

Strategies for Taking State Assessments

Multiple Choice Questions:

- Remind students to carefully read each question, more than once if necessary, to make sure they understand what is being asked.
- If students are unsure of an answer, they should eliminate the incorrect choices, and then use the understanding of the concept, skill and/or given text to select the best answer from the remaining choices.
- Remind students that there is only one correct answer choice.

Constructed Response Questions:

- Ask students to read each question carefully and check to see that their written responses include all information needed to answer the question completely.
- If a question requires students to do more than one task, such as “identify and provide support,” make sure they include everything that is asked in the response.
- Advise students to answer all of the questions, to the best of their ability. Students may know enough about the topic to earn partial credit. Do not leave any questions blank.

When Responding to READING Questions:

- Encourage students to read the passage and questions carefully before responding.
- Remind students that the reading test has literary and informational/technical/persuasive passages.
- Advise students to use information from the passage to support their answers.
- When students encounter unknown words, they should use context clues, knowledge of word structure and word parts to determine the meaning of the unknown word.
- Encourage students to use illustrations in the passage to help them comprehend information.
- Students should reread the passage for greater understanding when a question asks for predictions, conclusions or summaries.

When Responding to WRITING Questions:

- Remind students that the writing test contains two writing prompts and ten multiple choice questions. The OGT also includes one short answer question.
- Students should take time to organize their thoughts with some form of advance organizer before writing.
- Remind students to include an introduction, body and conclusion when composing persuasive, informational or expository responses.
- Remind students to include a beginning, middle and end when composing narratives.
- Encourage students to vary word choice and sentence types when responding to a prompt.
- Students should proofread what they have written for content, missing words, grammar, spelling and punctuation.

General Classroom Strategies for Improvement

- Utilize an inquiry-based method of instruction and encourage students to apply and demonstrate important concepts as a check for their understanding.
- Provide explicit instruction for analyzing informational text, summarizing, taking notes, outlining, organizing to draw conclusions and writing reports.
- Collaborate within teachers above and below your grade level to ensure that all content in the standards has been taught and that the curriculum is coordinated to meet the grade-band benchmarks.
- Group benchmark and grade-level indicators for instruction to aid in concept development, rather than teach the grade-level indicators in isolation.

English Language Arts

- Increase exposure to nonfiction text during classroom instruction.
- Model the methods of interacting with and deconstructing the text in addition to having the students do it.
- Use classroom wikis, blogs and other electronic modes to gather and share responses to text.
- Incorporate writing across the curriculum, to make writing a “habit of the mind” rather than an exercise to respond to a test question.
- Continue reinforcement and provide explicit instruction around context clues at the middle and high school levels. Although context clues are addressed K-12 in the standards, there is more emphasis at the elementary than the secondary level.
- Provide increased opportunities for responses to all types of text.
- Provide experiences with writing on demand and other writing strategies.
- Promote the practice of writing and the use of peer editing.

Social Studies

- Visit the OAT Toolkit for Social Studies on the ODE Web site (http://ims.ode.state.oh.us/ode/ims/oattoolkit/SocialStudies/Social_Studies_Toolkit.asp), which provides valuable suggestions for teachers on how to use data, differentiate instruction and work in professional learning teams.
- Use informal pre-assessment strategies to inform daily instruction and help students connect prior knowledge and skills to new content.

Science

- Many constructed response items require more than mere recall. Students must analyze, demonstrate or apply scientific concepts to the given scenario. If students have not had the opportunity to practice this as part of their classroom instructional routine, they may have difficulty understanding how to answer the question.
- Science process skills must be incorporated into the daily science lessons. By exposing students to experiments, design, inquiry, real-world data or application and evaluation, students will learn the processes of science.
- Visit the Ohio Science Matrix, found on the ODE Web site (http://ims.ode.state.oh.us/ode/ims/oattoolkit/Science/SC_Focusing.asp). This site describes the benchmarks and content limits in detail. There are connections to other benchmarks and grade levels to show how the benchmarks are related vertically and horizontally. There also are links to national documents related to each benchmark.

