Show What You Know® Publishing

Research-Based Documentation for the Show What You Know® Program

OHIO
Test-Preparation Materials for the Ohio Achievement Assessments and the Ohio Graduation Tests
Grades 3–10

Show What You Know® Publishing
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Introduction

Show What You Know® Publishing has been developing high quality supplemental materials, specializing in state-mandated test-preparation products, since 1993. The Show What You Know® test-preparation program has helped students learn the skills needed to succeed on their state assessment tests.

In 2002, President George W. Bush signed the No Child Left Behind Act (NCLB), which gives every student equal access to a high quality education. Under NCLB, the federal government only invests in educational materials and services that are based on recognized and reliable research. The research evidence should be demonstrated to be effective in enhancing student performance.

NCLB strengthened Title I accountability by requiring states to implement statewide accountability systems covering all public schools and students. It stated that systems must be based on challenging state standards in reading and mathematics, annual testing for all students in grades 3-8, and annual statewide progress standards ensuring that all groups of students reach proficiency within 12 years.

Since the No Child Left Behind enactment, Show What You Know® Publishing has published new test-preparation editions to ensure that its materials are up-to-date, accurate, and Title I compliant. All *Show What You Know® on the OAA* and *Show What You Know® on the OGT* materials are specifically aligned to each Standard, Benchmark, and Grade Level Indicator of the Ohio Academic Content Standards.

The Show What You Know® Program: Components for Test Success

Multiple research studies support that three elements must exist for a student to succeed in high-stakes testing situations. The components include: (1) knowledge, which involves being able to apply everything a student is learning and has already learned; (2) practice on tests that simulate the actual test combined with test-taking skills, which develop critical thinking; and finally (3) confidence, which comes with integration of the other elements and understanding and responding to test anxiety. The foundation for a confident, successful student is established when these elements are combined.

The Show What You Know® Program was developed based on these three elements: knowledge, practice and test-taking skills, and confidence. School districts are using these products to teach test-taking skills that are specific to the Ohio state assessments and to provide students with practice on full-length tests that simulate the format of these tests. Students will succeed if they know how to apply the knowledge they have learned both inside and outside of the classroom. This includes understanding learnable test-taking strategies and addressing the increasing problem of test anxiety. Theses strategies, in combination with having practice tests that model the OAA and OGT, are guaranteed to give students the confidence they need to succeed not only on the Ohio state assessments, but on every test throughout the rest of their lives. Confidence comes from knowing the information being tested, having good test-taking skills, and the experience of practicing taking tests.

The Show What You Know® Program was developed in 1991 by teachers and psychologists based on research on high-stakes testing. With the enactment of No Child Left Behind, the program was revised and updated to integrate the research-based requirements. The following documentation includes the nine facts used to develop

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this program and how the program continues to ensure that each student using it achieves test success.

What Research Shows:
Fact 1: Test anxiety is a problematic and common condition among students.
Research demonstrates in a number of studies that test instructions can influence the degree of anxiety in the test taker. One study showed that demanding, test-oriented instructions increased anxiety and resulted in performance decrements, especially for students who were already highly anxious (Sarason, 1960). Another study found that originality increased when the test taker was given clues as to what was being looked for in the test (Gerlach, 1964). Study counseling is most likely to result in a reduction in test anxiety when combined with structured behavioral techniques for teaching students how to observe, measure, and change their study behavior and how to prepare for and take examinations (e.g., Allen, 1971, 1973; Gonzalez, 1976).

According to Dr. Jolie Brams, Ph.D., author of *How to Do Your Best on Every Test*, test anxiety has shown a dramatic increase in young patients who are stressed by tests, particularly statewide assessment tests. Many students have little to no idea how to approach taking tests, particularly at an elementary level. At the same time, an increasing number of college students with test anxiety have caused them unnecessary hardship and failure. Had these college students dealt with their test anxieties during youth, their performance in college could have improved (Brams, 2003).

With the greater emphasis on high-stakes tests, test anxiety is becoming a troublesome and common condition among students in public schools. Research indicates that test anxiety may exert a debilitating effect on student performance. The higher the anxiety level, the lower student performance tends to be (Berliner & Casanova, 1988; Hancock, 2001).

