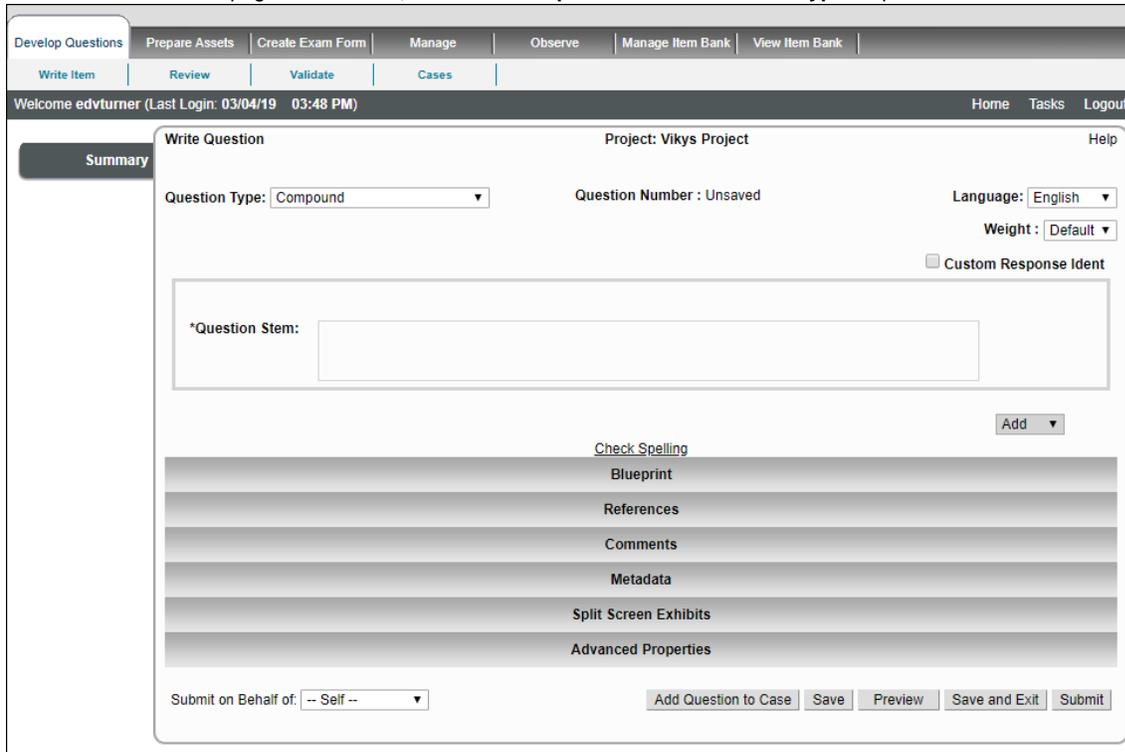


2.4.13 Compound Items

The **Compound** item type allows authors to include multiple response types on one item. Users can author multiple text blocks, add exhibit buttons, and add response buttons.

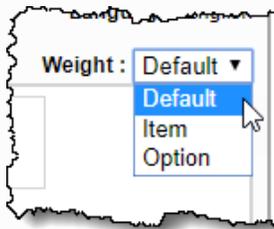
1. Select the **Develop Questions Write Item** menu.
2. Click the **Write Question** link.
3. On the **Write Question** page, select **MCQ, One Correct Option** from the **Question Type** drop-down list.



✓ Please visit the [Language-related features in Items](#) page to learn about the **Language Code** drop-down list.

i Assigning Weights

Weights affect the candidate's score for an item. Assigning weights is optional and can be done via the **Weight** drop-down list. The default selection item is **Default**, which assigns a score of "1" to the item.



If you choose to assign custom weight for the item, then you must select **Item** from the drop-down list. A text box appears next to the drop-down list, where you can enter the weight value for the item.



Item weight can be a positive decimal or integer value. It can range from ".001" to "9999".

