

PowerSchool Assessment: Advanced Item Creation

PowerSchool

Purpose

- **Obtain a clear understanding of how you can use the PowerSchool Assessment to**
 - *Create multiple choice, technology enhanced, and constructed response items effectively*
 - *Utilize the available tools and customize student choices*
 - *Provide students with a variety of question types that best support higher level thinking*

Agenda

- 1. Assessment Library Review*
- 2. Multiple Choice Items*
- 3. Hot Spot Items*
- 4. Drag and Drop Items*
- 5. Fill-in-the-Blank Items*
- 6. Constructed Response Items*
- 7. Help Resources*

Login Options

Login as Yourself if:

- You have a username and password
- You have permission to create items
- You have brought planned content with you today for each item type
- You want your items to save in the site

Login to the Training site if:

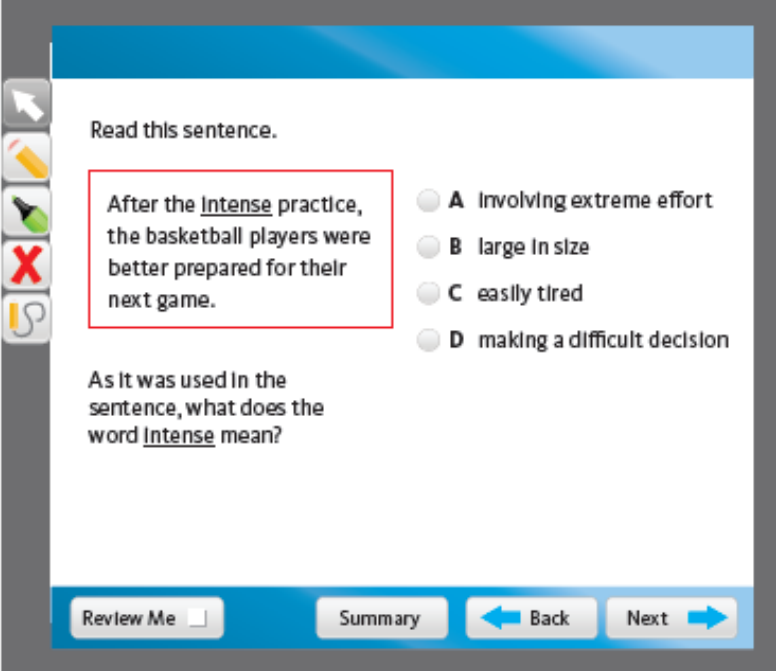
- You do not have username and password
OR
- You do not have permission to create items
OR
- You have not brought planned content with you today for each item type
OR
- You do not want your items to save in the site

The background features large, light teal, stylized letters 'IP'. The 'I' is composed of two vertical bars, and the 'P' is a large, rounded shape with a semi-circular cutout on its right side.

Multiple Choice

Discussion Activity #1

With your shoulder partner, discuss when it is best to select multiple choice as your question type.



Read this sentence.

After the intense practice, the basketball players were better prepared for their next game.

As it was used in the sentence, what does the word intense mean?

- A Involving extreme effort
- B large in size
- C easily tired
- D making a difficult decision

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Traditional Multiple-Choice Items

HOW THE ITEM WORKS

The student is given a question, with or without a stimulus, and must choose the correct answer from four answer options.

ADVANTAGES

Can cover a lot of content

Can be answered relatively quickly

Cost-effective

Easy scoring

Writing and correct spelling not required

Data can be compared

“If teachers decide to use multiple-choice items, it is important that the items accurately measure the construct being assessed, are free from bias, the vocabulary is appropriate for the grade level, and contain plausible distracters that reflect common student misunderstandings.”

(Haladyna, Downing, & Rodriguez, 2010)

Learning Application Activity #1

- **Using the item wizard, create a Multiple Choice Item.**
- **Please include the following:**
 - *Choose the Bloom's and Webb's levels*
 - *Experiment with the different tools*
 - *Use the symbol icon to include a symbol in your answer choice*
 - *Experiment with marking items as correct, locking, and adding/removing options*
 - *Reminder: Click CREATE when you are finished.*

Information Content Comments

Title: Customize Title?

