

# Item Layouts and Answer Variations Guide

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*Prepared by the American Institutes for Research®*



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# About Layouts

Layouts in the Item Tracking System (ITS) determine the orientation of the stimulus and items as they appear in the Student Testing Site or any other application that uses the TDS Blackbox. Some layouts may accommodate multiple items, but they can only accommodate one stimulus. Other layouts may consist of one or more items *without* a stimulus. The type of layout you select for a test screen depends on the following factors:

- Item Type
- Number of Items
- Association with a stimulus
- Stimulus Type
- Item Bank

The text in item stems, response options, and passages is always left-aligned, but the area containing it may not be. For example, a left-aligned response option could appear in the center of the screen if it is part of a horizontal or stacked Multiple-Choice item layout in which the group of response options is centered.

Many single-item layouts are limited to a maximum width of 40 ems to maintain consistency between small and large monitors. They also have a minimum width of 200 pixels.



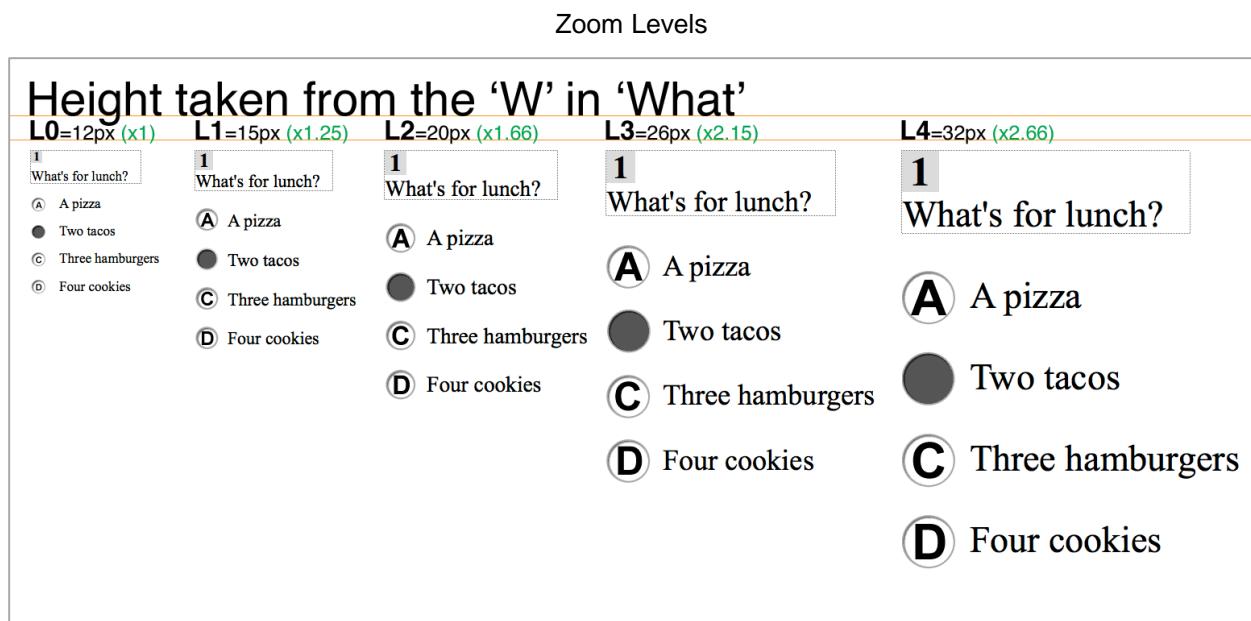
## **Layouts 1, 11, 13, 17, 21–27 do not follow this rule:**

- Layouts 1, 13, and 22 do not have a maximum width.
- Layouts 11, 17, 21, and 23–27 fill 100% of the screen because these layouts are divided into two scrollable sections.

## Font Sizes & Measurements in this Document

Unless otherwise indicated, measurements in figures use “em” units, which correspond to the width of a single “M” character. This unit is used for consistency purposes to account for instances where zoom is applied. The normal zoom level of text is 1.2 ems (about 12 pixels). Zoom text multiplies the base level of the font. There are 5 zoom levels: Level 0 (default) through 4. The figure below displays the zoom levels and their equivalent pixel heights on screen.

This document does not use point sizes, as points are a measurement strictly for the print medium and can vary in size from one screen to another.



## About Stimuli Types

A stimulus may be associated with one or more items. When items are part of a layout which includes a stimulus, they will all have the same structure: stem followed by response. The type of stimulus also determines which layout you should use. Stimuli may consist of the following:

- Reading Passage
- Illustration/Graphic/Table/Chart
- Audio/Video Recording
- Animation

## About Item Types and Response Areas

Most items consist of a stem and a response area (except Cloze items, which combine the stem with the response area). Stems tend to be homogenous across item types, but the response areas vary greatly. Each item type may be used with any available layout. However, certain layouts are not recommended for Grid items, Scratch Pad items, and Simulation items, because these items have response areas with a fixed width.

## Elicited Response

For Elicited Response items, an on-screen widget indicates instances of recording and playback. The widget's appearance depends on its current state.



## Selected Response Items

There are several types of Selected Response item types, including Multiple-Choice, Multi-Select, Picture-Click, and Evidence-Based Selected Response items.

### Multiple-Choice and Multi-Select items

Multiple-Choice and Multi-Select items use the same item layouts. There are three item layout variations for these item types: Vertical, Stacked, and Horizontal.

Clockwise from Top Left: Vertical, Stacked, Horizontal



## Picture-Click Items

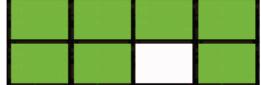
Picture-Click items display graphics for response options, rather than text. These item types use the same variations as standard Multiple-Choice item types (Stacked, Vertical, and Horizontal).

6

Which picture has more than 0.75 shaded?

(A) 

(B) 

(C) 

(D) 

## Evidence-Based Selected Response (EBSR) Items

EBSR items combine two sets of stems and response options into a single item. Unlike Multiple-Choice and Multi-Select item types, EBSR items cannot be displayed in horizontal or stacked layouts. EBSR items can only display response options vertically.

### Part A

What does the word "lethargic" mean in the second paragraph of the passage?

- (A) Sick
- (B) Tired
- (C) Sad
- (D) Late

### Part B

Select two other words in the passage that led you to this conclusion.

- Weak
- Darkness
- Drifting
- Blinked

## Short & Extended Answer Items

The response areas for Short Answer and Extended Answer item types essentially have the same appearance. Extended Answer response areas accommodate more text than Short Answer response areas. You can configure the character limit for both item types.

Short Answer Item

A screenshot of a 'Short Answer Item' response area. At the top left is a blue header bar with the number '44056'. To the right is a three-line menu icon. Below the header is a question text box containing the instruction: 'Explain how the author of Passage #2 would counter the claim that election results are "more legitimate."'. Below the question is a placeholder text 'Type your response in the space below.' followed by a large, empty rectangular text input field.

## HTML Editor Items

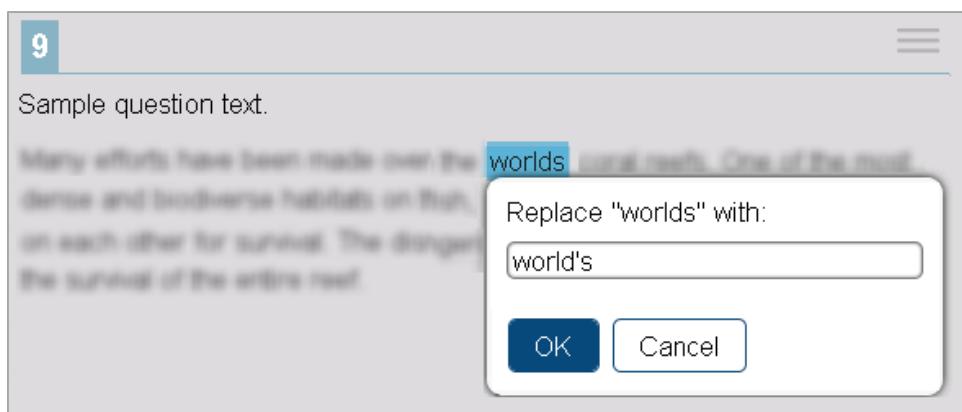
HTML Editor items are a type of written response item that include a Javascript text area designed to allow for rich text formatting. It is as wide as its container, which is normally about 481 pixels wide in the default layout. HTML Editor items typically use Layout 1.

A screenshot of an 'HTML Editor' response area. At the top is a toolbar with various rich text formatting icons: bold (B), italic (I), underline (U), strikethrough (Tx), alignment options (1=, 2=, 3=, 4=), a font size dropdown, a font dropdown, a color palette, and a language dropdown set to 'English'. Below the toolbar is a large, empty rectangular text input field.

