
Flash - Basics

Smith College Technology Training

Presented by:

Damon Blanchette
Educational Technology Services

Fall 2006

Flash – Basics: Overview

1. Basics of vector graphics and drawing in Flash

- Draw basic shapes with the Oval and Rectangle tools
- Colors and the fill and stroke
- Editing shapes

2. Using layers and the timeline

- Creating, naming, and moving layers
- Shapes and drawing with different layers

3. Symbols and their use with the library window

- Types of symbols
- Creating a symbol
- Editing a symbol and its timeline

4. Animation with keyframes

- Creating a keyframe
- Moving symbols
- Tweening
- Shape animation
- Adjusting the animation (moving keyframes, easing)

5. Buttons

- Creating a button
- The button timeline
- Choosing button states

6. Simple Actionscript

- Timeline control
- Button actionscript
- Loading a web page

7. Publishing the Project

- Choosing output types
- Publishing

FLASH BASICS ACTIVITIES

Basics of vector graphics and drawing in Flash

1.	Draw basic shapes with the Oval and Rectangle tools	<ul style="list-style-type: none">- Flash uses vector graphics for all its visual elements.- Vector graphics are not like painting, it's more like just creating shapes that are very editable.- Try the Oval tool (o) or Rectangle Tool (r) and click and drag out the shape on the stage.
2.	Colors and the Fill and Stroke	<ul style="list-style-type: none">- With the Selection tool (v), you can select various pieces of your shape. The outside edge is called the "stroke" and the inside is called the "fill". When selected, a piece will have white dots in it making it highlighted.- Once highlighted, you can change the colors using the Color Mixer (if you don't see it, go to Window > Color Mixer at the top of the screen).
3.	Editing Shapes	<ul style="list-style-type: none">- If you put the mouse to the edge of your shape, its icon will change, and you can click and drag the shape around.- The Properties box at the bottom of the screen allows you to change things about your shape, including the color, the size of the stroke, and the type of stroke.

Using Layers and the Timeline

1.	Creating, Naming, and Moving Layers	<ul style="list-style-type: none">- The timeline is at the top of the stage, and is where the layers are located.- Layers in Flash behave exactly as they do in Photoshop – they can be thought of as transparent pieces of paper laid one on top of another. You can put shapes on each layer and they will behave independently of other layers.- To create a new layer, click on the icon of the page with a blue plus-sign on it.- You can (and should) rename all layers by double-clicking on the words "Layer #" where # is the number of the layer.- To move a layer, simply click on its name and drag it above or below the other layers.
2.	Shapes and Drawing with Different Layers	<ul style="list-style-type: none">- Each layer has its own timeline space. You can move objects on one layer without affecting the other layers in any way.- Create a new layer and then draw a shape on it, on top of the shape on the layer below.

		<ul style="list-style-type: none"> - In the timeline, drag the layer with the new shape below the layer with the old shape, and they will switch places, one on top of the other.
--	--	--

Symbols and their Use with the Library Window

1.	Types of Symbols	<ul style="list-style-type: none"> - A Symbol is a special kind of Flash object. It has its own timeline, can be copied any number of times on the stage (“instancing”), and can be controlled with actionscript. - There are three types of Symbols: a “Movie Clip”, a “Button”, and a “Graphic”. - A Movie Clip can be changed, moved, and edited with actionscript, making it especially powerful. - A Button acts as a button, which can be told to do anything you want it to do, such as load a web page or move to a different part of the animation. - A Graphic is like a Movie Clip, but is static, and can’t change around as much.
2.	Creating a Symbol	<ul style="list-style-type: none"> - To create a symbol, select a shape or graphic you have on the stage, and right-click (windows) or ctrl-click (mac). Select “Convert to Symbol...” in the menu that pops up. Alternatively, you can go to Modify > Convert to Symbol... at the top of the screen. - In the window that pops up, name your symbol, and choose a type. - Your symbol will show up in the Library on the right side of the screen. If you don’t see the Library, go to Window > Library at the top of the screen. - Your new Symbol will be a complete object, instead of individual editable parts such as a stroke and fill. - You can create copies (instances) of your Symbol by dragging it from the library onto the stage. If you change one of the instances of the symbol as per the directions below, it will change them all.
3.	Editing a Symbol and its Timeline	<ul style="list-style-type: none"> - Once you create a Symbol, it will have a turquoise-colored box around it. To edit it, such as changing its shape or color, double-click on it. Everything else on the stage will fade, and the timeline will change. - Each symbol has its own timeline, independent of the main timeline for the stage itself. This allows you to have a lot of control over the movement of your objects. - To go back to the main timeline and the rest of your objects, click on the words “Scene 1” at the top of the Timeline.

