



Flash Domain 4: Building Rich Media Elements Using Flash CS5

**Adobe Creative Suite 5
ACA Certification Preparation:
Featuring Dreamweaver, Flash, and Photoshop**



Objectives

- Make rich media content development decisions based on your analysis and interpretation of design specifications.
- Use tools on the Tools panel to select, create, and manipulate graphics and text.
- Import and modify graphics.
- Create text.
- Adjust text properties.



Objectives

- Create objects and convert them to symbols, including graphics, movie clips, and buttons.
- Understand symbols and the Library.
- Edit symbols and instances.
- Create masks.
- Create animations.
- Add simple controls through ActionScript 3.0.
- Import and use sound.



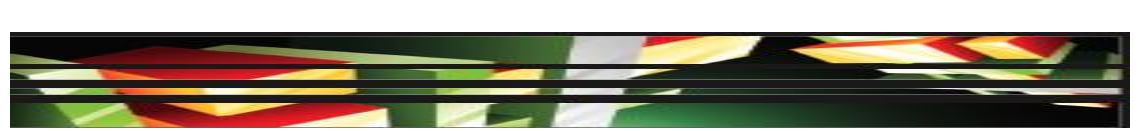
Objectives

- Add and export video.
- Publish and export Flash documents.
- Make a document accessible.



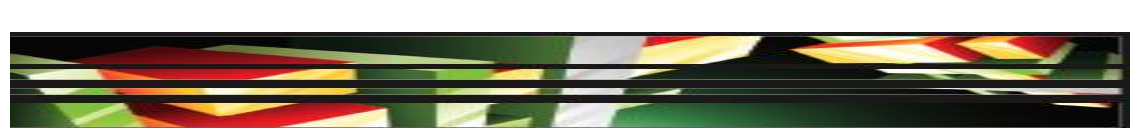
Vocabulary

- bitmap
- blank keyframe
- classic tween
- event sound
- instance
- inverse kinematics
- keyframe
- keyframe animation
- motion tween
- shape tween
- stream sound
- vector



Domain 2.0 Building Rich Media Elements Using Flash CS5

- This domain focuses on Flash fundamentals, tools, symbols, and creating animations.



Objective 4.1 Make Rich Media Content Development Decisions Based on Your Analysis and Interpretation of Design Specifications

- When designing rich media content, you should consider the relationship between end-user requirements and the design and development process.
- It is important to identify page elements that may affect delivery requirements.



Objective 4.2 Use Tools on the Tools Panel to Select, Create, and Manipulate Graphics




- **Bitmap vs. Vector Graphics**
- A **bitmap** is an image that is represented by pixels in a grid layout; each pixel contains color information for the image.
- A **vector** image is created with mathematical calculations and can be enlarged without a loss of quality.

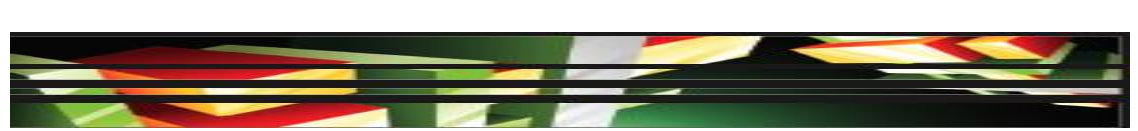




Objective 4.2 Use Tools on the Tools Panel to Select, Create, and Manipulate Graphics (Continued)

- **The Selection Tools**
- When making selections in Flash, you need to be sure you are using the correct tool.

NAME	TOOL	DESCRIPTION
Selection tool		Selects entire objects or shapes including both the fill and stroke, or just the stroke or just the fill of a shape or object
Subselection tool		Selects specific points that make up the shape, and allows you to adjust the point that is selected
Lasso tool		Used to draw a selection around objects or parts of an object on the Stage



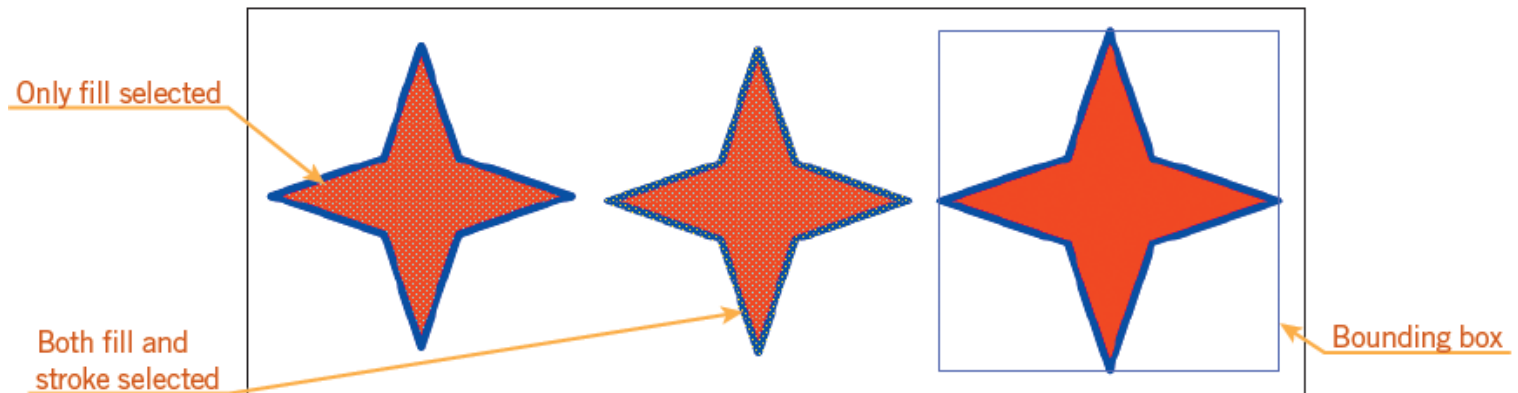
Objective 4.2 Use Tools on the Tools Panel to Select, Create, and Manipulate Graphics (Continued)

- **The Selection Tools (Continued)**
- When selecting with the Selection tools, if you have drawn your shape in Merge Drawing mode, the default drawing mode, clicking the shape selects either the fill or portion of the stroke.
- If you want to select both the fill and stroke, you must double-click the fill area of the object.
- If you have drawn your shape in Object Drawing mode, the stroke and fill are selected as one object.