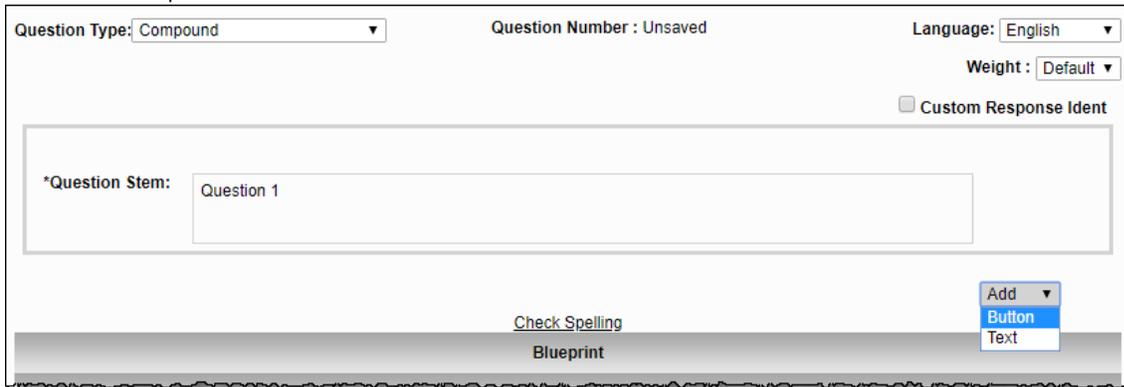
Create a Compound Item

1. Add the **Question Stem** to the Compound Item type. This is the only mandatory field in this item type.
2. Add **Buttons** or **Text** to the item.

Add a Button to an item

Multiple buttons may be added to a Compound item. The button opens a pop-up window when the candidate clicks the button.

- Click the **Add** drop-down arrow and select **Button** from the list.



The screenshot shows the question editor interface. At the top, there are fields for 'Question Type' (set to 'Compound'), 'Question Number' (set to 'Unsaved'), and 'Language' (set to 'English'). Below these are 'Weight' (set to 'Default') and a checkbox for 'Custom Response Ident'. The main area contains a text box for the '*Question Stem' with the text 'Question 1'. At the bottom right, there is an 'Add' dropdown menu that is open, showing options for 'Button' and 'Text'. Below the question stem, there are 'Check Spelling' and 'Blueprint' buttons.

A button is added below the Question Stem.

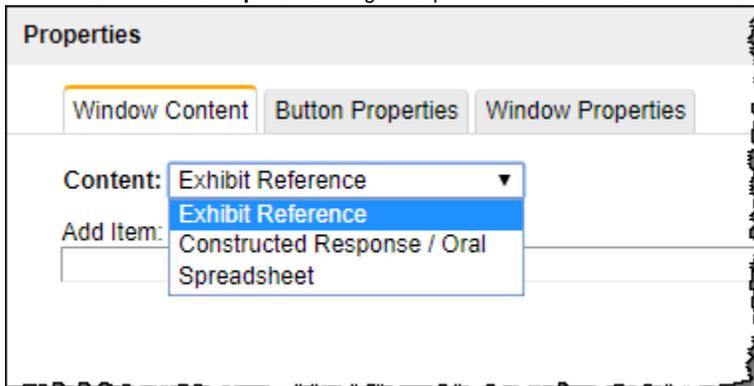


The screenshot shows the question editor interface after a button has been added. The '*Question Stem' text box still contains 'Question 1'. Below it, a 'Button' has been added. To the right of the question stem, there are up and down arrow icons and a red minus icon. At the bottom right, there is an 'Add' dropdown menu.

Specify Window Content

The Window Content tabs allows to you specify the type of item you want open when candidates click the button. You can select **Exhibit Reference**, **Constructed Response / Oral**, or **Spreadsheet**.

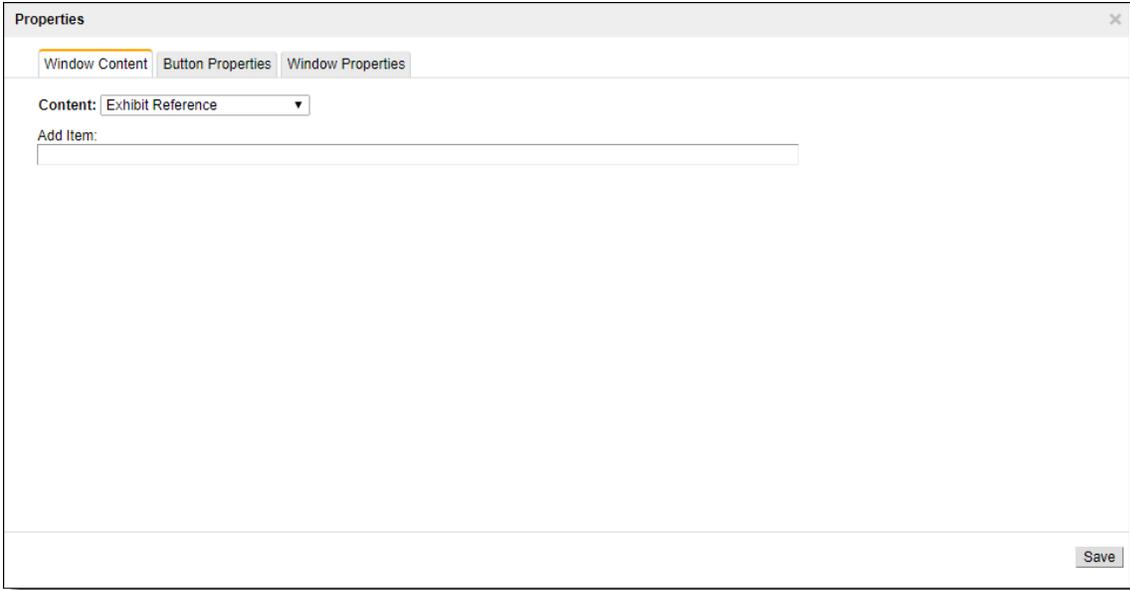
1. Click the button. The **Properties** dialog box opens to the **Window Content** tab.



