

## LESSON 3

# Incorporating Images

## OBJECTIVES

*You will be able to:*

- incorporate icons, images, pictures and graphics into your HTML documents.
- understand the different image file formats.
- align and format text around images.



In this lesson, you will learn how to incorporate images into your HTML documents to create multimedia Web pages. You will also learn how to use the ALIGN attribute with the <IMG> tag to customize the manner with which text wraps around inline images and how to control page layout. Finally, you will learn how to incorporate alternative image formats, such as JPEG.

## Incorporating Images

One exciting characteristic of the World Wide Web is the ability to incorporate images and graphics, along with text, to produce a visually appealing Web site.

For most of the exercises in this lesson, *GIF (Graphics Interchange Format)* image files will be used. GIF files are currently the most common image file formats on the Internet. Most Web browsers are capable of displaying both GIF and XBM (X Bitmap images) without the assistance of an external viewer application. Images that are displayed within a browser are referred to as *inline images*.

Most browsers are now also capable of displaying inline *JPEG (Joint Photographic Experts Group)* images. However, you may wish to use GIF images wherever possible, as many older Web browsers are only capable of displaying the GIF file format.

One of the trade-offs of inline images is that large images take longer to download because of their size. To be practical, larger images require a high speed modem or direct Internet connection. The average connection speed of the intended audience should be kept in mind when including inline images in your Web pages.

There are other image file formats such as *TIFF (Tagged Image File Format)* and *BMP (Bitmap)*, but these are not supported for display. Appendix C provides a listing of the various image and other media file formats and their extensions.

### Image Tag

The Image tag, <IMG>, is an open tag with three commonly used attributes. The only required attribute is SRC. The ALIGN and ALT attribute are optional.

<b>Attribute</b>	<b>Meaning</b>
<b>SRC</b> (required)	Provides the name (and location) of the image file.
<b>ALT</b> (optional)	This attribute provides an alternate text string to be displayed in non-graphical browsers.
<b>ALIGN</b> (optional)	Alignment can specify either vertical or horizontal positioning for text that follows a graphic. For vertical positioning, alignment may be set to top, middle or bottom (default). Horizontal alignment may be set to left or right.

**Figure 3-1: Image Tag Attributes**

## Inline Images

The following exercise will demonstrate how to insert an inline image into an HTML document. Inline images can be displayed directly in the browser without the need for an external helper application. When a user downloads an HTML document that includes an image, the image is downloaded along with the text.



### **Exercise 3-1: Using the Image Tag**

In this exercise, you will use the IMG tag to insert an inline image in your document.

1. Create a new document using your text editor or word processor.
2. Type the following HTML source code:

```
<HTML>
<HEAD>
<TITLE>Example Incorporating an Inline Image</TITLE>
</HEAD>
<BODY>
<H1>Using Inline Images</H1><HR>

<IMG SRC="beach1.gif"> <B>Wish you were here?</B>

</BODY>
</HTML>
```

3. Save the HTML source file you just created and name it **image.htm**.
4. Switch applications to your Web browser.
5. Open the **image.htm** document from within your Web browser.



**Figure 3-2: Example of an Inline GIF Image**

By default, inline images are aligned to the baseline of the text which surrounds them. As you see in the figure above, this means that the text will appear beside and at the bottom of the image. You can control this alignment with the `ALIGN` attribute of the `IMG` tag. If you set the `ALIGN` attribute to "middle", the text will appear beside and in the middle of the image. If you set it to "top", the text will appear beside and at the top of the image.



### **Exercise 3-2: Aligning Text with an Image**

In this exercise, you will use the `ALIGN` attribute of the `IMG` tag to position text to the side of an image at the top, middle or bottom.

1. Return to the **image.htm** document in your text editor or word processor.
2. Insert the text in the `IMG` tag as shown.

