

COMSC-032

**Web Site Development-
Flash**



Part-Time Instructor: Joenil Mistal

Chapter 7



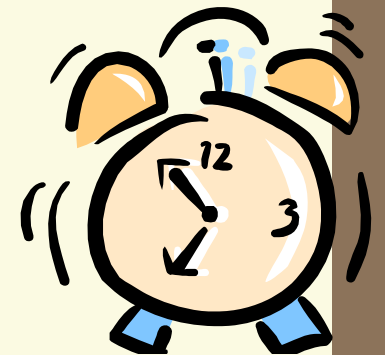
7

Working with the Timeline

The Flash Timeline is made up of layers and frames. Layers are a representative of depth in space, while frames are a representation of time. Frames can be used for building an animation over time. They can also be used for creating different states of your Flash project, much like interactive slides in a slide show.

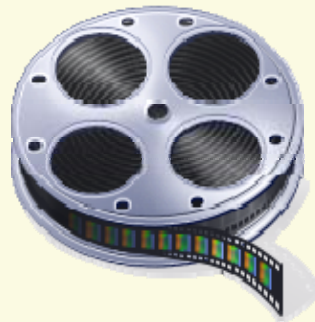
Chapter 7 Topics: Working the Timeline

- Introduction to Frames
- Add and Remove Frames and Keyframes
- Add Frame Labels
- Move Frames
- Cut, Copy, and Paste Frames
- Reverse Frames
- Preview Frames in the Timeline



Introduction to Frames

- You can use frames to create the illusion of motion and change across time.
- **Frames** are the backbone and building blocks of your animation effects.
- When you start a new Flash file, it opens with a single layer and hundreds **placeholder** frames in the Timeline.



Introduction to Frames

- You can insert frames to each layer you add to the **Timeline**.
- Before you start animating objects, you need to understand how frames work.



Introduction to Frames

Frame Rates

- The number of frames you use in your Flash movie combined with the speed at which they play determines the length of the movie.
- By default, new Flash files you create use a frame rate of **24 frames per second** or 24 fps.
- You can set a frame rate higher or lower than the default if needed.

Introduction to Frames

Frame Types

- You can work with several different types of frames in the Flash Timeline:

Placeholder
Frames

Regular
Frames

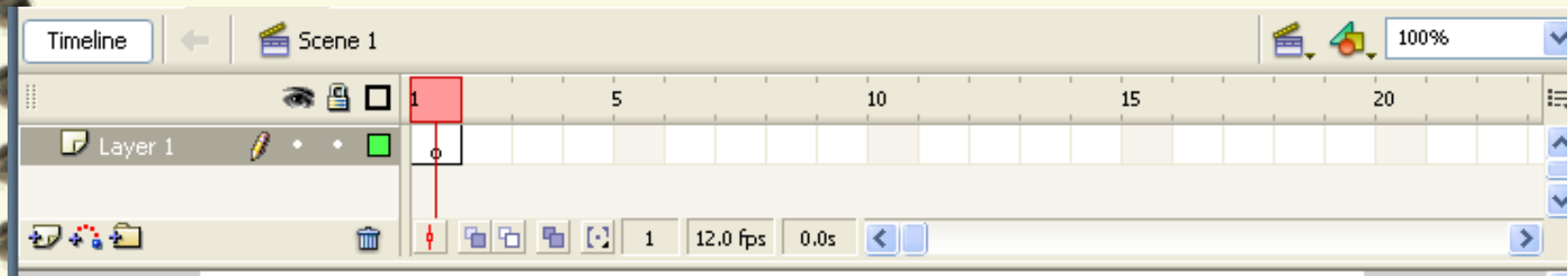
Keyframes

Tweened
frames

Introduction to Frames

Frame Types

- Frames appear as **tiny boxes** in the Timeline.
- By default, the frames appear in Normal size; however you can use the Timeline Options Menu to change the appearance of frames in your Timeline.



Introduction to Frames

Placeholder Frames

- A placeholder frame is merely an **empty** frame.
- It has **no content**. When your movie reaches an empty frame, it stops playing.
- With the exception of the first frame in a new layer, the remaining frames are all placeholders until you assign another frame type.