The screenshot shows the 'Properties' dialog box with the 'Window Content' tab selected. The 'Content' dropdown menu is open, showing options for 'Exhibit Reference', 'Constructed Response / Oral', and 'Spreadsheet'. The 'Add Item' field is empty.

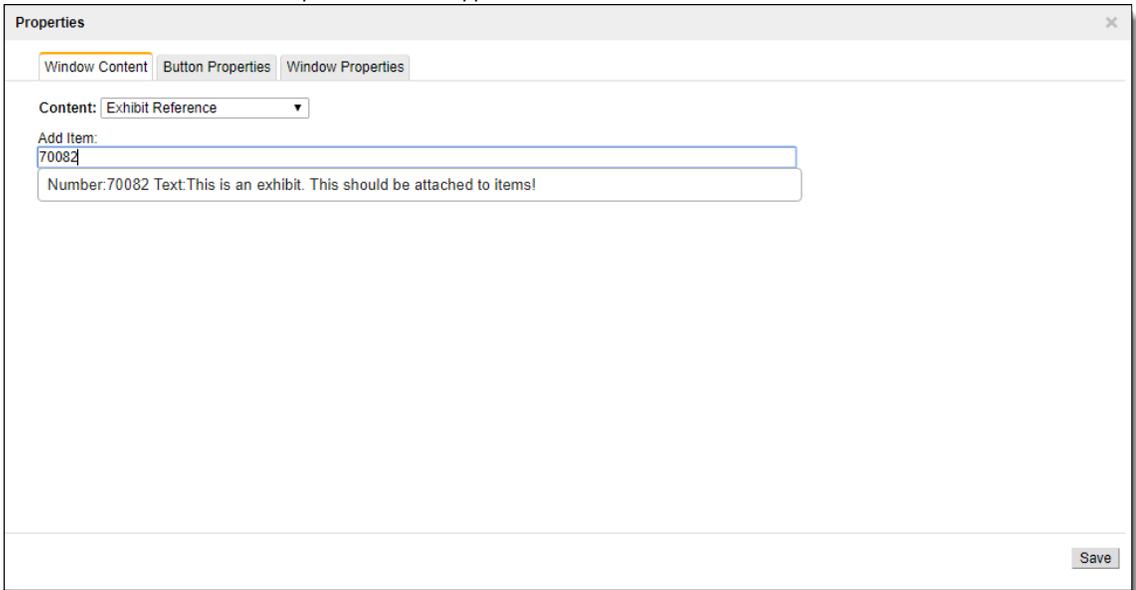
2. Click the **Content** drop-down arrow and select one of the content options:

Exhibit Reference: You can add an **Exhibit (Display only type item)** that was previously created.



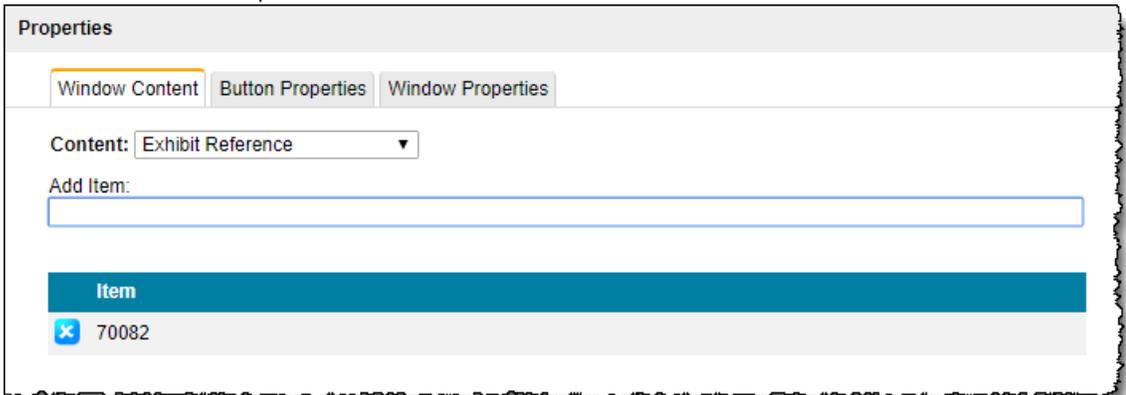
The screenshot shows a 'Properties' window with three tabs: 'Window Content', 'Button Properties', and 'Window Properties'. The 'Content' dropdown is set to 'Exhibit Reference'. Below it is an 'Add Item:' text field, which is currently empty. A 'Save' button is located at the bottom right of the window.

