

## FLASH 5 LECTURE

Directions: Deliver the following lecture to your students while they take notes. This page is not meant to be distributed to students. It is meant to be a guided lecture. Please read the contents carefully prior to class so that you can answer any questions students may have.

### Symbols and the Library

Today's lesson will be dealing with the conversion of Shapes—artwork and text, which is also a Shape—into Symbols and the storage of such Symbols into the Library of Flash.

When you work with more complex Flash movies, you'll find that you reuse certain Shapes again and again. Flash provides a way to save the Shape into the Library where it can be re-used. This produces a smaller file size and also gives you, the designer, the ability to make changes on groups of Shapes all at once. (In addition, it is possible to share Libraries among Flash movies. We will not be discussing this feature in these lessons.)

There are three types of Symbols in Flash:

- Movie Clips
- Buttons
- Graphic Symbols

Each of these Symbol types have different qualities and features. You will use them in different ways to achieve the different effects you desire in Flash.

Movie Clips are a complete “mini”-movie – a movie within a movie. They have their own Timelines and are completely independent from the main timeline. (We will not discuss Movie Clips in these lessons.)

A Graphic Symbol is primarily artwork and background text. Graphic Symbols have their own Timeline, but it's Timeline is tied directly to the main Timeline. A Graphic Symbol plays for only as many frames as there are frames in the main Timeline. If the main Timeline is shorter than the Graphic Symbol, then only the first frames of the Graphic Symbol up to the limit of the main Timeline will be shown. If the main Timeline is longer than the Graphic Symbol's Timeline then the Graphic Symbol will loop back and repeat its Timeline until the Frames in the main Timeline are finished.

Also, ActionScript and sounds are not allowed in Graphic Symbols. Graphic Symbols are best used for backgrounds and graphics that don't change much and will be used several times in the movie. (Movie Clip Symbols are the preferred choice over Graphic Symbols. However there isn't class time to learn Movie Clips fully, so we are focusing on the simpler Graphic Symbols.)

Button Symbols are used for interactive buttons and have their own unique four state (frame) timeline: Up, Over, Down and Hit.

- Up – How the button appears on the Stage
- Over – Revealed when someone rolls their mouse over a button
- Down – How the button appears when someone clicks the button.
- Hit – Defines the area on the page that will respond to a mouse event, such as a rollover or click. Whatever is placed in the Hit state (frame) is not visible. Typically, the area defined in the Hit state will be the same size or slightly larger than the button. (Other choices will most likely cause confusion and irritation for the users.)

Each Button state (Up, Over, Down, Hit) can contain a Graphic Symbol, a Movie Clip, or a sound.

As the last sentence implies, you can nest Symbols inside of other Symbols. This can be a very useful and powerful technique. For this class and for having more satisfaction with your class projects we recommend against doing so. (If you do, the Movie Explorer, which we won't be discussing, is the tool to help you see what's nested where.)