Objective 4.2 Use Tools on the Tools Panel to Select, Create, and Manipulate Graphics (Continued)



- The Selection Tools (Continued)





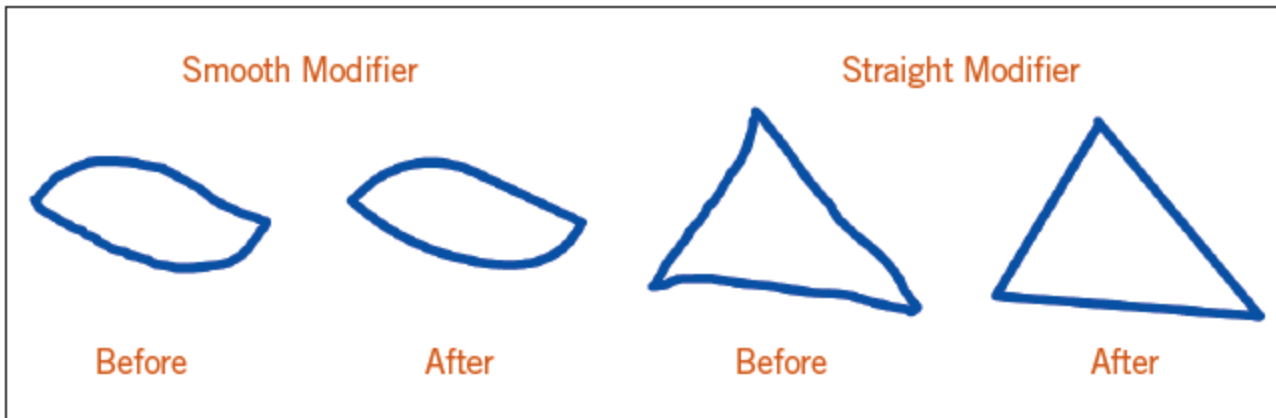
Objective 4.2 Use Tools on the Tools Panel to Select, Create, and Manipulate Graphics (Continued)

- **The Selection Tools (Continued)**
- When a tool is selected on the Tools panel, additional modifiers, if available, appear in the options area of the Tools panel.

NAME	MODIFIER	DESCRIPTION
Smooth		Smooths a selected stroke each time it is clicked
Straighten		Straightens a stroke each time it is clicked

Objective 4.2 Use Tools on the Tools Panel to Select, Create, and Manipulate Graphics (Continued)

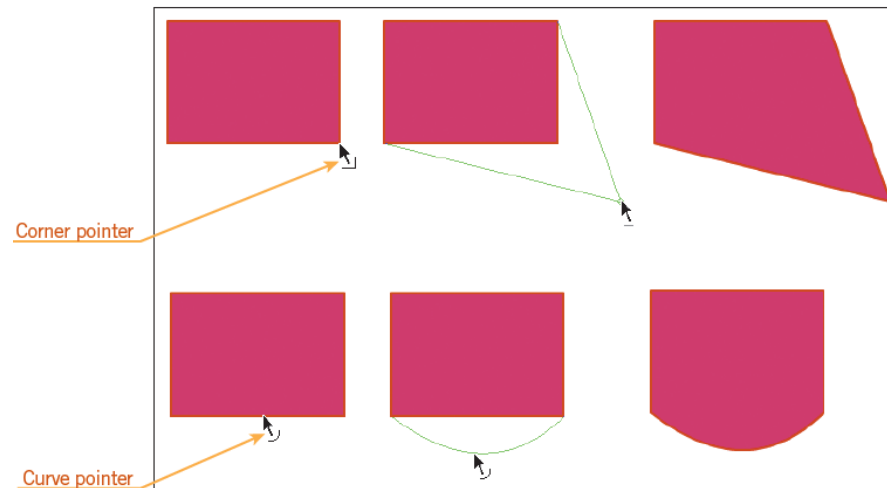
- **The Selection Tools (Continued)**
- These modifiers allow you to reshape a line by either smoothing the curves of a shape or straightening lines.





Objective 4.2 Use Tools on the Tools Panel to Select, Create, and Manipulate Graphics (Continued)




- **The Selection Tools (Continued)**
- When you hover over or click with the Selection tool, the pointer changes to either a corner pointer or a curve pointer.

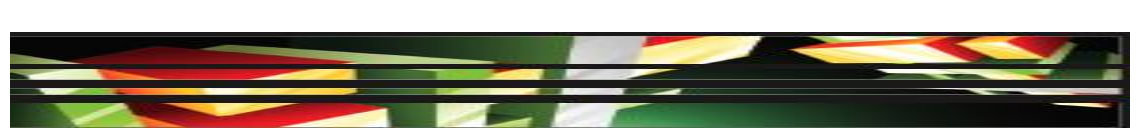




Objective 4.2 Use Tools on the Tools Panel to Select, Create, and Manipulate Graphics (Continued)

- **The Selection Tools (Continued)**
- The Lasso tool allows you to select irregular shapes and then close the path when you release the mouse button.

NAME	MODIFIER	DESCRIPTION
Magic Wand		Selects pixels in an area that are a similar color
Magic Wand Settings		Options to change how the color range is selected
Polygon Mode		Creates a selection with straight lines














Objective 4.2 Use Tools on the Tools Panel to Select, Create, and Manipulate Graphics (Continued)

- **The Selection Tools (Continued)**
- The Magic Wand modifier allows you to make selections based on a color or a range of color.
- The settings for the threshold or tolerance of the Magic Wand are adjusted by clicking the Magic Wand Settings modifier.
- The Polygon Mode modifier allows you to select objects in straight lines.



