



# JavaScript Arrow Function

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Arrow functions were introduced in ES6.

Arrow functions allow us to write shorter function syntax:

```
let myFunction = (a, b) => a * b;
```

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## Before Arrow:

```
hello = function() {  
  return "Hello World!";  
}
```

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## With Arrow Function:

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It gets shorter! If the function has only one statement, and the statement returns a value, you can remove the brackets *and* the **return** keyword:

## Arrow Functions Return Value by Default:

```
hello = () => "Hello World!";
```

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**Note:** This works only if the function has only one statement.

If you have parameters, you pass them inside the parentheses:

## Arrow Function With Parameters:

```
hello = (val) => "Hello " + val;
```

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In fact, if you have only one parameter, you can skip the parentheses as well:

## Arrow Function Without Parentheses:

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## What About `this`?

The handling of `this` is also different in arrow functions compared to regular functions.

In short, with arrow functions there are no binding of `this`.

In regular functions the `this` keyword represented the object that called the function, which could be the window, the document, a button or whatever.

With arrow functions the `this` keyword *always* represents the object that defined the arrow function.

Let us take a look at two examples to understand the difference.

Both examples call a method twice, first when the page loads, and once again when the user clicks a button.

The first example uses a regular function, and the second example uses an arrow function.

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## Example

With a regular function `this` represents the object that *calls* the function:

```
// Regular Function:
hello = function() {
  document.getElementById("demo").innerHTML += this;
}

// The window object calls the function:
window.addEventListener("load", hello);

// A button object calls the function:
document.getElementById("btn").addEventListener("click", hello);
```

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## Example

With an arrow function `this` represents the *owner* of the function:

```
// Arrow Function:
hello = () => {
  document.getElementById("demo").innerHTML += this;
}

// The window object calls the function:
window.addEventListener("load", hello);

// A button object calls the function:
document.getElementById("btn").addEventListener("click", hello);
```

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# Browser Support

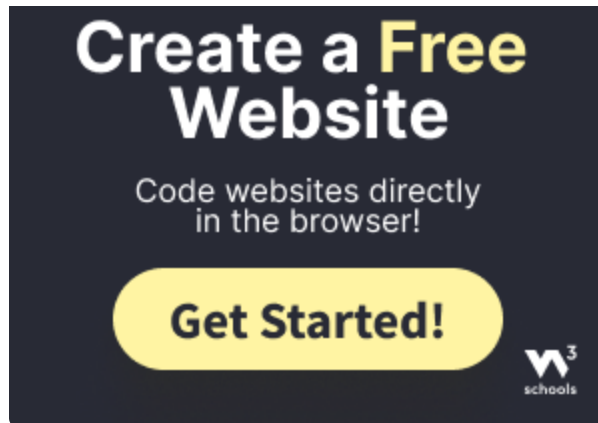
The following table defines the first browser versions with full support for Arrow Functions in JavaScript:

Chrome 45	Edge 12	Firefox 22	Safari 10	Opera 32
Sep, 2015	Jul, 2015	May, 2013	Sep, 2016	Sep, 2015

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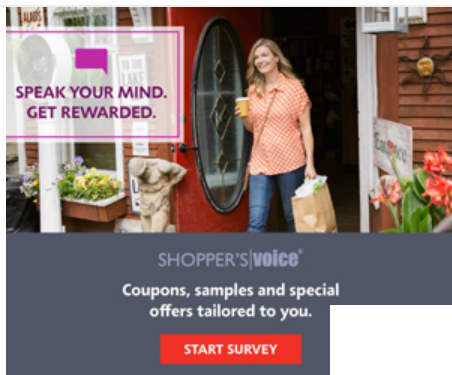
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