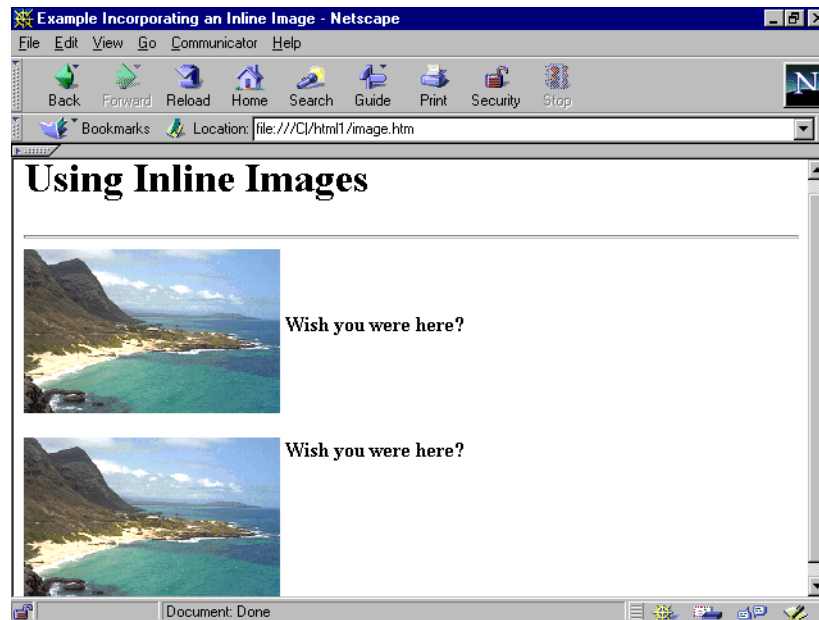
```
<IMG SRC="beach1.gif" align=middle> <B>Wish you were here?</B>
```

3. Save the changes.
4. Switch to the web browser and reload the **image.htm** document to view the changes.
5. Return to the **image.htm** document and change "middle" to "top" as shown.

```
<IMG SRC="beach1.gif" align=top> <B>Wish you were here?</B>
```

6. Switch to the web browser and reload the **image.htm** document to view the changes.

The figure below includes examples of both settings in one document. Your screen will only have one image with the change you inserted.



**Figure 3-3: ALIGN set to “middle” and “top”**



### Exercise 3-3: Using the ALT Attribute

Now you will add another image, this time including the ALT attribute. The ALT attribute provides textual clues to users who are not viewing graphics in their browser. It is recommended that you include an ALT attribute and short caption for all images on the page.

1. Return to the **image.htm** document in your text editor or word processor.
2. Add a second image tag, including the ALT attribute, as shown below.

```
<HTML>
<HEAD>
<TITLE>Example Incorporating an Inline Image</TITLE>
</HEAD>
<BODY>
<H1>Using Inline Images</H1><HR>

<IMG SRC="beach1.gif" align=top> <B>Wish you were here?</B>
<P>
<IMG SRC="beach2.gif" alt="Wave through rock formation"> <B>It's a
blast!</B>

</BODY>
</HTML>
```

4. Save the changes.
5. Switch to the web browser.
6. From the **E**dit menu, choose **P**references...
7. Select **A**dvanced, then click **A**utomatically load **i**mages to "uncheck" that option and click **O**K.

*This will "turn off" the loading of new images from this point forward. Any images that were displayed earlier are in the cache and will still be visible.*