Objective 4.2 Use Tools on the Tools Panel to Select, Create, and Manipulate Graphics (Continued)

- The Drawing Tools

NAME	TOOL	DESCRIPTION
Pen tool		Draws straight or curved lines by clicking to create points
Line tool		Draws straight lines
Rectangle tool		Draws rectangles, allows you to apply a stroke or fill, and create rounded corners
Oval tool		Draws ovals or circles, allows you to apply a stroke or fill, and adjust the angles and radius of the oval
Rectangle Primitive tool		Allows you to make adjustments to the corners after drawing the rectangle
Oval Primitive tool		Allows you to make adjustments to the angle and radius after drawing the circle
PolyStar tool		Draws polygons and stars, and adjusts the number of sides in the Property inspector
Pencil tool		Draws shapes and lines similar to drawing with a real pencil, modifiers allow you to draw straight, smooth, or freehand lines
Brush tool		Similar to drawing with a real brush, modifiers allow you to change the brush size, shape, pressure, and mode
Spray Brush tool		Sprays a color of dots, or a graphic or movie sample as a pattern
Deco tool		Draws a complex shape from a variety of choices







Objective 4.2 Use Tools on the Tools Panel to Select, Create, and Manipulate Graphics (Continued)

- **The Drawing Tools (Continued)**
- The Deco tool is a decorative drawing tool that makes simple work of drawing complex shapes.
- When the Deco tool is selected, you can select a variety of drawing effects from a pop-up menu in the Property inspector.
- Some of the Deco Tool drawing effects animate the drawing automatically. Other drawing effects provide the option to draw the effect on a single frame or to generate an animation.



Objective 4.2 Use Tools on the Tools Panel to Select, Create, and Manipulate Graphics (Continued)

- **Tools to Modify Shapes**

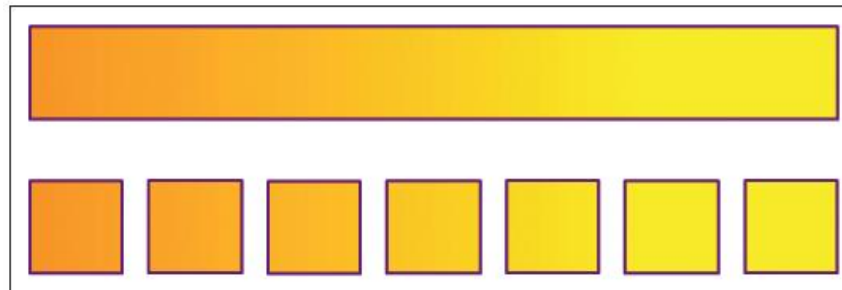
NAME	TOOL	DESCRIPTION
Paint Bucket tool		Change the fill color with a solid color, gradient, or bitmap
Eraser tool		Remove shapes, or portions of a shape, drawn on the same layer
Free Transform tool		Move, rotate, scale, skew, or distort a graphic object or text block
3D Rotation tool		Rotate a movie clip around the x- or y-axis to create 3D perspective effects



Objective 4.2 Use Tools on the Tools Panel to Select, Create, and Manipulate Graphics (Continued)

● Tools to Modify Shapes (Continued)

- The Paint Bucket tool modifiers allow you to ignore a gap when filling an area.
- The Lock Fill option allows you to fill more than one shape with the same gradient or bitmap so that it extends from one shape to the next.





Objective 4.2 Use Tools on the Tools Panel to Select, Create, and Manipulate Graphics (Continued)

● Tools to Modify Shapes (Continued)

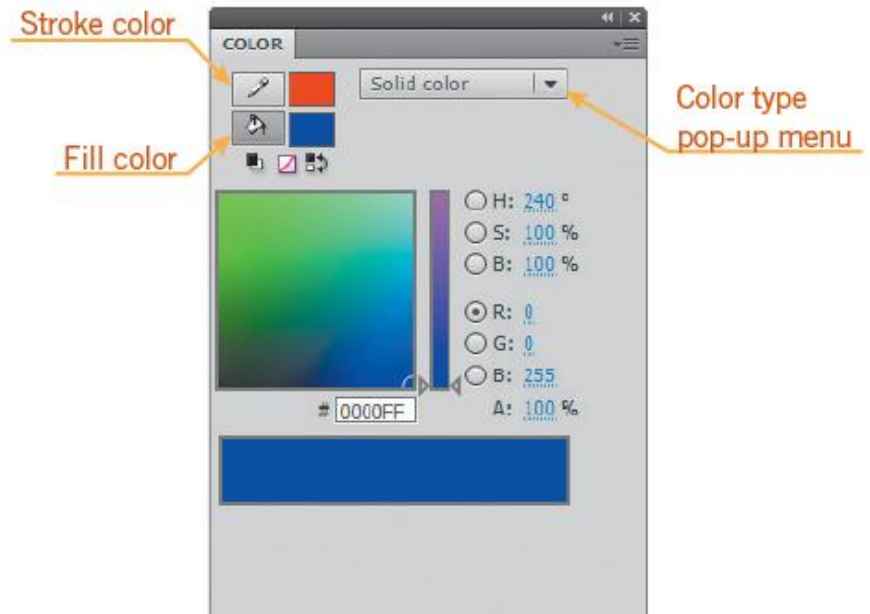
TABLE 4-7 Eraser tool and Free Transform tool modifiers

