

Understanding Test Questions
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The trick to doing well on any test is to just know the material. Right?

WRONG!

Description of Workshop: This workshop will be used as a training session for presenting the material contained within. Purchasers will receive:

- 1) A 2-4 hour workshop for up to 25 attendees covering the outline of the conference as shown below.
- 2) A detailed instructional manual for presenting this conference to others
- 3) One participant's packet for each member of the conference up to 25 members. (Additional participant's packets are extra).
- 4) One set of overheads for use in presenting this conference.
- 5) One power point presentation for use in presenting this conference.

Objective of this workshop: Knowing what goes into writing the test items, understanding key terminology and knowing what clues are in the stem of the problem will help in answering the questions. With these and many more helpful "tricks of the trade", teachers will be able to give their students, including English Language Learners, the necessary skills to pass the state exams.

Outline of Workshop:

- 1) Understanding No Child Left Behind
- 2) Some Basic Vocabulary for test questions and types of items
- 3) Some guidelines used when writing the state competency exams
- 4) Some guidelines used when creating the answers
- 5) How to write your own test questions based on the states style
- 6) Deciphering key words and terminology
- 7) Weeding out responses – tips
- 8) Understanding the Essay question

Materials Needed:

- 1) Participant Packet
- 2) Arizona Essential Skills for your grade level
- 3) Paper
- 4) A writing utensil
- 5) A calculator
- 6) A desire to learn and participate

Some Basic Vocabulary

- 1) Item-The test question itself
- 2) Stem-The part of the item that asks the student to do something - identify, solve, etc.
- 3) Multiple Choice-The stem and four viable answers
- 4) Distractors-The incorrect responses to a multiple choice question
- 5) Gridded Response Items-A format that requires students to pencil in the answer on a gridded format. (Some states do not use this format.)
- 6) Rubric-A set of guidelines for scoring short answer and extended response questions.

Some Guidelines When Writing Test Questions

- 1) Each Item should test only one objective.
 - a) What is the one objective?
 - b) The question should ask the student to perform only that objective and no other.
 - c) Is this a good test question?

- (1) "Bob has 6 apples. He gives Mary 5. Their mother gives Sue twice as many apples that Bob and Mary have together. How many apples does Sue get?"
- (2) It depends. This question requires adding and multiplying by 2. If the objective is order of operations, this might be a possible question.
- 2) Test Questions should only test the skill.
- 3) They should be written in such a manner that they are unbiased and provide the student with every opportunity to solve the problem correctly.
- 4) The question should interest the students.
 - a) Writing about creating maple syrup in the Midwest will only confuse and bore students.
- 5) The questions should be at grade level.
 - a) There are three levels of questions.
 - (1) Easy - 75% of the students will get it right
 - (2) Medium - 25% - 75% of the students will get it right
 - (3) Hard - Less than 25% of the students will get it right
 - (a) Most questions should be written at the Easy - Medium range.
- 6) The reading level should be easy to read and never above grade level
- 7) Avoid slang and cliches
- 8) Make all questions relate to the student's world
 - a) Avoid stereotypes
 - b) Make questions multi-cultural
 - c) Avoid references to expensive things such as designer shoes, etc.
 - d) Avoid items that might bring about an intense emotion, divorce, death, gangs etc.
- 9) Make sure your questions do not entail a lot of extra information.
 - a) Example: Levi Hutchins of Conrod, NH invented an alarm clock in 1787. His alarm clock, however, rang at only one time. 4 a.m. He invented this device so that he would never sleep past his usual waking time. He never patented or manufacture it. The first modern alarm clock was made by Atoine Redier in 1847. It was a mechanical device; the electric alarm clock was not invented until around 1890. How many years later that the first alarm clock was the mechanical alarm clock invented?
- 10) Make sure you are asking a question and not a opinion.
 - a) Example What do you think? Why do you think?
- 11) Which and What
 - a) Use **Which** when there could be more than once correct answer outside the choices listed:
 - (1) Which of these numbers is prime:
 - (a) 2
 - (b) 9
 - (c) 15
 - (d) 20
 - (2) As there are other prime numbers, which would be the correct usage.
 - b) Use **What** when there is only one possible answer:
 - (1) What is the product of 3 and 5?
 - (a) In this question, the only answer is 15.

Some Guidelines When Creating the Answers

- 1) Do not put items in the stem that will clue in the answer.
 - a) Example: A gorilla has 6 bananas. Another has 5. The first gorilla has _____ more banana than the second.
 - (1) 1
 - (2) 2
 - (3) 3
 - (4) 4
 - b) The obvious answer is A as it is the only one that make sense. You don't say 2 more banana. (This question would also be rejected for it's structure).
- 2) Distractors should all be plausible answers.
 - a) We no longer set up our distractors as one definitely not correct, 2 possible answers and 1 definite answer.
 - b) Think of common mistakes students might make.

