

**New Paltz Central School District
Mathematics
Fourth Grade**

Test Taking as a Genre

Background

Prior to launching this unit, you may wish to provide students with various New York State math tests to look over. What do they notice? You may also wish to give the unit a light-hearted frame, calling it something like ‘test lab’. In a way, it is a science. There’s also the idea of approaching the task of taking a test like a wise or perceptive creature such as an eagle or an owl. Make use of your ‘inner eagle’.

The application of reading strategies is crucial to test-taking. Also, incorrect answers increase toward the middle and end of most tests. So, stamina is an important skill as well. Another notable factor is confidence. Although taking a test may make you at least a little nervous, you can make fear your ally. It’s good for students to be aware that, just as when you do a show, a few nerves can help to energize your performance. Adopt an “I can” attitude.

Strategies

Seize opportunities to make teaching points about the following strategies:

- Reading/understanding questions and directions: per Lucy Calkins, “Read it until you can say, ‘I got it!’ ”
- Visualize what the question is asking/make mind movies
- Read all of the choices when selecting a multiple choice answer
- Skipping the “hard ones” and returning later
- Connect to what you know
- Understand what the question is asking
- Does my answer make sense? Is it reasonable?
- When showing work, can someone else understand your steps?
- Estimating

Resources

- Conrad, Lori, Missy Matthews, Cheryl Zimmerman, and Patrick Allen. 2008. *Put Thinking to the Test*. Portland Maine: Stenhouse.
- Calkins, Lucy. 2010 *A Guide to the Reading Workshop*. Portsmouth, NH: Heinemann. (Chapter 11)

Vocabulary Review

These lessons can be used at appropriate points throughout the year. Vocabulary work improves achievement.

Before the lesson: Select words your students need to review. Some possibilities are: solve, show, sum, product, greater/less than signs, difference, chart, table, graph, complete the, equivalent, equation, expression, multiple, factor, area, perimeter, identify. You can also select a Thoughtful Education vocabulary method for teaching/reviewing or use one of your own. Here are a couple of possibilities.

Method 1: Play 'Guess My Word'

Launch

Review
Go over directions for 'explore'.

Explore

Provide each group of students with a word. The group creates a set of clues for the word (up to 5). Then they meet up with another group and give their clues one by one. If the receivers get the word, both teams get 2 points. If they never get it, no one receives points but the clue givers lose 2 points. (You can change the scoring system or leave it out if you like.)

Summarize

Share out as a whole class for review.

Method 2: Give Examples (see attached sheet)

Launch

Review a set of vocabulary as a class. You could do 'word spiders' together. Model how to give examples/nonexamples.

Explore

As individuals or partners, students choose 4 words and give examples of them and one nonexample.

Summarize

Share. Address any confusion.

Lesson 1: What Do You Know/Want to Know?

Materials: chart paper, actual or projected sample questions

Launch

Ask students what they already know about test-taking. Chart responses on a KWL chart. Include experiences they have had.

Explorer

Give students a variety of sample questions. (Adjust the number for your group; include multiple choice and constructed response samples.) Students work alone or in pairs to solve these.

Summarize

Gather students and discuss/chart what they noticed as they worked. Make the teaching point about how important the strategy of reading/rereading directions is. You might model this by reviewing answers after you demonstrate careful reading. Conclude with: What else do you want to know about how tests are designed and what would you like to know about how to do your best? Add responses/questions to KWL chart. (These will, of course, be a guide to modifying further instruction.)

Lesson 2: Multiple Choice Question Strategies

Materials: multiple choice items without answers, bubble sheets (attached), rulers

Launch

Talk about experiences with multiple choice questions. Hand out questions with no answers....Hmmm what do you do? Talk about/model the strategy of solving the problem yourself first without looking at the answers given. Show how you devise 4 answers. Suggest that since a test aims to measure what you know, there are usually answers listed that you *could* arrive at if you made a mistake. Often, one choice is 'outrageous'. This is also a good time to model visualizing what's happening in the question and using estimation.

Explore 1

Using these strategies and the next in the practice booklet question students, in partnerships, create four possible choices, A, B, C, and D, including (hopefully) the correct response for the question. Share out. Then show the actual choices the test makers gave. Discuss.

Explore 2

Individuals or partnerships continue to work with practice questions.

Summarize

Review responses and actual answers. Practice using the bubble sheet for answers. (Tell students that it is not necessary to spend a lot of time coloring in the bubbles all that meticulously.)

Elicit/discuss the importance of understanding the problem and solving it yourself before you choose. Add to KWL chart. You could begin a "Test Taking Strategies" chart.

Lesson 3: Extended Responses/Scoring

Materials: scoring rubrics (child version) for 2 and 3 point questions; sample questions and scored responses; sample questions and unscored responses.

Launch

Remind students about the other kind of question on the assessment – extended response.

Show students a (projected) sample and ask what they notice about the question and expected answer (no choices for answer – two or three parts of the question). Answer the question with the class using “teacher talk” to model your thinking and recording it. Try to include the use of rereading, visualizing, estimating, and checking your work. Have students turn and talk to a partner about what they noticed you doing. Add to KWL chart. Next, look at the scoring rubrics (attached) for 2 and 3 point questions. Discuss what students notice and questions they have. Show scored responses that are 0, 1, and 2 for a two-point response, and then 0, 1, 2, and 3 for a three-point response. Students can turn to a partner to discuss scoring for each answer. Talk about how to apply rubrics.

Explorer

Students work with a partner to score a different set of responses from the same two questions.

