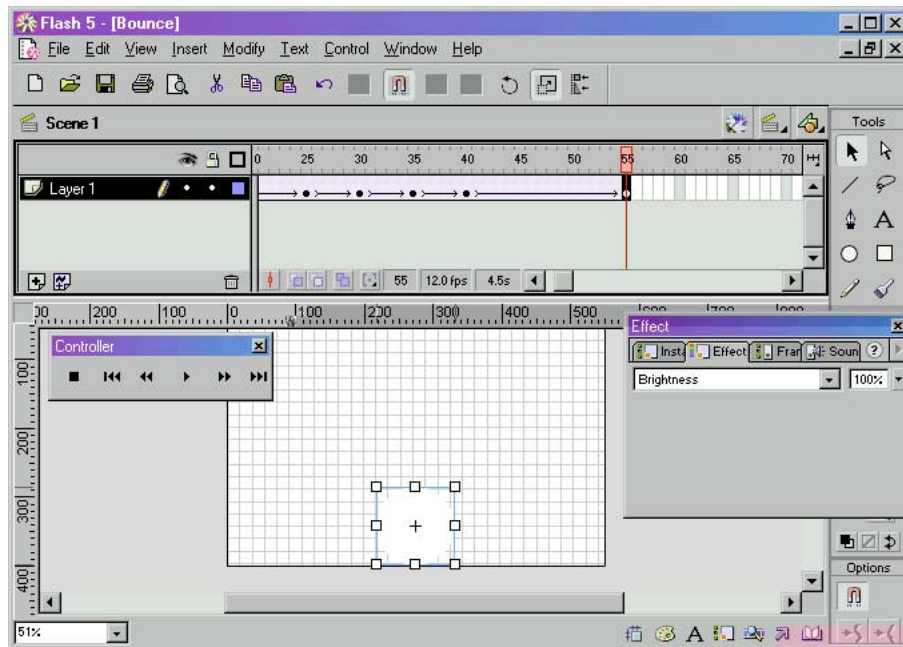
Using what you have created, you will manipulate the position of your “bouncing ball.”

1. Select **Frame 10**.
2. With the **Arrow** tool selected, move your pointer over the Stage and drag your circle to the left side.
3. Select **Frame 15**. Move your pointer over the Stage and drag your circle to the top.
4. Select **Frame 20**. Move your pointer over the Stage and drag your circle to the right.
5. Click **Play** on the Controller to preview your animation.

### **To create special effects:**

Using what you have created, you will create some special effects for the “bouncing ball.”

1. Select **Frame 40** on your Timeline.
2. Choose **Insert > Keyframe**.
3. Choose **Modify > Instance**.
4. Select **Effects** tab in the Instance panel.
  - Click the pop-up window and select **Tint**.
  - Change the color of the ball to red.
5. Select **Frame 55** on your Timeline.
6. Choose **Insert > Keyframe**.
7. Select the **Scale** tool and drag the corner of the square surrounding your circle to make it larger.
8. Choose **Modify > Instance > Effects**.
9. Choose **Brightness**. Blend the ball to 100%.



10. Click **Play** on the Controller to preview your animation.
11. Save your work.

## Activity 3: Creating a Text Animation

Approximate time to complete: 30–50 minutes

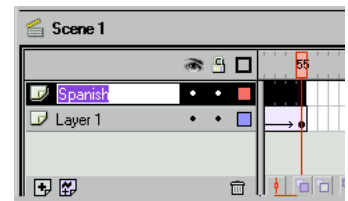
To complete the first scene and transition to the second scene with a viewer control, the following topics are covered in this activity:

- Adding text
- Changing text attributes
- Creating navigation buttons
- Adding action to buttons

### To create animated text:

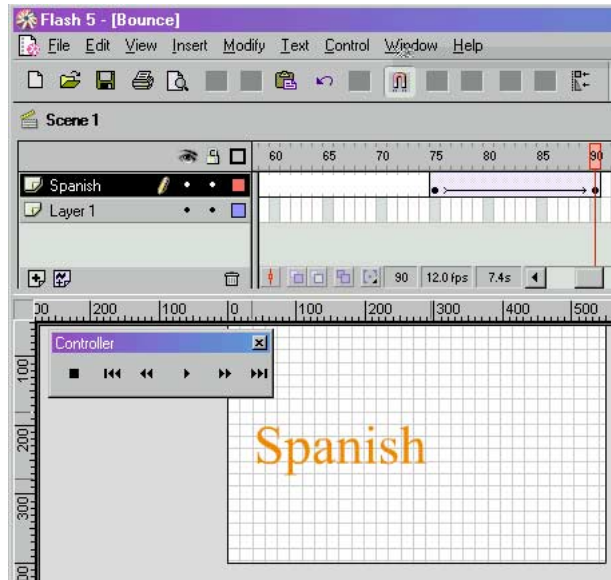
Using what you have created, you will create and add some text animation.