What Show What You Know® on the OAA/OGT Products Show:
Chapters on reducing test anxiety
Show What You Know® Publishing's test-preparation workbooks have an entire chapter devoted to reducing test anxiety. Jolie Brams, Ph.D., a psychologist who specializes in children and adolescents, writes the test anxiety chapters at a grade-specific level. Teachers can break this chapter up into different sections, allowing plenty of time to discuss and practice the methods suggested to identify what test anxiety is, help students learn the symptoms of anxiety, and to reduce test stress. Students need to know that test anxiety is normal, and that there are ways it can be overcome. According to Dr. Brams, being a little nervous motivates students to do their best, but being overly nervous could make students forget information they need to know for the test.

Each Student Workbook contains a grade appropriate Test Anxiety chapter offering activities to overcome test stress, such as thinking positively instead of negatively, emphasizing the importance of good physical health, and studying and practicing for the test. These are skills that help students succeed on Ohio standardized tests, as well as other tests they will face throughout their lives.

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What Research Shows:

Fact 2: Test-taking strategies can help a student actively apply knowledge.

Preparing students for tests does not have to involve extensive drilling and memorization. It is about developing the learnable skills needed to test well. It has been shown that increasing test wiseness results in improvement in test scores (Millman, 1965). One study defined test wiseness as "a subject's capacity to utilize the characteristics and formats of the test and/or the test-taking situation to receive a high score." This study's outline of test-wiseness principals includes such practical suggestions as "pay careful attention to directions, determining clearly the nature of the task and the intended basis for response" and "always guess if right answers only are scored."

It is now recognized that many children and adolescents, particularly those with learning difficulties, need explicit, intensive instruction in study strategies (Metzler, 1993). Some students may need to learn specific study strategies for organizing, remembering, prioritizing, and shifting approaches flexibly. These processes are the underpinnings of strategic learning and are essential for accurate and efficient studying. Students may also need strategies for identifying global themes while ignoring irrelevant details and shifting from the detail to the main ideas (Meltzer, et. al, 2005).

Another element that can hinder students' ability to perform well on a high-stakes test is a lack of time management skills. Research indicates that when teachers focus on teaching time management skills, all students, including those with disabilities, demonstrated proficiency on exams (Gulek, 2003). It is suggested that the most direct way to build time management skills is to give a few tests with time limits throughout the year so that when faced with a timed test, students do not panic (Clovis, 1999).

What Show What You Know® on the OAA/OGT Products Show:

Test-Taking Strategies chapter promotes test wiseness

Each *Show What You Know® on the OAA* and *Show What You Know® on the OGT* workbook includes a Test-Taking Strategies chapter, which is also written by Dr. Jolie Brams at a grade appropriate level. Some general strategies taught in these chapters are:

- Learning how to fill in the answer documents correctly
- Positive thinking tips
- Speeding through the test doesn't help
- Read directions carefully
- Using partial knowledge and common sense
- Learning how to not get stuck on a question
- Learning the importance of rechecking answers

The chapter then gives specific test-taking strategies for each specific subject being tested on Ohio's state assessments. After reviewing the Test-Taking Strategies chapter, students should be able to find their own strategies to help them prepare for tests. The Show What You Know® Program also includes practice tests, which enforce time management skills.

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What Research Shows:
Fact 3: Students will do better if they familiarize themselves with the standards they may be tested on.
The No Child Left Behind Act mandates that all states set and assess state learning standards that identify the content and skills that students need to acquire at each grade level. Many of the new state standards and their corresponding tests require students to answer very demanding questions. Research indicates that in order to give students a fair chance to demonstrate what they know and can do, it is essential to expose them to all curriculum objectives to be mastered at their grade level (Gulek, 2003). This includes teaching to a state's standards in advance to be sure the students are proficient in them.

Teaching to the state standards and using various assessment approaches and formats constitutes appropriate test-preparation practice (Gulek, 2003).

What Show What You Know® on the OAA/OGT Products Show:
Guided tutorials by standards
Although Show What You Know® products promote teaching learnable skills, and not just teaching to the test, it is necessary that students understand the Ohio Academic Content Standards. The Show What You Know® test-preparation materials are aligned specifically to the Ohio Academic Content Standards. The test-preparation series then develops these materials using cognitive questioning in the form of student tutorials and assessments. This program provides an awareness of the student's knowledge about a concept or strategy. Students learn to sort through text, organize their thinking, make clear responses to assessment questions, and monitor and evaluate their responses.

The tutorials are designed to guide students through each Standard, Benchmark, and Grade Level Indicator that may be assessed. The purpose of the tutorials is to help students become more familiar with the types of questions that they could see on the actual test for each standard.

