

The Box Model

Lesson Time: 60 Minutes

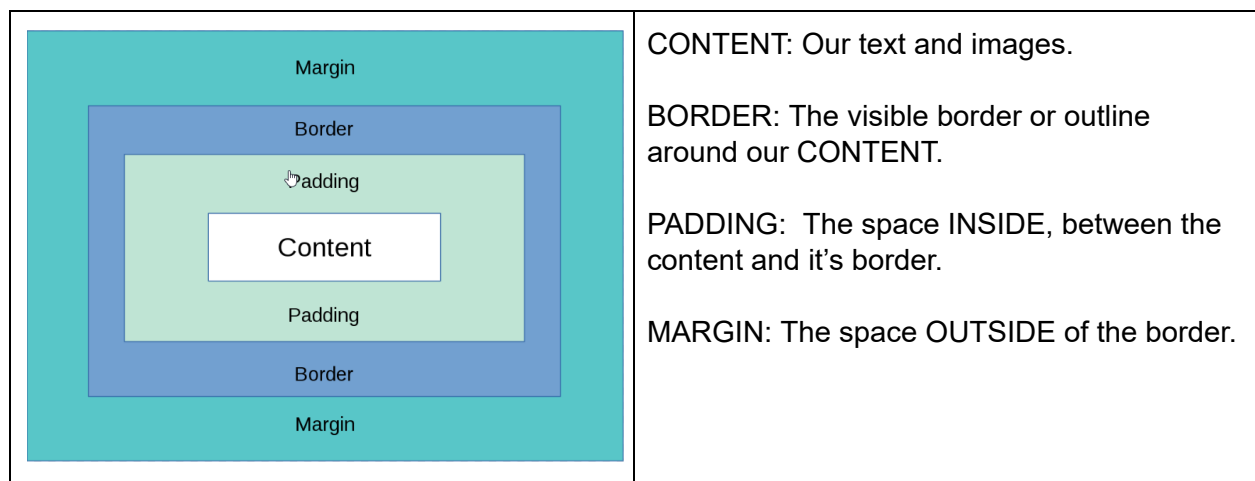
EVERY HTML ELEMENT IS A BOX.

WHEN WE CREATE ANY NEW ELEMENT, WE ARE PUTTING A NEW BOX ON THE PAGE.

We are coming up to the most important lessons in CSS. In the next several lessons, we will finally understand how to place any element exactly where we want it on screen. Our first step in mastering positioning and layout is understanding the box model.

What is the Box Model? Every element in HTML can be thought of as a box. Our `<p>` elements, `<h1>` elements, `<div>`, ``, EVERYTHING!

Every box has the same four properties.



Code Example 1

The CONTENT and BORDER are easy enough to understand. In this <p> element example, the text is our CONTENT and we've applied our BORDER properties.

```
p{
  width: 500px;
  border: 5px solid black;
}
```

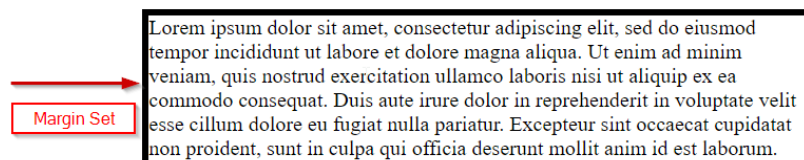
Box Model Example

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We can adjust the **Margin** to move the entire box more to the left, right, or center it.

```
p{
  width: 500px;
  border: 5px solid black;
  margin-left: 100px;
}
```

Box Model Example



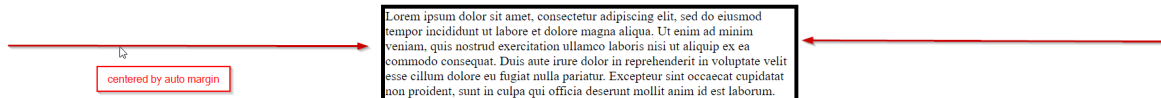
The diagram shows a rectangular box with a black border containing Lorem ipsum text. To the left of the box, a red arrow points from a red-bordered box labeled "Margin Set" to the space between the text box and the left edge of the image, illustrating the margin property.