- a. Type the **Item ID** or **text from the Question Stem** into the **Add item** text field. The system searches for items matching the search criteria you typed.
- b. Click the desired **Item** in the drop-down list that appears.



The screenshot shows the 'Properties' window with the 'Add Item:' field containing the text '70082'. Below the field, a search result is displayed: 'Number:70082 Text:This is an exhibit. This should be attached to items!'. A 'Save' button is at the bottom right.

- c. The Item is listed in the Properties window. Click **Save**.



The screenshot shows the 'Properties' window with the 'Add Item:' field empty. Below it, a list of items is displayed. The first item is highlighted in blue and has a close button (X) next to it. The item is labeled 'Item' and has the ID '70082'. A 'Save' button is at the bottom right.

Constructed Response / Oral: See [Constructed Response or Oral](#) topic for details on authoring a constructed response / oral type items.

The screenshot shows the 'Properties' dialog box with the 'Window Content' tab selected. The 'Content' dropdown is set to 'Constructed Response / Oral'. The 'Text' field is empty. The 'Initial Response' field is also empty, with a 'Toolbar' set to 'Edit Only'. The 'Response Properties' checkbox is checked. A 'Check Spelling' button is located at the bottom center, and a 'Save' button is at the bottom right.

a. Create a **Constructed Response / Oral** type item.

 If you **Upload Assets** to the Text field of the Constructed Response / Oral type item, a message notifies you that the uploaded files have been attached.

The screenshot shows the 'Properties' dialog box with the 'Window Content' tab selected. A green notification box at the top states 'Uploaded files have been attached.' The 'Content' dropdown is set to 'Constructed Response / Oral'. The 'Text' field contains a red speech bubble with the word 'Hello'. The 'Initial Response' field is empty, with a 'Toolbar' set to 'Edit Only'. The 'Response Properties' checkbox is checked. A 'Save' button is at the bottom right.

If the asset requires mandatory metadata, the metadata pop-up window opens where you must add the mandatory metadata and then **Save**. The same message notifies you the files have been attached.

b. Click **Save**.

Spreadsheet: See [Spreadsheet](#) topic for details on authoring a spreadsheet type item.

- a. Create a **Spreadsheet** type item.
- b. Click **Save**.

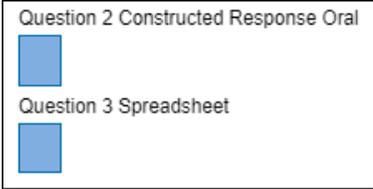
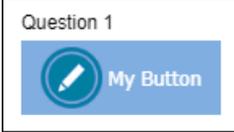
3. Click **Save** to return to the Write Question page.

Set Button Properties

Users can specify how the button looks and how it appears on the item.

1. On the **Write Question** page, **click** the **Button**.
2. Select the **Button Properties** tab in the **Properties** dialog box.

Feature	Description
---------	-------------

<p>Button Label</p>	<p>Enter the Title for the button using the Button label field. The button auto sizes to the label text if the Button Width and Button Height are not defined.</p> <p>For Exhibit References if the Button Label and Button Normal Image fields are left blank, the default "easel" image and the default text "Exhibit" are placed on the button.</p>  <p>For Constructed Response / Oral and Spreadsheet type items, the button is empty if no label is defined in the Button Label field.</p> 
<p>Button Normal Image</p>	<p>An existing Asset from the project can be used as the normal state button image using the Button Normal Image field. This button image is visible to the candidate if the mouse pointer is not hovering over the button.</p> <p>Note: The Image is placed to the left of the label on the button. If the button height and width are not set, the button auto sizes to accommodate the size of the normal image. If a large button image is selected and the button height and width are set smaller than the size of the image, the button image is cut off and the Button Label is not displayed.</p>  <p>Note: There is no way to delete the button image once it has been added. You must delete this button and add a new button if you do not want to include an image on the button.</p>
<p>Button Rollover Image</p>	<p>An existing Asset from the project can be used as the rollover state button image using the Button Rollover Image field. This button image is visible to the candidate when the mouse pointer hovers over the button.</p> <p>Note: If the Button Normal Image is larger than the Button Rollover Image, when candidates hover the mouse pointer over the button, the button size remains larger and the smaller rollover image is top-left aligned in the button. If the Button Normal Image is smaller than the Button Rollover Image, when candidates hover the mouse pointer over the button, the button size remains smaller and the rollover image is cut off. We recommend that both the Button Normal Image and Button Rollover Image be the same size to prevent this behavior.</p> <p>Note: There is no way to delete the button image once it has been added. You must delete this button and add a new button if you do not want to include an image on the button.</p>
<p>Hotkey</p>	<p>A single character alphanumeric value can be specified as a keyboard hotkey in conjunction with the ALT key for the candidate to open the pop-up window without clicking its button.</p>