What Research Shows:
Fact 4: Rubrics provide both students and teacher with helpful criteria for success.
Rubrics are multidimensional sets of scoring guidelines that can be used to provide consistency in evaluating student work. Rubrics display scoring criteria so that multiple teachers, using the same rubric for a student's essay, would arrive at the same grade (George Lucas Educational Foundation). According to research, criterion-referenced knowledge provides the right kind of guidance for improving student understanding (Crooks, 1988; Wilburn & Felps, 1983). Rubrics help students understand what is expected from them. They demystify grades by clearly stating, in age-appropriate vocabulary, the expectations for a test. Rubrics also help a teacher monitor the student's learning process in an authentic way and develop or revise a lesson plan (George Lucas Educational Foundation, 2003).

What Show What You Know® on the OAA/OGT Products Show:
Scoring rubric information for the OAA and OGT
Show What You Know® products include scoring rubrics for qualifying question types asked on the OAA and OGT. Rubrics provide criteria to help students to evaluate their work. Rubrics benefit students because it helps

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them realize the validity and quality of their answers. They can visualize the standards that a short-answer question or writing prompt is testing and how it will be scored. Rubrics help students understand that it is better to put down something for an answer than nothing at all.

What Research Shows:
Fact 5: Practice makes a difference.
Research states that administering practice tests optimizes learning and provides a good review strategy (Bangert-Downs, Kulik, Kulik & Morgan, 1991). Practice tests make students more aware of themselves as learners and are also a form of diagnostic assessment being used to identify students' strengths and weaknesses on particular topics (Gall, Borg, & Gall, 1996). In one study, three years of practice test distribution indicated a direct positive relationship between the number of practice tests given and students' final scores (Snooks, 2005). Student satisfaction is another measure of teaching effectiveness. Gretes and Green (2000) found that 90% of students believed practice tests helped them study for "real" exams. It is important for a testing program to include criterion-referenced exams that reflect the quality and depth of curriculum advocated by the standards (Atkin, et. al. 2001).

What Show What You Know® on the OAA/OGT Products Show:
Assessments modeled after the OAA and OGT
The Show What You Know® Assessments are modeled after the actual Ohio state assessments. This means that they include the same number of questions, same format, and the same type of questions, whether it be multiple-choice, short-answer, writing prompts, or extended-answer questions.

Assessments can be used in several ways: The guided Tutorial can be used as a pre-test to find students' strengths and weaknesses, and which standards need additional review. A correlation chart for teachers is provided to assist with this. Each subject Assessment can be given as a post-test after reviewing the standards identified from the Tutorial that needed more attention. The test item distribution matches what students will see on the actual test, and test item distribution charts are included to illustrate the number of question types for each standard and give advice on how to approach the questions. The tests are designed to simulate the actual test so that students can become familiar with the actual look of the test; the more familiar students are with the look of the test, the more confidence they will have when they take the actual test.

Research Shows:
Fact 6: Diagnostic assessments help teachers distinguish where students are and what they need to work on.
Research indicates that in addition to informing and supporting instruction, assessments communicate information to people at multiple levels within the school system, serve numerous accountability purposes, and provide data for placement decisions. Tests that are given before the end of a unit can provide both teacher and student with useful information while there is still opportunity to revisit areas where students were not able to perform well. Opportunities for revisions on tests, or any other type of assessment, give students another chance to work through, think about, and come to understand an area they did not fully understand or clearly articulate the previous time (Atkins, et. al 2001).

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What Show What You Know® on the OAA/OGT Products Show:
Assessment tests with correlation charts identify students' strengths and weaknesses
In the Teacher Guides and Self-Study Workbooks, there are correlation charts for each practice test, which allow quick assessment of students' strengths and weaknesses. The Standard, Benchmark, Grade Level Indicator, and answers are listed for each question. To use the chart, teachers can write the students' names in the left-hand column. When students miss a question, the teacher places an "X" in the corresponding box. A column with a large number of "X's" shows that a class needs more practice with that particular Standard, Benchmark, and Grade Level Indicator. This makes it easy for a teacher to quickly identify the needs of individual students or the class as a whole.

The Show What You Know® test-preparation program series delivers quick diagnostic results regarding individual student performances, enabling students to take an active role in monitoring their own learning.

Research Shows:
Fact 7: Immediate feedback helps students learn.
Feedback has been shown to be one of the most significant activities a teacher can engage in to improve student achievement (Hattie, 1992). In fact, in 1999, John Hattie, Dean of Education at the University of Auckland, summarized his wide ranging view of "what works" in education with the statement, "the most powerful single moderator that enhances achievement is feedback" (Crooks, 2001).