8. Reload the **image.htm** document to view the changes.

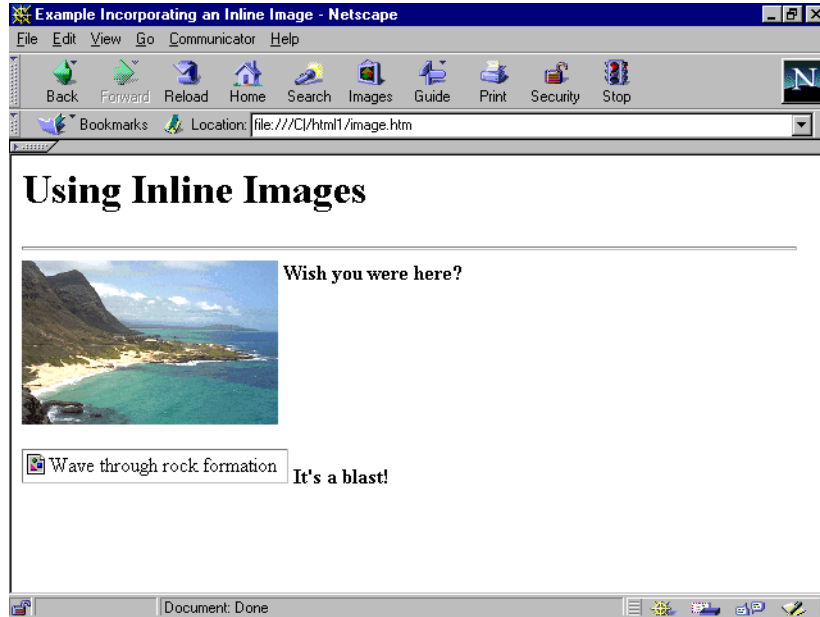


Figure 3-4: ALT text displayed

9. Repeat steps 6 and 7 to turn the automatically loading of images back on.
10. Reload the **image.htm** document to view the changes.

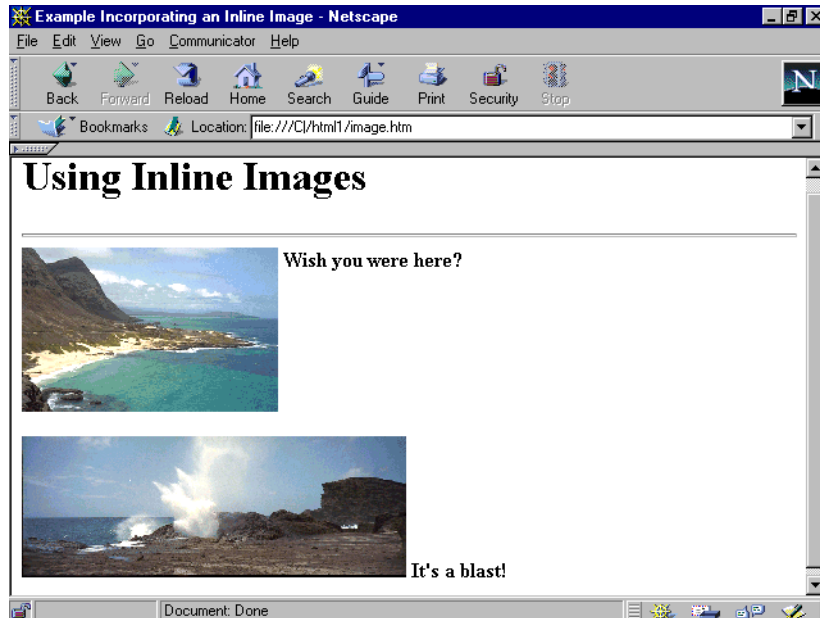


Figure 3-5: ALT text hidden

## Images and Page Layout

All graphical browser now support the display of inline images. Inline images were a step up from the earliest HTML standards, but this still limited people who were accustomed to the layout control most word processing and desktop publishing software packages provide. For instance, there is no way to get text to "flow" around an inline image. The image defines the height of one line of text. There is little way to guarantee that an image will be on the right or left margin of a page as the images will wrap to fill the browser window the same way the text does. It can be frustrating.

In response, Netscape implemented new extensions to the HTML standards, that have now become part of the proposed HTML 3.0 standard. These extensions have added new power to the IMG tag. One of the changes allows the ALIGN attribute to take a value of "right" or "left". These settings anchor the image to the right or left margin no matter what size the user's browser window is. Further, text and inline images will wrap around these anchored images, providing greater control over page appearance.

Things are far from perfect. Your text will still wrap according to the size of the browser window, so you still will not have absolute control over the alignment of text and images. Also, there is still no easy way to get text to wrap around a centered image.



