

Decorative images and backgrounds

As we saw earlier, the `` tag is meant to be used for semantically important imagery. For example, the pictures that accompany a news story are important to understanding the news story and therefore should be displayed with the `` tag. But the cool banner with teletypes and coffee meant to evoke competence and urgency, that image is **not** essential to understanding the news story. That image is decorative.

Decorative images are incorporated via CSS.

There are quite a few CSS properties for controlling borders, background images and colors. Take notice that as you leverage borders and backgrounds that you will begin to see the underside of the Web. How big is the area around a link? You might have never thought about it before, but now it'll be glaringly visible. Can we make it larger or smaller? Are these items butted against each other? Can we space them out, or bring them closer? We will touch on these things as well.

Let's look at the most common CSS properties: `background-color`, `background-image`, `background-repeat`, `background-size`, and `background-position`.

BACKGROUND-COLOR

The `background-color` CSS property will fill the rectangle of the given element with a solid background color. In addition to the values of `transparent` and `none`, there are all the range of values that we saw applicable to the `color` property.

In the example below we apply a variety of background colors a hyperlink (`<a>`), paragraph (`<p>`), unordered list (``) and list items (``)

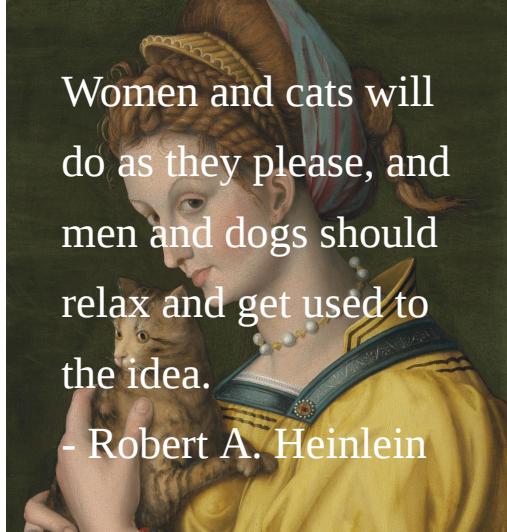
HTML	CSS	Result
<pre><p class="p-blue">This is the list of critters requested by the owners</p> Wasp Ant Moth Ostritch </pre>	<pre>p { background- color: #3E3F67; } p a { background- color: #6E7099; } ul { background- color: #FFC592; } li { background- color: #CC602D; }</pre>	<p>This is the list of critters requested by the owners</p> <ul style="list-style-type: none">• Wasp• Ant• Moth• Ostritch

BACKGROUND-IMAGE

The background-image property is used to set an external image file as the background to a particular HTML element. To bind in an external file, the value is url, followed by an open parenthesis (, followed by a quote ", then the path, a closing quote " and a closing parentheses). The path can be a URL, or a path relative from the file the CSS is in.

```
div { background-image: url("https://www.w3.org/2008/site/images/logo-w3c-mobile-lg"); }  
div { background-image: url("images/kitten.png"); }
```

As these are decorative images, there are quite a few different usage scenarios that can leverage background images. For instance, an image can be used as repeating tile, or a background image can fit its parent element, or be a large panoramic image not fully viewed. These scenarios can be constructed with other CSS properties, like background-repeat, background-size, and background-attach (as well as several others).

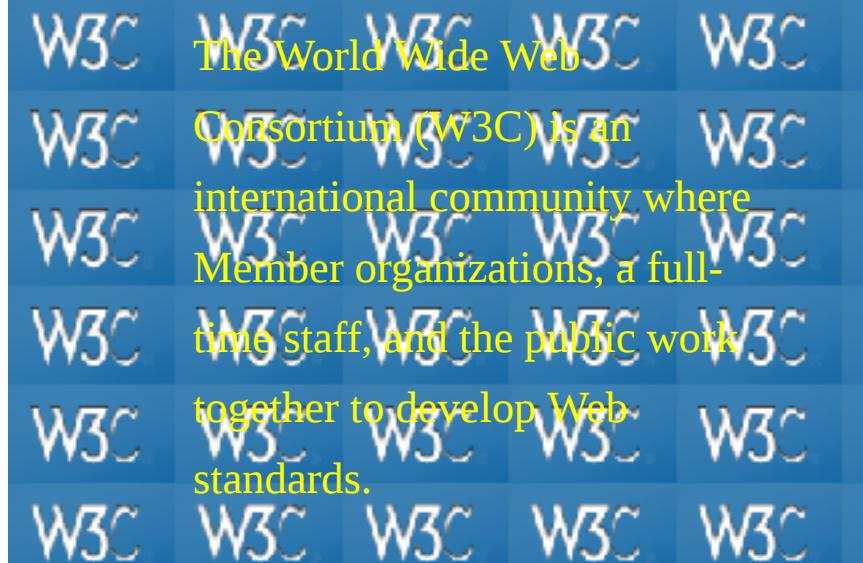
HTML	CSS	Result
<pre><p class="kitten">Women and cats will do as they please, and men and dogs should relax and get used to the idea.
- Robert A. Heinlein</p></pre>	<pre>.kitten { background-image: url("kittens.jpg"); }</pre>	 A classical painting of a woman with blonde hair in an updo, wearing a yellow dress and a pearl necklace. She is holding a small kitten. Overlaid on the image is a quote in white text: "Women and cats will do as they please, and men and dogs should relax and get used to the idea. - Robert A. Heinlein".