Mathematics

- Students need time in class to communicate mathematical ideas both orally and in writing to aid students in creating clear and complete written responses to constructed response items on the test.
- In addition to the resources available on the ODE Web site, teachers should review the resources available on the ORC (<http://ohiorc.org/>) including several webcasts related to the OGT and OAT assessments and the NCTM Web site (<http://www.nctm.org/>), along with the *Navigations Series* from NCTM.

Observations of Student Performance on the OAT & OGT

NOTE: The information used to make these observations is from analyses of statewide released items, so the findings are limited and may not necessarily apply to an individual school or school district.

Reading and Writing State Assessments

Elementary Level

- Particularly at grades 4 and 5, students tend to not perform as well on summary questions as they do on others. These concepts are first introduced at grade 4. (See the 2009 Grade 4 Test-Item 37.)

- Students at the elementary level perform slightly better on questions addressing literary selections in comparison to questions addressing informational selections.

Middle Level

- Students in grades 6 and 7 tend not to perform well on questions addressing the author's argument/viewpoint and the effects of figurative language on literary text. (See the 2008 Grade 6 Test-Item 12 and the 2009 Grade 6 Test-Items 39, 40.)
- Students tend to have difficulty when responding to questions that require them to determine the meaning of a word by applying knowledge of word relationships and when asked to identify the specific context clue that helped draw that conclusion. (See the 2009 Grade 6 Test-Items 12, 13 and the 2009 Grade 7 Test-Item 42.)
- Students in grade 7 tend not to perform well on multiple choice items that address the writing process. Students tend to show a weakness in conventions, sentence structure and organization. (See the 2008 Grade 7 Test-Item 3 and the 2009 Grade 7 Test-Items 2, 13.)

High School Level

- Students tend to have difficulty when evaluating text features and determining how authors use devices (e.g., rhetorical, valid and invalid inferences) to reach their purpose and audience. (See the 2008 OGT-Item 22 and the 2009 OGT-Items 10, 13.)
- Students appear to have difficulty when responding to questions that require them to use the context within the passage to determine word meaning. (See the 2008 OGT-Item 32 and the 2009 OGT-Item 24 & 31.)
- Students tend to show weakness in conventions and sentence structure. (See the 2008 OGT-Item 9 and the 2007 OGT-Items 8, 10.)

Social Studies State Assessments

Elementary Level

- Students have difficulty writing complete responses to short answer and extended response questions. (See the 2009 Grade 5 Test-Item 21, 2008 Grade 5 Test-Item 16 and the 2007 Grade 5 Test-Items 11, 21.)
- Students have some difficulty using map elements or coordinates to locate human and physical features of North America. (See the 2009 Grade 5 Test-Item 29, 2008 Grade 5 Test-Item 39 and the 2007 Grade 5 Test-Item 5.)
- Students have difficulty explaining how the Ohio Constitution and the U.S. Constitution foster (encourage) self-government in a democracy. (See the 2009 Grade 5-Item 2, 2008 Grade 5 Test-Item 6 and the 2007 Grade 5 Test-Items 2, 7, 15.)
- Students have some difficulty explaining how new developments contributed to the growth of North America. (See the 2008 Grade 5 Test-Item 30 and the 2007 Grade 5 Test-Items 1, 35, 44.)
- Students may not take the time to read and respond carefully. (See 2009 Grade 5 Test-Item 7 and 2007 Grade 5 Test-Item 5, 25.)

Middle Level

- Students struggle trying to describe the characteristics and contributions of early civilizations and their enduring impact on later civilizations. (See 2007 test items 2, 8, 25, 40, 42; 2008 items 11, 42; and 2009 test items 12, 33, 39.) Most of this content is found in the 7th grade content standards.
- Students have difficulty with describing the political, religious and economic aspects of North American colonization, particularly, the interactions between American Indians and European settlers. (See 2007 test items 11, 41; and 2008 test item 42.) Most of this content is found in the 8th grade content standards.
- Students seem to struggle as they attempt to analyze information from primary sources and distinguish the differences between primary and secondary sources. (See 2007 test items 21, 36, 37; 2008 test items 10, 30, 38; and 2009 test item 26.)