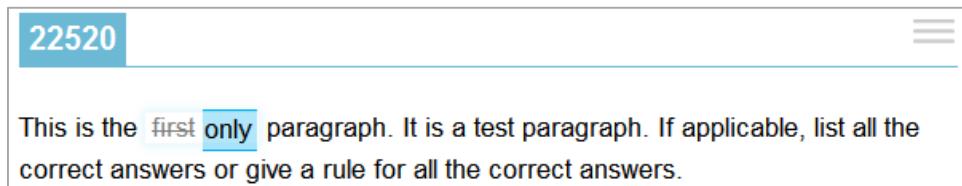
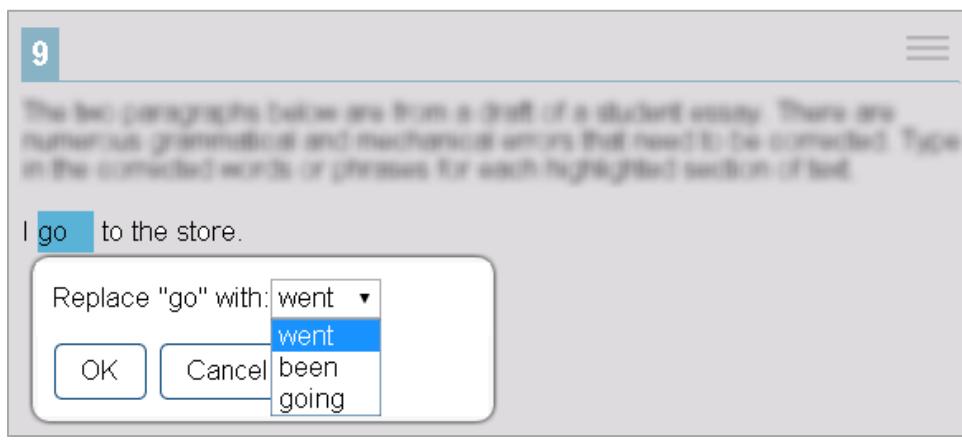
## Edit Task Items

The Edit Task item response area consists of a section of text containing highlighted interactive words that students can modify via a modal window. Edit Task items require students to enter the response in a text box. Edit Task Choice items require students to select a response from a options in a drop-down list. The interactive text cannot exceed 28 characters (including spaces) for Edit Task Choice items, due to the width of the drop-down list. The text passage can be any size, as it uses 100% of the window's width.

Edit Task Item



Edit Task Choice Item



## Matching Items

The response area for Match items may appear in Match format or Table Match format. The latter format is more common for this item type. Both formats use Layout 8. Match items in Match format have a minimum width of 375 pixels (22 ems) at default zoom level.

Match Format

**44419**

Match the words in the left column with their synonyms in the right column.

Happy	Despondent
Sad	Famished
Angry	Elated
Hungry	Weary
Tired	Irate

Diagram illustrating the connections between words in the left column and their synonyms in the right column:

- Happy → Despondent
- Sad → Famished
- Angry → Elated
- Hungry → Weary
- Tired → Irate

Table Match Format

**44420**

For each number listed in the rows of the table, mark the checkboxes for each column that describes that number.

	Perfect Square	Prime Number	Odd Number
<b>5</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>12</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>9</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Hot Text Items

The response area for Hot Text items consists of a section of text containing interactive words or phrases that students can either select (highlight) by clicking or rearrange by clicking and dragging.

44217

Highlight a concern from the Anti-Federalist argument. Then, highlight a portion of the first four amendments that addressed the Anti-Federalist argument.

**Amendment 1.** Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.

**Amendment 2.** A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed.

**Amendment 3.** No Soldier shall, in time of peace be quartered in any house, without the consent of the Owner, nor in time of war, but in a manner to be prescribed by law.

**Amendment 4.** The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

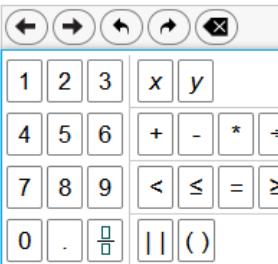
## Table Items

The Table item response area consists of a table with cells in which students may enter text.

16451	=
Valley Forge National Park is located in eastern Pennsylvania, in an area that has many caves. Caves form in limestone when Earth's systems interact.	
Enter numbers 1 through 5 into the table to order the processes of limestone cave formation, with 1 being the oldest process and 5 being the most recent process.	
Processes in Cave Formation	Order
Rainwater absorbs carbon dioxide from the air and from decaying plants in soils, creating a weak acid solution.	<input type="text"/>
Cave formations begin to grow as water deposits minerals onto exposed surfaces within the cave.	<input type="text"/>
Acidic groundwater flows into and between layers of limestone bedrock, dissolving the rock and widening cracks.	<input type="text"/>
Limestone is formed during sedimentation in the ocean and in some lakes.	<input type="text"/>
Rain falls onto the plants and soil that covers layers of limestone bedrock.	<input type="text"/>

## Equation Items

The Equation item response area consists of one or more entry boxes and an on-screen keyboard containing mathematical characters. These items are 769 pixels wide or use 100% of the available response area width (whichever is smaller). The default height is 254 pixels.

44471	=
Use the quadratic formula to find the values of $x$ for the following equation:	
$y = x^2 + 2x - 3$	
$X =$	<input type="text"/>
$X =$	<input type="text"/>
	

## Cloze Items

The response area for Cloze item types differs slightly from other item types because it is combined with what is normally considered to be the item stem.

The children are  .

Cloze responses can include a full QWERTY keyboard, an alphabetically ordered keyboard, a partial keyboard, or no on-screen keyboard (requiring students to use the actual keyboard).

QWERTY Keyboard



Alpha Keyboard



Partial Keyboard



## Scaffolding Items

Scaffolding items use Layout 25, occupying 70% of the screen on the right side. Scaffolding item response areas consist of interactive cards and audio cues. Each card is 170 pixels wide by 204 pixels tall at default zoom level. The images in the cards must be within these measurements and should be the same size for all response options. Only two to three response option cards are allowed for these item types, but this may change in the near future.

**SOFT PRETZELS**



Making soft pretzels is something easy and fun to do after school. You need to gather just six ingredients. You use math to measure the ingredients. You need to mix the ingredients together. Then, you need to make the pretzel shapes and bake them.

First, you must gather your ingredients. Most ingredients can be found at home. You need four cups of flour, one cup of water, a tablespoon each of salt and sugar, a package of yeast, and an egg. After gathering the ingredients, take the egg and break it into a small bowl. Beat the egg and set it aside for later. Next, mix the yeast, water, sugar, and flour in a large bowl. Keep mixing until dough is formed.

Now it is time for the fun part! Take pieces of the dough and make shapes with them. You can roll out a piece of dough to make a long, twisty soft pretzel. You can flatten out the dough and cut out a circle to make a cookie-shaped pretzel. You can even make a soft pretzel shaped like a donut! Then take the pretzel shapes and place them on a cookie sheet.

Remember that egg you set aside? Now is the time to use it. Brush some egg on top of each pretzel shape, and then sprinkle the pretzel with salt. The egg will act like glue and help the salt stick to the pretzels. The pretzels are ready for the oven. Place the cookie sheet in the oven and bake the pretzels. After fifteen minutes, remove the baking sheet from the oven and let the pretzels cool for five minutes. The final step? Eat the pretzels! Enjoy.

**1**

We're going to read about how to make soft pretzels. Show me, why does the author think making soft pretzels is easy?