Is Reserved:

Subjects: MATH 6.RP.A.1 (CCSS 2010)

Bloom's Taxonomy: Undefined

Webb's DOK: Undefined

Choice 1

$\frac{x}{y}$ A^x A_x \bar{A} \sqrt{A} U *I* **T** Correct? Locked?

Right-click for additional options

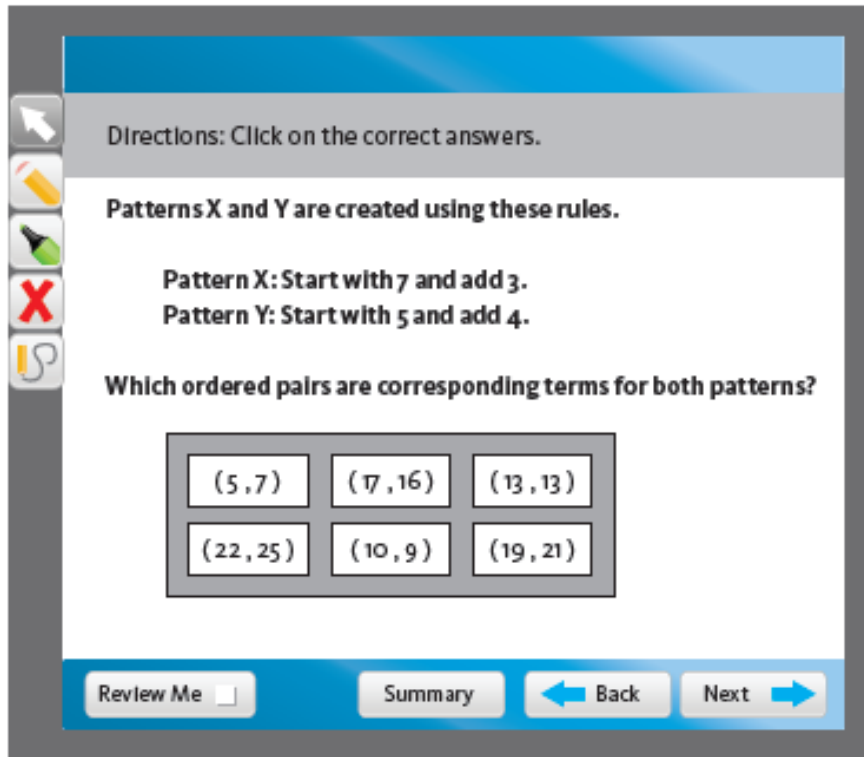
Answer #1
Click to edit
Click to edit

- Mark Incorrect
- Lock
- Remove Option
- Add Option
- Add Column

A large, stylized letter 'P' is rendered in a light yellow color. The vertical stem of the 'P' is composed of two parallel vertical bars. The bowl of the 'P' is filled with three concentric semi-circular lines, creating a sense of depth or a signal-like pattern. The entire graphic is set against a solid, vibrant yellow background.

Hot Spot

Discussion Activity #2



Directions: Click on the correct answers.

Patterns X and Y are created using these rules.

Pattern X: Start with 7 and add 3.
Pattern Y: Start with 5 and add 4.

Which ordered pairs are corresponding terms for both patterns?

(5, 7)	(7, 16)	(13, 13)
(22, 25)	(10, 9)	(19, 21)

Review Me Summary Back Next

With your shoulder partner, discuss when it is best to select hot spot as your question type.

“The most frequently cited justification for innovative items is their potential to measure skills that are not easily assessed through multiple-choice items. Such skills include higher-level cognitive skills and complex problem solving abilities.”

(Strain-Seymour, Way, & Dolan, 2009)

Hot Spot

GREAT FOR ASSESSING:

Identification of more than four pieces of knowledge or concepts

HOW THE ITEM WORKS

Students are given a question, without or without a stimulus, and are asked to select an indicated number or ALL of the correct answer options.