Introduction to Frames

Keyframes

- A keyframe defines a change in animation, such as object moving or taking on a new appearance.
- By default, Flash inserts a **blank keyframe** for you in the first frame of every new layer you add to the Timeline.
- When you add a **keyframe**, it duplicates the content from the previous keyframe. This technique makes it easy to tweak the contents slightly to create the illusion of movement between frames.

Introduction to Frames

Regular (Static) Frames

- Regular frames or static display the **same content** as the previous frame in the Timeline.
- Regular frames must be preceded by a keyframe.
- Regular frames are used to hold content that you want to remain visible until you add another keyframe in the layer.

Introduction to Frames

Tweened Frames

- One way to create animation in a movie is to allow Flash to **calculate the number of frames** between two keyframes to create movement.
- Called tweening, Flash determines the **in-between positions** of the animated object from one keyframe to the next and spaces out the changes in the tweened frames between the two keyframes..

Add and Remove Frames and Keyframes (pg 140)

- You can add **frames** and **keyframes** to add time to your Flash movie.
- **Keyframes** are used for critical points in the Timeline where your content changes.
- Keyframes are also used to mark the beginning or end of an animation.
- You can add or remove frames to adjust timing between keyframes.

Add Keyframes

(pg 140)



Insert a Keyframe

1. Click the **Timeline** tab
2. Click a **frame** on the Timeline to select your keyframe's location.
3. Right-click on your selected frame and click **Insert Keyframe**.

demo

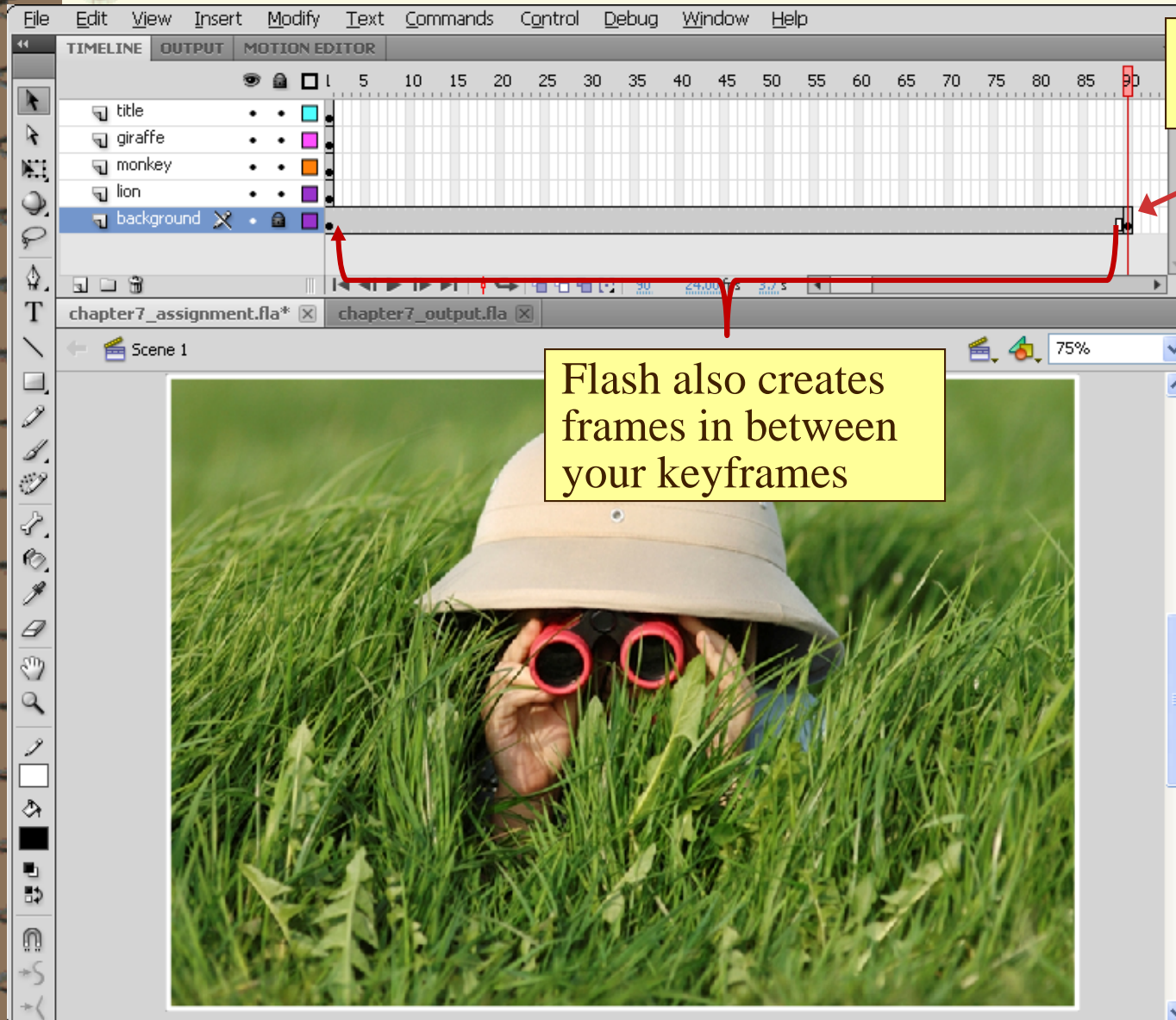
Insert a Keyframe (pg 140)