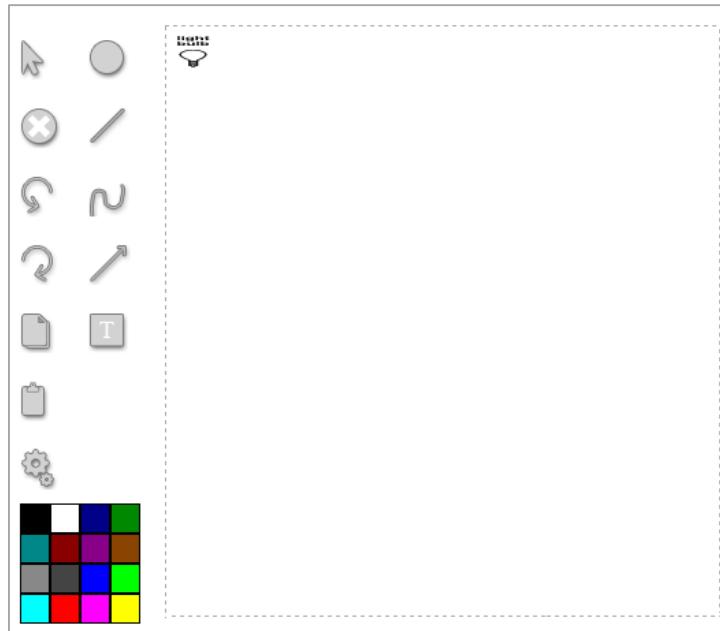
 **few** 

 **oven** 

 **shapes** 

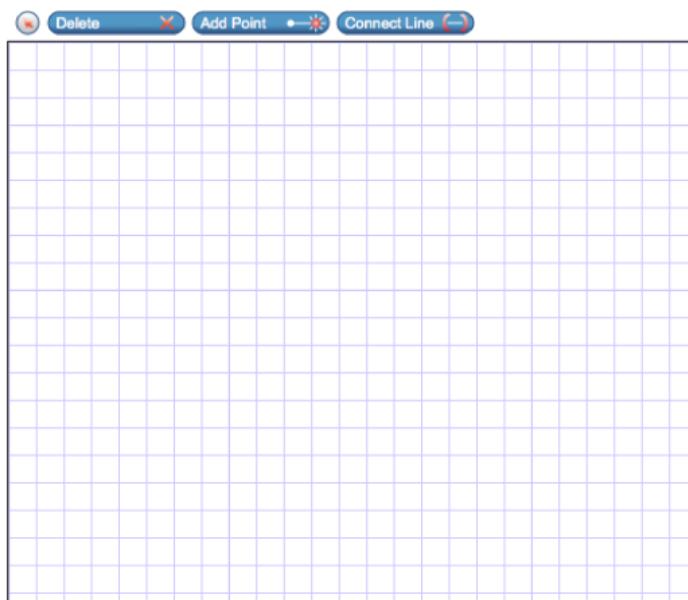
## Scratch Pad Items

The Scratch Pad item response area consists of a canvas in which students can create drawings. You should only use these items in Layouts 13, 21, and 22 because their width is not flexible.



## Grid Items

The Grid item response area consists of a grid in which students can select objects, place objects, and construct graphs. Each grid area is usually 550 pixels tall by 650 pixels wide, depending on the layout (in layout 21 the grid is 465 x 575). Because the width of Grid items is not flexible, you should only use these items in Layouts 13, 21, and 22.



## Simulation Items

The response area for Simulation items consists of one or more input tools, an interactive animation, and an output table that populates with data when students run animations. These items may also function like stimuli and be associated with other items. Each Simulation response area is 6500 pixels tall, and the width is determined by the layout. Simulation items can only be used in Layouts 28, 29, 30, and 31.

- In Layout 28, the item occupies 70% of the screen's width, 90% when expanded.
- In Layout 29, the item occupies 38% of the screen's width, 90% when expanded.
- In Layout 30, the left column is 300 pixels and the Simulation uses the remaining width of the screen on the right side.
- In Layout 31, the item occupies 100% of the screen's width.

98754

This investigation tests the ability of pepsin to digest egg protein in different solutions and at different temperatures. Select one or more solutions and choose a temperature. Then click Start. Results will be recorded in the table. Clear results show that protein was digested. Cloudy results show that protein was not digested.

Perform a controlled experiment testing the hypothesis that the human body requires both pepsin and acid to digest proteins.

When you are done, click Next to submit your answer.

Objects

Eraser

Start

Variable: Object	Result: Lightbulb
Aluminum Foil	lit
Eraser	not lit

Clear All Rows

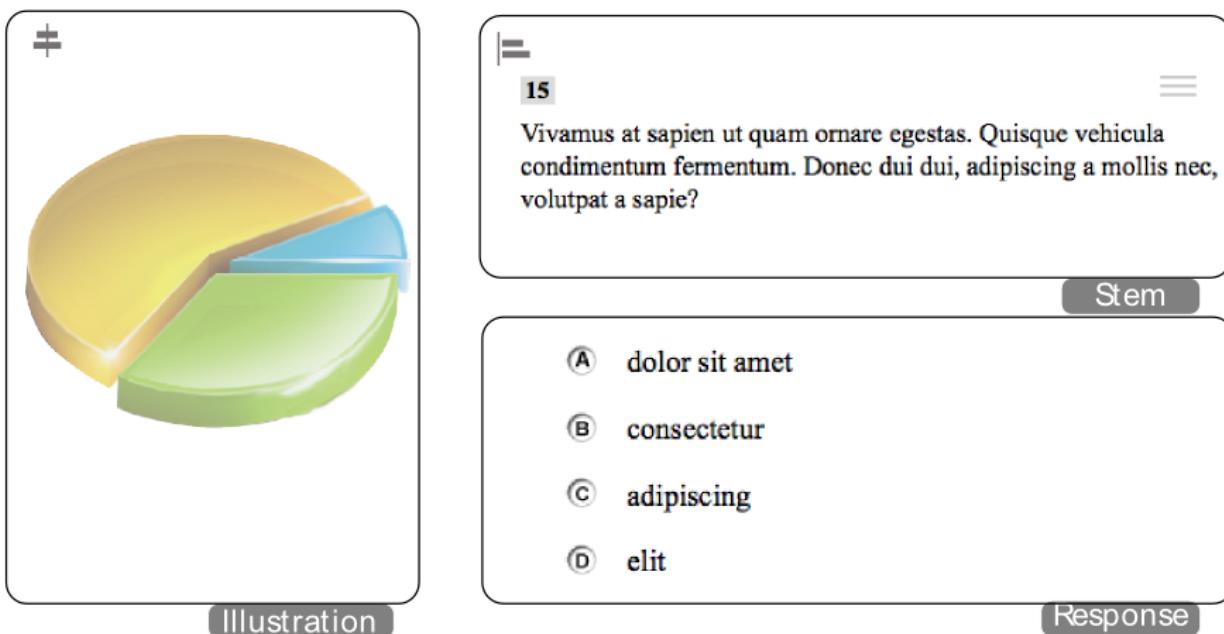
# Item Layouts

This section provides sample diagrams for each layout. The captions for these diagrams follow the format “Layout Number: Item Type.” This does not mean that the corresponding layout is used exclusively for that item type; it simply indicates what item type is used in the sample.

## Layout 1

Layout 1 does not have a maximum width.

Layout 1: Elicited Response



## Layout 2

Layout 2: Vertical Multiple-Choice Item

15

Vivamus at sapien ut quam ornare egestas. Quisque vehicula condimentum fermentum. Donec dui dui, adipiscing a mollis nec, volutpat a sapie?

Stem



Illustration

(A) dolor sit amet  
(B) consectetur  
(C) adipiscing  
(D) elit

Response

## Layouts 3 & 4

Layout 3 and Layout 4 are essentially the same layout. Original specifications called for varying percentages for the split between left and right sides of the layout, but this created an undesirable effect in the item content.

Layout 3: Vertical Multiple-Choice Item

15

Vivamus at sapien ut quam ornare egestas. Quisque vehicula condimentum fermentum. Donec dui dui, adipiscing a mollis nec, volutpat a sapie?

Stem



Illustration

(A) dolor sit amet  
(B) consectetur  
(C) adipiscing  
(D) elit

Response

## Layout 5

Layout 5: Horizontal Multiple-Choice Item

9

Donec tincidunt, lorem a tincidunt aliquet, ligula lorem euismod lectus.  
Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis  
ultricies sit amet id augue.

Stem

Illustration

A Aenean erat    B Phasellus faucibus    C Vivamus at    D Duis congue

Response

## Layout 6

Layout 6: Horizontal Multiple-Choice Item

Illustration

9

Donec tincidunt, lorem a tincidunt aliquet, ligula lorem euismod lectus.  
Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis  
ultricies sit amet id augue.

Stem

A Aenean erat    B Phasellus faucibus    C Vivamus at    D Duis congue

Response

## Layout 8

Layout 8: Stacked Picture-Click Item

Donec tincidunt, lorem a tincidunt aliquet, ligula lorem euismod lectus.  
Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis  
ultricies sit amet id augue.

Stem

Response

(A) (C)   
(B) (D)

## Layout 11

Layout 11 has been discontinued. This layout occupies 100% of a user's screen, dividing it 60/40 horizontally between the passage and sets of questions.



For all new split-panel layouts, please use Layouts 17 and up.

# Layout 12

## Layout 12: Extended Answer Items

Directions: Choose only one

Integer mauris nisi, matts et hendrerit hendrerit, condimentum sed lorem. Sed ac massa eu metus pulvinar vehicula. Donec adipiscing laoreet mi, hendrerit laoreet tellus feugiat ac. Nunc ipsum nibh, rutrum non ornare in, volutpat ut felis. Nulla sit amet enim eu nisl aliquam interdum sed fermentum dolor. Etiam tempus, dolor quis adipiscing dapibus, enim nunc mollis dui, et consequat elit neque sit amet leo.

Vivamus bibendum purus in eros accumsan placerat. Quisque vel nisl lectus. Phasellus eros dui, dapibus quis feugiat in, pharetra eu lectus. Maecenas sit amet massa et augue eleifend bibendum. Nullam ornare, dolor sit amet adipiscing iaculis, metus quam volutpat massa, in tincidunt arcu ante at velit. Pellentesque in leo vitae velit gravida ultricies.