1. Create a new layer. Choose **Insert > Layer** and title it *Spanish*. Double-click **Layer**, and type the title.
2. In the Spanish layer select **Frame 75** and choose **Insert > Keyframe**.
3. Select the **Text** tool from the Toolbox.
4. If the Character panel is not open, choose **Window > Panels > Character**. In the Character panel, click the Font pop-up window and select **Times New Roman**. Type **40** in the Height box, and use the Color Selection box to make the text red.
5. Click anywhere on the Stage. Type *Spanish*.
6. Choose the **Arrow** tool and select the text. Choose **Insert > Create Motion Tween**.
7. In the Spanish layer select **Frame 90** and choose **Insert > Keyframe**.
8. Return to Frame 75 and use the Transform Scale modifier to reduce the size of your text.
9. Select the text and choose **Modify > Instance > Effects**.
10. Increase the Brightness to **100%**.
11. With the Arrow tool click the text box. Move the text in Frame 75 to position on the left half of the Stage near the center.
12. Select **Frame 90** and use the Arrow tool to position the text on the left half of the Stage near the center.
13. Create a new layer and name it Lesson.
14. In the Lesson layer, select **Frame 85** and choose **Insert > Keyframe**.
15. In the Character panel, click the **Font** pop-up window and select **Times New Roman**. Type **40** in the Font Height box, and make the text **black**.
16. Using the Text tool, type *Lesson* on the Stage. Align "Lesson" to the right of "Spanish."



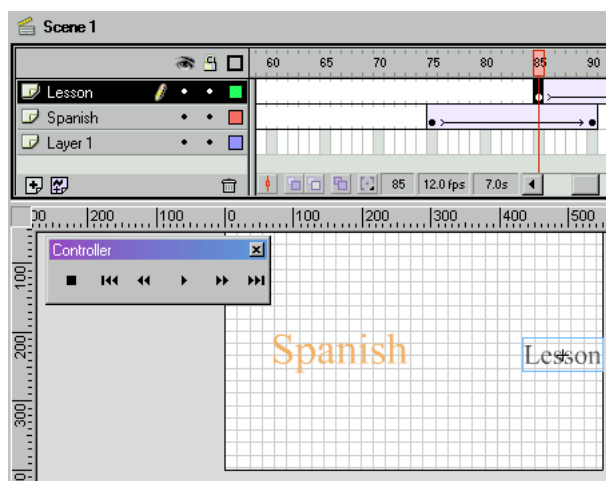
**Note:** After you have created the motion tweens and put the keyframes in place, you can use the Onion Skin tool to help line up your animation. To simultaneously see several frames of an animation on the Stage, click the Onion Skin button. All frames between the Start Onion Skin and End Onion Skin markers (in the Timeline header) are superimposed as one frame in the Movie window.

17. In the Lesson layer, select **Frame 85** and choose **Insert > Create Motion Tween**. Then select **Frame 100** and choose **Insert > Keyframe**.



18. "Spanish" disappears because at that point in the Timeline no more frames are in that layer. To keep "Spanish" on the Stage, select Frame 100 in the Spanish layer and choose **Insert > Frame**.
19. Turn on Onion Skin to help align the Spanish and Lesson animations.
20. In the Lesson layer, click **Frame 85**.
21. Choose **Modify > Instance > Effects** and increase Brightness to 100%.  
With Frame 85 still selected, hold down Shift and drag "Lesson" to the far right of the Stage.
22. In the Lesson layer, select **Frame 100** and choose **Insert > Keyframe**.
23. Copy the text, **Ctrl+C** (Windows) or **Command+C** (Macintosh).
24. In the Lesson layer, select **Frame 110**.
25. Choose **Insert > Frame**.
26. Paste the text, **Ctrl+V** (Windows) or **Command+V** (Macintosh).
27. In the Lesson layer, click **Frame 85**.
28. With the **Arrow** tool selected, click on the text and reposition the text at the right side of the Stage.
29. Test the movie.
30. Create another layer and title it *One*.
31. In the One layer, select **Frame 101** and choose **Insert > Keyframe**.
32. Select the **Text** tool. In the Character panel click the downward-pointing arrow and select **Times** as your font. Type 95 in the Font height box, and make the text red.
33. Using the Text tool, type 1.

34. With the Arrow tool, select the text and choose **Insert > Create Motion Tween**.



35. In the One layer, select **Frame 110** and choose **Insert > Keyframe**.

36. Select the text again and choose **Modify > Instance, Effect**.

37. In the One layer, select **Frame 101** and change the Brightness to 100%. Click on the Stage to apply the change.

38. Select **Frame 110** and choose **Modify > Instance, Effect**.

39. Change the Brightness to 40%. Click on the Stage to apply the change.

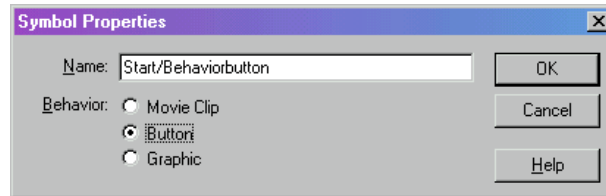
40. Test the movie. When you are satisfied with the appearance, save your work.

**Note:** Normally, Flash displays one frame of an animation sequence at a time. To help you position and edit a frame-by-frame animation, you can view two or more frames on the Stage at once by using onion skinning. The frame under the playhead appears in full color and surrounding frames are dimmed, making each frame appear as though drawn on a sheet of translucent onionskin paper with the sheets stacked one on top of another. Dimmed frames cannot be edited. Use the Arrow tool together with the Onion Skin button to reposition text as needed.