The screenshot displays the animation software interface. At the top, the menu bar includes File, Edit, View, Insert, Modify, Text, Commands, Control, Debug, Window, and Help. Below the menu bar is the TIMELINE panel, which shows a grid of frames from 5 to 90. A red arrow labeled '1' points to the 'INSERT' menu option in the top menu bar. The timeline panel lists several layers: title, giraffe, monkey, lion, and background. A red arrow labeled '2' points to the end of the timeline. A context menu is open over the timeline, with 'Insert Keyframe' selected. A red arrow labeled '3' points to the preview window, which shows a scene titled 'Wild Safari Adventure' with a character wearing a hat and binoculars, and three circular inset images of a lion, a monkey, and a giraffe.

- Create Motion Tween
- Create Shape Tween
- Create Classic Tween
- Insert Frame**
- Remove Frames
- Insert Keyframe**
- Insert Blank Keyframe
- Clear Keyframe
- Convert to Keyframes
- Convert to Blank Keyframes
- Cut Frames
- Copy Frames
- Paste Frames**
- Clear Frames
- Select All Frames
- Copy Motion
- Copy Motion as ActionScript 3.0...
- Paste Motion
- Paste Motion Special...
- Reverse Frames
- Synchronize Symbols
- Actions



Insert a Keyframe (pg 140)



Flash creates your keyframe

Flash also creates frames in between your keyframes

Remove Frames (pg 141)



Remove Frames

1. Right-click on any of the selected frames
2. Click **Remove Frames**



Remove Frames (pg 141)

The screenshot displays the animation software interface with the following elements:

- Timeline:** A horizontal timeline at the top with frame numbers from 5 to 90. A red bracket labeled "1" spans from frame 85 to 90.
- Layer List:** A list of layers on the left: title, giraffe, monkey, lion, and background. The "background" layer is selected.
- Context Menu:** A right-click context menu is open over the selected frames. The "Remove Frames" option is highlighted in blue. A red arrow labeled "2" points to this option.
- Preview Window:** The bottom window shows a scene with a person wearing a tan hat and red binoculars, peering through tall green grass.
- Interface Elements:** A menu bar at the top (File, Edit, View, Insert, Modify, Text, Commands, Control, Debug, Window, Help), a toolbar on the left, and a Properties/Library panel on the right.

Add Keyframes (pg 140)



Insert a Keyframe

1. Click the **Timeline** tab
2. Click a **frame** on the Timeline to select your keyframe's location.
3. Right-click on your selected frame and click **Insert Keyframe**.



Insert a Keyframe (pg 140)

The screenshot displays the Adobe Animate software interface. The top menu bar includes File, Edit, View, Insert, Modify, Text, Commands, Control, Debug, Window, and Help. The 'Insert' menu is open, showing options like Create Motion Tween, Create Shape Tween, Create Classic Tween, Insert Frame, Remove Frames, **Insert Keyframe** (highlighted), Insert Blank Keyframe, Clear Keyframe, Convert to Keyframes, Convert to Blank Keyframes, Cut Frames, Copy Frames, Paste Frames, Clear Frames, Select All Frames, Copy Motion, Copy Motion as ActionScript 3.0..., Paste Motion, Paste Motion Special..., Reverse Frames, Synchronize Symbols, and Actions.