<input type="checkbox"/> Aenean eu lorem sit amet mauris vulputate porttitor 1	<input type="checkbox"/> Vivamus sagittis, nisi in euismod fermentum, neque Vivamus sagittis Praesent sollicitudin lacus id neque porttitor pretium. Maecenas nisl arcu, bibendum et lacinia id, vulputate commodo purus. 3
<b>Stem</b> <a href="#">CLICK TO EXPAND</a> +	<b>Stem</b> <a href="#">CLICK TO EXPAND</a> +
<input type="checkbox"/> Praesent sollicitudin lacus id neque porttitor pretium. Maecenas nisl arcu, bibendum et lacinia id, vulputate commodo purus. 2	<input type="checkbox"/> Bbibendum et lacinia Praesent sollicitudin lacus id neque porttitor pretium. Maecenas nisl arcu, bibendum et lacinia id, vulputate commodo purus. 4
<b>Stem</b> <a href="#">CLICK TO EXPAND</a> +	<b>Stem</b> <a href="#">CLICK TO EXPAND</a> +

Bbibendum et lacinia Praesent sollicitudin lacus id neque porttitor pretium. Maecenas nisl arcu, bibendum et lacinia id, vulputate commodo purus.

[CLICK TO EXPAND](#) + [Change Prompt](#) 

**Stem**

**F** B I U = = ↶ ↷ ABC #

0 out of 850 words used.

**Response**

## Layout 13

Layout 13 does not have a maximum width. The grid component in this layout is 550 pixels tall by 650 pixels wide.

Layout 13: Grid Item

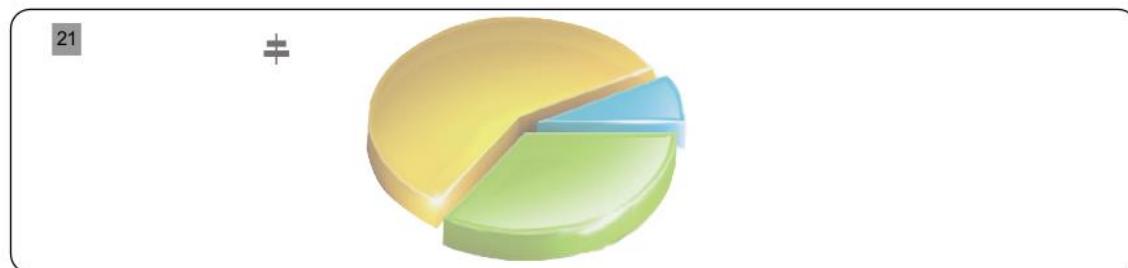
The screenshot shows a layout with two main components. The top component is a "Grid Item" with a title bar labeled "Layout 13: Grid Item". It contains a text area with the number "9" and some placeholder text: "Donec tincidunt, lorem a tincidunt aliquet, ligula lorem euismod lectus. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue." Below this is a "Stem" button. The bottom component is a "Scratchpad Item" with a title bar labeled "Response Grid". It features a scratchpad interface with tool buttons for "Delete", "Add Point", and "Connect Line". A large grid workspace is visible. Below this is a "Response" button. The entire layout is contained within a rounded rectangle.



This layout is only to be used with Grid and Scratchpad items.

## Layout 14

Layout 14: Cloze Item



Illustration

Donec tincidunt, lorem a

**A** **D** **Y** **H**

Stem & Response

## Layout 15

Layout 15: Cloze Item

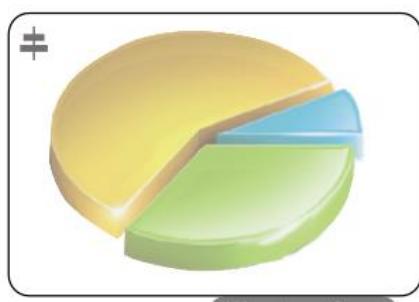
Donec tincidunt, lorem a

**A** **D** **Y** **H**

Stem & Response

## Layout 16

Layout 16: Cloze Item



Illustration

Donec tincidunt, lorem a

**A** **D** **Y** **H**

Stem & Response

## Layout 17

Layout 17 occupies 100% of a user's screen, dividing it 60/40 horizontally between a passage and sets of items. Layout 17 replaces Layout 11 and can contain any combination of answer variations. **On a smaller monitor at default zoom level, the item column in Layout 17 would require a horizontal scroll bar to accommodate Grid, Simulation, or Scratch Pad items.**

## Layout 17: Multiple Item Types

60%
40%

**ANNEC BLANDIT ELEIFEND**
**21**

*Donec blandit eleifend urna et interdum. Phasellus sit amet urna justo, vel laoreet lorem. Mauris ullamcorper congue velit at tempor. In tincidunt tincidunt elit, sit amet interdum lacus mollis id.*



**Mauris interdum fringilla placerat?**

CURABITUR AC TORTOR UT arcu porttitor venenatis. Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue. Sed sollicitudin feugiat sollicitudin. expertsarcu porttitor venenatis.

Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue.

Harcu porttitor venenatis. Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue. Sed sollicitudin feugiat sollicitudin. Phasellus faucibus aliquet nisl, sed luctus nisl gravida sit amet. whiparcu porttitor venenatis. Curabitur egestas, lacus non dapibus Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue.

Harcu porttitor venenatis. Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue. Sed sollicitudin feugiat sollicitudin. Phasellus faucibus aliquet nisl, sed luctus nisl gravida sit amet. whiparcu porttitor venenatis. Curabitur egestas, lacus non dapibus

Harcu porttitor venenatis. Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue. Sed sollicitudin feugiat sollicitudin. Phasellus faucibus aliquet nisl, sed luctus nisl gravida sit amet. whiparcu porttitor venenatis. Curabitur egestas, lacus non dapibus

**Doze**
**22**

*Donec tincidunt, lorem a tincidunt  
Pellentesque tempor tellus vel arcu*

This is some text to be styled.

**Short Answer**
**23**

*Donec tincidunt, lorem a tincidunt  
Pellentesque tempor tellus vel arcu*

(A) dolor sit amet

(B) consectetur

(C) adipiscing

(D) elit

**Stimulus**
**Multiple Choice (Vertical)**

## Layout 21

Layout 21 occupies 100% of a user's screen, dividing it 40/60 horizontally between a passage and sets of items. There is slightly less white space, or padding, between the left and right edges of each major column (10 pixels on each side instead of the normal 20 pixels). **On a smaller monitor at default zoom level, the item column in Layout 21 would require a horizontal scroll bar to accommodate Grid, Simulation, or Scratch Pad items.**

Layout 21: Multiple Item Types

The screenshot shows a layout divided into two main horizontal sections: 40% on the left and 60% on the right. The left section contains a 'Stimulus' item, while the right section contains three 'Item' items.

**Stimulus:** This item displays a passage titled "ANNEC BLANDIT ELEIFEND" followed by a pie chart and several paragraphs of Latin text.

**Item 21 (Cloze):** This item shows a cloze question with the text "Donec tincidunt, lorem a" and four answer buttons labeled A, D, Y, and H. It includes a "Cloze" button at the bottom.

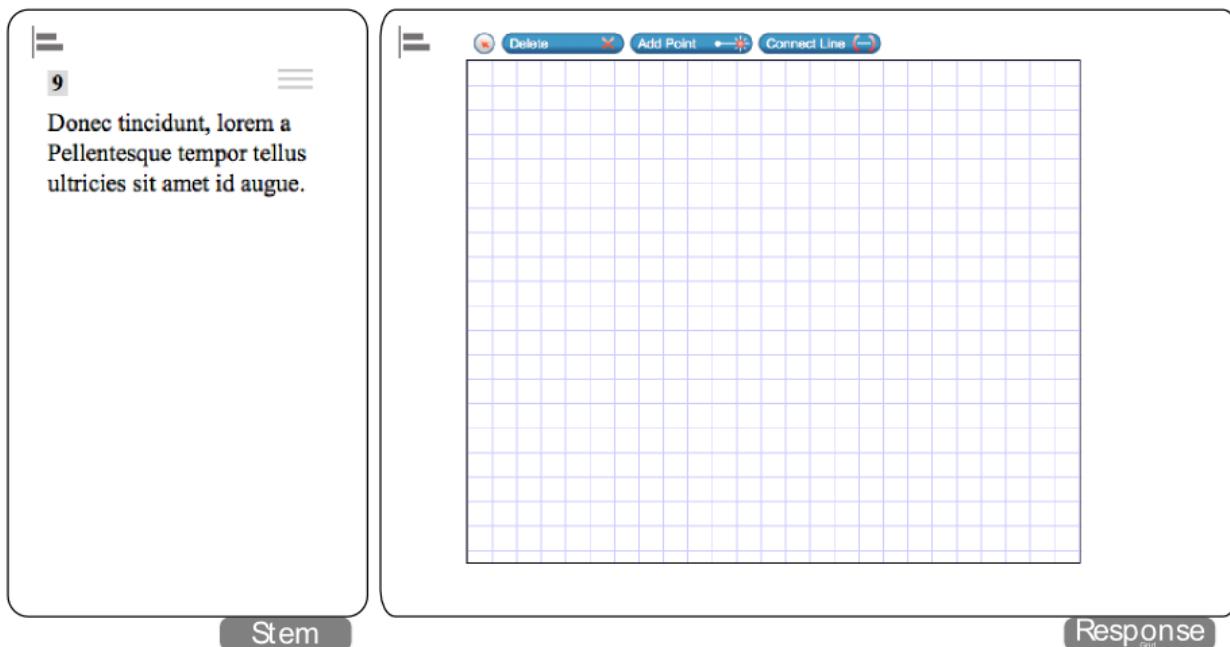
**Item 22 (Short Answer):** This item shows a text input field with the placeholder "This is some text to be styled." It includes a rich text editor toolbar above the input field and a "Short Answer" button at the bottom.

