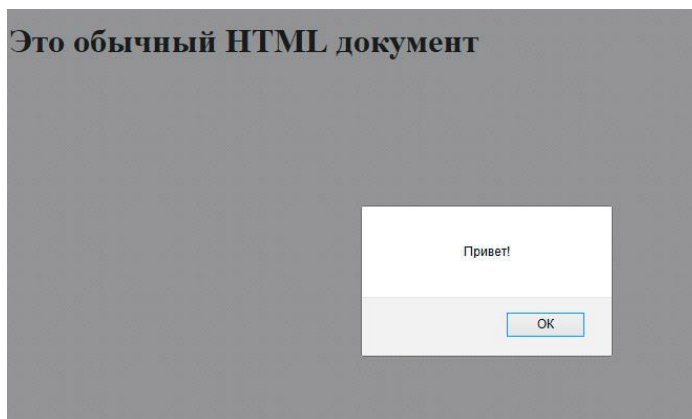


<b>School:</b>		
<b>Date:</b>	<b>Teacher's name: Dzhakipbaev Abai Kazbekovich</b>	
<b>Grade:</b>	<b>Number present:</b>	<b>absent:</b>
<b>Topic of the lesson: Scripts. Script Connection</b>		
<b>Learning objective(s) that this lesson is contributing to</b>	<ul style="list-style-type: none"> <li>• development of students' ability to express thoughts, model the situation;</li> <li>• repetition and consolidation of the basic material, expressed in unusual situations;</li> </ul>	
<b>Lesson objectives</b>	<p><b>All students will be able to:</b></p> <ul style="list-style-type: none"> <li>· What are scripts and what are they for?</li> </ul> <p><b>Most students will be able to:</b></p> <ul style="list-style-type: none"> <li>· Make the script <code>&lt;script src = "scripts.js"&gt; &lt;/script&gt;</code> correctly</li> </ul> <p><b>Some students will be able to:</b></p> <ul style="list-style-type: none"> <li>• Understand the difference between the <code>async</code> and <code>defer</code> attributes from each other and use</li> </ul>	
<b>Assessment Criteria</b>		
<b>Value links</b>	fostering respect for others, the ability to properly dispute, the will to learn new things, resourcefulness, teamwork	
<b>Previous learning</b>		
<b>Cross curricular links</b>		
<b>Time</b>	<b>Planned activities</b>	<b>Resources</b>
	<b>1. Repetition of the passed («hot table» game)</b>	
<b>Beginning 10 min</b>	<p>Build, outline, greeting, message topics and learning objectives. Safety Reminder, explain success criteria.</p> <p>Create a program with variables.</p> <p>Robot with scripts.</p> <p>The difference between the <code>async</code> and <code>defer</code> attributes from each other.</p>	<p>Computer Projector Internet Board</p>
<b>Middle 25 min</b>	<p>Imagine your script occupying tens or hundreds of lines of code. Or even more. And, of course, we most likely need this script on every page of our site. Agree, it will be completely bad in this case to duplicate these hundreds of lines of code in each file. And just the presence of non-HTML code in an HTML document will not look very right and not very pretty.</p> <p>That is why JavaScript code is usually taken out in a separate file, which is connected to the page. Actually, everything is the same as in the case of style files. How to connect a JavaScript script to the main file? Very simple. To do this, we use the familiar <code>&lt;script&gt;</code> tag, to which the <code>src</code> attribute is added, in the same way as in the case with pictures. Well, as you might have guessed, the path to the JavaScript plugin is specified in the <code>src</code> attribute.</p> <p>Let's try to transfer our program, which consists of one line of code, to an external file and include this file. Call this file, for example, <code>scripts.js</code>:</p> <p>Please note that inside the connected file we need to write script tags. Not only that, if we write them in a <code>.js</code> file, our JavaScript code will stop working, and we will get a JavaScript error.</p> <p>Well, the connection of an external JavaScript file itself:</p> <pre>1 &lt;script src = "scripts.js"&gt; &lt;/script&gt;</pre>	

