

# Graphical Editor & LaTeX

Last Modified on 04/20/2023 1:51 pm CDT

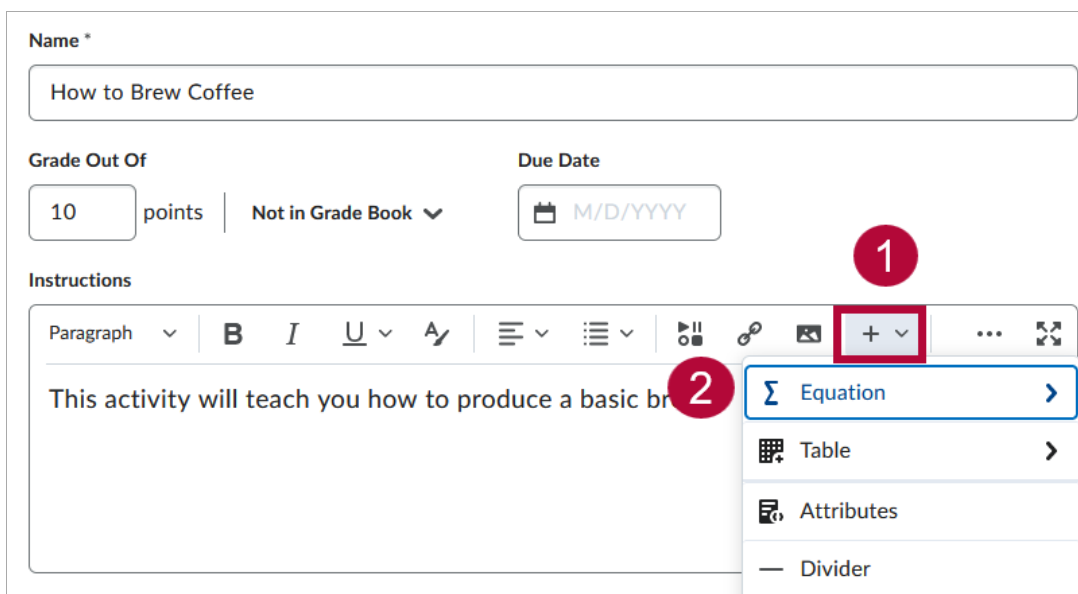
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## Inserting Formulas From HTML Equation Editor

### From Assignments

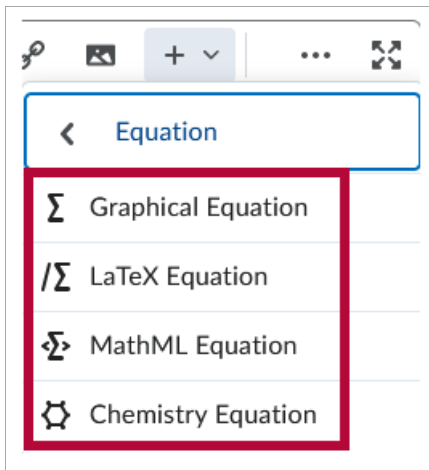
To access the Equation Editor from the HTML Editor toolbar, click **[+]**, then click **[Equation]**.



The screenshot shows the HTML Editor interface. At the top, there is a 'Name' field containing 'How to Brew Coffee'. Below it, there are fields for 'Grade Out Of' (10 points) and 'Due Date' (M/D/YYYY). The 'Instructions' field contains the text 'This activity will teach you how to produce a basic br'. The toolbar at the bottom of the instructions field includes various formatting options like Paragraph, Bold, Italic, Underline, and a '+' button. A red circle with the number '1' highlights the '+' button. A dropdown menu is open below the '+' button, showing options: Equation, Table, Attributes, and Divider. A red circle with the number '2' highlights the 'Equation' option.