**Item 23 (Multiple Choice Grouping):** This item shows a multiple choice question with four options: A) dolor sit amet, B) consectetur, C) adipiscing, and D) elit. It includes a "Multiple Choice Grouping" button at the bottom.

## Layout 22

Layout 22 does not have a maximum width. The grid component in this layout is 550 pixels tall by 650 wide. The stem section is 17 ems wide.

Layout 22: Grid Item



This layout is only to be used with Grid and Scratchpad items.

## Layout 23

Layout 23 occupies 100% of a user's screen, dividing it 40/60 vertically between a passage and sets of items.

Layout 23: Multiple Item Types

Stimulus

Donec tincidunt, lorem a tincidunt aliquet, ligula lorem euismod lectus.  
Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis  
ultricies sit amet id augue.



Donec tincidunt, lorem a tincidunt aliquet, ligula lorem euismod lectus.  
Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at  
ultricies sit amet id augue.

40%

23 Donec tincidunt, lorem a tincidunt  
Pellentesque tempor tellus vel arcu

(A) dolor sit amet  
(B) consectetur  
(C) adipiscing  
(D) elit

60%

Multiple Choice (Vertical)

22 Donec tincidunt, lorem a tincidunt  
Pellentesque tempor tellus vel arcu

This is some text to be styled.

Short Answer

## Layout 24 & 29

Layout 24 occupies 100% of a user's screen, dividing it 38/62 horizontally between a passage and sets of items. There is slightly less white space, or padding, between the left and right edges of each major column—10 pixels on each side instead of the normal 20 pixels. At the default zoom level, Layout 24 is wide enough to accommodate Grid, Simulation, and Scratch Pad items without a horizontal scroll bar.

Layout 29 is similar, but uses a Simulation item instead of a text passage in the left pane.

Layout 24: Multiple Item Types

The screenshot displays a digital assessment interface with a horizontal split-screen layout. The left side (38% of the width) is labeled "Stimulus" and contains the following content:

**ANNEC BLANDIT ELEIFEND**  
Donec blandit eleifend urna et interdum. Phasellus sit amet urna justo, vel laoreet lorem. Mauris ullamcorper congue velit at tempor. In tincidunt tincidunt elit, sit amet interdum lacus mollis id.

Mauris interdum fringilla placerat?  
Curabitur ac tortor ut arcu porttitor venenatis. Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue. Sed sollicitudin feugiat sollicitudin. Phasellus faucibus aliquet nisl, sed luctus nisl gravida sit amet. Whiparci porttitor venenatis. Curabitur egestas, lacus non dapibus Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue.

Harci porttitor venenatis. Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue. Sed sollicitudin feugiat sollicitudin. Phasellus faucibus aliquet nisl, sed luctus nisl gravida sit amet. Whiparci porttitor venenatis. Curabitur egestas, lacus non dapibus Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue.

Harci porttitor venenatis. Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue. Sed sollicitudin feugiat sollicitudin. Phasellus faucibus aliquet nisl, sed luctus nisl gravida sit amet. Whiparci porttitor venenatis. Curabitur egestas, lacus non dapibus Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue.

The right side (62% of the width) contains three items:

**21** Donec tincidunt, lorem a   
A D Y H  
Cloze

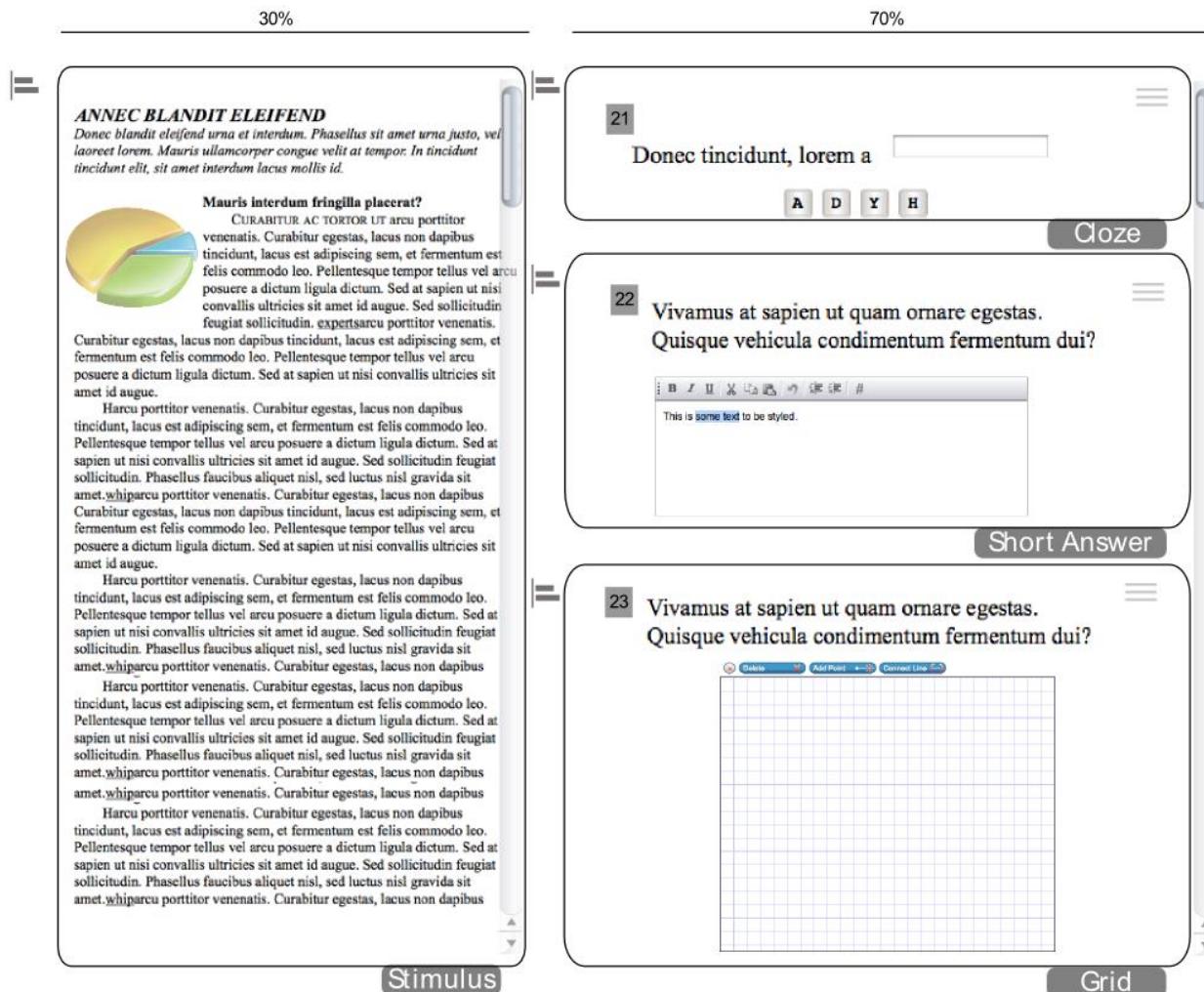
**22** Vivamus at sapien ut quam ornare egestas.  
Quisque vehicula condimentum fermentum dui?  
This is some text to be styled.  
Short Answer

**23** Vivamus at sapien ut quam ornare egestas.  
Quisque vehicula condimentum fermentum dui?  
Grid

## Layout 25

Layout 25 occupies 100% of a user's screen, dividing it 30/70 horizontally between a passage and sets of items. There is slightly less white space, or padding, between the left and right edges of each column—10 pixels on each side instead of the normal 20 pixels. At the default zoom level, Layout 25 is wide enough to accommodate Grid, Simulation, and Scratch Pad items without a horizontal scroll bar.