Summarize

Project the sample answers (same ones they have just scored) and have students tell the score they gave (by holding up fingers for 0, 1, 2, or 3) and why, using the rubric. Discuss any discrepancies. Be sure to include a discussion of a complete answer versus an incomplete answer. Remember your ‘audience’ is a scorer who does not know you and cannot ‘read minds’. A good response shows the steps of your thinking in a way that can be clearly understood. Discuss why some answers don’t make sense. Notice misunderstandings of the question. Analyze answers to look for clear, concise explanations of thinking. Add to KWL and test-taking strategies charts.

Lesson 4: Practice Doing/Scoring Your Own Extended Responses Using Peer Coaching

Materials: Sample items and scored samples

Launch

Review the scoring rubrics and how to apply them. Review strategies such as: rereading, visualizing, etc. Using a student volunteer, model how to coach a partner to use strategies. (“Let’s picture the problem. What do you see?” “How about you reread it?.” “Does the answer make sense?”)

Explorer

Have students work in partnerships to complete two sample items. They each take a turn as ‘doer’ and ‘coach’. Tell them that later they will score their own work.

Summarize

Gather students. Talk about how the coaching went/felt. Show scored items on overhead or Smart board and have students score their own work. Discuss the answers to the questions as well as the strategies the students used to solve the problems. Remind them that a complete answer includes demonstrating your thinking. Add to the KWL and strategies charts.

Lesson 5: I'm Done! – Checking Your Work

Materials: Sample items

Launch

Have a conversation with students about checking their work when they finish the assessment. This means that you do not just glance; you may actually redo at least some items as if tackling them for the first time. Use your 'inner eagle', so to speak, to spot things. Ask students about strategies they use for checking their work. Make a list of checking strategies. The list could include, but is not limited to:

- Reread the directions
- Reread each question until you say, 'I got it!'
- Put a mark next to the questions you were unsure of
- Put a star next to the hard ones
- Eliminate the ridiculous answers
- Start from the last question and work backward
- Redoing work
- Does my answer make sense?

Explore

Have students answer the 5 sample questions and then practice strategies for checking their work. (Peer coaching could also be used in this lesson.)

Summarize

Gather students and discuss answers to the questions and the strategies for checking their work. Add to the list of strategies as appropriate.

Lesson 6: Confidence and Unit Feedback

Materials: Display of Strategies and KWL charts; a sample question

Launch

Hold a conversation about the unit. Look at the charts together. You may want to have students respond to the following:

Think about the questions you had when we started and the strategies we worked with during this unit. Were any strategies new to you? What strategies did you find to be most helpful?

Share what they found most useful and see if there are still unanswered questions. (Could begin with pair/share first.)

Explore

After they respond and discuss, you might try the following: Talk about how important it is to summon your own confidence. Even though a question may make you nervous, you can

still approach it calmly if you choose. If fear is allowed to rule, you may find that you overlooked something that you could have done well. Give students a question and have them play act how they might be if they were 'scared'. Talk about what happened. Then, talk them through a short, calming, affirming 'mediation', something like, "Sit quietly and just breathe peacefully. Tell yourself that you are capable and intelligent and silently whisper 'I can' in your mind. When you feel calmer, look at the words of the question. See that really they are just ink on a page. Use the strategies from our charts. Picture it in your mind even in a fun way. Put yourself or your friends in the scene if you like. Reread the directions. When you are ready, work through the problem again. If nerves appear, just smile, let them be, and carry on your work. A few nerves may actually help your 'performance'.

Summarize

Process the experience. Share final thoughts and questions. Add to charts.

2 - Point Rubric

2-Points

- The student completely understands the math problem and the steps to solve it.
- The answer is correct.
- The explanation is clear, complete and shows work if it is required.

1-Point

- The student partly understands the math problem and the steps to solve it.
- The answer may not be complete, but is partly correct.
- The answer can be the wrong answer, but the student used the correct math operation.
- The answer is correct but student did not show required work.

0-Points

- The student gives the wrong answer and uses the wrong math operation.
- The student does not show that he/she understands the problem.

3 - Point Rubric

3-Points

- The student completely understands the math problem and the steps to solve it.
- The answer is correct.
- The explanation is clear, complete and shows work if it is required.

2-Points

- The student partly understands the math problem and the steps to solve it.
- The answer may not be complete, but is mostly correct.
- The answer can be the wrong answer, but the student used the correct math operation.

1-Point

- The student shows very little understanding of the math problem.
- The answer may not be complete, but is partly correct.
- The answer is correct but student did not show required work.

0-Points

- The student gives the wrong answer.
- The student uses the wrong math operation.
- The student does not show that he/she understands the problem.

Math Vocabulary Review



Name(s) _____

Choose 4 vocabulary words* and think of three different examples of each. Add one that is not an example.

Word _____

Examples:

1) _____

2) _____

3) _____

Not an example: _____

Word _____

Examples:

1) _____

2) _____

3) _____

Not an example: _____

Word _____

Examples:

1) _____

2) _____

3) _____

Not an example: _____

Word _____

Examples:

1) _____

2) _____

3) _____

Not an example: _____

*teacher will give you a list to choose from.

Practice Test

Name: _____

1. (A) (B) (C) (D)
2. (F) (G) (H) (J)
3. (A) (B) (C) (D)
4. (F) (G) (H) (J)
5. (A) (B) (C) (D)
6. (F) (G) (H) (J)
7. (A) (B) (C) (D)
8. (F) (G) (H) (J)
9. (A) (B) (C) (D)
10. (F) (G) (H) (J)