ADVANTAGES

Increased student engagement

Increased rigor

Increased assessment data regarding student thinking

Allows for comparison

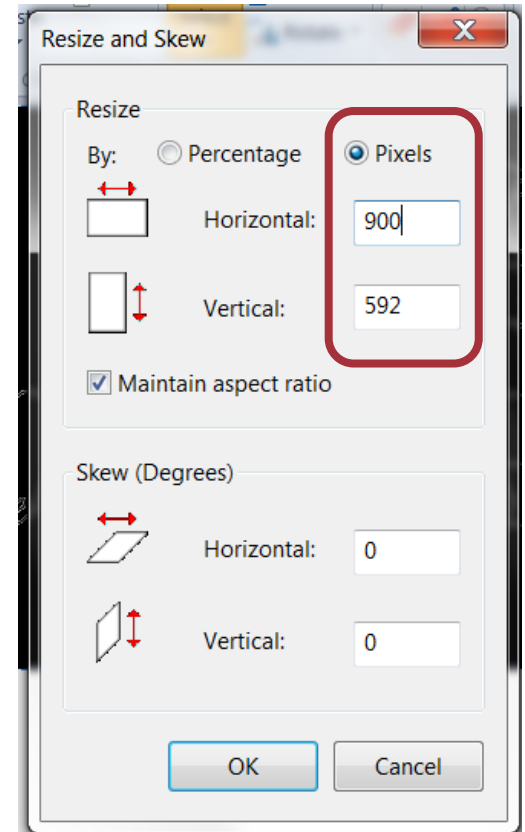
Learning Application #2

- **Using the item wizard, create a Hot Spot Item.**
- **Please include the following:**
 - *Add remarks to your item*
 - *Choose the Bloom's and Webb's levels*
 - *Experiment with the different tools*
 - *Insert a graphic (set to 900 pixels in Paint)*
 - *Experiment with marking items as correct, locking, and adding/removing options*
 - *Set a maximum number of selections*
 - *Reminder: Click CREATE when you are finished, then submit and approve your item.*



Information **Content** Comments

Max Student Selections: 6



Resize and Skew

Resize

By: Percentage Pixels

Horizontal: 900

Vertical: 592

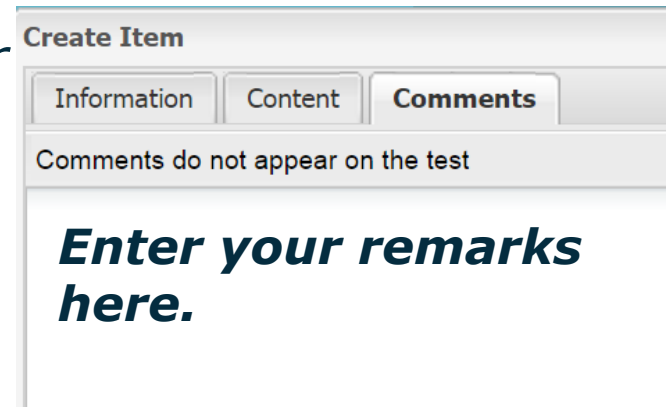
Maintain aspect ratio

Skew (Degrees)

Horizontal: 0

Vertical: 0

OK Cancel



Create Item

Information Content **Comments**

Comments do not appear on the test

Enter your remarks here.



Drag and Drop

Discussion Activity #3

With your shoulder partner, discuss when it is best to select drag and drop as your question type.

The screenshot shows an interactive learning interface with a blue header and a grey sidebar on the left containing icons for navigation and editing. The main content area has a blue background and contains the following text and elements:

Directions: Click and drag the answers to the correct box.

The pictures below represent naturally occurring cycles. Match the cycle to the picture that describes it.

Four diagrams are shown in a 2x2 grid, each with a white box below it for a label:

- Top-left: A diagram of a water cycle showing evaporation from a body of water, condensation into clouds, precipitation as rain or snow, and runoff or infiltration into the ground.
- Top-right: A diagram of a plant with arrows showing the process of photosynthesis, including light energy from the sun, carbon dioxide intake, and oxygen release.
- Bottom-left: A diagram of a carbon cycle showing the exchange of carbon between the atmosphere, land, and living organisms.
- Bottom-right: A diagram of a nitrogen cycle showing the movement of nitrogen through the soil, plants, and animals.

To the right of the diagrams is a vertical list of six cycle names, each in a white box with a grey border:

- Carbon Cycle
- Sodium Cycle
- Water Cycle
- Photosynthesis
- Oxygen Cycle
- Nitrogen Cycle

At the bottom of the interface is a blue bar with several buttons: "Review Me" with a dropdown arrow, "Summary", "Back" with a left-pointing arrow, and "Next" with a right-pointing arrow.