You will then be presented with the list of **Equation Editors**, which enables users to insert equations within the HTML Editor. It supports the inputs from:

- **Graphical Editor**
- **LaTeX Editor**
- **MathML Editor**
- **Chemistry Equation Editor**

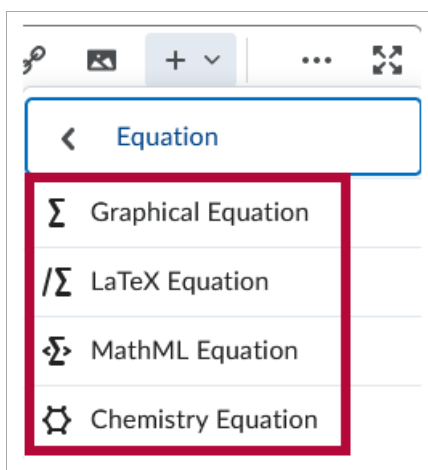


## From Quizzes

From the **Edit Quiz** page, click anywhere in the **Description** box, a popup toolbar will then appear. From the toolbar, click on **[+]**, then click **[Equation]**.

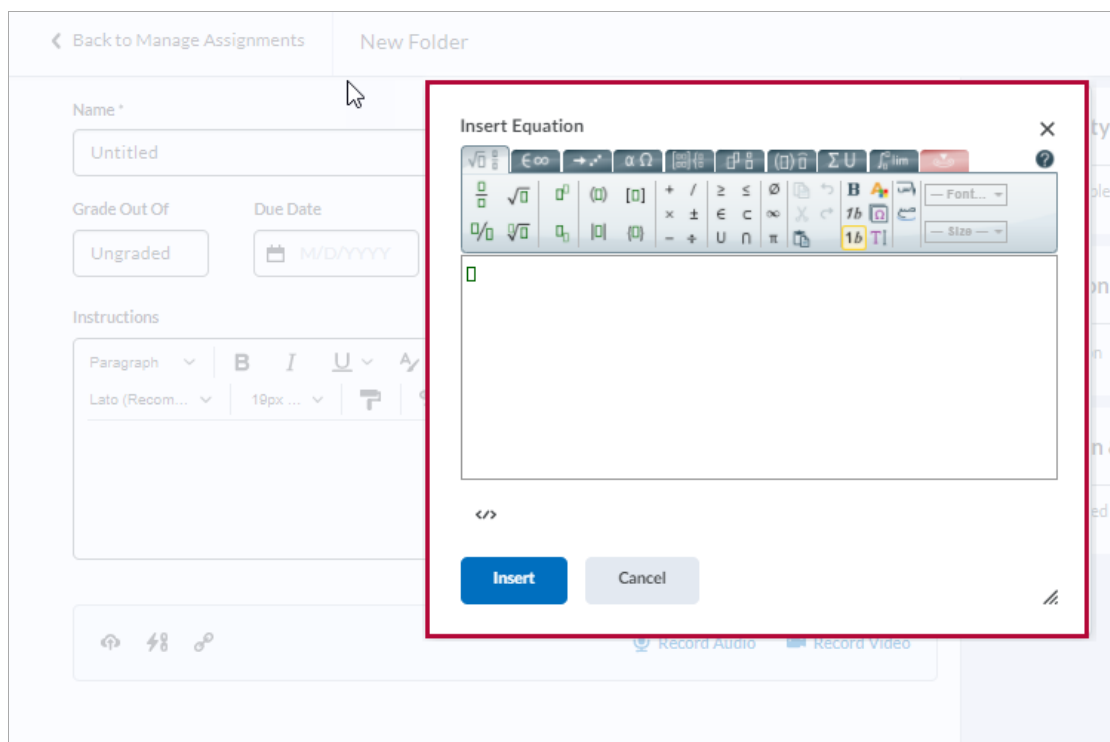
A screenshot of the "Edit Quiz" page. The "Name" field contains "Test Quiz". Below it, the "Grade Out Of" is "0 points" and "Not in Grade Book" is selected. The "Due Date" field is empty with a placeholder "M/D/YYYY". The "Description" field is empty and highlighted with a red box and a red circle containing the number "1". A toolbar is visible above the description field, with a red box and a red circle containing the number "2" around the "+" icon. A red arrow points from the "2" to the "+" icon. Below the description field, there is a "Questions" section and a "Preview" button.