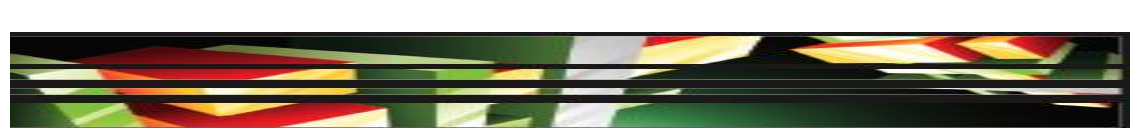
NAME	TOOL	DESCRIPTION
Erase Normal		Removes strokes and fills
Erase Fills		Only removes the fill; the stroke is not altered
Erase Lines		Only removes the stroke; the fill is not altered
Erase Selected Fills		Selects the fills you wish to remove; only those selected will be affected
Erase Inside		Removes the fill where you begin using the Eraser
Faucet		Removes the segment of a stroke or the filled area
Eraser Shape(s)		Modifies the shape and size of the Eraser; choose round or square
Rotate and Skew		Moves the object based on the transformation point, or slants the object along the axes
Scale		Resizes an object; dragging a corner handle maintains proportions, dragging a center handle scales the object either vertically or horizontally
Distort		Dragging a handle moves a corner or edge while realigning adjoining edges
Envelope		Drag a point to bend, curve, warp, or distort an object



Objective 4.2 Use Tools on the Tools Panel to Select, Create, and Manipulate Graphics (Continued)

- **How to Use the Color Panel to Create and Apply Colors**
- Use the Color panel to modify fill and stroke colors.





Objective 4.3 Import and Modify Graphics

- Use the Import command on the File menu to import vector graphics and bitmap files directly to the Stage or to the Library.
- Flash can import native Illustrator and Photoshop files.
- You can import native Fireworks files either as an editable object in Flash or as a flattened image.
- Breaking apart a symbol allows you to use tools on the Tools panel to modify the symbol.
- To swap a bitmap or trace a bitmap that is selected on the Stage, click Modify on the Application bar (Win) or Menu bar (Mac), point to Bitmap, and then click a command.



Objective 4.4 Create Text

- Flash has two text engines available when working with text: Classic Text and Text Layout Framework (TLF).
- Classic Text includes static, dynamic, and input, which you select in the Text type pop-up menu in the Text tool Property inspector.
- TLF provides many more options for formatting and working with text character and paragraph styles than working with Classic Text. TLF can link or thread text across text containers.



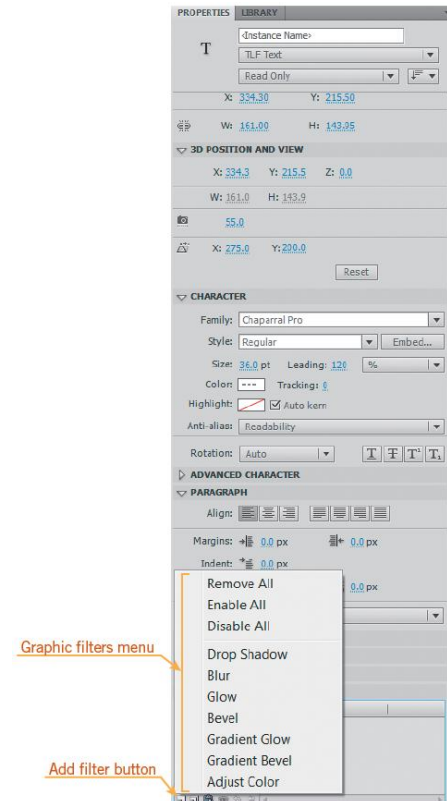
Objective 4.5 Adjust Text Properties

- You can make text adjustments in the Property inspector when the text is selected on the Stage.
- Both Classic Text and the TLF Property inspectors display Character styles or attributes.
- The Character section of both versions of the Text Property inspector allows you to select the font family, font style, size, and color.
- You can modify text alignment, margins, and spacing in the Paragraph section of the Text Property inspector.



Objective 4.5 Adjust Text Properties (Continued)




- To apply graphic filters to Classic or TLF text, in the Filters section of the Text Property inspector, click the Add filter button at the bottom of the panel, and then select an option.





Objective 4.6 Create Objects and Convert Them to Symbols, Including Graphics, Movie Clips, and Buttons

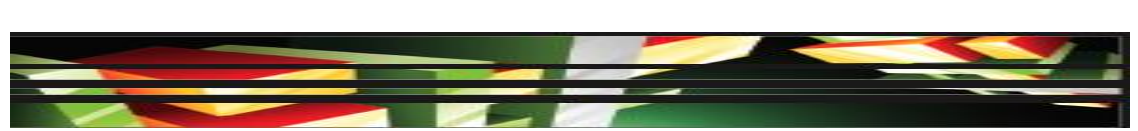
- You can create three types of symbols: movie clip, button, and graphic.

TYPE	ICON	DESCRIPTION
Movie clip		Used when you want the symbol to have its own nested timeline, independent from the main timeline; the nested timeline can be used to create an animation that can be reused; movie clips are also scriptable with ActionScript
Button		Responds to a mouse click, pointer rolling over it, or other action that you have defined; graphics need to be assigned to the various states of the button, and the actions are assigned to the button instance
Graphic		Used to create reusable static images



Objective 4.6 Create Objects and Convert Them to Symbols, Including Graphics, Movie Clips, and Buttons (Continued)

- Flash stores and organizes symbols in the Library.
- You can create a new symbol by drawing an object or converting an existing object or shape on the Stage.
- Button symbols have their own Timeline with four frames representing each of the states of a button: Up, Over, Down, and Hit.
- You can edit states on the button Timeline by double-clicking the button.