### Exercise 3-4: Aligning an Image to the Left or Right

In this exercise, you will learn how to use the ALIGN attribute to the IMG tag to format the image to the left or right of accompanying text. (HTML 3.0)

1. Open **image2.htm** in your text editor or word processor.
2. Add the text to the IMG tag as shown.

```
<HTML>
<HEAD>
<TITLE>Aligning an Image</TITLE>
</HEAD>
<BODY>
<H1>Aligning an Image</H1>
<HR>
```

```
<IMG SRC="waves.gif" ALIGN=LEFT>
```

```
<B>An image with ALIGN=Left or Right</B>
<P>
```

This text appears beside the image. Note that you may now have multiple lines of text running beside and wrapping around your image. If there is enough text, it will wrap back to the margin of the browser window when it passes the image. You can test this by changing the size of your browser. The image will stay against the margin while the text repositions itself.

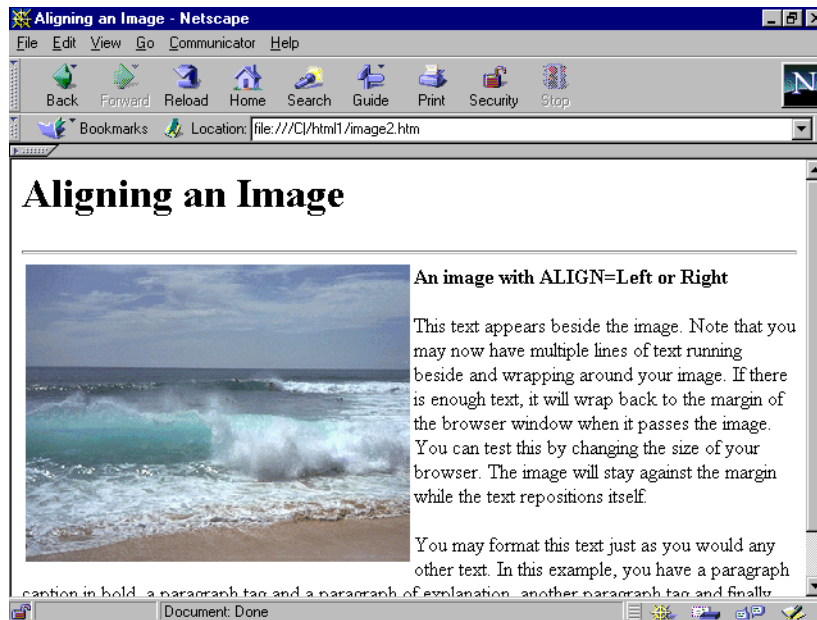
```
<P>
```

You may format this text just as you would any other text. In this example, you have a paragraph caption in bold, a paragraph tag and a paragraph of explanation, another paragraph tag and finally, this paragraph. Now your pages can begin to look much more as they might in print.