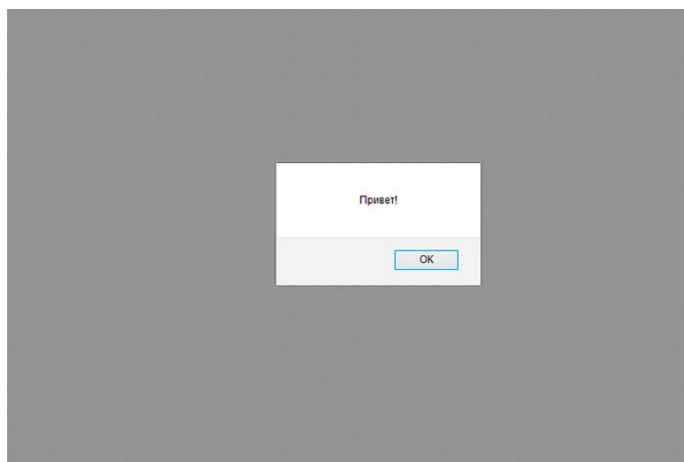
```
← → query.sql index.html × scripts.js
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <title>JavaScript</title>
6 </head>
7 <body>
8
9   <h1>Это обычный HTML документ</h1>
10
11   <script src="scripts.js"></script>
12
13 </body>
14 </html>
```

If we refresh the page now, nothing will change, our script works and, as before, displays a modal window with a greeting.



What should I look for when connecting scripts? We included the script at the end of the document, before the closing body tag. Previously, scripting at the beginning of the document, in head tags, was practiced. However, this is not recommended today, and scripts recommend connecting it at the end of the document. Why is that?

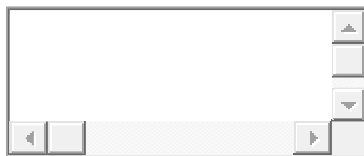
Let's try moving the connections between the head tags:



What do we see? Nothing but a modal window. There is no content. That is the essence. When an external script is connected at the beginning of the document, the browser starts downloading it and tries to execute it. And until the download and execution of the script is completed, the browser will not show the part of the document following the include file.

Now imagine that for some reason this file loads extremely slowly. As a result, the user will have to wait, and sometimes he may just not wait. That is why it is recommended to include scripts at the end of the document, before the closing body tag.

But what if a certain library requires a connection at the very beginning of the document? How to be in this case? In this case, the `async` and `defer` attributes will help us, which allow the browser to load scripts asynchronously, i.e. the browser will start loading the script, but it will not stop showing the document. Let's try to use these attributes one by one:



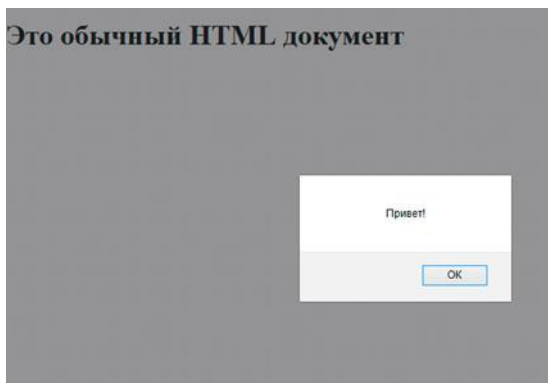
1 `<! - option 1 ->`

2 `<script src = "scripts.js" async> </script>`



3 `<! - option 2 ->`

4 `<script src = "scripts.js" defer> </script>`

In both cases, we get the same result, the script is connected without interrupting the display of the document:



What is the difference between the `async` and `defer` attributes from each other? The `defer` attribute stores the connection sequence of external scripts, i.e. the first script that connects above will always be executed first. This is important when we include several scripts and one of them may depend on the other. In this case, the main script must be connected before the dependent one. The `defer` attribute ensures order. The `async` attribute will ensure the execution of the script immediately after loading it. Therefore, this option is not always suitable, since the dependent script may load earlier than the main one.

<p><b>End 5 min</b></p>		
<p><b>Differentiation – how do you plan to give more support? How do you plan to challenge the more able learners?</b></p>	<p><b>Assessment – how are you planning to check learners' learning?</b></p>	<p><b>Health and Safety</b></p>
<p>At home, follow the link and learn 2-3 lessons: <a href="https://fructcode.com/ru/courses/javascript-and-jquery/interactive-first-javascript/">https://fructcode.com/ru/courses/javascript-and-jquery/interactive-first-javascript/</a></p>		<p>Tech safety eye exercise</p>