Animation with Keyframes

1.	Creating a Keyframe	<ul style="list-style-type: none">- To create a keyframe, select a frame in the Timeline on the layer of the symbol you want to move and right-click it (windows) or ctrl-click it (mac), and select "Insert Keyframe".- A black dot will show up in that frame, and the frames between that keyframe and the previous one will be shaded.
2.	Moving Symbols	<ul style="list-style-type: none">- Click on your new keyframe to select it, then, with the Selection tool (v), click and drag your symbol on the stage to a different place on the stage.- If you drag the red timeslider of the Timeline back and forth, you will see your symbol jump from one place to another.
3.	Tweening	<ul style="list-style-type: none">- Tweening creates a smooth movement between keyframes, so your object won't jump from one place to another.- Right-click (windows) or ctrl-click (mac) on the timeline in-between the two keyframes where you want smooth animation. In the menu that pops up, click on "Create Motion Tween".- An arrow will point from one keyframe to the other, and the frames will be shaded blue. Drag the red timeslider back and forth, and your symbol will smoothly move from one place to the other, across the stage.
4.	Shape Animation	<ul style="list-style-type: none">- To animate the shape and not just the position of your object, first select the keyframe in the Timeline where you want your object to be a different shape (or create a new keyframe). This will also select your symbol.- Select the Free Transform Tool (t), it is directly under the Selection tool, and a new box will show up around your symbol on the stage. Click on one of the little square boxes and drag to change the shape of your object.- Drag the timeslider back and forth between the keyframes, and you will see your symbol change shape smoothly (if you have added the tweening).
5.	Adjusting the Animation	<ul style="list-style-type: none">- To slow down or speed up your animation, you can simply move your keyframes.- Select a keyframe by clicking on it, then click and drag the keyframe up or down the timeline. The farther you move it from the keyframe before it, the slower your animation will be, and the closer you move it, the faster it will be (because you have the same movement in more or less time).

		<ul style="list-style-type: none"> - You can push alt-enter (windows) or apple-enter (mac) to watch your animation. - You'll notice that the movement of your symbol is a little jerky. To smooth it out, you can add easing to the animation. - Click on the first keyframe of the animation of your object, then look at the Properties box at the bottom of the screen. - One of the values you can change is "Ease". Click on the button with the arrow and drag the Ease value all the way up to 100 (out). - Watch your animation, and your symbol will start moving quickly, but then slow down to a stop at the second keyframe.
--	--	---

Buttons

1.	Creating a button	<ul style="list-style-type: none"> - To create a button, first draw the shape of the button on the stage – any shape and color you want. - If you want text on the button, use the text tool and type it directly on top of your shape (make sure it's on the same layer). - Select the entire shape and any text you might have by using the Selection tool (v) and dragging a selection box around it. - Right-click (windows) or ctrl-click (mac) and select "Convert to Symbol..." in the menu that pops up. - Name your button, and pick "Button" for the type.
2.	The Button Timeline	<ul style="list-style-type: none"> - Double-click on your newly created button, and then look at the timeline. - Buttons have their own special timelines, which contain four frames, one for each state. - "Up" is the state of the button when it is just sitting there and nothing is happening to it. - "Over" is what the button looks like when the mouse cursor is sitting over it. - "Down" is what the button looks like when the mouse button is clicked on it. - "Hit" is the shape of the area that is clickable on the button.
3.	Choosing Button States	<ul style="list-style-type: none"> - In your button's timeline, right-click (windows) or ctrl-click (mac) and insert a keyframe to the "Over" state. - Select your button with the Selection tool (v), and change the color of the fill a little bit. - Do the exact same above two steps again for the "Down" state. - In the "Hit" state frame, just add a keyframe – nothing

		<p>else needs to be done there.</p> <ul style="list-style-type: none"> - Click on the words “Scene 1” at the top of the timeline to get back to your main timeline and the stage. - Push alt-enter (windows) or apple-enter (mac) to view your animation, and try moving the mouse over and clicking on your button.
--	--	--

Simple Actionscript

1.	Timeline Control	<ul style="list-style-type: none"> - First, make sure you have some sort of animation, such as after you complete the Animation with Keyframes section above. - If you preview your movie, you'll see that it just keeps repeating over and over. - Click on the last keyframe of your animation to select it, and then open the Actions window if it's not already open (go to Window > Actions). - In the Actions window, type <code>stop();</code> - Do not forget the semicolon at the end! - You'll see a little 'a' above your keyframe, that means there is actionscript on the frame. - Preview your movie, and it will stop at the end of your animation.
2.	Button Actionscript	<ul style="list-style-type: none"> - Add a button to your above animation on a different layer. - Make sure you're on the main timeline after making the button's states (you'll see the two layers). Click on the button on the stage to select it. - In the Actions box (make sure it says Actions – Button at the top of the Actions box), type <code>on(press) { gotoAndPlay(1); }</code> - Now preview your animation. It will play and then stop, and then if you push the button, it will play again. The code gotoAndPlay(1) goes back to frame 1 when the button is pressed.

3.	Loading a Web Page	<ul style="list-style-type: none"> - Click on the button again and change the above code to this: <pre style="margin-left: 20px;">on(press) { getURL('http://www.smith.edu'); }</pre> <ul style="list-style-type: none"> - Now preview your animation and click on the button. Your default browser will open to the Smith homepage!
----	--------------------	--

Publishing the Project

1.	Choosing output types	<ul style="list-style-type: none"> - Once you have a finished animation, go to File > Publish Settings... - There are many types of end files available. If you want your animation to be in a web page, Flash can create that page automatically for you if you have the HTML (.html) and Flash (.swf) boxes checked. - If you want a stand-alone windows program that will run from your computer and not the internet, check the Windows Projector (.exe) box. - If you want a Quicktime movie, check the QuickTime (.mov) box. Note that you cannot have buttons or any actionsript at all in a quicktime movie.
2.	Publishing	<ul style="list-style-type: none"> - Push the Publish button or go to File > Publish, and your output choices will be saved to the directory your original Flash file is saved. - If you picked the Flash (.swf) and HTML (.html) boxes, go to your save directory and upload these two files to your website. - Direct your favorite browser to your website to the name of your .html file to view your amazing animation on the web!