## Layout 25: Multiple Item Types



## Layout 26

Layout 26 occupies 100% of a user's screen, dividing it 50/50 horizontally between a passage and sets of items. There is slightly less white space, or padding, between the left and right edges of each column—10 pixels on each side instead of the normal 20 pixels. **At the default zoom level on a smaller sized monitor, the item column in Layout 26 would require a horizontal scroll bar to accommodate Grid, Simulation, or Scratch Pad items.**

Layout 26: Multiple Item Types

50%

50%

**ANNEC BLANDIT ELEIFEND**  
*Donec blandit eleifend urna et interdum. Phasellus sit amet urna justo, vel laoreet lorem. Mauris ullamcorper congue velit at tempor. In tincidunt tincidunt elit, sit amet interdum lacus mollis id.*

**Mauris interdum fringilla placerat?**  
Curabitur ac tortor ut arcu porttitor venenatis. Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue. Sed sollicitudin feugiat sollicitudin. expertarcu porttitor venenatis. Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue.

Harcu porttitor venenatis. Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue. Sed sollicitudin feugiat sollicitudin. Phasellus faucibus aliquet nisl, sed luctus nisl gravida sit amet. whiparcu porttitor venenatis. Curabitur egestas, lacus non dapibus fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue.

Harcu porttitor venenatis. Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue. Sed sollicitudin feugiat sollicitudin. Phasellus faucibus aliquet nisl, sed luctus nisl gravida sit amet. whiparcu porttitor venenatis. Curabitur egestas, lacus non dapibus fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue.

Stimulus

**21**  
Donec tincidunt, lorem a   
**A D Y H**

**22**  
Donec tincidunt, lorem a tincidunt  
Pellentesque tempor tellus vel arcu  
**Short Answer**

**23**  
Donec tincidunt, lorem a tincidunt  
Pellentesque tempor tellus vel arcu

**A** dolor sit amet  
**B** consectetur  
**C** adipiscing  
**D** elit

Multiple Choice (Vertical)

## Layout 27 & 28

Layout 27 occupies 100% of a user's screen, dividing it 70/30 horizontally between a passage and sets of items. There is slightly less white space, or padding, between the left and right edges of each column—10 pixels on each side instead of the normal 20 pixels. **At the default zoom level on a smaller sized monitor, the item column in Layout 27 would require a horizontal scroll bar to accommodate Grid, Simulation, or Scratch Pad items.**

Layout 28 is similar, but uses a Simulation item instead of a text passage in the left pane.

70%

30%

**ANNEC BLANDIT ELEIFEND**  
*Donec blandit eleifend urna et interdum. Phasellus sit amet urna justo, vel laoreet lorem. Mauris ullamcorper congue velit at tempor. In tincidunt tincidunt elit, sit amet interdum lacus mollis id.*

**Mauris interdum fringilla placerat?**  
CURABITUR AC TORTOR UT arcu porttitor venenatis. Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue. Sed sollicitudin feugiat sollicitudin. Phasellus faucibus aliquet nisl, sed luctus nisl gravida sit amet id augue.  
Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue.  
Harcu porttitor venenatis. Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue. Sed sollicitudin feugiat sollicitudin. Phasellus faucibus aliquet nisl, sed luctus nisl gravida sit amet id augue.  
Harcu porttitor venenatis. Curabitur egestas, lacus non dapibus tincidunt, lacus est adipiscing sem, et fermentum est felis commodo leo. Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis ultricies sit amet id augue. Sed sollicitudin feugiat sollicitudin. Phasellus faucibus aliquet nisl, sed luctus nisl gravida sit amet id augue.



21  
Donec tincidunt, lorem a   
A D Y H

22  
Donec tincidunt, lorem a tincidunt  
Pellentesque tempor tellus vel arcu  
B I X G H  
This is some text to be styled.

**Short Answer**

23  
Donec tincidunt, lorem a tincidunt  
Pellentesque tempor tellus vel arcu

A dolor sit amet  
B consectetur  
C adipiscing  
D elit

**Multiple Choice (Vertical)**

## Layout 30

Layout 30 does not have a maximum width. The Simulation item is 650 pixels tall and fills the remainder of the screen not occupied by the stem. The stem is 290 pixels wide.

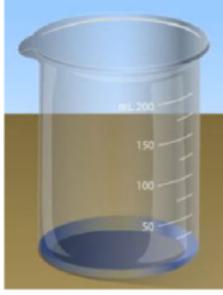
9

Donec tincidunt, lorem a  
Pellentesque tempor tellus  
ultricies sit amet id augue.

Number of Chalk Pieces  
 1 piece

Surface Area of Chalk  
 Whole  
 Halves  
 Pieces  
 Crushed

Amount of Vinegar  
 50 mL



Number of Chalk Pieces	Surface Area of Chalk	Amount of Vinegar/mL	Reaction Rate
1	Whole	50	Slow
2	Halves	50	Medium
3	Pieces	50	Fast
4	Crushed	50	Very Fast
<input type="button" value="Clear All Rows"/>			

Stem

Response

## Layout 31

Layout 31 does not have a maximum width. The Simulation item, located below the stem, is 650 pixels tall and fills the width of the screen. The stem fills the width of the screen and can be any height.

9

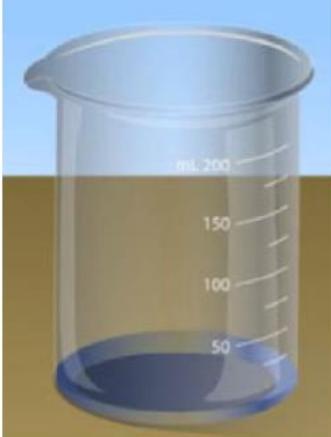
Donec tincidunt, lorem a tincidunt aliquet, ligula lorem euismod lectus.  
Pellentesque tempor tellus vel arcu posuere a dictum ligula dictum. Sed at sapien ut nisi convallis  
ultricies sit amet id augue.

Stem

Number of Chalk Pieces  
 1 piece

Surface Area of Chalk  
 Whole  
 Halves  
 Pieces  
 Crushed

Amount of Vinegar  
 50 mL   
 Start



Number of Chalk Pieces	Surface Area of Chalk	Amount of Vinegar(mL)	Reaction Rate

Clear All Rows

Response

## Layout 32 & 33

Layout 32 occupies 100% of a user's screen, with 20 pixels of white space, or padding, on all sides. This layout accommodates multiple items but no passage.

Layout 33 is similar, but supports Grid items.

Layout 33: Multiple Item Types

The screenshot displays a digital assessment interface with three distinct items:

- Item 21:** A grid response area titled "Response grid". It features a large rectangular grid with a light blue grid pattern. Above the grid are four toolbar buttons: "Delete" (red circle), "Add Point" (blue circle), "Connect Line" (green circle), and a "Help" icon (yellow circle).
- Item 22:** A multiple choice question titled "Multiple Choice (Vertical)". The question text is: "Donec tincidunt, lorem a tincidunt Pellentesque tempor tellus vel arcu". Below the text is a list of four options, each preceded by a radio button:
  - (A) dolor sit amet
  - (B) consectetur
  - (C) adipiscing
  - (D) elit
- Item 23:** A short answer text area titled "Short Answer". It contains a text box with a toolbar at the top and the placeholder text "This is some text to be styled.".

# Compound Layout 1

Compound Layout 1 fits to the window and is used with Edit Task and Hot Text items. It can contain several items simultaneously and is designed to mimic a single item in Layout 8.

1 - 3

This is the passage..

This is the first paragraph. It is a test paragraph. If applicable, list all the correct answers or give a rule for all the correct answers.

This is the second paragraph. It is a test paragraph. If applicable, list all the correct answers or give a rule for all the correct answers

This is the third paragraph. It is a test paragraph. If applicable, list all the correct answers or give a rule for all the correct answers

# Layout WAI

TDS converts each item's original layout to Layout WAI automatically when a student tests in Streamlined Mode. Layout WAI occupies 100% of the screen and consists of a single column. This layout accommodates a single item per page, or multiple items (with or without a passage).

If a passage is included, it has no set height and uses the same scroll bar as the rest of the test page. All of the components on the page are listed vertically, with the passage on top and the items below it. If an item includes an illustration, it appears above the stem and response area.

At the time, energy costs were skyrocketing due to the oil embargo of 1973. Citizens were looking for alternatives to petroleum for power and fuel, and solar energy became a focal point. It was clean and inexpensive, not to mention safe. The disasters of Three Mile Island and Chernobyl during the 1980s scared people away from nuclear energy, and the influx of solar systems in residences began. However, the popularity of solar power waned by the 1990s. Carter's tax credits ended in 1986 when President Reagan chose to let commerce dictate the direction of renewable energy sources.