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We can center the element by using **margin: auto**

```
p{
  width: 500px;
  border: 5px solid black;
  margin: auto;
}
```

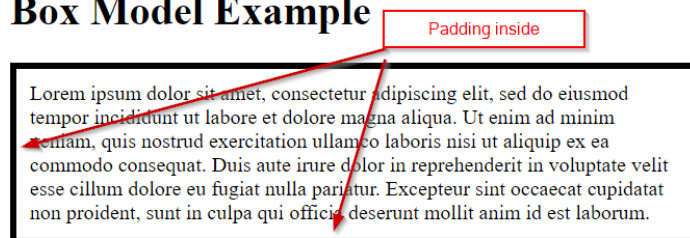
Box Model Example



We can use the **padding** property to make the content look nicer inside the border. By default, padding places space around the top, bottom, left, and right sides of the content.

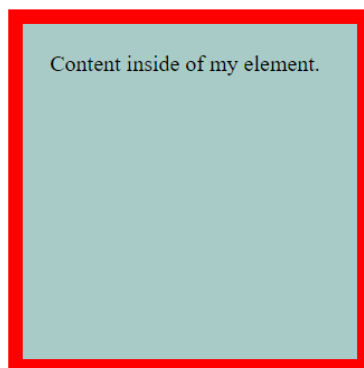
```
p{
  width: 500px;
  border: 5px solid black;
  padding: 10px;
}
```

Box Model Example



Box-Sizing

HTML	CSS
<pre><div id='box'> Content inside of my element. </div></pre>	<pre>#box { width: 200px; border: 10px solid red; padding: 5px; margin: 15px; }</pre>



How many pixels wide is the box in our example? If you guess 200, you would be wrong. This is because the width sets only the *content* of the box, not the border, padding, or margin. To find the total size in pixels:

width	200
border	20 = 10*2 (add left and right border)
padding	10 = 5*2 (add left and right padding)
margin	30 = 15*2 (add left and right margin)
Total	260px wide.

Most of the time, we do not want this. It would be simpler to tell CSS we want our box to be 200 pixels and have the content, padding, border, and margins all add up to equal the size we want. We can accomplish this with the property **box-sizing**

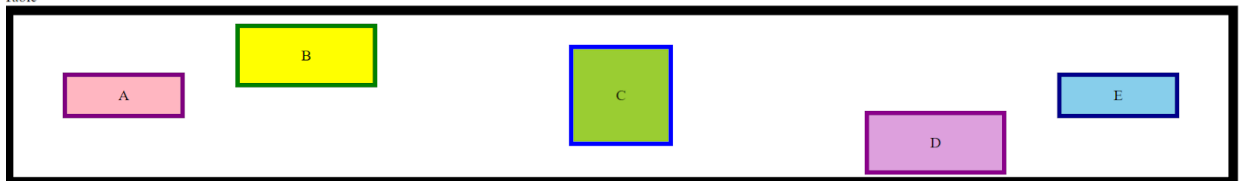
```
.one{  
  box-sizing: border-box;  
}
```

In general, you should set all elements to use **box-sizing: border-box** so that the width/height properties apply to the entire box and not just the content of the box.

Without box-sizing:

Five 100px width boxes all seem to have different widths because of borders, padding, and margins.

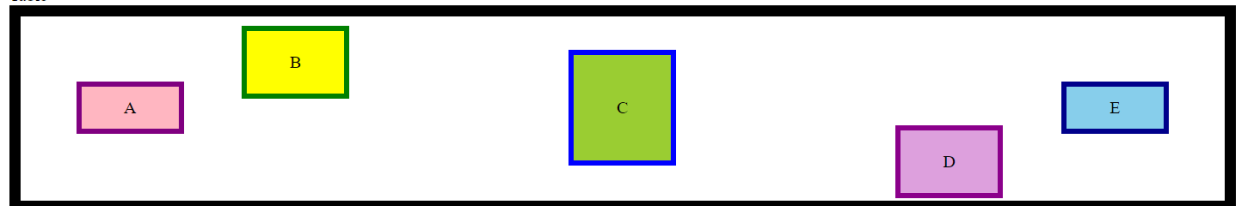
Table



With box-sizing:

Our 100px width boxes all appear to be uniform in width.

Table



Key Terms	Margin, Padding, Box Model, Box Sizing
Lesson Files	
Additional Resources	<p>Box Model MDN https://developer.mozilla.org/en-US/docs/Learn/CSS/Building_blocks/The_box_model</p> <p>Box Sizing MDN https://developer.mozilla.org/en-US/docs/Web/CSS/box-sizing</p>
Further Learning	