The timeline at the top shows a sequence of frames from 1 to 90. A red arrow labeled '1' points to the 'Insert' menu. A red arrow labeled '2' points to frame 40 on the timeline. A red arrow labeled '3' points to the 'Insert Keyframe' option in the context menu. The main workspace shows a scene with a giraffe wearing a hat and binoculars, set against a background of tall grass.



Insert a Keyframe (pg 140)



Flash creates your keyframe

Add Frames (pg 141)



Add Frames

1. Right click on the Timeline where you want to add frames
2. Select **Insert Frame**.

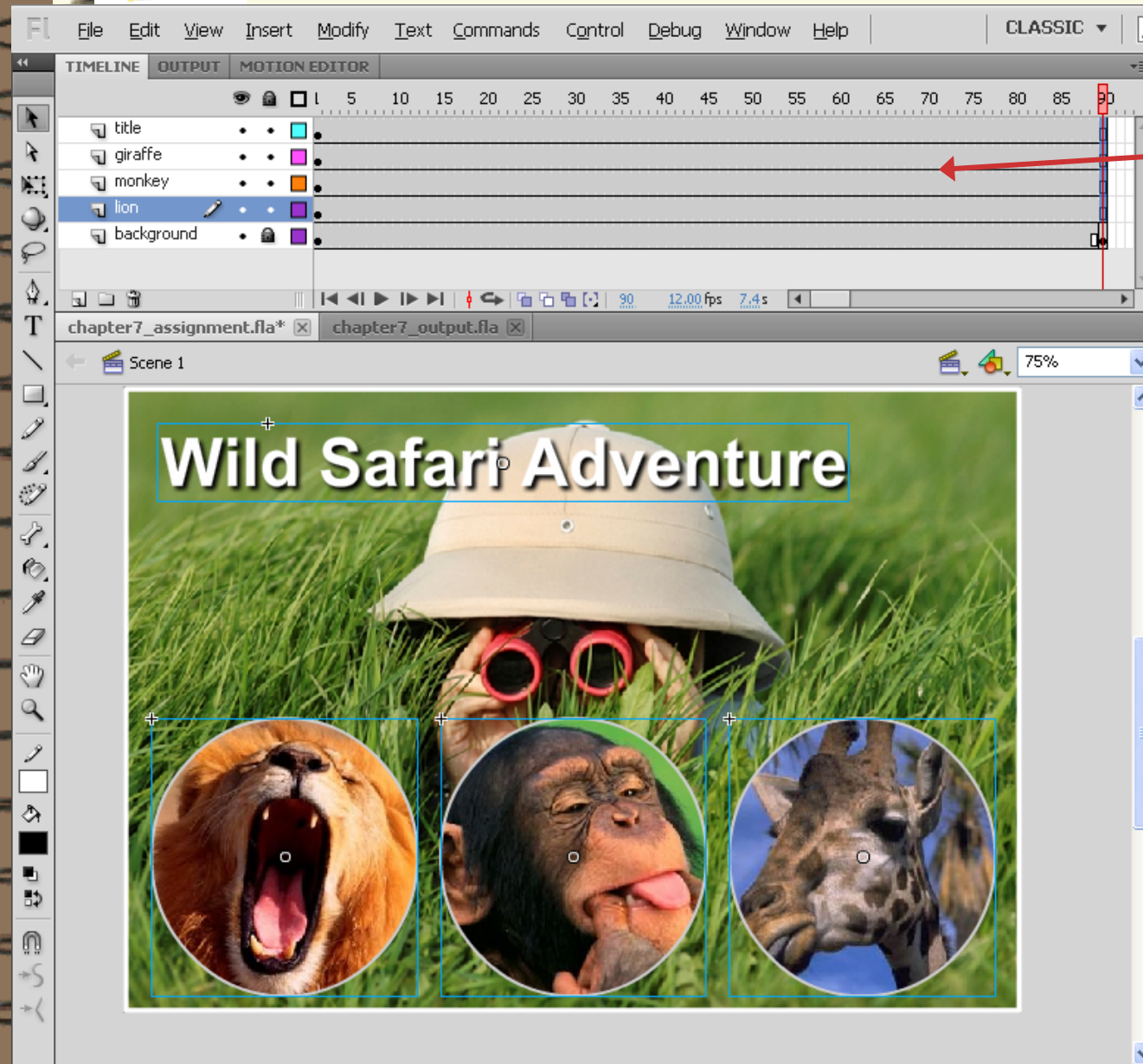
demo

Add Frames (pg 141)