`</BODY>`

`</HTML>`

3. Save the changes.
4. Open the **image2.htm** document from within your Web browser.

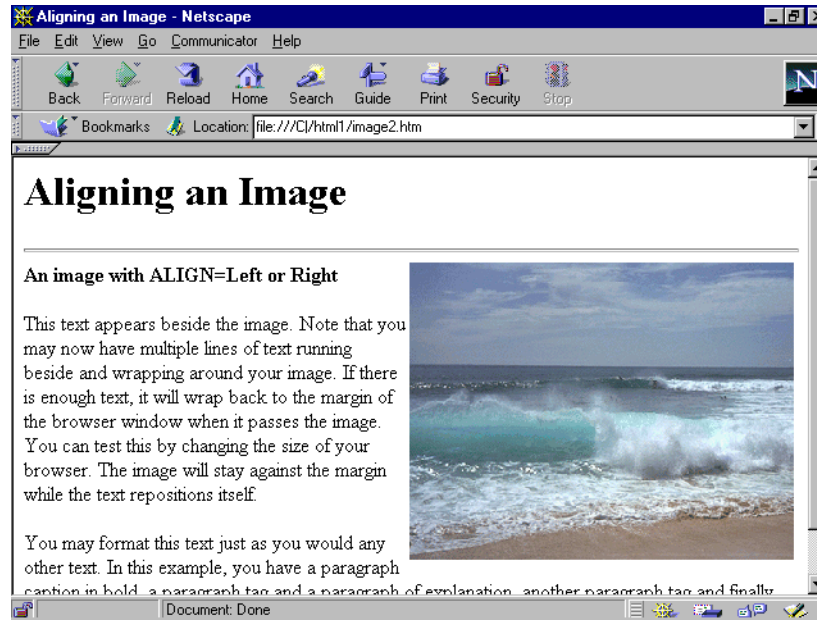


**Figure 3-6: Image with ALIGN Attribute Set to Left**

5. Return to the **image2.htm** document in your text editor or word processor.
6. In the IMG tag, change the value of the ALIGN attribute to "right" as shown.

```
<IMG SRC="waves.gif" ALIGN=RIGHT>
```

7. Save the changes.
8. Switch back to your web browser and reload the **image2.htm** document to view the changes.



**Figure 3-7: Image with ALIGN Attribute Set to Right**

### **Controlling Text Wrap Around Images**

It may be that you would like some of the text to wrap around an image, but not the entire document. Using a new attribute of the BREAK tag, you may force the text past the image to the next "clear" spot on the margin. This CLEAR attribute may take one of three values: all, left or right. CLEAR=RIGHT forces the text down to the next open right margin. CLEAR=LEFT obviously drops to the next clear left margin. CLEAR=ALL drops all the way below any aligned image.

**<IMG SRC="any\_picture.gif" ALIGN=RIGHT>**

**This text might appear as a caption for the image.**

**<BR CLEAR=RIGHT>**

**The text in this paragraph should appear below an image aligned on the right margin.**

You can be quite creative with page layout using these new features in addition to the standard formatting you learned earlier in this course.



### Exercise 3-5: Using the BREAK Tag

In this exercise, you will learn how to use this extension of the BR tag to format text and other elements around aligned images.

1. Return to the **image2.htm** document in your text editor or word processor.
2. Substitute **<BR CLEAR=RIGHT>** for the second **<P>** tag as shown.

```
<B>An image with ALIGN=Left or Right</B>  
<P>
```

**This text appears beside the image. Note that you may now have multiple lines of text running beside and wrapping around your image. If there is enough text, it will wrap back to the margin of the browser window when it passes the image. You can test this by changing the size of your browser. The image will stay against the margin while the text repositions itself.**

```
<BR CLEAR=RIGHT>
```

**You may format this text just as you would any other text. In this example, you have a paragraph caption in bold, a paragraph tag and a paragraph of explanation, another paragraph tag and finally, this paragraph. Now your pages can begin to look much more as they might in print.**