- Students continue to struggle understanding the consequences of interactions between cultures and cultural diffusion (See 2007 test items 26, 11, 42 ; 2008 test items 2, 26, 39, 42; and 2009 test items 25, 38, 42.) Most of this content is found in the 7th grade content standards.
- Students appear to be having difficulty understanding the strengths, weaknesses and accomplishments of the Articles of Confederation (See 2007 test items 18, 22 and 2009 test items 6, 37.) Most of this content is found in the 8th grade content standards.
- However, in comparing the released items in which students score 70 or above, students do well on comparing types of government (Government C- See 2007 test item 15; and 2008 test item 41.)
- Students seem to have difficulty earning the maximum number of points available on constructed response items, implying a potential difficulty in describing and/or explaining connections. (See the 2008 Grade 8 Test-Item 6 and the 2007 Grade 8 Test-Items 11, 38.)
- Students may have difficulty understanding how contact between different cultures impacts the diffusion of culture. (See the 2008 Grade 8 Test-Item 42 and the 2007 Grade 8 Test-Item 26.)
- Students may have difficulty understanding how to select sources for a project. (See the 2008 Grade 8 Test-Item 38 and the 2007 Grade 8 Test-Item 37.)

High School Level

- The “History” subscale has generally posed more difficulties for students than any other reporting category. This is true for items addressing all seven standards across all five test administrations.
- Four standards have generally posed more difficulties for students across the five test administrations (History C, History D, Geography A, and Social Studies Skills and Methods A). Based upon a very limited number of test items [NOTE: the OGT is not a diagnostic assessment], items assessing these standards include topics such as:
 - Causes and consequences of imperialism;
 - Connections between developments related to World War I and the beginnings of World War II;
 - How definitions/perceptions of regions change over time;
 - Factors used to determine credibility.
- Of the two types of constructed-response items, students have generally been more successful answering short answer items.
- Of the constructed-response items with which students generally had difficulty:
 - Over one-half of the items assessed history benchmarks focusing on twentieth-century history (see 2005 OGT, item 6; 2006 OGT, item 12; 2009 OGT, item 29);
 - The most common directions were to “describe” or “explain” (see 2007 OGT, item 23 and 2009 OGT, item 29);
 - Most of the items asked students to make connections between two sets of knowledge/content (see 2008 OGT, item 29).

Science State Assessments

Elementary Level

- Strengths from the grade 5 test fall into two main categories: questions pertaining to science safety and general life science topics.
- In Physical Science, students struggle with the nature of matter, in particular: Benchmark A, chemical/physical change, Benchmark B, physical properties (see the 2008 Grade 5 Test-Items 28, 42.) and Benchmark F, light and sound energy (see 2009 Grade 5 Test-Item 44).
- Within Earth Science, students have difficulty with processes that shape the Earth, in particular: Benchmark B, deposition, weathering, erosion and Earth systems and Benchmark A, Earth's resources including water, rocks and soil. (See the 2008 Grade 5 Test-Item 30 and 2009 Grade 5 Test-Item 34.)

Middle Level

- The areas of strength in the grade 8 test are found in Life Science and the Science Process Skills - Inquiry, Technology and Ways of Knowing, while Earth Science and Physical Science are weaker.
- Within Earth Science, understanding Earth systems and Earth processes (including plate tectonics) and the universe seem to be areas of specific difficulty. (See the 2008 Grade 8 Test-Items 18, 22, 29, 37 and 2009 Grade 8 Test, Items 32, 33.)
- Within Physical Science, the nature of energy topics, in particular energy transformation (potential and kinetic energy transfers) and understanding the different forms of energy seem to be more difficult than other Physical Science topics. (See the 2008 Grade 8 Test-Items 19, 31 and 2009 Grade 8 Test-Item 26.)
- In Life Science, students had difficulty with the Benchmark A: Characteristics of Life. (See 2009 Grade 8 Test-Item 34.)