The screenshot displays the Adobe Flash CS5.5 interface. The top menu bar includes File, Edit, View, Insert, Modify, Text, Commands, Control, Debug, Window, and Help. The main workspace is divided into several panels: the Timeline (top left), Output (top middle), Motion Editor (top right), Properties (middle right), and Library (far right). The Timeline panel shows a sequence of frames from 1 to 90. A red bracket labeled '1' highlights the frames from 85 to 90. A red arrow labeled '2' points from the 'Insert Frame' option in the context menu to the timeline. The context menu is open, showing options such as 'Create Motion Tween', 'Create Shape Tween', 'Create Classic Tween', 'Insert Frame', 'Remove Frames', 'Insert Keyframe', 'Insert Blank Keyframe', 'Clear Keyframe', 'Convert to Keyframes', 'Convert to Blank Keyframes', 'Cut Frames', 'Copy Frames', 'Paste Frames', 'Clear Frames', 'Select All Frames', 'Copy Motion', 'Copy Motion as ActionScript 3.0...', 'Paste Motion', 'Paste Motion Special...', 'Reverse Frames', 'Synchronize Symbols', and 'Actions'. The main workspace shows a scene with a person wearing a hat and binoculars, standing in tall grass. The bottom status bar indicates 'Scene 1' and a zoom level of '75%'.

demo

Add Frames (pg 141)



Flash inserts frames up to your inserted frame

Add and Remove Frames and Keyframes (pg 141)



How can I add and remove frames using keyboard shortcuts?

Flash has keyboard shortcuts for almost all of its functions. And as a general rule, Flash uses the <Shift> modifier for opposite commands.

To add frames, press <F5>

To remove frames, press <Shift><F5>

To add keyframes, press <F6>

To remove keyframes, press <Shift><F6>

Add and Remove Frames and Keyframes (pg 141)



When should I use Insert Blank Keyframe?

A **blank keyframe** is exactly the same as a regular keyframe.


The only difference is that Flash automatically removes all of your content from Stage at a blank keyframe. That way, if you want to start fresh at a certain point on the Timeline, you don't have to manually delete objects from the Stage.

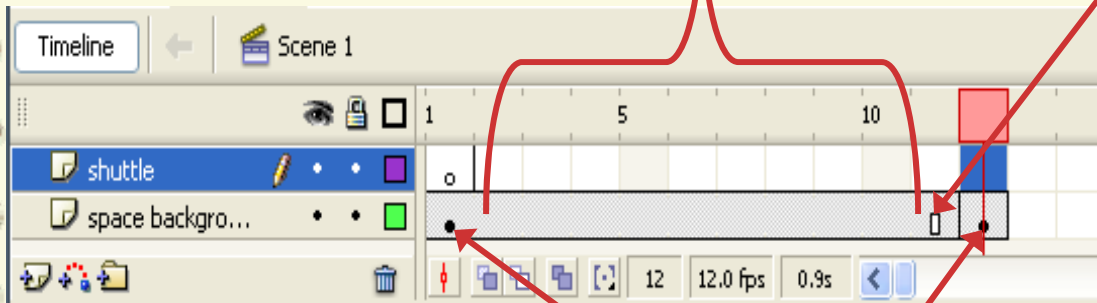
Add and Remove Frames and Keyframes




How can I tell which frames are which in the Timeline?