1

Read the sentences from "What Happened to Solar Power for Home Use?"

sdf

2

The following question has two parts. First, answer part A. Then, answer part B.

**Part A**

Which statement **best** summarizes the author's central idea in "The Homeowner's Salvation: Solar Power"?

(A) Solar energy is an expensive alternative to fossil fuels.  
(B) The government is attempting to support the use of solar energy.  
(C) Solar energy will be a financially sound alternative for many homes in the future.  
(D) Lawmakers understand that incentives are a wise method for steering the economy.

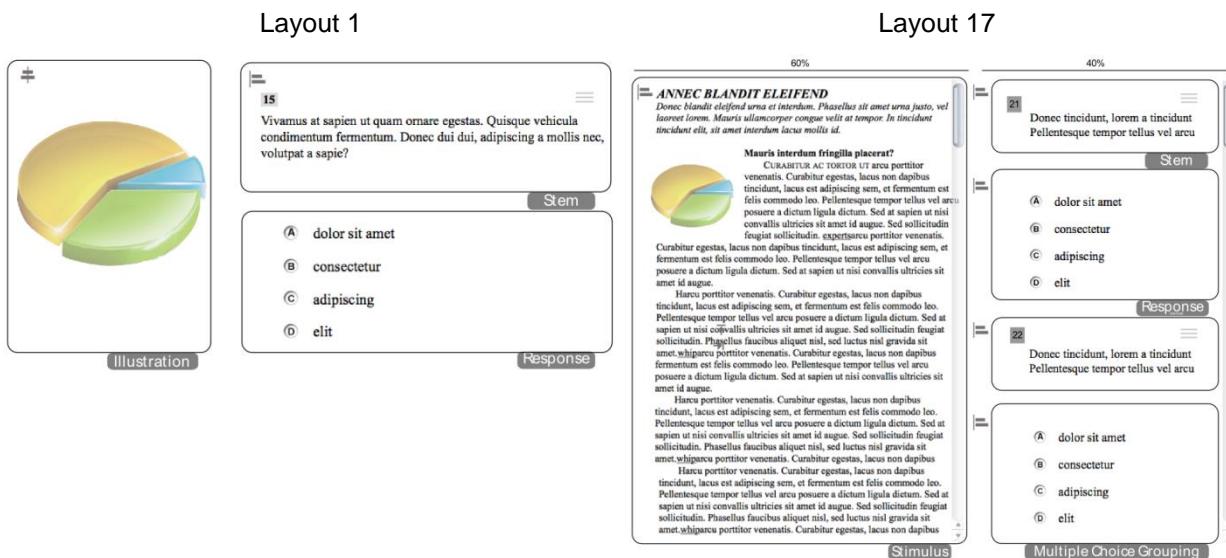
**Part B**

## Best Practices

This section provides basic guidelines to follow when selecting layouts.

## Best Practices 1: Use Appropriate Layout (Part I)

Do not use a multi-column layout (such as Layouts 17 or 21) for a single item when Layout 1 will work.



## **Best Practices 2: Use Appropriate Layout (Part II)**

Do not use Layout 6 for an item that is not associated with a stimulus. Use Layout 8 for such items instead.

Figure 1. Layout 6

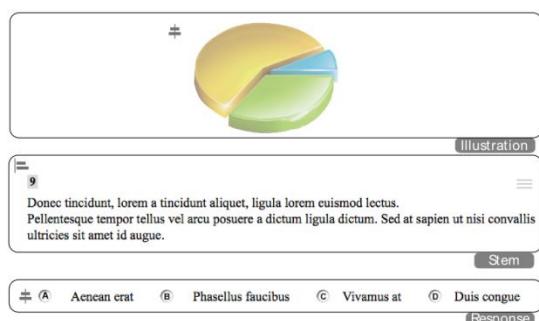
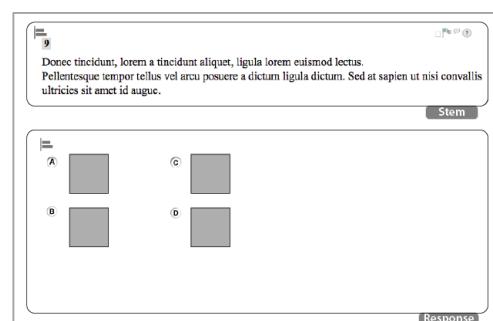


Figure 2. Layout 8



## Best Practices 3: Use Small Images for Response Options

When working with images for Picture-Click items, try to use small dimensions (less than 150 pixels wide by 100 pixels tall). On smaller screens, or in multi-column layouts, using a wide image in options may require students to scroll.

Picture-Click Item

Picture-Click Item with Wide Image

The second screenshot shows the same four shapes, but shape D is significantly wider than the others. This causes it to scroll off the screen, indicated by a red arrow pointing down to the scroll bar.

## Best Practices 4: Separate Text from Graphics

Whenever possible, do not use graphics that contain text. Separate the graphic as an independent image and the text as actual text. For example, do not use an entire poem or newspaper clipping as a graphic. Screen-readers and text-to-speech cannot make much sense of the content without the text.

Graphic Containing Text

Graphic Separated from Text

The first screenshot shows a page with a graphic of a cookbook and its table of contents. The entire graphic is circled in red, indicating it contains text. The second screenshot shows a separate graphic of a girl holding puppies, with the accompanying text about the 'PETSPAL' project placed below it.

## Best Practices 5: Use Caution When Working with Tables

HTML tables are preferable to large images of tables, but be careful of setting styles within the table, such as adding a background color to a table cell. Added styles may have unintended consequences when students test with accommodations, such as color-overlay. Additionally, when a student with a high zoom level sends a print request, the table will most likely get cropped, leaving some of the content inaccessible to them.

Table with High Zoom Level

The screenshot shows a web-based assessment interface. At the top, there are navigation icons for Back, Next, Save, and Pause. On the right, there are icons for Masking, Notes, Zoom Out, and Zoom In. Below these are two questions:

**8**  
What would you look under to find Gliding World Records?  
 A Fédération Aéronautique Internationale  
 B Guinness World Records  
 C Welcome to Real World  
 D New World Records

**9**  
What would you look under to find world records on Amazing Feats?  
 A Fédération Aéronautique Internationale  
 B FINA World Records  
 C Amazon.co.uk  
 D Guinness World Records

A red arrow points downwards from the bottom of the question area towards the bottom of the page, indicating where the table would be located if it were present.

## Best Practices 6: Use Caution When Adjusting Spacing

Be very careful when adjusting spacing. Adding extra spaces before a response option or at the end of a sentence or paragraph can have unpredictable consequences with text wrapping. Things may look fine on one screen, but on a larger or smaller screen a line may break awkwardly as a result of extra blank spaces.

Passage with Extra Spacing

• **Mark Spitz, swimming**, U.S. Mark Spitz set the world's record for gold medals in one Olympics in 1972 with seven. He won for the 100m and 200m freestyle, 100m and 200m butterfly, 400m and 800m freestyle relays, and the 400m medley relay. These he added to the four medals he won at the 1968 Olympics: a bronze in the 100m freestyle, a silver in the 100m butterfly, and gold in both the 400m and 800m freestyle relays.

Passage Without Extra Spacing

• **Mark Spitz, swimming**, U.S. Mark Spitz set the world's record for gold medals in one Olympics in 1972 with seven. He won for the 100m and 200m freestyle, 100m and 200m butterfly, 400m and 800m freestyle relays, and the 400m medley relay. These he added to the four medals he won at the 1968 Olympics: a bronze in the 100m freestyle, a silver in the 100m butterfly, and gold in both the 400m and 800m freestyle relays.

## Best Practices 7: Use Appropriate Tags

Use the `<em>` tag to emphasize something; use the `<i>` tag to just make something italic. A screen-reader can convey emphasis when reading aloud, but it cannot convey italics.

## Best Practices 8: Avoid Underlining Text

When text is presented on screen, underlined words typically indicate clickable hyperlinks. This could confuse students.

10

While working on your science experiment, you decided to check the world records. Which Website would be best?

(A) [www.newworldrecords.org](http://www.newworldrecords.org)  
(B) [www.guinnessworldrecords.com](http://www.guinnessworldrecords.com)  
(C) [www.fai.org/records](http://www.fai.org/records)  
(D) [www.amazon.co.uk](http://www.amazon.co.uk)

## Best Practices 9: Align Images in Response Options

When working with items that have single images as a response option (often in math), add a non-breaking space after the image to maintain proper vertical alignment.

10

Find the slope of this line.

(A) -2  
(B)  $-\frac{1}{2}$   
(C)  $-\frac{1}{3}$   
D) -3 ↘

10

Find the slope of this line.

(A) -2  
(B)  $-\frac{1}{2}$   
(C)  $-\frac{1}{3}$   
D) -3 ↗

# Cover Page Layouts

Cover pages contain no interactive elements, and are used to instruct students taking tests.