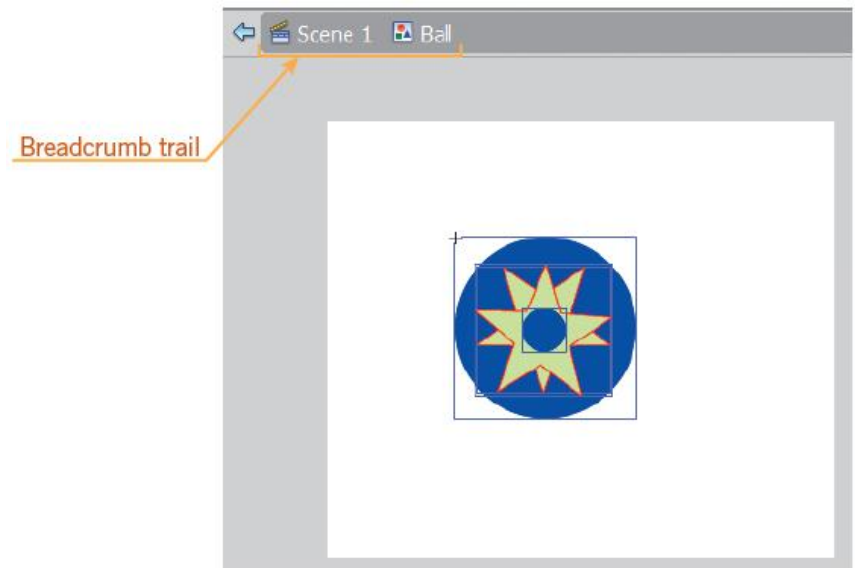
Objective 4.7 Understand Symbols and the Library

- The Library stores assets for your Flash project.
- Assets can include symbols, vector graphics, bitmaps, video, and sound.
- Using symbols in your Flash project reduces file size, improves consistency, makes editing easier and global, and allows you to share symbols between projects.
- When you place a symbol on the Stage, it is referred to as an **instance** of a symbol.



Objective 4.8 Edit Symbols and Instances

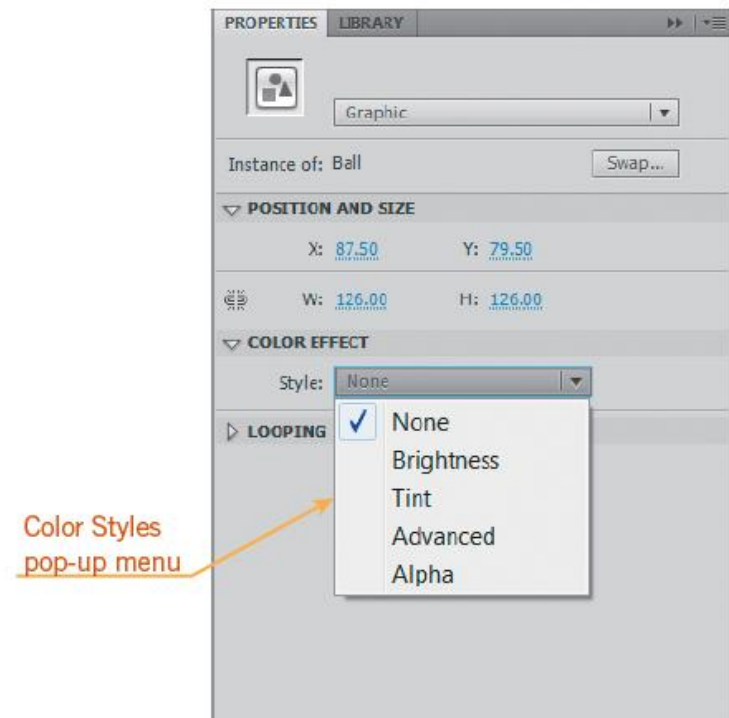
- If you want to edit a symbol in the Stage or Library, double-click the symbol or select the symbol and then click Edit Symbols on the Edit menu.
- A breadcrumb trail is created next to the scene in the Edit bar.





Objective 4.8 Edit Symbols and Instances (Continued)

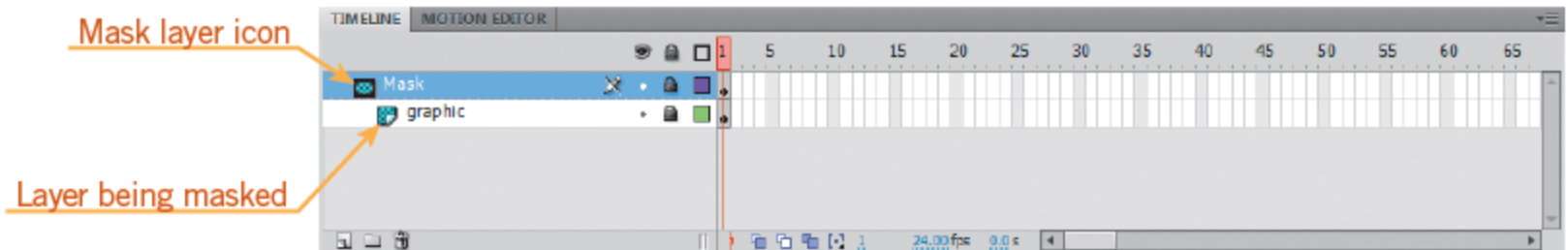
- The brightness, tint, and transparency of an instance of a symbol can be modified in the Color Effect section of the Property inspector by clicking the Color styles pop-up menu.