From the dropdown menu select the appropriate Equation Editor:



## Graphical Equation Editor

The **Graphical Equation Editor** features a toolbar equipped with a selection of buttons. This toolbar provides the necessary elements to construct the equation. Each button in the Equation Editor toolbar opens a palette of related mathematical symbols. The Graphical Equation Editor offers 10 tabs of symbols, arrows, Greek letters and numbers, matrices, scripts and layouts, decorations, big operators, calculus, and context for creating math equations.



The following table displays the **Tabs** on the **Graphical Equation Editor**.

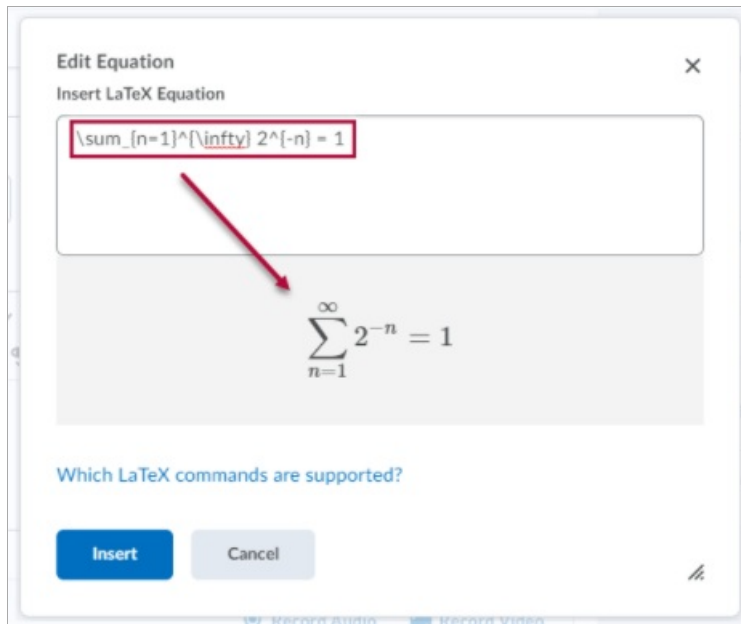
Icon	Name	Description
	Chemistry tab	Add specialized chemistry symbols for inorganic chemistry equations <b>Note:</b> This tab only appears when you select the Chemistry equation option
	General tab	<ul style="list-style-type: none"> <li>Add a template for building equations.</li> <li>Add and edit text in the equation using the Cut, Copy, Paste, Undo, Color, and other text editing function</li> </ul>
	Symbols tab	Add mathematical symbols to equations
	Arrows tab	Update or add arrows to equations
	Greek and letters tab	Update or add uppercase and lowercase Greek characters to equations
	Matrices tab	Update or add matrices to equations
	Scripts and layout tab	Add scripts or layouts to build equations
	Decorations tab	Add fences such as brackets and vertical bars around text fields
	Big operators tab	Update or add big operators to equations
	Calculus tab	Add a template for building Calculus equations

## LaTeX Editor

LaTeX is a typesetting system based on TeX. There are two possible modes for LaTeX entry: text mode and math mode. D2L supports math mode only. If you add LaTeX using the Equation Editor:

- Most spaces and line breaks are not recognized and have to be specified with special commands.
  - Empty lines are ignored, only one paragraph per formula.
  - Each letter is considered to be the name of a variable and will be typeset as such. If you want normal text within a formula (normal upright font and normal spacing) then you have to enter the text using dedicated commands

Insert the LaTeX command on the LaTeX Editor and the preview of the formula will be automatically generated. The LaTeX commands available are displayed on the link “Which LaTeX commands are supported?”