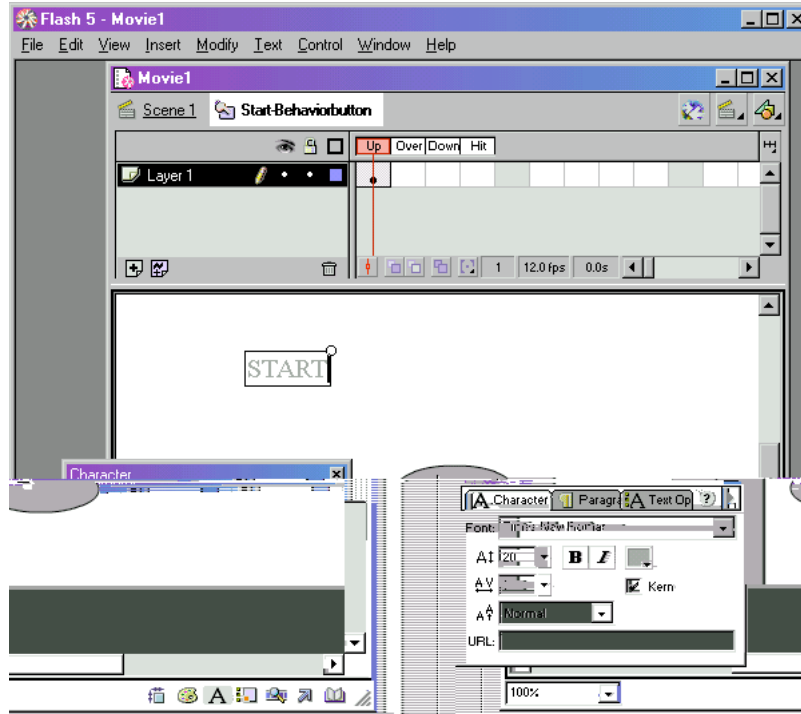


## To create navigation buttons:

1. Choose **Insert > New Symbol**. Select **Behavior: Button**.
2. Title your button *Start/Behaviorbutton*.

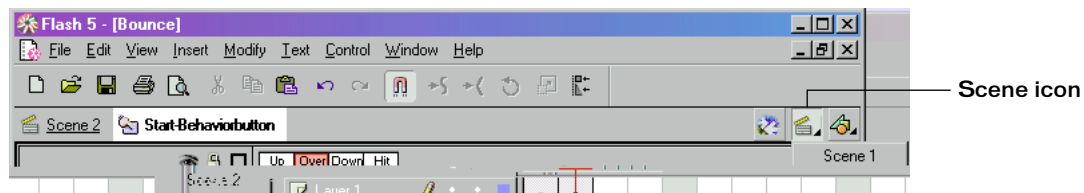


3. Click **OK**.
4. Select the **Oval** tool.
  - Set Stroke color to **Black**.
  - Set Fill color to **Light Gray**.
5. Draw an oval on the Stage approximately 3 cm wide by 2 cm high.
6. Select the **Text** tool.
7. In the Character panel, click the Font pop-up window and select **Times New Roman**. Type **20** in the Font Height box and make the text black.
8. Click on the **Stage**. Type *Start* on the Stage using the Text tool.

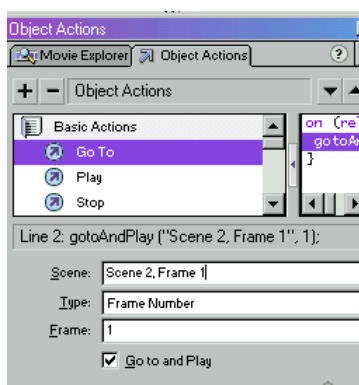




9. Select the **Arrow** tool. Drag the word "Start" to the center of the oval.
10. Click **Over Frame** and choose **Insert > Keyframe**.
11. Select the gray area of the oval and change your fill color to **Dark Gray**.
12. Locate the Scene icon on the top right of the Flash menu bar. Select **Scene 1**.

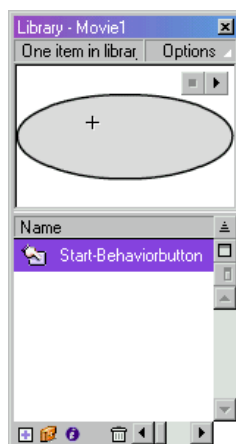


13. Insert a new layer and name it *Start*. Select **Frame 110** and choose **Insert > Keyframe**.
14. Choose **Window > Library** and find your button. Drag your button onto the Stage below the text.

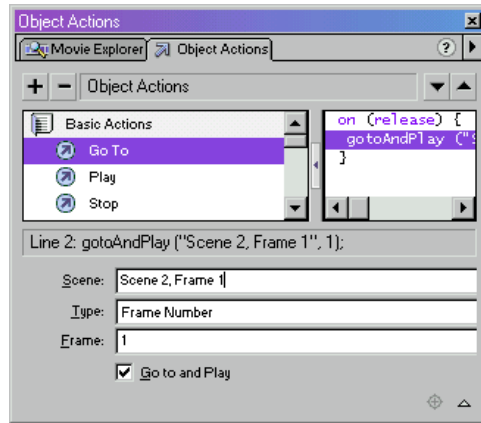


**To add action to the button:**

1. Insert a new scene. Choose **Insert > Scene (Scene 2)**.



2. Return to Scene 1. Click in Frame 110 and select the button on the Stage.
3. Choose **Window > Action**.
4. Drag the action **Go to** into the adjacent script window.
5. Select the options **Scene 2, Frame 1**, and **Go to and Play** in the Actions dialog box.



6. Select the **One** layer and click in **Frame 110**.
7. Choose **Window > Action**.
8. Drag the **Stop** action into the adjacent script window.
9. Return to Scene 1 and choose **Control > Enable Simple Frame Actions** and **Control > Enable Simple Buttons**.
10. Test the movie (choose **Control > Test Scene**).
11. Choose **File > Save As**. You can save with a new file name to ensure you have saved every step in the process.