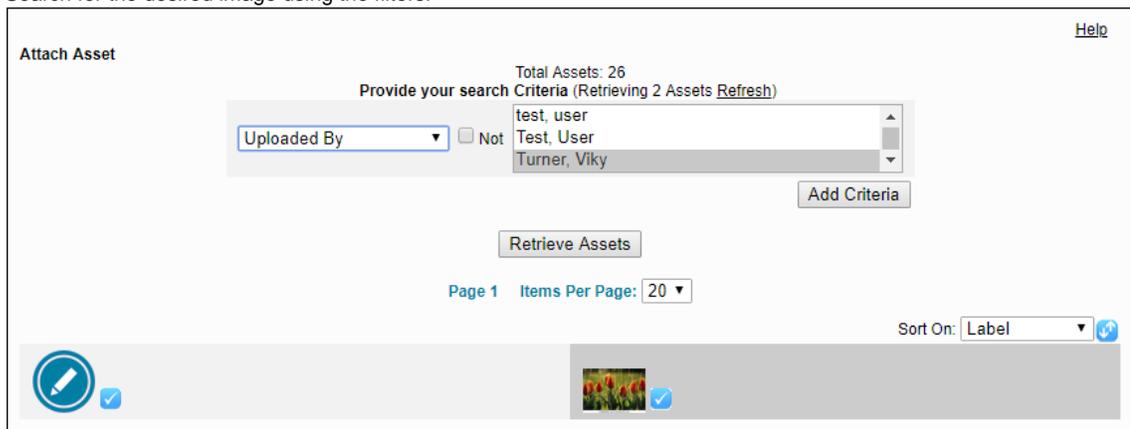
Button Width	Enter the pixel width of the button. This can be any non-zero integer or can be left blank. If left blank, the button is displayed using the default settings. The button auto sizes to the Button Label or Button Normal Image size if the Button Width and Button Height are not defined.
Button Border Color	Select one of the predefined colors from the Button Border Color drop-down list, or enter the Hex value for the desired color in the Button Border Color text field. Note: If Show Border is set to False , the button border is not displayed even though a button border color was defined.
Button Foreground Color	Select one of the predefined colors from the Button Foreground Color drop-down list, or enter the Hex value for the desired color in the Button Foreground Color text field. The button foreground color is the color of the button text visible to the candidate if the mouse pointer is not hovering over the button.
Button Alignment	The Button Alignment setting specifies the placement of the button within the paragraph. The available options are left , center , or right .
Show Button Label	<p>The Show Button Label setting specifies if the button label will be displayed. The available options are True and False.</p> <p>If you add a Button Label and set Show Button Label to False, ExamDeveloper produces an error. This is not a valid configuration.</p> <p>For Exhibit References the Show Button Label can only be set to False if no label is defined in the Button Label field. A False value removes the default "Exhibit" label.</p> <div> </div> <p>You cannot set both Show Button Label and Show Button Image to False when the Button Label field is empty. ExamDeveloper produces an error. This is not a valid configuration.</p>
Show Button Image	<p>The Show Button Image setting specifies if the button image is displayed. The available options are True and False.</p> <p>If you add a Button Normal Image and set Show Button Image to False, ExamDeveloper produces an error. This is not a valid configuration.</p> <p>For Exhibit References the Show Button Image can only be set to False if no Button Label and no Button Normal Image are defined. A False value removes the default "easel" image.</p> <div> </div> <p>You cannot set both Show Button Label and Show Button Image to False when the Button Label field is empty. ExamDeveloper produces an error. This is not a valid configuration.</p>
Show Background	The Show Background setting specifies if the button background color is displayed. The available options are True and False .
Show Border	The Show Border setting determines if the button border is displayed. The available options are True and False .

Button height	Enter the pixel height of the button. This can be any non-zero integer or can be left blank. If left blank, the button is displayed using the default settings. The button auto sizes to the Button Label or Button Normal Image size if the Button Width and Button Height are not defined.
Button Background Color	Select one of the predefined colors from the Button Background Color drop-down list, or enter the Hex value for the desired color in the Button Background Color text field. The Button Background Color is the color of the button visible to the candidate. Note: If Show Background is set to False , the button color is not displayed even though a button background color was set.
Button Rollover Color	Select one of the predefined colors from the Button Rollover Color drop-down list, or enter the Hex value for the desired color in the Button Rollover Color text field. The Button Rollover Color is the color of the button text visible to the candidate when the mouse pointer is hovering over the button.
Button Label Alignment	The Button Label Alignment setting specifies the placement of the text on the button. The available options are left , center , or right .