BACKGROUND-REPEAT

By default, if the rectangular area of an element is bigger than the image itself, then the image will repeat and fill the space, like tiles. Like so:

CSS	Result

```
.tile {  
    background-image:  
url("https://www.w3.org/  
2008/site/images/logo-  
w3c-mobile-lg");  
    /* use padding to keep  
the text away from the  
edges of the paragraph  
box */  
    padding-top: 15px;  
    padding-right: 50px;  
    padding-bottom: 30px;  
    padding-left: 100px;  
}
```



The background-repeat property can be used to control this. It's more commonly used values are: repeat, repeat-x, repeat-y, and **no-repeat**. The no-repeat value is very useful, and bears repeating.

There are advanced uses of this property. Notice in the above example, that if the size of the parent element is not exactly a multiple of the tile, than the image may be "cropped" and bleed off the side. That can be managed by centering the tile (with background-position: center;). But additionally the background-repeat property can also be used to control how it repeats. The space value will result in no cropped images. It means "repeat, but add space between the elements so there is no cropping". Note that this property does not let you directly manipulate the amount of spacing. That is calculated for you.

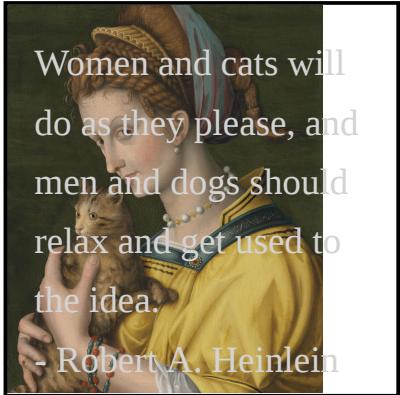
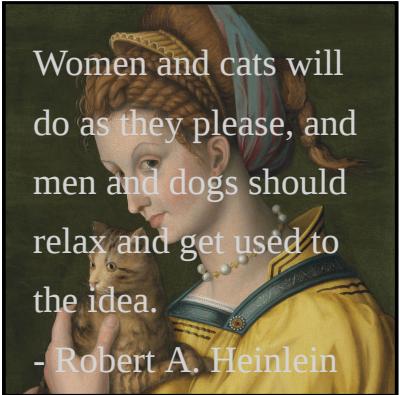
background-repeat: space



BACKGROUND-SIZE

When *not* repeating it is very useful to size a background image to fit its element. The `background-size` can be used for this. There are two very useful values: `contain` and `cover`. The `contain` value will put the entire image into the space of the element, but the space of the element may not be completely filled if the aspect ratio of the element and the image do not match. The `cover` value is the opposite. It will completely fill the element but the image may be cropped off two opposite sides. Neither `contain` or `cover` will distort or squish the image. Its aspect ratio is maintained.

Here we demonstrate the difference. A border has been applied to the paragraph to clearly show the bounds of the parent `<p>` element.

<code>background-size: contain</code>	<code>background-size: cover</code>
 <p>Women and cats will do as they please, and men and dogs should relax and get used to the idea. - Robert A. Heinlein</p>	 <p>Women and cats will do as they please, and men and dogs should relax and get used to the idea. - Robert A. Heinlein</p>

The `background-size` property can also be used to more exactly size the image. When used in this fashion, it takes *two* values separated by a space. The first governs the width, the second the height. Examples:

```
.kittens { background-size: 100px 120px; } /* might distort */
.puppies { background-size: 100px auto; } /* auto preserves aspect
ratio, no distorting */
.munchies { background-size: 50% auto; } /* % is of percentage of
parent (not of image). */
```

The `px` and `%` units were covered in the units section. Note that other units (`rem`, `vh`, etc) have no guarantee of support.

When specifying exact sizes, the `auto` value is extremely useful. It allows you worry only about one dimension, and then the other will be handled for you. Otherwise there is a risk of stretching/distorting images.

<code>background-size: 140px 100px; /* will distort */</code>	<code>background-size: 130px auto;</code>	<code>background-size: 50% auto;</code>
---	---	---



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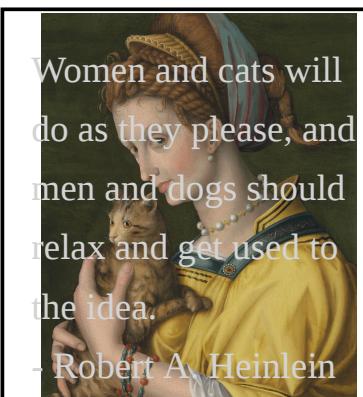
BACKGROUND-POSITION

Like background-size, background-position can be used to place or offset a background image in the element. It takes two values (x and y) separated by a space when used to exactly specify a position.

But most useful is the center value. It is position the center of the image in the center of the element. This is useful even with repeating tiles.

background-position:center

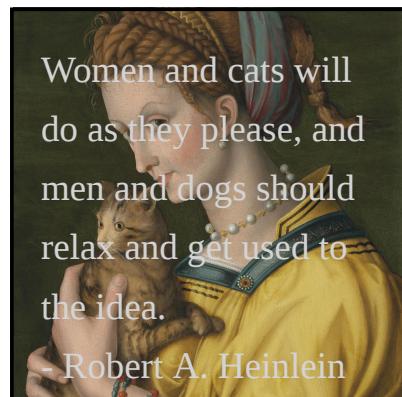
background-size: contain



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background-size: cover



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