GREAT FOR ASSESSING:

Ability to put things in sequential or chronological order

Labeling an image, graphic, etc.

Matching cause and effect

Matching words with definitions

HOW THE ITEM WORKS

Students are presented with an image and a list of answer options. They must drag the correct answer option to its proper space on the image.

ADVANTAGES

Increased student engagement

Increased rigor

Increased assessment data regarding student thinking

“Drag and drop items can be innovatively designed to assess students’ higher-level understanding of concepts. These items allow students to demonstrate their knowledge through engaging, meaningful, and complex tasks.”

(Strain-Seymour et al., 2009)

Drag and Drop

Learning Application Activity #3

Information Content Comments

Lock All Options Add Image

Click to edit Stem #1

Action Area

Bays

Click dragger #1 to
Click dragger #2 to
Click dragger #3 to
Click dragger #4 to

Draggers

Click to edit #1
Click to edit #2
Click to edit #3
Click to edit #4

Draggers:

- Teachers enter answers here.
- Students drag these to the correct location.

Bays:

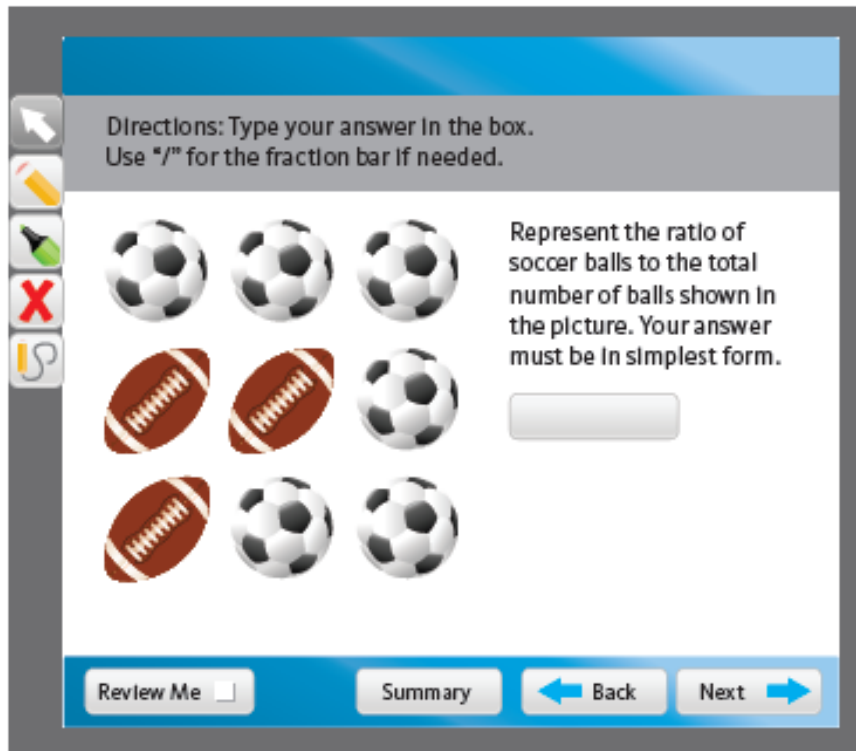
- Teachers drag these to the correct location.
- Students place the answers (dragger) here.

- **Using the item wizard, create a Drag and Drop Item.**
- **Please include the following:**
 - *Choose the Bloom's and Webb's levels*
 - *Experiment with adding and deleting an image*
 - *Include at least 4-5 draggers*
 - *Lock your draggers*
 - *Reminder: Click CREATE when you are finished, then submit and approve your item.*

The background features large, light green, stylized letters 'I' and 'P'. The 'I' is composed of three vertical bars of varying thickness. The 'P' is a large, rounded shape with a vertical stem on the left and a curved top and bottom. The text 'Fill-in-the-Blank' is centered over the 'P' in white.

Fill-in-the-Blank

Discussion Activity #4



Directions: Type your answer in the box.
Use "/" for the fraction bar if needed.

Represent the ratio of soccer balls to the total number of balls shown in the picture. Your answer must be in simplest form.

