**Event Handlers for All HTML5 Elements & document & window Objects**

This table includes the event handlers that can be used in all HTML5 elements as both content attributes and IDL attributes, and on Document and Window objects, as IDL attributes.

| **Attribute** | **Description** |
| --- | --- |
| onabort | Invoked when an event has been aborted. For example, the browser stops fetching media data before it is completely downloaded. |
| oncancel | cancel event handler. |
| oncanplay | Invoked when the browser/user agent can start playing media, but hasn't yet, due to buffering. In other words, if playback were to begin now, it wouldn't play right to the end (due to the current playback rate) - it would need to pause during playback in order to load the rest of the media. |
| oncanplaythrough | The browser/user agent estimates that if playback were to begin now, the media resource could be rendered at the current playback rate all the way to its end without having to stop for further buffering. |
| onchange | User has changed the object, then attempts to leave that field (i.e. clicks elsewhere). |
| onclick | Invoked when the user clicked on the object. |
| onclose | close event handler. |
| oncontextmenu | Invoked when a context menu has been triggered. |
| oncuechange | cuechange event handler. |
| ondblclick | Invoked when the user clicked twice on the object. |
| ondrag | Invoked when an element is being dragged. |
| ondragend | Invoked when an element has stopped being dragged. |
| ondragenter | Invoked when an element has been dragged to a drop target. |
| ondragexit | dragexit event handler. |
| ondragleave | Invoked when an element leaves a valid drop target. |
| ondragover | Invoked when an element is being dragged over a valid drop target. |
| ondragstart | Invoked when a drag operation has started. |
| ondrop | Invoked when an element is being dropped. |
| ondurationchange | Invoked when the length of the media is changed (i.e. the duration attribute has just been updated). |
| onemptied | Invoked when a media resource element suddenly becomes empty (for example, due to a network error). |
| onended | Invoked when the media has reached the end. |
| oninput | input event handler. |
| oninvalid | invalid event handler. |
| onkeydown | Invoked when a key was pressed over an element. |
| onkeypress | Invoked when a key was pressed over an element then released. |
| onkeyup | Invoked when a key was released over an element. |
| onloadeddata | Invoked when the browser/user agent can render the media data at the current playback position for the first time. |
| onloadedmetadata | Invoked when the browser/user agent has just determined the duration and dimensions of the media resource. |
| onloadstart | Invoked when the browser/user agent has started loading the media resource. |
| onmousedown | The cursor moved over the object and mouse/pointing device was pressed down. |
| onmousemove | The cursor moved while hovering over an object. |
| onmouseout | The cursor moved off the object |
| onmouseover | The cursor moved over the object (i.e. user hovers the mouse over the object). |
| onmouseup | The mouse/pointing device was released after being pressed down. |
| onmousewheel | Invoked when the mouse wheel is being rotated. |
| onpause | Invoked when the media resource has been paused. |
| onplay | Invoked when the media resource starts playback. |
| onplaying | Playback has begun. |
| onprogress | The browser/user agent is fetching media data. |
| onratechange | Invoked when the playback rate has changed (i.e. either the defaultPlaybackRate or the playbackRate has just been updated). |
| onreset | reset event handler. |
| onseeked | Invoked when the seeking IDL attribute changed to false (i.e. the seeking attribute is no longer true) |
| onseeking | Invoked when the seeking IDL attribute changed to true and the seek operation is taking long enough that the user agent has time to fire the event. |
| onselect | Invoked when some or all of the contents of an object is selected. For example, the user selected some text within a text field. |
| onshow | show event handler. |
| onstalled | Invoked when the browser/user agent is trying to fetch media data but the data has stalled (i.e. the data has stopped coming). |
| onsubmit | User submitted a form. |
| onsuspend | The browser/user agent is (intentionally) not currently fetching media data, but has not yet downloaded the entire media resource (i.e. it has suspended the download). |
| ontimeupdate | Invoked when the media's current playback position changed. |
| onvolumechange | Invoked when either the volume attribute or the muted attribute has changed. |
| onwaiting | The next frame of the media is not yet available (but the browser/user agent expects it to become available). |

**Event Handlers - Specific Rules**

Some event handlers have more specific rules. The following event handler attributes are subject to the following rules:

...must be supported by all HTML elements other than body and frameset elements, as both event handler content attributes and event handler IDL attributes; that must be supported by all Document objects, as event handler IDL attributes; and that must be supported by all Window objects, as event handler IDL attributes on the Window objects themselves, and with corresponding event handler content attributes and event handler IDL attributes exposed on all body and frameset elements that are owned by that Window object's Documents:

For more information, see [Event Handler Content Attributes](http://www.w3.org/TR/html5/webappapis.html##event-handler-content-attributes) from the W3C specification.

Note that the <frameset> element is obsolete in HTML5, but it was valid in HTML version 4.

| **Attribute** | **Description** |
| --- | --- |
| onblur | User has left the focus of the element. |
| onerror | Invoked when an error occurs while the Window object is being loaded. Also handler for script error notifications. |
| onfocus | Invoked when the focus is on the element. |
| onload | The element has loaded. |
| onscroll | scroll event handler. Invoked when the element's scrollbar is being scrolled. |

The following event handlers are subject to the following rule:

...must be supported by Window objects, as event handler IDL attributes on the Window objects themselves, and with corresponding event handler content attributes and event handler IDL attributes exposed on all body and frameset elements that are owned by that Window object's Documents:

For more information, see [Event Handler Content Attributes](http://www.w3.org/TR/html5/webappapis.html##event-handler-content-attributes) from the W3C specification.

Note that the <frameset> element is obsolete in HTML5, but it was valid in HTML version 4.

| **Attribute** | **Description** |
| --- | --- |
| onafterprint | afterprint event handler |
| onbeforeprint | beforeprint event handler |
| onbeforeunload | beforeunload event handler |
| onblur | User has left the focus of the element. |
| onerror | Invoked when an error occurs while the element is being loaded. Also handler for script error notifications. |
| onfocus | Invoked when the focus is on the element. |
| onhashchange | hashchange event handler. The hashchange event is fired when navigating to a session history entry whose URL differs from that of the previous one only in the fragment identifier. |
| onload | The element has loaded. |
| onmessage | message event handler. |
| onoffline | offline event handler. |
| ononline | online event handler. |
| onpagehide | pagehide event handler. The pagehide event is fired when traversing *from* a session history entry. |
| onpageshow | pageshow event handler. The pageshow event is fired when traversing *to* a session history entry. |
| onpopstate | popstate event handler. The popstate event is fired when navigating to a session history entry that represents a state object. |
| ~~onredo~~ | ~~redo event handler. This is used for "redoing" an "undo" operation. For example, the user accidentally selected "Undo", so decides to correct this by using "Redo". Also see onundo below.~~ (This event handler has been removed from the HTML5 specification) |
| onresize | resize event handler. |
| onscroll | scroll event handler. Invoked when the element's scrollbar is being scrolled. |
| onstorage | storage event handler. |
| ~~onundo~~ | ~~undo event handler for Window object. This could be used when the user clicks an "Undo" button or similar. For example, a web mail application could keep track of the fact that a user has deleted an email from the inbox, so that the user can "undo" the action and have the email return to the inbox.~~ (This event handler has been removed from the HTML5 specification) |
| onunload | unload event handler. |

**Event Handlers for document Objects Only**

Can be used on Document objects as IDL attributes:

| **Attribute** | **Description** |
| --- | --- |
| onreadystatechange | readystatechange event handler. |