- (1) Example: What is $\frac{1}{2} + \frac{3}{4}$?
- (a) $\frac{4}{6}$ Student might add numerators and denominators
 - (b) $1 \frac{1}{4}$ correct
 - (c) $\frac{4}{4}$ Student will add top and take largest denominator
 - (d) $\frac{3}{6}$ Student will take largest numerator and add denominators
- 3) Distractors should be put in descending or ascending order unless it gives a clue to the response.
- 4) Distractors should not clue into the answer
- a) Avoid using words such as never and always.
- 5) Avoid making the distractor unique in any way.
- a) The other answers are simple responses and the correct response is more detailed.
 - b) Examples
 - (1) The other answers are all negative and the one correct response is positive
 - (2) The other answers are all fractions and the one correct response is a mixed number
- 6) Avoid using none of the above or all of the above.

What is wrong with these test questions?

- 1) Which of these countries is located on the Atlantic Ocean?
- a) Germany
 - b) England
 - c) Canada
 - d) Arizona

(Arizona is not a country, obscure)

- 2) The date is September 21. Tim's birthday is October 3. How many days until Tim's birthday?
- a) More than 6.
 - b) Less than 9.
 - c) More than 9.
 - d) Less than 15.

(More than 9 is also more than 6. Less than 9 is also less than 15).

- 3) 1000 Americans over age 18 were surveyed as to their marital status. The chart below shows how many were divorced, widowed, single and married.

Marital Status	Number Responded
Widowed	70
Divorced	98
Single	235
Married	597

Which one do you think is the probability that a person, selected at random would be married?

- a) $\frac{597}{1000}$
- b) $\frac{597}{100}$
- c) 597
- d) $\frac{597}{18}$

(The context of divorce might be too emotional for some. Do not use phrases such as "do you think.")

- 4) In the story, Bob was an
- a) Lawyer
 - b) Android
 - c) Chef
 - d) Teacher

(grammar clue - can be written with identifiers in the answer)

5) Water boils at what temperature Celsius?

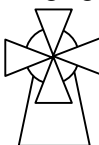
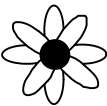
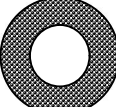
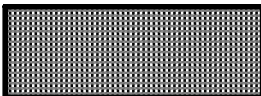
- a) 100°
- b) 50°
- c) 40°
- d) 20°

(The answer 100 stands out too much)

6) The Ghawan field, discovered in 1948 in Saudi Arabia is the largest oil field in the world. It measures 150 miles X 122 miles. What is this field square mileage?

(There is no proof than the field is rectangular)

7) Which of the following figures DO NOT have a rotational symmetry?

- a) Windmill 
- b) Flower petal 
- c) A donut 
- d) A rectangle 

(None of these items have rotational symmetry. The details prevent it in the donut, the base of the windmill prevents it and the flower has different petals,)

7) The Schmidt family is taking a car trip. Their van gets 11 miles to the gallon. The trip is 1367 miles long. Which is the best estimate for the number of gallons of gas they will need on their trip?

- a) 110
- b) 130
- c) 150
- d) 170

(The trip mileage would round to 1400. Thus there are two possible answers, 130 and 150)

8) Why did Mary think John stole her watch and when was it stolen?

- a) He had it in his desk, 3:00 p.m.
- b) He always wanted to have it, 6:00 p.m.
- c) He never had a watch before, 2:00 p.m.
- d) He thought it was Tom's watch, 3:00 p.m.

(Uses identifiers such as always and never. Although he might have never had a watch before, it is too definite and might confuse some, also tests two objectives.)

9) Yang was making Chinese Food. She needed 2 tsp. of soy sauce. She only had a 1/2 teaspoon measuring device. How many times does she need to fill the teaspoon to get 2 teaspoons.

(This question has stereotypes - Yang making Chinese food. It also is confusing.)

- 10) <A map is attached to this problem> - Eddie and Marcus went cruising. They went up 5th street and over to 8th street, then down Harvard Avenue. How far did they drive?

(Cruising is a slang term. A student might be confused by this term. Vocabulary should not be an issue.)

It's Your Turn!

- 1) Break up into groups of 3-4 people.
- 2) Using the Arizona Essential Skill Shown, write a test question. Try to use relevant information.
 - a) *IM-EI*; Read, write and order integers, whole numbers and rational numbers -
P.O. 2 - Represent place value using concrete or illustrated models
- 3) Share your test questions with the class.
- 4) Use any Arizona Essential Skill in your packet and create a test question.
- 5) Share your test questions with the class.