## Activity 4: Importing Sound

Approximate time to complete: 30–50 minutes

To add sound to the mini-lesson movie, you will attach the audio clips to Keyframes. In this activity you will learn how to:

- Import sounds to the movie library
- Use the Common Library to add buttons
- Add sound to the buttons

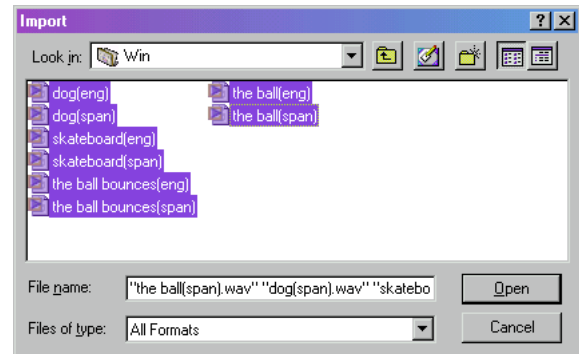
### To import sound files to the Library:

1. Select **Scene 2**.
2. Choose **File > Import**.

Flash imports .aiff, .wav, and mp.3 audio files.

3. Locate the folder *Sound*.

**Note:** The original sound files can be found on the Project-Based Multimedia companion CD in Mini-Lesson Movie Project/ Graphics/Sound. If you did not already copy those files onto the computer hard drive into the folder you have designated for saving the project files, do so now.



**Note:** The sound files are saved in a format compatible with either Windows or Macintosh platforms. Select the sound files that correspond to the computer platform you are using.

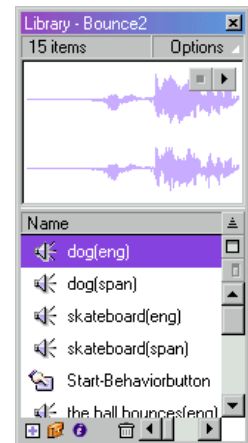
4. Select all of the audio files in the folder.
5. Choose **Open** in Windows or **Import** on the Macintosh.
6. Choose **Window > Library** to see if the files have successfully been imported into the Library.

Each sound file should be in the Library.

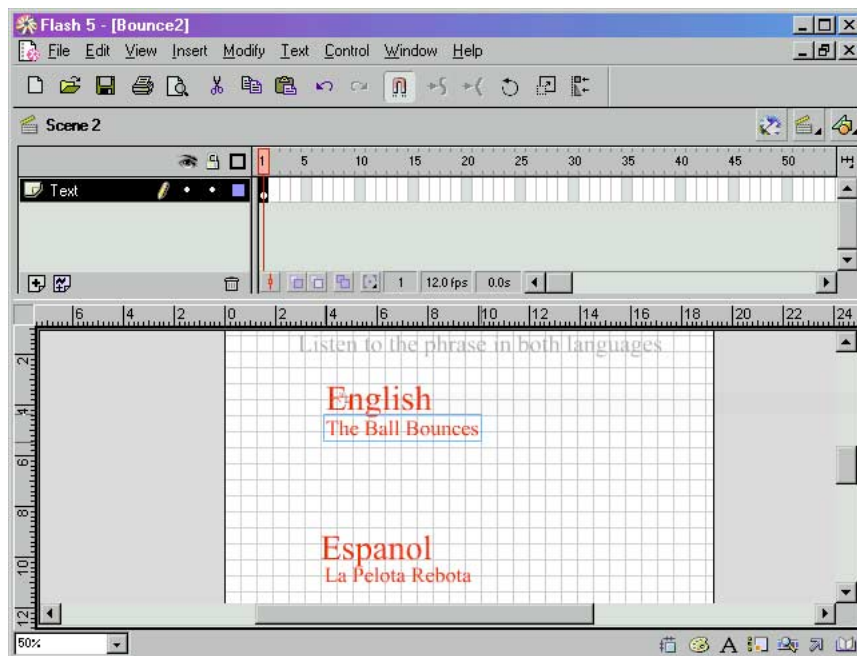
7. Select a sound file in the Library. Test the sound file by clicking **Play**.

### To add the Text layer:

1. In Scene 2, rename Layer 1 *Text*.
2. At the top of the Stage, use the Text tool and type *Listen to the phrase in both languages*.
  - **Font:** Times
  - **Size:** 27
  - **Color:** Gray

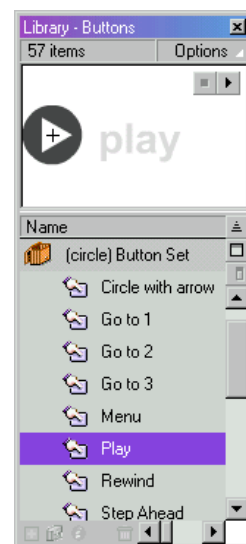


3. In the middle of the Stage type *English*.
  - **Font:** *Times*
  - **Size:** 39
  - **Color:** *Red*
  - **Paragraph:** *Align: Left*
4. Below the word "English" type *The Ball Bounces*.
  - **Font:** *Times*
  - **Size:** 24
  - **Color:** *Red*
5. Near the bottom of the Stage type *Espanol*.
  - **Font:** *Times*
  - **Size:** 39
  - **Color:** *Red*
  - **Paragraph:** *Align: Left*
6. Under the word "Espanol" type *La Pelota Rebota*.
  - **Font:** *Times*
  - **Size:** 24
  - **Color:** *Red*



## To add buttons to the movie:

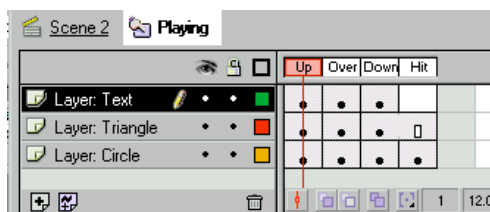
1. Add a new layer labeled *Play Buttons*.
2. Choose **Window > Common Libraries > Buttons**.
3. Double-click (circle) **Button Set**. Select **Play**.
4. Drag the Play Button to the Stage. Once the button is on the Stage, it will automatically appear in the Bounce movie library.
5. Choose **Window > Library**. Find and select the **Play** button. Locate the Options menu at the top right of the Library panel. Rename the button by choosing **Options > Rename**; type *Playing*.
6. To create another Play Button in the Library, select **Play Button**, choose **Options > Duplicate**.
7. Name the new Play Button *Spanish*.
  - Set the Behavior to **Button**.
  - Click **OK**.
8. Drag the Spanish Play Button to the Stage.