In-between frames contain content appear tinted or grayed

Flash places a hollow box  preceding a keyframe



Keyframes with content appear with a solid bullet 

Add and Remove Frames and Keyframes



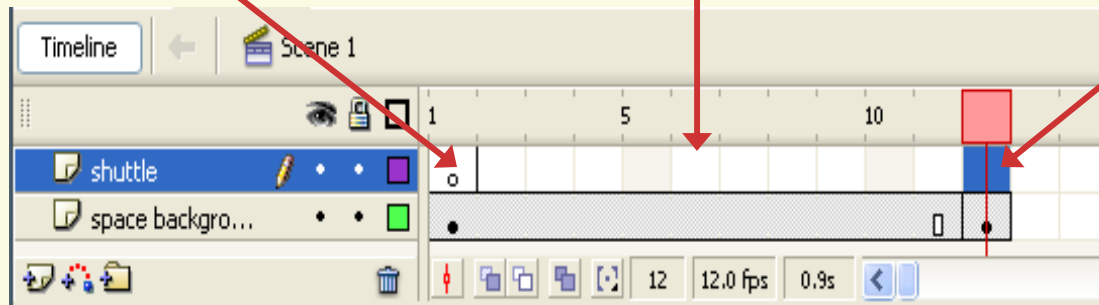
How can I tell which frames are which in the Timeline?

Blank keyframes

have no content added yet. Appear as hollow bullets ○

Empty frames appear white □

Flash highlights selected frames in black



Add Frame Labels (pg 142)

- **Frame Labels** are a great way to keep the Timeline organized.
- You can add a label to any keyframe, although the general convention is to create a specific layer for all of your labels.

Add Frame Labels (pg 142)



Create a Name Label

1. Click on your **keyframe** to select it
2. Open the **Properties inspector**
3. In the **Label section** type a name for your label.
4. In the Type drop-down list, select **Name**



Create a Name Label (pg 142)

File Edit View Insert Modify Text Commands Control Debug Window Help CLASSIC CS Live

TIMELINE OUTPUT MOTION EDITOR

5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90

title Wild Safari Adventure

giraf

monkey

lion

background

Your label appears on the Timeline

chapter7_assignment fla* chapter7_output fla

Scene 1 75%

Wild Safari Adventure

PROPERTIES LIBRARY

Frame

LABEL

Name: Wild Safari Adventure

Type: Name

SOUND

Name: None

Effect: None

Sync: Event

Repeat x 1

No sound selected

Add Frame Labels (pg 143)



Create a Comment Label

1. Click on the **keyframe** to select it.
2. Open the **Properties inspector**
3. In the **Label section**, type a name for your label
4. Click the Type drop-down list and select **Comment**



Create a Comment Label (pg 143)

The screenshot displays the Adobe Animate workspace. The timeline at the top shows a video clip named "background" with a comment label icon (a small 'L' in a square) at the 5-second mark. The properties panel on the right is open to the "LABEL" section, showing the name of the label as "This is the movie background" and its type set to "Comment". A yellow callout box with a black border contains the text: "Comment labels are identified by the Frame Label comment icon". The main preview window shows a video of a person in a safari hat looking through binoculars, with three circular inset images of a lion roaring, a monkey sticking its tongue out, and a giraffe's head.

1 → 2 → 3 → 3

Comment labels are identified by the Frame Label comment icon

Wild Safari Adventure

Add Frame Labels (pg 143)



Why use a Name label instead of a Comment label?

Comment labels are used to write notes for yourself or to other people working with your Flash document. They are not exported as part of your Flash movie.

Name labels are not only good for organizing your Flash document, but they are also useful to ActionScript.

Add Frame Labels (pg 143)



What is the Anchor label type for?

Anchors are designed to enable users to bookmark specific sections of a Flash-based Web site and to enable usability features of the browser like the Back button.

Move Frames (pg 144)

- You can move **frames** and **keyframes** around the Timeline, much like splicing a film together.
- You will want to move frames around often in order to keep your layers in sync with each other as you create animation.

Move Frames (pg 144)



Move Frames

1. Click and drag to **select frames** on the Timeline
2. Move your mouse over the **selected frames**
3. Click and **drag** the selected frames
4. Release the mouse button
5. Flash moves your selected frames



Move Frames (pg 144)

File Edit View Insert Modify Text Commands Control Debug Window Help CLASSIC

TIMELINE OUTPUT MOTION EDITOR

5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

title Wild Safari Adventure
giraffe
monkey
lion
background This is the movie background

chapter7_assignment fla* chapter7_output fla

Scene 1 75%

Wild Safari Adventure

Wild Safari Adventure

Wild Safari Adventure



Move Frames (pg 144)

Flash creates frames and keyframes, if necessary, where you insert your frames

Move Frames (pg 145)



Move Frames

6. Select any frames that Flash added that you do not want.
7. Right-click on your selected frames and click **Remove frames.**



Move Frames (pg 145)