3. Save the changes.
4. Switch back to your web browser and reload the **image2.htm** document to view the changes.

*Note that the second paragraph now begins after the image.*

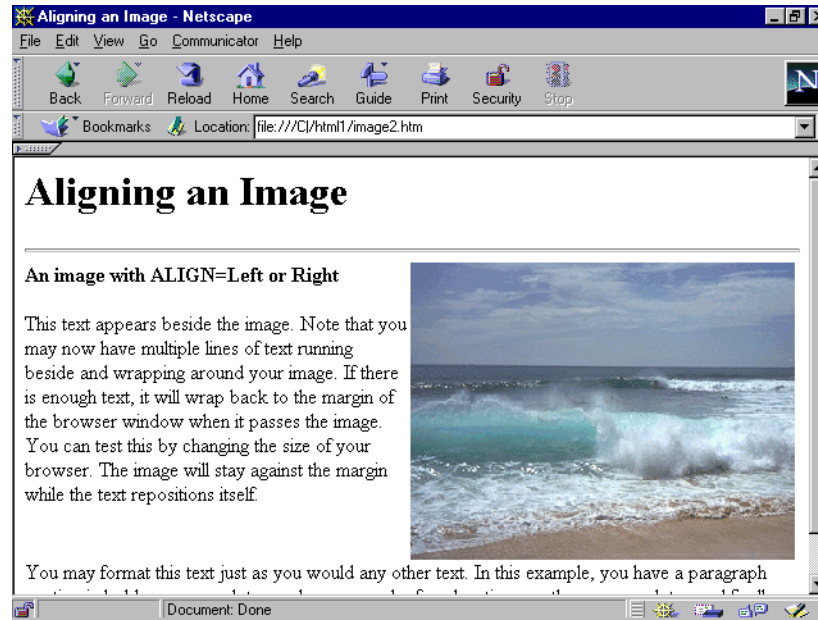


Figure 3-8: Using `<BR CLEAR=RIGHT>`

### Alternative Image Formats

Once, GIF files were the only image format supported for display in web browsers without a viewer application. Now, most of the recent browsers can also display JPEG (*Joint Photographic Experts Group*) files, which use the file extension ".jpg". The JPEG format offers a different kind of image compression which allows more control than the GIF format does over file size and image quality. Thus, it has been used by many to prepare photographic images for delivery over the Internet. In browsers that support the display of JPEG files, you may use them exactly as you have used GIF files.

There are also some additional features of the GIF format that are supported by recent browsers. One is *transparency*, where one color of an image can be set to let the page background show through. Almost all the browsers support transparency. The very newest browsers support *animated GIFs*. These files contain multiple images which are displayed in sequence, thus creating the animated effect. You will need special software tools to create both transparent images and animated GIFs. Future courses will instruct you on the creation of these image files.



### **Exercise 3-6: Incorporating JPEG files**

In this exercise, you will include a JPEG file as an inline image.

1. Create a new document in your text editor or word processor.
2. Type in the following HTML source code.

```
<HTML>
<HEAD><TITLE>Including a JPEG image</TITLE></HEAD>
<BODY>
```

```
<H1> Including a JPEG image</H1>
```

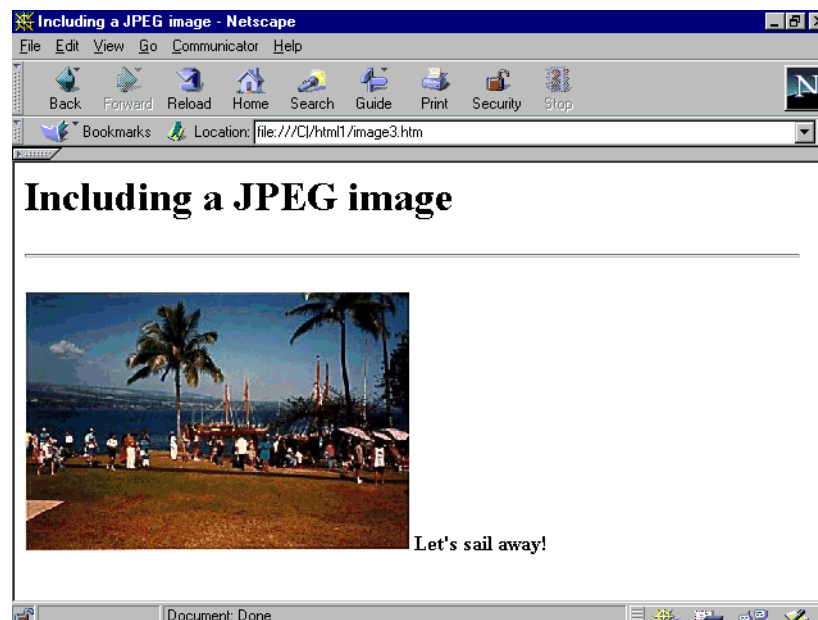
```
<HR><P>
```

```
<IMG SRC="boats.jpg"> <B>Let's sail away!</B>
```

```
</BODY>
```

```
</HTML>
```

3. Save the HTML source file you just created and name it **image3.htm**.
4. Switch applications to your Web browser.
5. Open the **image3.htm** document from within your Web browser.



**Figure 3-9: Including a JPEG Image**

*You may use all the tags and attributes you have learned above with JPEG images.*

## Review

In this lesson, you learned how to incorporate images into your HTML documents to create multimedia Web pages. You also learned how to use the ALIGN attribute with the <IMG> tag to customize the manner with which text wraps around inline images and how to control page layout. Finally, you learned about alternative image formats.