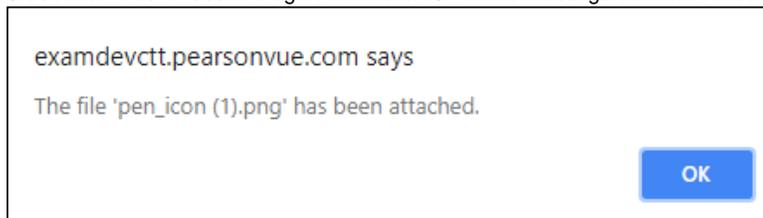
3. Set any of the desired **Button Properties**.

Upload Button Images

- Click the **Browse** button to add a **Button Normal Image** or **Button Rollover Image**.
- Search for the desired image using the filters.



- Click the **Blue Check Mark** button next to the desired image.
- Close the **Attach Asset** dialog box and click **OK** in the message box that states the image has been attached.



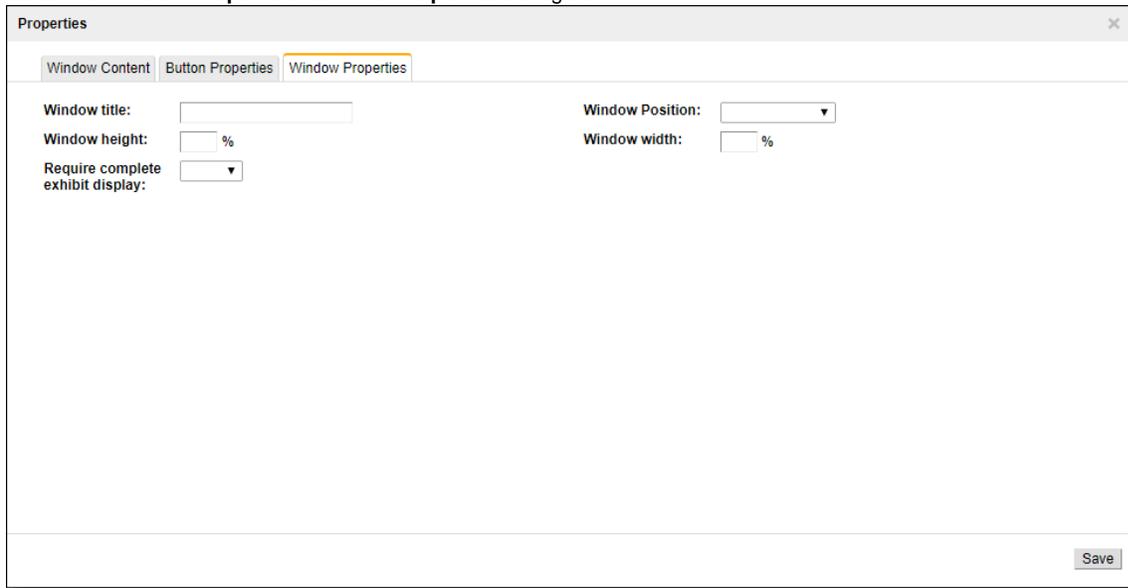
4. Click **Save** to return to the Write Question page.

Set Window Properties

Users can specify how the pop-up window looks when it is opened in the exam.

- On the **Write Question** page, click the **Button**.

2. Select the **Window Properties** tab in the **Properties** dialog box.



3. Set any of the desired **Window Properties**.

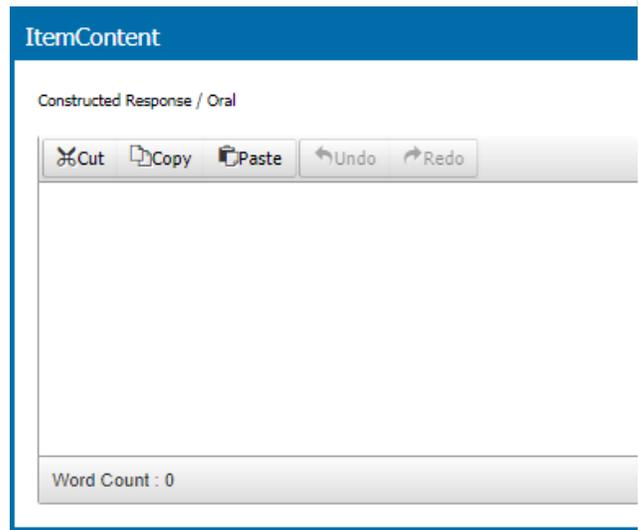
Feature	Description
Window Title	<p>Enter the Title for the Exhibit Window using the Window Title field.</p> <p>For Exhibit Reference, if no window title is defined, the default title "Exhibit" is listed in the title bar of the window.</p>  <p>The image shows a close-up of a window title bar. It has a blue background with a white icon of a document with a magnifying glass on the left, followed by the text "Exhibit". Below the title bar, the text "Display type item" is visible.</p>