Objective 4.9 Create Masks

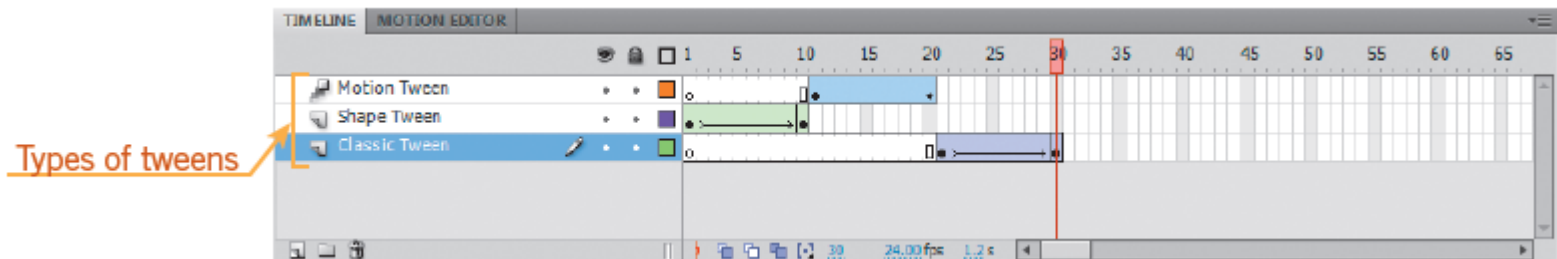
- A Mask layer is used to make visible only portions of the layer that are positioned below the mask layer; you can use the shape on one layer to act as a window and show parts of an image beneath it.
- A Mask layer is identified by a Mask Layer icon, and the layer being masked is indented under the Mask layer.

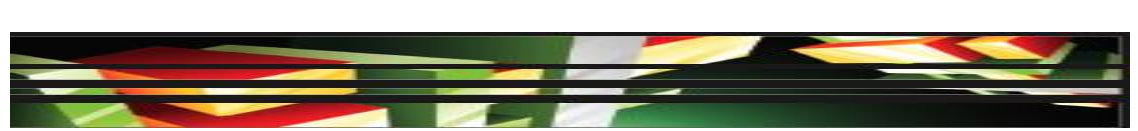




Objective 4.10 Create Animations

- **Animation Terms**
- A **classic tween** is a keyframe-based motion tween, and it is denoted in the Timeline with a purple fill and a continuous arrow.
- You can animate symbols and editable text with a **motion tween**; it is denoted in the Timeline with a blue fill.
- You can morph basic shapes with a **shape tween**; it is denoted in the Timeline with a green fill and a continuous arrow.





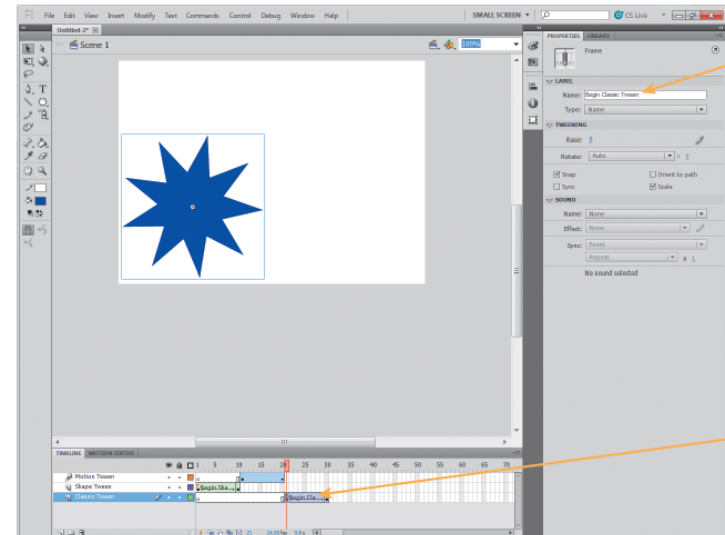
Objective 4.10 Create Animations (Continued)

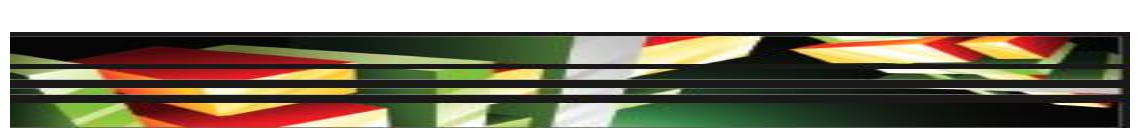
- **Animation Terms (Continued)**
- The most basic type of animation is the **keyframe animation**, also referred to as frame-by-frame animation.
- A **keyframe** is a frame that has a different instance of a symbol or shape from the previous keyframe.
- A **blank keyframe** is a placeholder keyframe that does not have any content on it.
- The different types of frames can be added to the Timeline by selecting Timeline from the Insert menu, or by right-clicking a specific frame in the Timeline.



Objective 4.10 Create Animations (Continued)

- **Advantages of Using Frame Labels**
- Frame labels help identify frames, organize content, provide contents for documentation, and serve as reference anchors when writing action scripts.





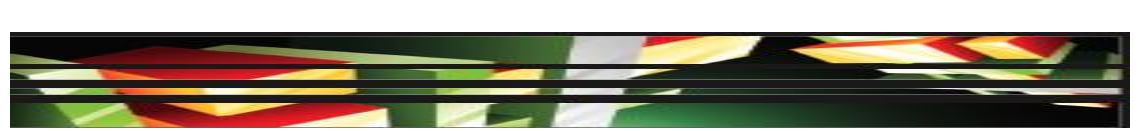
Objective 4.10 Create Animations (Continued)

- **Working with Tweens**
- You create a shape tween by drawing a vector shape on a frame you designate as a keyframe, and then you change the shape or draw a new shape at the end frame you designate as a keyframe.
- Next, you select the first keyframe in the animation, and then click Shape Tween on the Insert menu.



Objective 4.10 Create Animations (Continued)

- **Working with Tweens (Continued)**
- The process for creating a motion tween consists of the following:
 1. Place a symbol on a designated frame.
 2. Create a blank frame in the frame where you want your animation to end.
 3. With the first keyframe selected, select the Motion Tween command from the Insert menu.
 4. Move your pointer to the last frame, and drag the symbol to the location where you want your animation to end.



Objective 4.10 Create Animations (Continued)

- **Working with Tweens (Continued)**
- When animating text, you can animate the text as text or as a symbol, or you can break the text apart and animate the text as a shape.
- **Inverse kinematics** is the final method of animating in Flash. This type of animation uses bones to adjust or animate parts of a shape, eliminating the need to draw separate versions of an object to represent different movements.