The screenshot shows the Adobe Animate software interface. The timeline at the top displays a sequence of frames from 5 to 115. A red bracket labeled '6' highlights a range of frames from approximately frame 90 to frame 100. A red arrow labeled '7' points to the 'Remove Frames' option in a context menu that is open over the timeline. The context menu includes options such as 'Create Motion Tween', 'Insert Frame', 'Remove Frames', 'Insert Keyframe', 'Cut Frames', 'Copy Frames', 'Paste Frames', 'Clear Frames', 'Select All Frames', 'Copy Motion', 'Paste Motion', 'Reverse Frames', and 'Synchronize Symbols'. The main workspace shows a scene with a circular image of a lion's face.



Move Frames (pg 145)

File Edit View Insert Modify Text Commands Control Debug Window Help CLASSIC

TIMELINE OUTPUT MOTION EDITOR

5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115

title • • • Wild Safari Adventure

giraffe • • •

monkey • • •

lion • • •

background • • • This is the movie background

chapter7_assignment.fla* chapter7_output.fla

Scene 1 75%

Wild Safari Adventure

Wild Safari Adventure

lion

monkey

giraffe

Your unwanted frames are deleted.

Move Frames (pg 145)



Move a KeyFrame

1. Move your mouse over the **selected Keyframe**
2. Click and **drag** the selected frames
3. Release the mouse button
4. Flash moves your selected Keyframe



Move a KeyFrame

File Edit View Insert Modify Text Commands Control Debug Window Help

TIMELINE OUTPUT MOTION EDITOR

5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 9

title	• •	Animal Kingdome	Wild Safari Adventure
giraffe	• •		
monkey	• •		
lion	• •		
background	• •	This is the movie background	

12.00 fps 0.0 s

agenda_REV.fla chapter7_assignment.fla*



demo

Move a KeyFrame

The screenshot shows the 'MOTION EDITOR' tab of an animation software. The timeline at the top is marked from 0 to 95. The 'monkey' layer has a keyframe at approximately frame 30, indicated by a red arrow labeled '2'. The 'lion' layer has a keyframe at approximately frame 30, indicated by a red arrow labeled '3'. The 'title' layer has keyframes at frames 0 and 30. The 'giraffe' layer has a keyframe at frame 30. The 'background' layer has a keyframe at frame 30. The software interface includes a menu bar (File, Edit, View, Insert, Modify, Text, Commands, Control, Debug, Window, Help) and a toolbar on the left.





Move Frames (pg 145)

I accidentally dropped my frames in the wrong place. What should I do?

Like most well-designed applications, Flash has an **Undo command**.

Any time you perform a task in Flash, you can reverse it.

To undo your mistake, click **Edit** and then **Undo**.

You can also open your History panel, and using the slider to step back through your history.

Cut, Copy, and Paste Frames

(pg 146)

- You can cut, copy, and paste elements in Flash just like you do in most other programs.
- Flash allows you not only to cut, copy, and paste elements on the Stage, but also allows you to use these commands to modify frames on the Timeline.

Cut, Copy, and Paste Frames

(pg 146)



Cut Frames

1. Click and drag to **select frames** on the Timeline
2. Move your mouse over the **selected Frames**
3. Right-click on the selected frames and click **Cut Frames**



Cut Frames (pg 146)

The screenshot shows the Adobe Animate interface with the 'MOTION EDITOR' tab selected. The timeline at the top shows a sequence of frames from 0 to 105. A red box highlights the frame at approximately 20 seconds. A context menu is open over this frame, with the 'Cut Frames' option highlighted in blue. Red arrows labeled 1, 2, and 3 point to the frame selection, the context menu, and the 'Cut Frames' option respectively. The main workspace displays a scene titled 'Scene 1' with a background image of a person wearing a hat and binoculars in a grassy field. A circular inset image of a giraffe's head is visible in the bottom right corner of the workspace.

- 1. Points to the frame selection on the timeline.
- 2. Points to the context menu.
- 3. Points to the 'Cut Frames' option in the context menu.