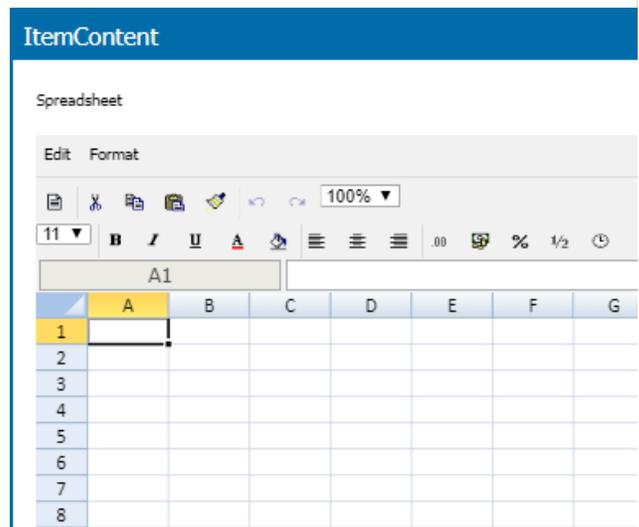
Compound items with **Exhibit reference Window Titles** added append **"-Exhibit ID"** to the Window name when you export the QTI. In the following example the Question ID **"760468"** is appended to the Window title as **"Exhibit Window-760468"**.

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE questestinterop SYSTEM "C:\Program Files (x86)\Pears
- <questestinterop xmlns="http://www.imslobal.org/xsd/ims_
  <item ident="760468">
    - <presentation background_color="#FFFFFF" fontstyle="no
      - <flow>
        - <material>
          - <mattext>
            <p>Display type item.</p>
          - <p>
            