Cover pages consist of a stem, illustration, or both—but no response section. A border surrounds the cover page content, which is approximately 800px wide and as tall as the content requires. All cover pages, except for Cover Page 1, place the beginning of the content about 5% below the top of the content area. Text size is set automatically to zoom level 4. Because text sizes are much larger than default, it is important to keep the content of the stem as short as possible (10 words or fewer).

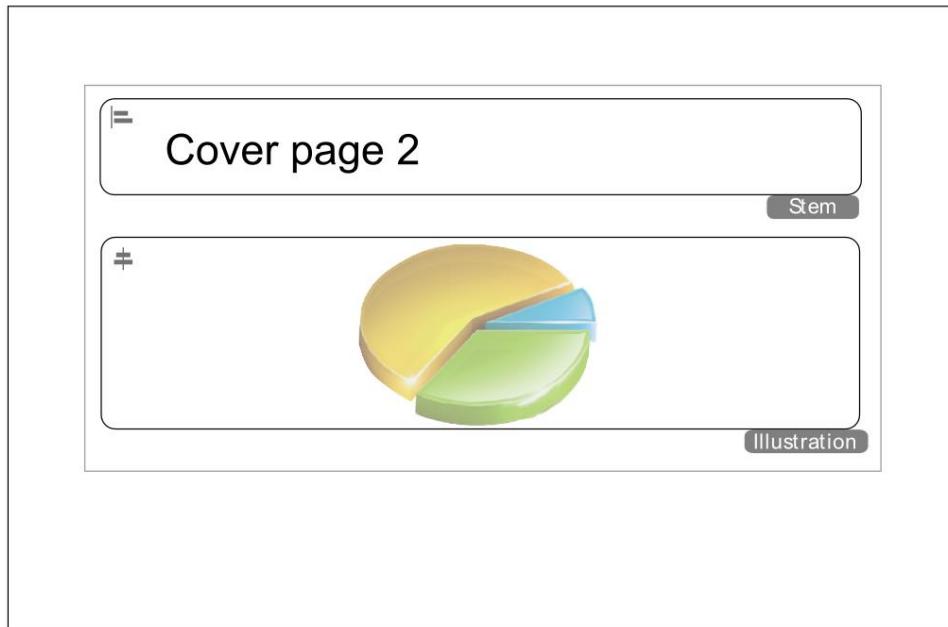
## Cover Page 1

Cover Page 1 contains just a stem. It is different from the rest of the cover pages in that it starts further down a student's screen, so that it appears vertically centered if there are two lines of text (one line of text appears slightly above center).



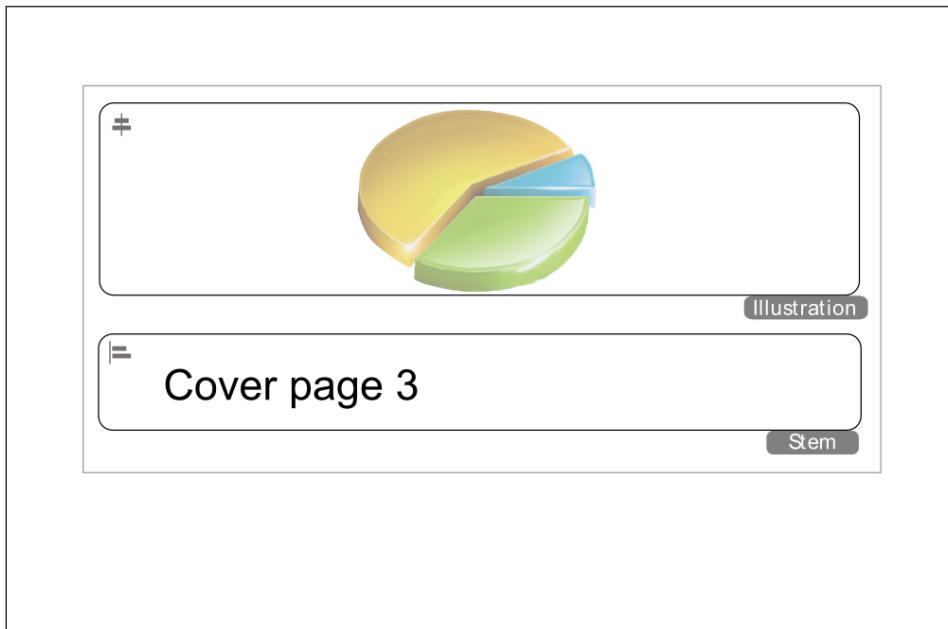
## Cover Page 2

Cover Page 2 contains a stem on top and an illustration below it. In order for all content to be visible without a scrollbar, a maximum height of 200 pixels is recommended for images.



## Cover Page 3

Cover Page 3 contains an illustration on top and a stem below it. In order for all content to be visible without a scrollbar, a maximum height of 200 pixels is recommended for images.



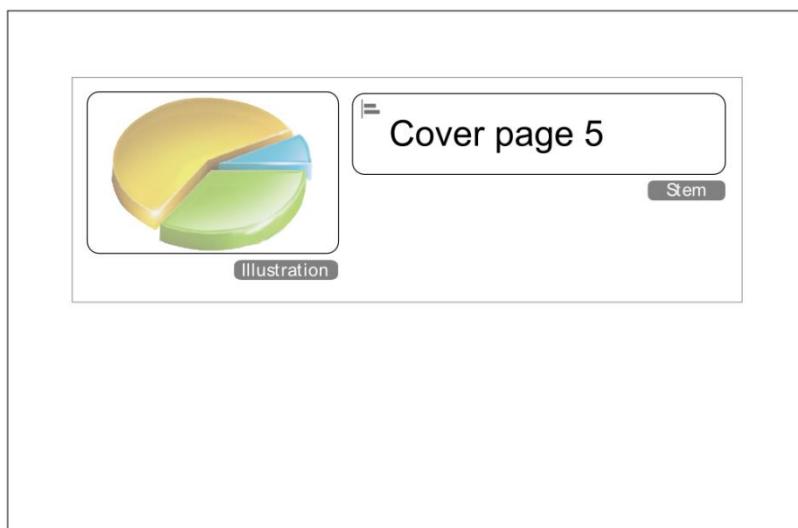
## Cover Page 4

Cover Page 4 contains a stem on the left, and an illustration on the right. It is important for the illustration to be no more than 350 pixels tall and 350 pixels wide, or else the illustration displays below the stem.



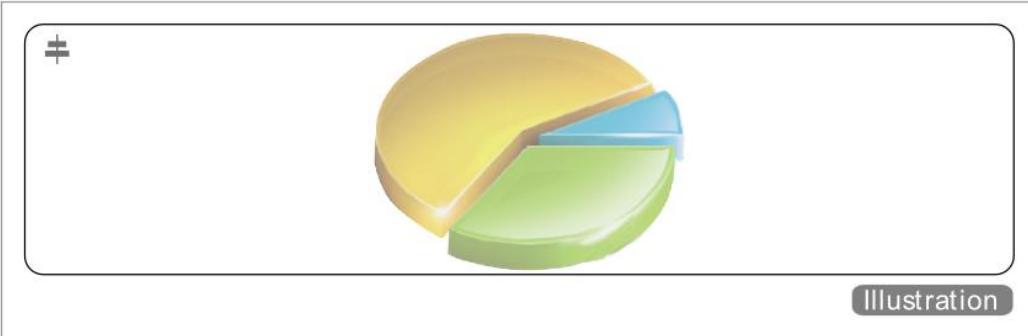
## Cover Page 5

Cover Page 5 contains an illustration on the left, and a stem on the right. It is important for the illustration to be no taller than 350 pixels and 350 pixels wide, or else the stem displays below the illustration.



## Cover Page 6

Cover page 6 is simply an illustration.



# Maximum Image Dimensions

The table below shows the maximum dimensions of an image (in pixels) you can use in a particular layout without forcing students to scroll to see all of an item's content on a standard 1024x768 monitor (the smallest size we support).

For layouts with passages, the first set of dimensions (yellow) is the space available for an image if it's embedded in the stem of an item. The second set of dimensions (green) is for images placed inside the passage (stimulus) area.

	Stem Max Image Width	Stem Max Image Height	Passage Max Image Width	Passage Max Image Height
Layout 1	600	590		
Layout 2	400	450		
Layouts 3 & 4	400	450		
Layout 5	600	400		
Layout 6	600	400		
Layout 8				
Layout 12				
Layout 13				
Layout 14	600	450		
Layout 15				
Layouts 11 & 17	360	250	590	590
Layout 21	570	250	400	590
Layout 22				
Layout 23	960	250	980	250
Layout 24 & 29	600	250	380	590
Layout 25	670	250	290	590
Layout 26	470	250	500	590
Layout 27 & 28	270	250	700	590
Layout 32 & 33	960	700		
Layout WAI	960	700	960	700