Objective 4.11 Add Simple Controls Through ActionScript 3.0

- ActionScript is an object-oriented programming language that allows you to add interactivity or automate animations in your Flash project.
- ActionScript is written in the Actions panel; be aware that punctuation and capitalization are very important with ActionScript.
- Writing code in ActionScript 3.0 is similar to writing HTML, CSS, or Java in Dreamweaver.
- A certain set of rules, known as **syntax**, needs to be followed.



Objective 4.11 Add Simple Controls Through ActionScript 3.0 (Continued)

- Basic concepts of object-oriented programming

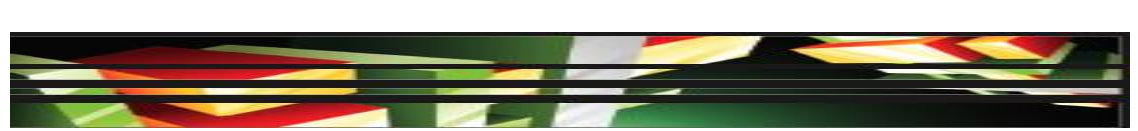
TERM	DEFINITION
class	Determines the rules that are applied; objects, properties, methods, and events are members of the class
object	Items in a Flash document that can be manipulated, such as movie clips, buttons, graphics, and text fields
method	The action an object can do
property	Characteristics applied to an object in the Property inspector
variable	A method of storing data; data may change or be altered during the running of the Flash movie
function	A block of code that is named so that it can be reused, analogous to creating a CSS style in Dreamweaver



Objective 4.11 Add Simple Controls Through ActionScript 3.0 (Continued)

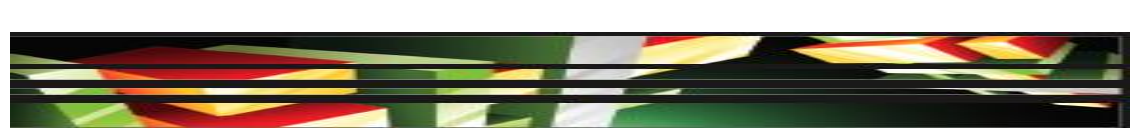
- You add interactivity using a process called event handling.

TERM	DEFINITION
Event source	The object the event will happen to
Event listener	A function written to react to an event, such as the click of the mouse
Listener function	Where an action is specified



Objective 4.11 Add Simple Controls Through ActionScript 3.0 (Continued)

- You can add code in the Actions panel using ScriptAssist mode.
- ScriptAssist provides prompts for the code and helps you avoid syntax and logic errors.
- The easiest way to add actions to your Flash document is through the Code Snippets panel.
- Code snippets are divided into six categories: actions, timeline navigation, animation, load and unload, audio and video, and event handlers.



Objective 4.12 Import and Use Sound

- You can easily add sound to a Flash movie by dragging a sound file from the Library to the Stage.
- Flash accepts a variety of audio file formats, including ASND, WAV, AIFF, and MP3.
- Sound can be used to create a soundtrack for an animation, add sound effects to buttons, or any other way you can imagine.

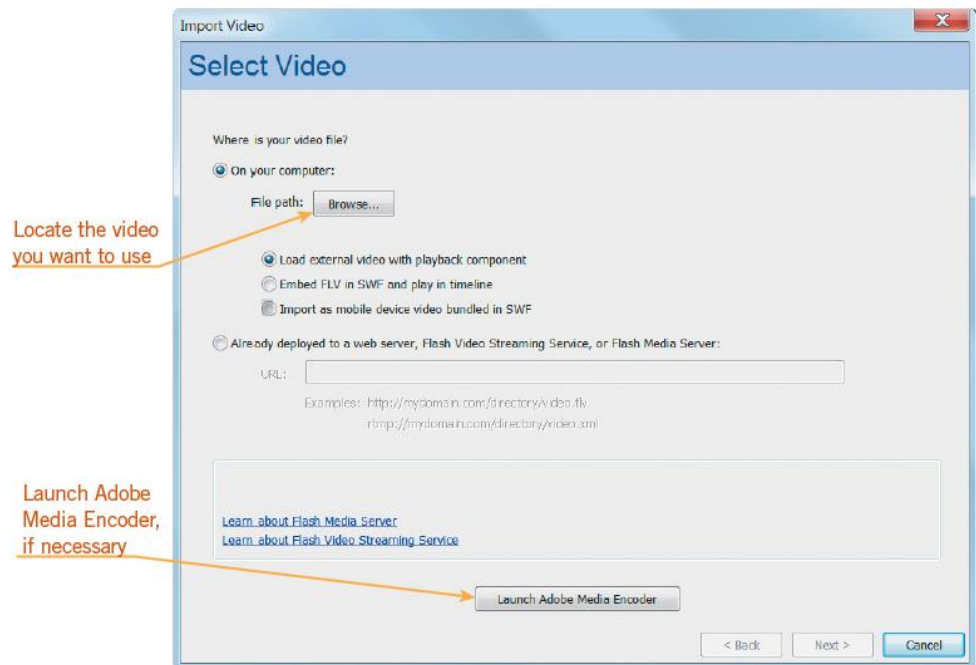


Objective 4.12 Import and Use Sound (Continued)

- There are two types of sound used in Flash: stream and event.
- An **event sound** must download completely before it begins playing.
- A **stream sound** begins to play as soon as enough frames have downloaded.
- Effects, such as Fade In and Fade Out, can be applied to the audio by selecting the Effects pop-up menu in the Audio Property inspector.