## To add sound to the buttons:

To add sound to these play buttons you will use the sound files that you imported at the beginning of Activity 4.

1. Double-click **Play Button Playing**. This opens the layers of the button and the Button Attribute frames.



2. In the movie library, select the sound file **The ball bounces** in English.
3. To assign sound to this button:

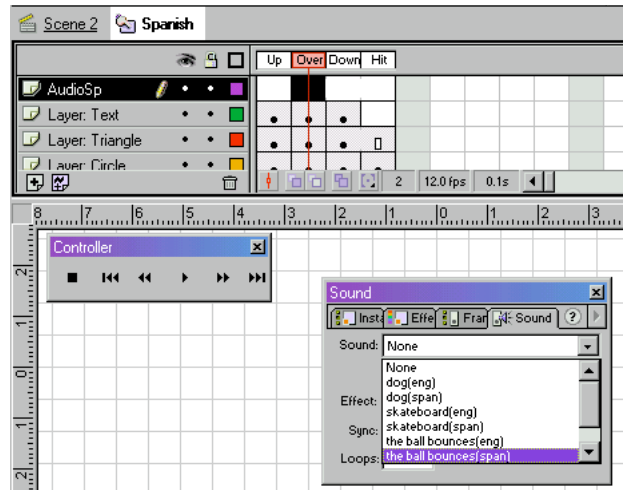
### Windows

- Choose **Insert > New Layer** and name the new layer *Audio*.
- Select **Over State** and choose **Insert > Keyframe**.
- In the Audio layer, select the **Over** frame.
- Open the Sound panel: **Window > Panels > Sound**.
- In Sound, scroll down to select **The ball bounces**.
- Close the Sound panel, Click **Scene 2** to return to Scene 2.

## Macintosh

- Choose **Insert > New Layer** and name the new layer *Audio*.
- Select **Over State** and then **Insert > Keyframe**.
- From the Library drag and drop the audio file "The ball bounces" on top of the Over State in the audio layer.
- Click **Scene 2** to return to Scene 2.

**Note:** Make sure you confine the sound to the Over State. If the sound line bleeds out of the Over State frame, drag the bled portion back into the frame.



4. To test the new Play button, choose **Control > Enable Simple Frames Actions** and **Control > Enable Simple Buttons**. Make sure the boxes are checked.
5. To add audio to the Spanish Play button, repeat steps 1-4.
6. Test the sounds. Place the pointer over each of the buttons.
7. Before going on to Activity 5, save your work as *Scene 2*.

## Activity 5: Combining Scenes

Approximate time to complete: 20-40 minutes

Using the various scenes you have created, you will combine them into one movie. In this activity you will learn how to:

- Join a previously created animation into the movie
- Create a continuous animation (film loop)
- Add a viewer control button

### To combine frames:

1. From Scene 1 choose **File > Open > Lesson 2**.

**Note:** The Lesson 2 file can be found on the companion CD in the Mini-Lesson Movie Project/ Graphics folder.

2. Select **Frame 1** and choose **Edit > Select All**.
3. Choose **Edit > Copy Frames**.
4. Close the window.
5. In Scene 2, choose **Insert Layer** and label it *bouncing ball*.
6. Select **Frame 1** and choose **Edit > Paste Frames**.

**Note:** You may need to reposition the ball at each keyframe in order to align the animation to the right side of the Stage.

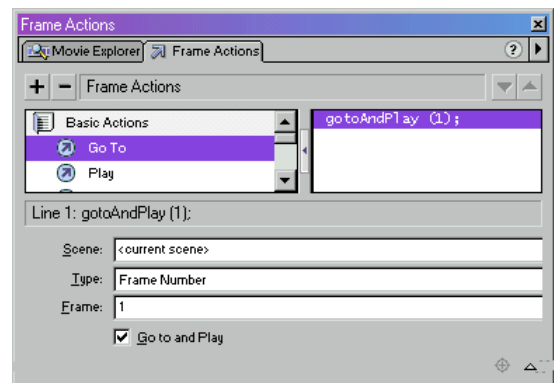
**Note:** You can use the “onion skin” option to help you align.

7. Choose **Control > Test Scene** to see a preview of the scene.

### To create a film loop:

To create a continuous animation of the bouncing ball (film loop), you must add actions to the frames.

1. Select **Frame 1** of the “bouncing ball” layer.
2. Choose **Window > Actions**.
3. Drag “Play” over to the adjacent script window.
4. Select **Frame 40**, the last frame in the “bouncing ball” layer.
5. Return to the Frame Actions panel and drag “Go to” over to the adjacent script window.
  - **Set Scene:** *Current*
  - **Type:** *Frame Number*
  - **Frame:** *1*
  - Check **Go to and Play**
6. Close the Actions window and save your work.
7. Choose **Control > Test Scene** to see your Flash Movie.



## To add scene links:

To finish up this Scene, you will add a link back to Scene 1.

