Rules for Item Design – Multiple Choice

**Summary**

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| --- | --- |
| **Planning** | 1. Base the item on a vision for student mastery.
2. Organize and format the item.
 |
| **Stem** | 1. Frame stems positively.
2. Include just the right amount of information in stems.
 |
| **Choices** | 1. Always use the same number of choices – four or five choices for most grades.
2. Include only ONE correct answer.
3. Make distractors plausible and free of tricks.
4. Create choices that are consistent in form, content and length.
5. Order choices logically.
6. Avoid using ‘all of the above’ or ‘none of the above.’
 |
| **Scoring** | 1. Provide scoring information and time estimates for sections of multiple choice items.
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| The shapes shown are part of a design.     |  |
| 1. What do all of these shapes appear to have in common?  |  |
| A. All have four right angles?  |  |
| B. All have at least one set of parallel sides.  |  |
| C. All have four equal angles.  |  |
| D. All have at least one set of perpendicular lines.  |  |

*The NJ Department of Education is grateful to Relay Graduate School of Education for providing this resource.*

Rules for Item Design – Multiple Choice

**Details**

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| 1. **Base the item on a vision for student mastery**
 | * Write a proposition (a statement you'd expect students to make if they had mastered the content)
 |
| 1. **Organize and format the item**
 | * Number your items and letter your choices
* Put the stem at the top (as opposed to on the side, for example)
* Put any images associated with the stem above the text of the stem
* Align the choices vertically underneath the stem
	+ Note: Aligning choices horizontally may save some space, but bunching up choices increases the density of text on the page, which is bad for student concentration. On top of this, arranging choices horizontally makes it harder to see differences among answer choices.
 |
| 1. **Frame stems positively**
 | * Most of the time, stems should be positive
* In cases where you must use negative framing, be sure to make this stand out to students with your text style
	+ For example: "Which of the following was **NOT** a main goal of the Civil Rights Movement in the 1950s and 1960s?"
 |
| 1. **Include just the right amount of information in stems**
 | * Be sure there's enough information in the stem to allow students to answer correctly
* Don't assume students know information unrelated to the content
* Avoid using words in the stem that might give away the answer
* Check item stems for grammatical cues that might give an answer away, and remove them
* Keep the item easy to read by including words in the stem that would otherwise be repeated in choices
* Include only relevant information in the stem
 |
| 1. **Always use the same number of choices**
 | * Use four or five choices for most grades
	+ Typically, younger students get fewer choices and older students get more
	+ There should not be fewer than three or more than five choices
 |
| 1. **Include only ONE correct answer**
 | * Choices should be unambiguously worded
* There should be one clear best response
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| 1. **Make distractors plausible and free of tricks**
 | * Don’t make distractors so obvious that any student, whether or not they have mastered the content, can guess correctly
* Strong distractors should have a basis in common student misconceptions and errors
	+ That way, if students answer items incorrectly, you can get information about where and how their understanding is breaking down
 |
| 1. **Create choices that are consistent in form, content and length**
 | * Choices that are inconsistent with others on the list stand out.
	+ For example, if a choice is significantly longer or shorter than the others, it draws attention to itself
 |
| 1. **Order choices logically**
 | * Always try to order choices in some logical way
	+ For example, if the choices are numbers, order them from least to greatest or from greatest to least.
	+ Or, if the choices are single words, order them alphabetically
	+ Or, if choices vary a little in length (but not so much that one answer really stands out), arrange them in order of length
* Logical order enhances the perception of randomness.
 |
| 1. **Avoid using ‘all of the above’ and ‘none of the above’**
 | * It is difficult to make valid inferences about student understanding based on multiple choice items that use "all of the above" or "none of the above“ for a number of reasons (e.g., these inconsistent choices stand out and some students will be drawn to choosing them, students can answer an item with four choices correctly if they know two of the choices are right (though they may not have known that the third choice is right))
 |
| 1. **Provide scoring information and time estimates for sections**
 | * Make expectations clear by providing scoring information and a time estimate
 |

Rules for Item Design – Constructed Response

**Summary**

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| --- | --- |
| **Planning** | 1. Base the item on a vision for student mastery
2. Keep item length to one page or shorter
 |
| **Prompt** | 1. Ensure the prompt makes the task clear to students
2. Ensure the prompt strikes a balance between concise and complete
 |
| **Scoring** | 1. Make rubric aligned to what you’re measuring, clear and concrete
2. Organize and format the item with scoring information and time estimates
 |

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| --- | --- |
| 1. Directions: Take about 5 minutes to answer the following question:  |  |
| Bill’s best friend describes him as “sharp” in the story. What is another word that you could use to describe Bill as a character? Provide evidence from the story to explain your answer.  |  |
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| **2 points** | **1 point** | **0 points** |
| Word accurately describes Bill as a character. Evidence from the story directly related to the chosen word is provided. | Word accurately describes Bill as a character, but evidence from the story is not included or does not relate. | Word does not accurately described Bill as a character. |

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Rules for Item Design – Constructed Response

**Details**

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| --- | --- |
| 1. **Base the item on a vision for student mastery**
 | * Exemplar responses can be used to determine both prompts and scoring criteria
	+ Like propositions, exemplar responses are statements you'd expect students to make if they had mastered the content.
 |
| 1. **Keep item length to one page or shorter**
 | * Keep the items on a single page, and keep them at a length of one page or less
	+ Exceptions to this rule include things like document based questions where you need to include several artifacts or essays where students will need ample planning and writing space
 |
| 1. **Ensure the prompt makes the task clear to students**
 | * Students need to know what's expected of them in order to be able to demonstrate mastery; if the answer is open to interpretation or the components required in the answer are not clear, you will not be able to make strong inferences about student understanding
 |
| 1. **Ensure the prompt strikes a balance between concise and complete**
 | * Keep prompts as concise as possible – this improves the overall clarity of the item by reducing the amount of irrelevant information that could cause student confusion
* Double check that there is no information in the prompt that gives away the answer or part of the answer
 |
| 1. **If you're using a rubric, make it aligned, clear and concrete**
 | * **Align rubrics to what you're measuring:** The most important parts of the exemplar are related to the content
* **Make descriptors clear and concrete**: The text in a single cell of a rubric is the descriptor
* **Make differentiating factors clear and concrete:** Differentiating factors are the things that change across adjacent descriptors
 |
| 1. **Organize and format the item with scoring information and time estimates**
 | * Put the prompt at the top
	+ Any image associated with the prompt should go above the text
* If the answer requires both work space and answer space, include the work space first and then the answer space
	+ Be sure that both are clearly marked
 |