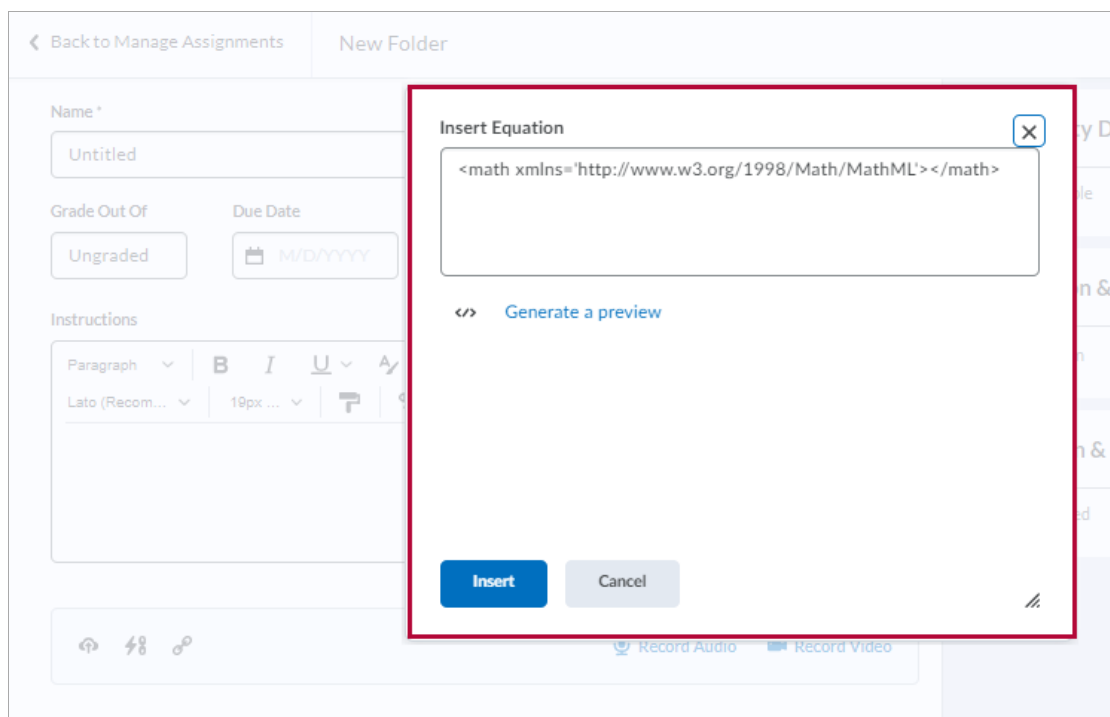


In the following table some examples of LaTeX commands are displayed:

	Symbol	LaTeX	Formula
Superscript	<code>^</code>	<code>x^2</code>	$x^2$
		<code>^+H^2</code>	$+H^2$
Subscript	<code>-</code>	<code>H_2</code>	$H_2$
		<code>_3H_2</code>	${}_3H_2$
Fraction	<code>\frac</code>	<code>\frac{1}{2}</code>	$\frac{1}{2}$
		<code>\frac{15}{20}</code>	$\frac{15}{20}$
Square Root	<code>\sqrt</code>	<code>\sqrt{2}</code>	$\sqrt{2}$
		<code>\sqrt[10]{2}</code>	$\sqrt[10]{2}$
Sum	<code>\sum_{n=1}^{\infty}</code>	<code>\sum_{n=1}^{\infty} 2^{-n} = 1</code>	$\sum_{n=1}^{\infty} 2^{-n} = 1$
Integrals	<code>\int_a^b</code>	<code>\int_a^b x^2 dx</code>	$\int_a^b x^2 dx$
	<code>\iint_a^b</code>	<code>\iint_a^b x^2 dx</code>	$\iint_a^b x^2 dx$
Limit	<code>\lim_{x \to \infty}</code>	<code>\lim_{x \to \infty} f(x)</code>	$\lim_{x \rightarrow \infty} f(x)$
Text	<code>\text</code>	<code>\text{Question1}</code>	Question 1
Space	<code>\</code>		
Line break	<code>\\</code>		

## MathML Editor

MathML is a standard adopted by the World Wide Web Consortium (W3C). It uses XML to describe mathematical notation by capturing both its structure and content. This enables MathML to support the visual display and assistive technology access. Its appearance is similar in structure to HTML. Unlike HTML, MathML is not designed to be hand-written. It is recommended that you compose equations in a visual editor and paste its MathML output into the Brightspace Equation Editor.



## Chemistry Equation Editor

The Chemistry Equation Editor offers specialized chemistry symbols for inorganic chemistry formulas.