1. Choose **Insert > New Symbol**.
2. In the Pop-up window, label it *Movie*, and set the Behavior to **button**. Click **OK**.
3. Using the Text tool type *Movie*.
  - **Font:** *Times*
  - **Size:** *14*
  - **Color:** *Dark Gray*
4. Select **Over State** and choose **Insert > Keyframe**.
5. With **Over State** selected, use the Text tool to highlight the text.
6. Open the Character panel by choosing **Window > Panels > Character**.
7. Set the text color to **blue**.
8. Select the **Hit State** and choose **Insert > Keyframe**.
9. Click **Scene 2** to return. Select **Frame 1** in the Text layer.
10. Locate the new symbol "Movie" and drag it to the bottom right of the Stage.
11. With the Arrow tool, select **Movie**. Choose **Window > Actions**.
12. Drag "Go to" over to the adjacent window.
13. Set Scene to "Scene 1."
  - **Type To:** *Frame number*
  - **Frame:** *1*
  - Check **Go to and Play**
14. Close the window and save your work.



## Activity 6: Creating a Drag & Drop Interaction

Approximate time to complete: 40-60 minutes

Using the language information that you have created in Scene 2, you will create a matching test, called a learning interaction in Scene 3. In this activity you learn how to:

- Use the matching activity template found in the Common Library
- Set the test parameters

### To create interactions:

1. Choose **Insert > Scene** (Scene 3).
2. Choose **Window > Common Libraries > Learning Interactions**.
3. In the Library dialog box, click **Drag & Drop** and drag it to the Stage. Center the Drag & Drop box with the Arrow tool.
4. Choose **Window > Panels > Clip Parameters** to open the Clip Parameters dialog box.
5. Enlarge the dialog box and make the following changes and then close the dialog box:.

- In the Interaction ID box, type *Learning Spanish*.
- In the Question box, type *Listen to each audio clip and match the English phrases to the Spanish phrases.*
- Leave the Matches Target area blank for now; you will fill this in later.
- Type *10* for the number of Tries.

6. Create a new Layer and call it *English/Spanish*.

Using the Text tool, type *Spanish* vertically next to the Drag boxes on the Stage.

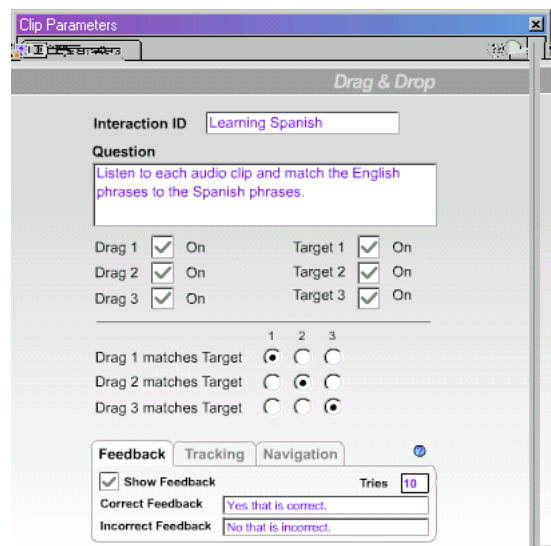
- **Font:** *Times*
- **Size:** *30*
- **Color:** *Red*
- **Paragraph:** *Align: Center*

Using the Text tool, type *English* and place vertically next to the Target boxes.

- **Font:** *Times*
- **Size:** *30*
- **Color:** *Gray*
- **Paragraph:** *Align: Center*

Using the Line tool draw a line in the center of the dialog box between the Drag and Target boxes. This will separate the Spanish audio files from the English audio files.

**Note:** To align the text vertically, set the paragraph alignment to Center and use line breaks (Enter or Return) between letters. Use the Arrow tool to get the desired text position.



7. Insert a new layer and label it *audio*.
8. Choose **Window > Common Libraries > Buttons**.
9. In the (circle) VCR Button Set, select the **gel right** button and drag it to the Stage in front of the first Drag box.
10. Close all other libraries and choose **Window > Library**.
11. Find and select **gel right** and in Library Options choose **Duplicate**.
12. Label the new button *Gel 2* and select **button** for the behavior.
13. Continue duplicating until you have created six gel buttons in the Library.
14. From the Library, drag **Gels 2-6** to the Stage. Position the button in front of every Drag and Target box.

### **To add sound:**

Using what you have learned in Activity 4, you will now add sound to each Gel button.

1. On the Spanish side of the lesson, place the following Spanish audio files:
  - Next to Drag 1: dog
  - Next to Drag 2: skateboard
  - Next to Drag 3: ball
2. On the English side of the lesson, place the following English audio files:
  - Next to Target 1: skateboard
  - Next to Target 2: dog
  - Next to Target 3: ball
3. Choose **Control > Enable Simple Frame Actions** and **Enable Simple Buttons**.
4. Test the sounds.
5. You will now go back and set the matches back in the Clip Parameters. Select the entire **Dialog Box** and choose **Window > Panels > Clip Parameters**.
  - Set Drag 1 Matching Target “2”
  - Set Drag 2 Matching Target “1”
  - Set Drag 3 Matching Target “3”
  - Close the window
6. Finally, create links back to the previous two scenes. Refer to Activity 5, To add scene links.
  - Create a symbol “Movie.” Position the symbol in Frame 1 Scene 4 at the bottom of the Stage.
  - Create a symbol “Lesson 1.” Position the symbol in Frame 1 Scene 4 at the bottom next to the Movie symbol.
7. Choose **Control > Test Movie** to see the Flash movie in action.
8. Choose **File > Save**.