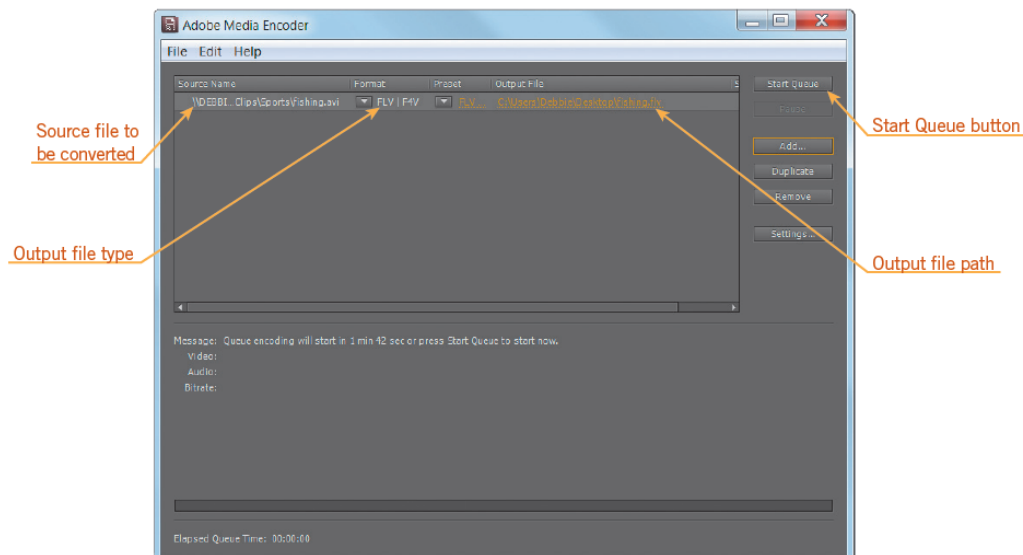
Objective 4.13 Add and Export Video

- To import a movie, click File on the Application bar (Win) or Menu bar (Mac), point to Import, and then click Import Video.
- The Import Video Wizard is activated and steps you through the process.



Objective 4.13 Add and Export Video (Continued)

- The Adobe Media Encoder is a stand-alone application used to convert a video's file extension.





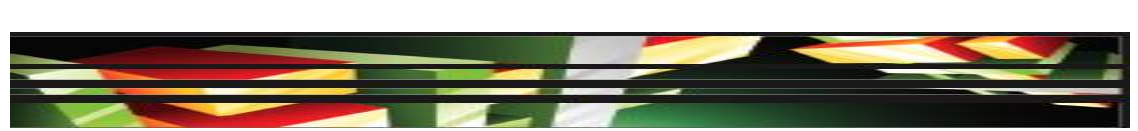
Objective 4.13 Add and Export Video (Continued)

- You have the option to embed the video into your Flash project by loading the video with a video skin player, embedding the video to play in the Timeline, or importing it as an SWF on a mobile device.
- You can also choose to link the video to an external source to keep your final movie file smaller and allow the video to be edited externally without having to replace it later in the Flash document and republish your movie.



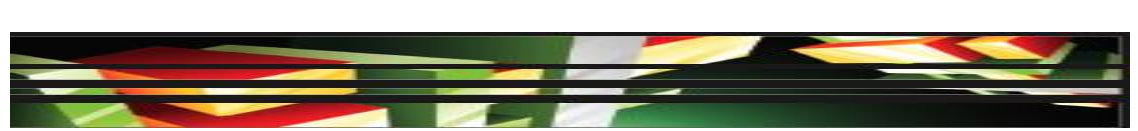
Objective 4.14 Publish and Export Flash Documents

- When preparing your Flash document for publishing or export, remember it is important to optimize your Flash document first.
- Flash source files have the .fla file extension. You can edit FLA files in Flash.
- You can publish a Flash movie with an .swf, .flv, or .html file extension.
- In addition, you can publish your Flash movie as a QuickTime movie.



Objective 4.14 Publish and Export Flash Documents (Continued)

- When publishing a Flash movie for deployment on the Internet, it is important to consider adding Flash Player detection.
- If the user does not have Flash Player installed, your content cannot be viewed.
- The Flash Player Detection Kit provides a variety of templates to determine the version of Flash Player installed on a user's computer, and it installs the latest version if necessary.



Objective 4.15 Make a Document Accessible

- If you have repetitive elements in a Flash document or if an object does not express any content, you may want to consider hiding those objects from a screen reader.
- When you hide an object the screen reader will not recognize the object, thus making the content easier to understand for the user.
- To hide an object, select the item on the Stage, and then in the Accessibility panel deselect the Make Object Accessible check box.



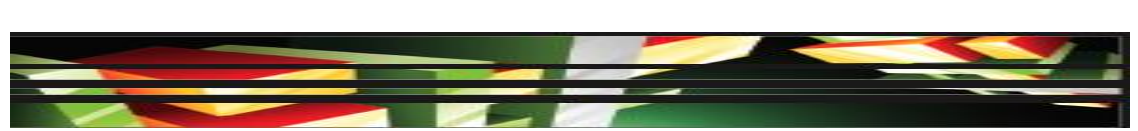
Summary

- Objective 4.1 Make rich media content development decisions based on your analysis and interpretation of design specifications
- Objective 4.2 Use tools on the Tools panel to select, create, and manipulate graphics and text
- Objective 4.3 Import and modify graphics
- Objective 4.4 Create text
- Objective 4.5 Adjust text properties



Summary (continued)

- Objective 4.6 Create objects and convert them to symbols, including graphics, movie clips, and buttons
- Objective 4.7 Understand symbols and the Library
- Objective 4.8 Edit symbols and instances
- Objective 4.9 Create masks
- Objective 4.10 Create animations
- Objective 4.11 Add simple controls through ActionScript 3.0



Summary (continued)

- Objective 4.12 Import and use sound
- Objective 4.13 Add and export video
- Objective 4.14 Publish and export Flash documents
- Objective 4.15 Make a document accessible