          </p>
          </mattext>
        </material>
      </flow>
    </presentation>
  </item>
  - <item ident="760475">
    - <presentation background_color="#FFFFFF" fontstyle="no
      - <flow>
        - <flow inset="2">
          - <material>
            - <mattext>
              <p>Compound item.</p>
            </mattext>
          </material>
        </flow>
        - <flow inset="2">
          - <material>
            - <pearsonvue:matbutton label="My button"
              - <pearsonvue:showwindow title="Exhibi
                <pearsonvue:itemreference ident="
              </pearsonvue:showwindow>
            </pearsonvue:matbutton>
          </material>
        </flow>
      </flow>
    </presentation>
  </item>
</questestinterop>
```

For **Constructed Response / Oral**, if no window title is defined the default title "ItemContent" is listed in the title bar of the window.



For **Spreadsheet**, if no window title is defined the default title "ItemContent" is listed in the title bar of the window.



<p>Window Height</p>	<p>You can specify how large the pop-up window is when the candidate clicks the button. The Window Height is a percentage of your screen resolution on the exam delivery workstation. This can be any non-zero integer or can be left blank.</p>
<p>Require complete exhibit display</p>	<p>Use the Require Complete Exhibit Display option to require candidates to view the entire pop-up exhibit window before submitting the answer to the current questions. The available options are True and False.</p>
<p>Window Position</p>	<p>The Window Position option identifies where the window opens on the screen when users click the button on the exam item. The available options are top-left, top-center, top-right, center-left, center-center, center-right, bottom-left, bottom-center, and ottom-right.</p>

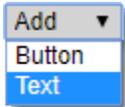
Window Width	You can specify how large the pop-up window is when the candidate clicks the button. The Window Width is a percentage of your screen resolution on the exam delivery workstation. This can be any non-zero integer or can be left blank.
---------------------	--

4. Click **Save** to return to the Write Question page.

Add Text to an Item

Multiple Text sections can be added to a Compound item. These may be used to create separate Question Stems in the compound item.

1. Click the **Add** drop-down arrow and select **Text** from the list.



2. Enter the desired text into the **Text** field.

 A screenshot of a question editor interface. It shows a 'Question Stem' field containing 'Exhibit Question 1'. Below it is a 'Button' field. Below that is a 'Text' field which is currently empty. To the right of these fields are navigation arrows (up, down) and a red minus sign. At the bottom right, there is an 'Add' dropdown menu.

Move Buttons and Text in the Compound Item

Once buttons or text have been added to a compound item, they can be moved up or down.

Click the **Move Up** or **Move Down** arrow for the desired text or button.

All items may be moved, even the Question Stem field.

 A screenshot of a question editor interface showing a list of items. The items are: '*Question Stem: Question 1 Exhibit button', 'My Exhibit', 'Text: Question 2 Constructed Response Oral', 'Constructed Response', 'Text: Question 3 Spreadsheet', 'Spreadsheet', and 'Button'. To the right of these items is a vertical column of navigation arrows (up, down) and red minus signs. A red oval highlights this column of arrows.

Add Custom Response Ident

Users can customize the **Response Ident** to make it easier to locate the response once the candidate has supplied an essay or spreadsheet response. By default, if the item has not been saved, the response ident is **_R1, _R2, _R3**, etc. when you add multiple response buttons. If the item has been saved the Response ident is **<Question number>_R1, <Question number>_R2**, etc.



Item Response Ident must be unique within the entire exam. ExamDeveloper does not prompt you if multiple items have the same Ident, but when you compile the exam the driver produces an error notifying you that items have duplicate ids.

1. Save the Compound type item so a **Question Number** is assigned to the item.
2. Select the **Custom Response Ident** check box.

3. Click the **button** with **Constructed Response / Oral** or **Spreadsheet** type pop-up. The **Window Content** tab opens.
4. For Constructed Response / Oral, expand the **Response Properties**. The Ident for the response is the **<Question number>_Rx**.

Properties

Window Content | Button Properties | Window Properties

Content: Constructed Response / Oral

Text: Constructed Response / Oral

Toolbar: Edit Only

Initial Response:

Response Properties:

Height: Border Width: Display Word Count

Width: Border Color: Display Character Count

Ident: 144879_R1

Save

For Spreadsheet responses, the **Custom Ident** is the <Question number>_Rx.

Properties

Window Content | Button Properties | Window Properties

Content: Spreadsheet

Text: Spreadsheet

Spreadsheet: Select from my assets Use default created by the driver

Score results: Automatically through test driver Manually through spreadsheet result file

*Maximum rows(1 to 500): 10

*Maximum columns(1 to 100): 10

Frame height (> 0):

Custom Ident: 144879_R2

[Check Spelling](#)

Save

5. Type in the new **Ident** name.

The **Custom Response Ident** field must be unique within the exam. Therefore, if more than one response button is included in the item, the ident must be unique for each response button within the exam.

Any **alphanumeric character** (A - Z, 0 - 9), **hyphens**, and **underscores** may be included in the **Ident** name. Spaces are not allowed in the Ident names.

6. Click **Save**.

Delete Buttons and Text in the Compound Item

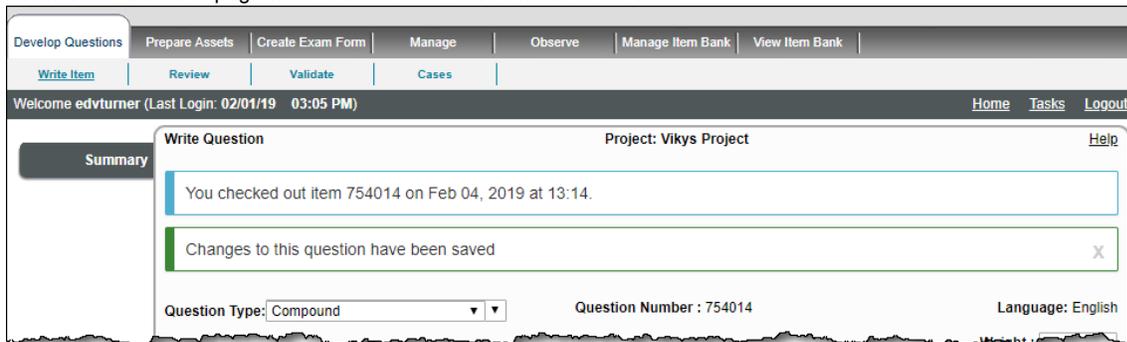
All buttons and text in Compound type items except for the Question stem may be deleted. You cannot delete the Question Stem.

Click the **Delete** button for the desired text or button.

Save the Item

You have several options to **Save** the item.

1. Click the **Add Question to Case** button save the item and create a new case. The item is automatically attached to the case. Only users with permission to create cases see this button.
2. Click the **Save** button. The item is saved and the item is checked-out preventing other users from making edits to the item. You remain on the Write Question page where further edits can be made to the item.



3. Click the **Preview** button. Changes to the item are saved, the item is checked-out, and the item is opened in the **Preview** window. Only users with permission to preview items see this button.
4. To save an incomplete item, click **Save and Exit**. The item is saved in a **Draft** state and checked-in so any user with access to the item may make edits to the item. It is visible in the **Draft/Returned Questions** tab of the **Project Writing Summary** page.
5. To submit the item for review, click **Submit**. The item is saved and checked in so any users with access to the item may make edits to the item. The item is advanced to the next reviewer in the list or to the next stage in the workflow.