# Activity 7: Exporting Your Files

Approximate time to complete: 10–30 minutes

The movie that you created in Flash is saved as a file with a .fla extension and can only be viewed within the Flash application. When you are ready to deliver the movie to an audience, you must publish or export the Flash FLA file to another format for playback.

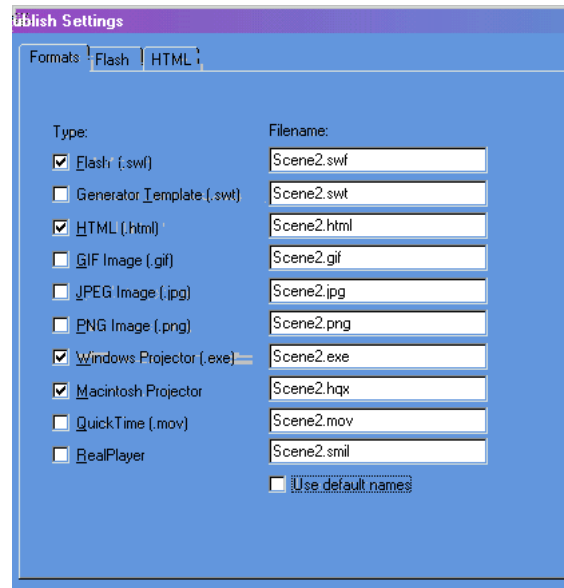
The **Flash Publish** feature is designed for presenting animation on the Web. The Publish command creates a Flash Player file (SWF) and an HTML document to house it and make it ready for a browser window. In this format, the file can only be viewed. The SWF file cannot be edited.

The **Export Movie** command allows you to create content that can be edited in other applications and exported into a single format. You can export movies in a variety of formats ranging from a series of Bitmaps to an AVI or QuickTime movie.

If you have Macromedia Dreamweaver, you can add a Flash movie to your Web site easily. Dreamweaver generates the necessary HTML.

## To set publishing options for movie files:

1. Specify where the movie will be published (saved). Create the folder where you want to save the published files. Browse to and open the folder, and save the Flash movie file.
2. Choose **File > Publish Settings**.
3. Select the options for each file format you want to create.
4. You can use the default file names or enter file names of your choosing.
5. When you have finished setting the options, do one of the following:
  - To generate all of the files, click **Publish**.
  - To save the settings with the FLA file and close the dialog box without publishing the files, click **OK**.



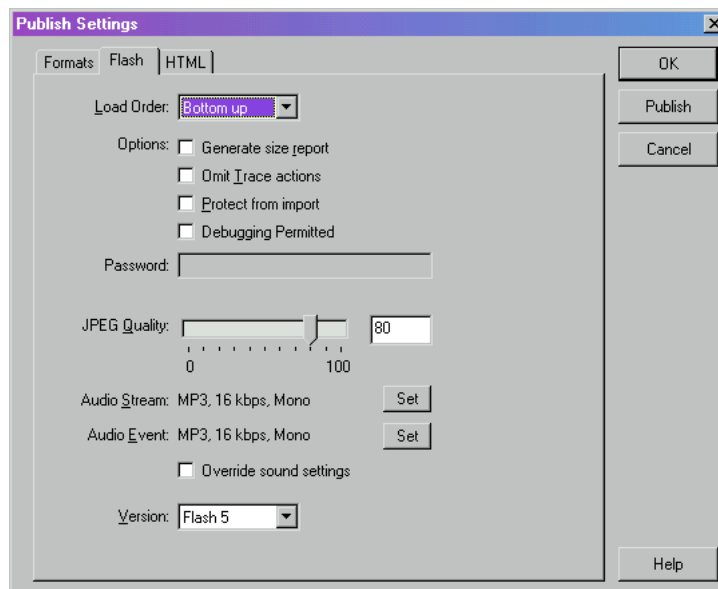
**To use the default setting or to publish from previously saved settings:**

1. Choose **File > Publish** to create the files in the formats and location specified in the Publish Settings dialog box.

**Note:** Click the Help button at the bottom of the Publish Settings dialog box for specific instructions on specifying an absolute or relative path for publishing the files.

2. To export your movie choose **File > Export Movie**.
3. Enter a file name for the output file and select a folder location to export the movie.
4. Click **OK** and then **Save**.

**Note:** You can choose an export movie file format either from the Export Flash Movie pop-up window or from the Format tab in Publish Settings. The Flash tab allows you to set image and sound compression options, and an option to protect your movie from being imported.



Once you have published your movie, it is ready to be viewed by the audience.

# Appendix A: Integrating Web Publishing into Academic Disciplines

As a means of expressing comprehension, multimedia Mini-Lesson Movies are unique because, just as students learn through multiple paths, they can express their comprehension through multiple paths. This project demonstrates the power of multimedia through the use of a modern world language lesson, but the project can be adapted to incorporate other academic areas. The project is structured to contain three main scenes:

- An introductory scene to establish the topic and provide an opportunity for interactivity and creativity
- A main content scene where information is transmitted through the use of sound, animation, and interactivity
- A learning interaction scene that provides an opportunity to demonstrate the viewer's understanding of the information presented

Here are some suggestions for other topics that could be used instead of a language lesson.