Review Me Summary

The screenshot shows a math problem interface. On the left, there is a vertical toolbar with icons for a cursor, eraser, highlighter, a green checkmark, a red X, and a pencil. The main area contains a grid of 10 balls: 5 soccer balls and 5 footballs. To the right of the grid is a text prompt and an empty input box. At the bottom, there are navigation buttons: 'Review Me' with a checkbox, 'Summary', 'Back' with a left arrow, and 'Next' with a right arrow.

With your shoulder partner, discuss when it is best to select fill-in-the-blank as your question type.

“A fill-in-the-blank, open-ended item is a more challenging and thorough measurement of a test objective than is a comparable multiple-choice item. Because the number of possible incorrect answers to an open-ended item is infinite, the answers can also provide you with interesting information about the misconceptions of your students.”

(Kelly & Haber, 2006)

Fill-in-the-Blank

GREAT FOR ASSESSING:

Measurement and computation skills in science and math

Grammar and writing skills

Citing text to answer a question

HOW THE ITEM WORKS

Students are asked to complete a sentence or phrase or perform a calculation.

ADVANTAGES

Requires students to generate text

Minimizes guessing

Learning Application Activity #4

Student Answers: Case Sensitive: Numbers Only: Max Character Length:

Click to edit Stem #1

Add Prefix Add Suffix

Accepted Answer (Click to edit)

Accepted Answer (Click to edit)

Accepted Answer (Click to edit)

Remove Answer
Add Answer

Right-click for more options

- **Using the item wizard, create a Fill in the Blank Item.**
- **Include the following:**
 - *Choose the Bloom's and Webb's levels*
 - *Experiment with the different tools*
 - *Add a prefix and/or suffix*
 - *Include at least 3 acceptable answers*
 - *Reminder: Click CREATE when you are finished, then submit and approve your item.*



Constructed Response

Discussion Activity #5

With your shoulder partner, discuss when it is best to select constructed response as your question type.

Directions: Type your response in the space provided.

Look at the data presented in the graph.

YEAR	RATE (%)
2005	70
2006	66
2007	68.5
2008	71
2009	72
2010	68.5

What is the average rate of change between years 2005 and 2009?
Explain your answer.

Review Me Summary [← Back](#) [Next →](#)

Constructed Response

“If we only use multiple-choice items, we may risk the loss of the active construction of knowledge, which is important in the learning process.”

(Lissitz, Hou, & Slater, 2012)

GREAT FOR ASSESSING:

The highest levels of cognitive complexity

Students' ability to write about how they would create, evaluate, or analyze a given stimulus.

HOW THE ITEM WORKS

This item type requires the student to type in a response to a prompt. The prompt most often refers the student to a piece of text, illustration, graphic, proof, etc.

ADVANTAGES

Rigorous

Eliminates guessing

Aligns well with highest levels of cognitive complexity

Can assess concept mastery and writing

Provides teacher with insight into student thinking

Learning Application Activity #5

- Using the item wizard, create a Constructed Response Item.

- Please include the following:

- Choose the Bloom's and Webb's levels
- Edit the rubric
- Include some remarks about your question
- Experiment with the tools
- Add an additional Stem
- Reminder: Click CREATE when you are finished, then submit and approve your item.

Create Item

Information Content **Rubric** Comments

Complete

4

- The response demonstrates *thorough* understanding of the concept embodied in the task.
- The response is accurate, complete, insightful, and fulfills all the requirements of the task.
- Necessary support and/or examples are included.
- Information is clearly relevant.

Rubric 1

[b]Complete[/b]
•The response demonstrates [i]thorough[/i] understanding of the concept embodied in the task.
•The response is accurate, complete, insightful, and fulfills all the requirements of the task.
•Necessary support and/or examples are included.
•Information is clearly relevant.

1

- The response demonstrates an *incomplete* understanding of the concept embodied in the task.
- The response provides some relevant information, but does not fulfill the requirements of the task.
- Information provided is too general or too simplistic.
- Necessary support and/or examples may be incomplete or omitted.

Edit the rubric here.

Discussion Activity #6

- **With your shoulder partner, please discuss the following:**
 - *What is your current process for writing or obtaining test questions?*
 - *In what ways do you feel the software will make this process more efficient?*
 - *In what ways will the new process have a positive impact on your students?*

