

# DWA\_02.8 Knowledge Check\_DWA2

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1. What do ES5, ES6 and ES2015 mean - and what are the differences between them?

ES5, ES6 (ES2015), and subsequent ECMAScript versions represent different stages of JavaScript's evolution. ES5, released in 2009, introduced improvements like strict mode, new Array methods, and enhanced JSON support. ES6 (ES2015), a major update in 2015, added features like arrow functions, block-scoped variables, template literals, and more. Subsequent versions bring smaller incremental changes. Not all browsers support the latest versions, so transpilers like Babel are used to convert newer code for broader compatibility.

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2. What are JScript, ActionScript and ECMAScript - and how do they relate to JavaScript?

JavaScript is the widely used scripting language for web development, while JScript is Microsoft's implementation of ECMAScript with slight variations. ActionScript, on the other hand, is a language associated with Adobe Flash and is based on ECMAScript. ECMAScript serves as the standard specification for these scripting languages, providing guidelines for their implementation and evolution.

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3. What is an example of a JavaScript specification - and where can you find it?

An example of a JavaScript specification is the ECMAScript specification, which defines the standardized features and behavior of the JavaScript language. The ECMAScript specification is maintained by Ecma International, an international standards organization.

You can find the ECMAScript specification documents on the Ecma International website.

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4. What are v8, SpiderMonkey, Chakra and Tamarin? Do they run JavaScript differently?

V8: Developed by Google, used in Chrome and Node.js, it employs JIT compilation to convert JavaScript into machine code for fast execution. It includes optimizations like inline caching and dynamic code generation.

SpiderMonkey: Developed by Mozilla for Firefox, it was the first JavaScript engine. It uses JIT compilation to convert JavaScript to machine code and has been continuously improved for performance and language support.

Chakra: Initially developed by Microsoft for Internet Explorer, now used in Edge and UWP. It combines JIT compilation and interpretation techniques, offering a balance between performance and compatibility.

Tamarin: Derived from Mozilla's SpiderMonkey, it executes ActionScript (a dialect of ECMAScript) for Flash Player and AIR. It utilizes JIT compilation and advanced optimizations for efficient execution of ActionScript code.

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5. Show a practical example using [caniuse.com](https://caniuse.com) and the MDN compatibility table.

## ECMAScript 2015 (ES6) - OTHER

Support for the ECMAScript 2015 specification. Features include Promises, Modules, Classes, Template Literals, Arrow Functions, Let and Const, Default Parameters, Generators, Destructuring Assignment, Rest & Spread, Map/Set & WeakMap/WeakSet and many more.

Current aligned	Usage relative	Date relative	Filtered	All	⚙
Chrome	Edge <sup>*</sup>	Safari	Firefox	Opera	IE
4-20	<sup>2</sup> 12-14	3.1-7	2-5	10-12.1	
21-50	<sup>2 3</sup> 15-18	7.1-9.1	6-53	15-37	
<sup>2</sup> 51-112	<sup>2</sup> 79-112	10-16.4	<sup>2</sup> 54-112	<sup>2</sup> 38-97	6-10
<sup>2</sup> 113	<sup>2</sup> 113	16.5	<sup>2</sup> 113	<sup>2</sup> 98	<sup>1 2</sup> 11
<sup>2</sup> 114-116		16.6-TP	<sup>2</sup> 114-115		