High School Level

- At the high school level, the differences between Earth Science, Physical Science and Life Science are not statistically significant, but there are some topics within each content area that are consistently weaker than others.
- In Earth Science, the history of Earth (Benchmark C), the universe (Benchmark A) and processes that shape the Earth (Benchmark E), in particular plate tectonics, are areas that seem to be more difficult than other Earth Science topics. (See the 2008 OGT-Items 13, 20, 30, 38.)
- In Life Science, genetic mechanisms and heredity (Benchmark C) and evolutionary theory (Benchmark H) seem to be more difficult than the other topics within Life Science. (See the 2008 OGT-Items 9, 33.)
- In Physical Science, forces and motion (Benchmark D) and wave properties and energy (Benchmark G) seem to be more difficult than the other topics within Physical Science. (See the 2008 OGT-Items 7, 14, 21.)

Mathematics State Assessments

Elementary Level

- In 2009 at grade 5 the Number, Number Sense and Operations and Measurement standards appears to be the most difficult for students. For example, students need to be able to convert measurement units. Students also need the ability to apply knowledge and skills in contextual situations.
- In 2009 at grades 3 and 4, student performance on the assessments have been consistent across all the standards. Grade 3 students should continue working on approximating measurement of real world objects. Grade 4 students should continue to work on multi-step, multi-operational problems.
- Students seem to have difficulty with Patterns, Functions, and Algebra (Benchmark A), in particular analyzing and extending patterns, and describing the rule in words. (See the 2008 Grade 3 Test-Item 10, 2005 Grade 3 Test-Items 10, 18.)
- Students struggle with Patterns, Functions and Algebra (Benchmark D), in particular representing an unknown quantity as a variable using a symbol, including letters. (See the 2006 Grade 3 Test-Item 46.)
- Students have difficulty in Number, Number Sense and Operations (Benchmark K), in particular, analyzing and solving multi-step problems involving addition, subtraction, multiplication and division using whole numbers. (See the 2008 Grade 4 Test-Item 35, the 2007 Grade 4 Test-Item 6, and the 2006 Grade 4 Test-Item 33.)
- Students struggle with Measurement (Benchmark A), in particular, selecting appropriate units for perimeter, area, weight, volume (capacity), time and temperature using objects of uniform size and U.S. customary units. (See the 2007 Grade 4 Test-Items 45, 47, and 2006 Grade 4 Test-Items 4, 35.)
- Students seem to know definitions, but not how to apply the definitions to actual problems. (See the 2007 Grade 5 Test-Item 31, and 2006 Grade 5 Test-Item 27.)
- Students seem to know formulas, but lack conceptual understanding of them. (See the 2007 Grade 5 Test-Item 8)
- Students answer the first part of a multi-step problem, but fail to complete all steps. (See the 2008 Grade 5 Test-Item 10.)

Middle Level

- In 2009 at grade 8, it appears that students are having the most difficulty with multiple choice questions in the Patterns, Functions and Algebra standard, especially when solving inequalities or graphing equations.
- In 2009 at grade 7, the Measurement standard appears to be the one with which many students struggle. For example, students need to understand what happens to the area or volume of an object when the dimensions are doubled or reduced by one half.
- In 2009 at grade 6, the results are fairly consistent across the standards. However, students have a little more difficulty with the Number standard. For example, students need to understand how to apply concepts of least common multiple within a contextual situation.
- Students in grade 7 seem to struggle with geometry concepts. Understanding the properties of right triangles involving angle measures and side lengths, and understanding the relationship between congruency and transformations of shapes, appear to be areas of weakness. (See the 2008 Grade 7 Test-Items 23, 33.)
- Students in grade 8 have difficulty with measurement concepts. Using formulas to find surface area and volume for three-dimensional objects and applying proportional reasoning to solve problems involving measurements and rates appear to be areas of weakness. (See the 2008 Grade 8 Test-Items 2, 24.)

High School Level

- Students appear to have difficulty determining the volume of objects in real-world problems. Students are even more challenged with volume when the object has features that are circular in nature. (See the 2008 OGT-Item 44, and the 2005 OGT-Item 37.)