## SOME TOPIC SUGGESTIONS

### Mathematics

- How to factor numbers and/or algebraic equations
- The properties of different polygons including formulas for area
- A geometric proof

### Social Science/Government

- A political process, such as voting, justice procedures, etc.
- The historical development of a country's political boundaries
- The products of a country or state according to region

### Science

- A life cycle, such as butterflies, frogs, birds, etc.
- Migration
- The effect of the moon on tides
- Erosion
- Structure of atoms and molecules

By building a multimedia lesson, students gain skills in several areas:

- **Computers:** Students use the computer to demonstrate the ability to access, operate, and manipulate information from secondary storage and remote devices. They will use on-line help and other documentation, and use a multimedia authoring program to create a presentation that demonstrates their knowledge of appropriate use of animation. They will demonstrate appropriate use of fonts, styles, and sizes as well as effective use of graphics and page design to communicate ideas effectively and publish information in a variety of ways including, but not limited to, printed copy, monitor display, text, audio, etc.
- **Communication skills:** They will plan, create, and edit documents. They will apply proofreading skills and capitalization, punctuation, and spelling rules. They will write to reflect on ideas. They will apply reading skills to make connections and comprehend, and to develop vocabulary. They will apply listening and speaking skills for an audience and for a purpose. They will use creative expression.
- **Project management skills:** Students need to plan, schedule checkpoints, and communicate progress as they move through the project.
- **Higher-order thinking skills:** Many higher-order thinking skills come into play naturally. Inquiry, observation, identification of relationships among pieces of information, and identification of patterns are just some of the skills students exercise in this project.

## **WEB-BASED RESOURCES**

### **Links About Animation**

Animation Intro: Essay on the basic process of animation

**[www.art.uiuc.edu/local/anle/ANIMATION/animation\\_intro.html](http://www.art.uiuc.edu/local/anle/ANIMATION/animation_intro.html)**

Visual Magic Magazine: A magazine for the professional animator. The article noted here is a case study of a high school program that uses animation as part of its curriculum.

**[www.visualmagic.awn.com/vmag/article.php3?article\\_no=46](http://www.visualmagic.awn.com/vmag/article.php3?article_no=46)**

About® The Human Internet™: Several linked resources on how to create animations

**[animation.about.com/arts/animation/](http://animation.about.com/arts/animation/)**

Daryle Cagle's Professional Cartoonists Index - Teacher's Guide

**[cagle.slate.msn.com/teacher/](http://cagle.slate.msn.com/teacher/)**

Animation Basics, A sample chapter from Peachpit Press

**[beta.peachpit.com/ontheweb/animation/excerpt/basics.html](http://beta.peachpit.com/ontheweb/animation/excerpt/basics.html)**

Hotwired Animation Express

**[hotwired.lycos.com/animation/articles.html](http://hotwired.lycos.com/animation/articles.html)**

### **Award-winning Sites That Use Multimedia**

Macromedia sponsors the e-learning Innovations Award Winners

**[www.macromedia.com/solutions/executive/learning/innovation/winners/honorable\\_train.html](http://www.macromedia.com/solutions/executive/learning/innovation/winners/honorable_train.html)**

Top 100 Education-Related Web sites

**[www.100.com/Top/Education](http://www.100.com/Top/Education)**

BrainPOP Health, Science Technology Animation and Educational Site for Kids

**[www.brainpop.com/](http://www.brainpop.com/)**

### **Teacher Resources**

Public Broadcasting Station, The Merrow Report, America's Premiere Series on Youth and Learning

**[www.pbs.org/merrow/index2.htm](http://www.pbs.org/merrow/index2.htm)**

The Web Awards, A listing of great educational Web sites

**[www.thewebawards.com/categories/education.htm](http://www.thewebawards.com/categories/education.htm)**

The Web Diner, Flash Tutorials and Help

**[www.webdiner.com/flash/samples/software.htm](http://www.webdiner.com/flash/samples/software.htm)**





## Appendix B: Multimedia Assessment Guidelines

Following are guidelines for assessing the use of media and design elements in a multimedia project. You can use these guidelines to check that the various elements are present and functioning appropriately for a project.

- **Typography:** Titles, subheadings, and text should be displayed in sizes that reflect the content hierarchy. Avoid using several font styles as it increases file size and in turn increases download time.
- **Images and Animation:** All images should be appropriate to the content. Animation adds to the content by providing a bridge making abstract concepts more comprehensible. Animations and images stimulate interest in the topic. Images should be displayed with appropriate sizing and resolution.
- **Layout:** The layout should follow a consistent pattern and reflect the purpose of the content.
- **Sounds:** All sounds are an integral part of the project. They add mood or provide explanation. Sounds are synchronized correctly.
- **Viewer Controls and navigation:** The viewer should be able to use the controls easily. The movie should be easy to navigate so that information can be found easily..

### CONTENT GUIDELINES

Critical to a good movie is its content. The information contained in a movie—its purpose, usefulness, and facts—should fit a specific audience, or if multiple audiences are proposed, then the organization needs to reflect these various audiences. Here are some considerations to keep in mind when planning a movie:

- The purpose, goals, and audience should be clear.
- The information presented should be useful.
- The information should be as factual as necessary or as entertaining, as appropriate.
- Feedback should be actively sought.
- The movie should express and fit well with the site’s stated purpose and goals.

### OTHER CONSIDERATIONS

- How well does the movie introduce the topic? Does it grab you right away?
- Is the movie in a logical order?
- Does each animation flow smoothly?
- Have correct grammar, spelling, punctuation, sentence structure, and proper mechanics been followed?
- Is the movie appealing to the eye?

Here are some other areas that can be checked, although they are not specifically addressed in this project:

- Be sure copyright issues are addressed appropriately.
- Check the design for compatibility in various browsers, as required.
- The page content should include information about who created the file and when it was last updated.
- If the project is part of an academic unit, add guidelines that address specific content objectives and skills.