Cut Frames (pg 146)

The screenshot shows the Adobe Flash timeline editor. The timeline is set to 12.00 fps. A red vertical line is positioned at frame 46. A yellow callout box with a black border contains the text: "The frames are cut from the Timeline, and Flash automatically adds blank keyframes where necessary". A red arrow points from the callout box to the red vertical line. The timeline shows several layers: "title", "giraffe", "monkey", "lion", and "background". The "giraffe" layer is selected. The video preview window shows a scene with a person in a hat and binoculars, with circular insets of a lion and a monkey.

The frames are cut from the Timeline, and Flash automatically adds blank keyframes where necessary

Cut, Copy, and Paste Frames

(pg 146)



Copy and Paste Frames

1. Click and drag to **select frames** on the Timeline.
2. Move your mouse over the **selected frames**
3. Right-click on the selected frames and click **Copy Frames**
4. Click on the Timeline where you want to insert your pasted frames
5. Right click on the frames you have selected and click **Paste Frames**.

Cut, Copy, and Paste Frames

(pg 146)



How can I select frames without clicking and dragging?

You can select multiple frames by holding down the **Shift key** and clicking two points on the Timeline.

You can also **double-click** any frame to select a section of the Timeline between keyframes.

And you can right-click the Timeline and click **Select All Frames** to select every frame on the Timeline.

Cut, Copy, and Paste Frames

(pg 146)



Is there a quick way to duplicate frames?

Yes. Select the frames you want to duplicate. Then hold down the **<Alt><Option>** key and drag your frames to a new location on the Timeline.

Your frames are duplicated much like a copy-and-paste operation.

Reverse Frames (pg 148)

- If you have something animate onto the Stage, many times you will want the same animation to play backwards as it animates off the Stage, **Reverse Frames** is a great timesaver for achieving such an effect.
- Reversing frames is also a quick way to reorder a slide show.

Reverse Frames (pg 148)



Reverse Frames

1. Click and drag to **select frames** on the Timeline
2. Right-click on your selected frames
3. Click **Reverse Frames**

demo

Reverse Frames (pg 148)

The screenshot displays the Adobe Animate interface. At the top, the menu bar includes 'File', 'Edit', 'View', 'Insert', 'Modify', 'Text', 'Commands', 'Control', 'Debug', 'Window', and 'Help'. A red arrow labeled '1' points to the 'Window' menu. Below the menu bar, the 'TIMELINE' panel shows a sequence of frames from 0 to 105. A red arrow labeled '2' points to frame 90. A context menu is open over frame 90, listing various actions. A red arrow labeled '3' points to the 'Reverse Frames' option, which is highlighted in blue. The main workspace shows a scene titled 'Scene 1' with a video frame of a person in a hat looking through binoculars. Below the video are three circular inset images: a lion roaring, a monkey sticking its tongue out, and a giraffe's head.

demo

Reverse Frames (pg 148)

The screenshot displays an animation software interface with a timeline at the top. The timeline has a ruler from 0 to 105. A red vertical line is positioned at frame 45. A red arrow points from the text box to a small icon on the 'giraffe' layer at frame 45. The 'giraffe' layer is highlighted in blue. Other layers include 'title', 'monkey', 'lion', and 'background'. The preview window shows a person wearing a tan hat and red binoculars, looking through tall green grass. The text 'Animal Kingdome' is overlaid on the top left of the preview window.

Your frames are reversed on the Timeline

Preview Frames in the Timeline

(pg 148)

- You can view the Timeline in a way that is more like a **filmstrip** where you can see the content of your keyframes on the Timeline itself.

Preview Frames in the Timeline

(pg 148)



Preview Frames in Timeline

1. Open the **Timeline panel**.
2. Click the menu in the upper-right corner of the panel.
3. Click **Preview**

demo

Preview Frames in Timeline

The screenshot displays the software interface with the following elements:

- Timeline:** Shows a sequence of frames. The 'background' layer is selected, and a thumbnail image of a lion is visible in the frame.
- Context Menu:** Opened over the timeline, showing options like 'Tiny', 'Small', 'Normal', 'Medium', 'Large', 'Preview' (highlighted), 'Preview in Context', 'Short', 'Tinted Frames', 'Help', 'Close', and 'Close Group'.
- Callout Box:** A yellow box with the text: "The Timeline shows thumbnail images of the contents of your frames".
- Preview Window:** Displays a scene titled "Wild Safari Adventure" featuring a person in a hat and three circular inset images of a lion, a monkey, and a giraffe.