Research identifies that feedback must be timely. If students receive feedback in a timely manner, it will increase the window of opportunity for learning. On the contrary, delay in providing students feedback diminishes its value for learning (Banger-Drowns, Kulik, 1991). Feedback is a research-based strategy that teachers and students can practice to improve their success. Providing the right kind of feedback to students can make a significant difference in their achievement. Feedback that improves learning is responsive to specific aspects of student work, such as tests, and provides specific and related suggestions. This kind of feedback extends the opportunity to teach by alleviating misunderstanding and reinforcing learning. Feedback that is corrective in nature—that is, explains where and why students have made errors—leads to significant increases in student learning (Lysakowski & Walberg, 1981, 1982; Walberg, 1999; Tennebaum & Goldring, 1989). This type of self-assessment is a vital component in student learning. Feedback on assessments cannot be effective unless students accept their work can be improved and identify the important aspects of their work that they wish to improve (Crooks, 2001).

What Show What You Know® on the OAA/OGT Products Show:
Immediate feedback
The Show What You Know® test-preparation series provides immediate feedback to teachers and students.

The Assessments provide immediate feedback to teachers in the Teacher Guides through extensive answer analyses. The tests can be used in two ways: as an assessment, as previously mentioned, or as a step-by-step model tutorial, which the teacher can break apart into standards, pages, or questions, and work through with students. The correlation charts assist in determining which standards the students are mastering, and which

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standards need attention.

Flash cards, modeled in the format of the specific OAA and OGT state assessment questions, give students immediate feedback on why the correct answer is correct and why the incorrect answers are incorrect. Therefore, learning is twofold. In addition, each flash card identifies the Standard, Benchmark, and Grade Level Indicator being assessed.

Research Shows:
Fact 8: Students learn in different ways
Many studies exist that suggest students learn differently from one another. Some students are kinesthetic learners, while others prefer visual or auditory methods. Research demonstrates that planning appropriate and varied lessons will improve both instructional and classroom management. Lessons should reflect an understanding of individual student differences by appropriately incorporating strategies for a variety of styles. When individual differences are considered, many researchers claim that students will have higher achievement levels (Reiff, 1992).

It is good practice to expose students to a variety of assessment approaches, tools, and formats because this allows students to apply their knowledge in multiple learning situations (Gulek, 2003).

What Show What You Know® on the OAA/OGT Products Show:
Additional teaching tools
A **Glossary of Terms and Mathematics Illustrations** are provided in each workbook to help students understand the terms that they should be familiar with on the test. Glossaries review subject-specific concepts or terms, such as the meaning of the words, *i.e., synonym, figurative language, or Pythagorean theorem*.

The actual OAA and OGT state assessments include real-world data on mathematics test questions. Therefore, genuine **Real-World Data** is included in the *Show What You Know® on the OAA* and *Show What You Know® on the OGT* mathematics materials. This helps a student understand how a real world concept is relevant to mathematics. Much of this data is acquired and developed by the Show What You Know® Mathematics Editor, a mathematics teacher of 30+ years.

Like the actual OAA and OGT state assessments, **Cross-Curricular Passages** are included in the *Show What You Know® on the OAA* and the *Show What You Know® on the OGT* reading and writing materials. Therefore, a student can learn about history or science while practicing for the reading or writing tests. Cross-curricular material is also included in the Show What You Know® mathematics preparation.

Additional Test-Preparation Products
The Show What You Know® Flash Cards are an excellent way to incorporate many forms of differentiated instruction in your Ohio state assessment preparation curriculum. Each deck provides additional practice questions. These flash cards can be used as Questions of the Day, in test-preparation games, bell work, group work, and tutoring, among other techniques.

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Research Shows:
Fact 9: Graphic organizers provide a systematic approach to develop critical thinking skills
Graphic organizers provide students with an organizational framework to help them plan their thinking and organize their thoughts. This allows a student to find connections, organize large amounts of information, brainstorm ideas, and make decisions on the best way to communicate those ideas.

Graphic organizers come in many types and have been widely researched for their effectiveness in improving learning outcomes for students with and without disabilities (Hall, Meyer, 2003). In Reading First, a program implemented under No Child Left Behind, it explains that good comprehension instruction includes explicit instruction in comprehension strategies along with numerous opportunities to read and discuss text. One strategy that is suitable for teaching these comprehension skills is through the use of graphic organizers.

There is solid evidence for the effectiveness of graphic organizers in facilitating learning (Hall, Meyer, 2003). Graphic organizers are most effective when these skills are used daily, and in a repetitive manner. When this curriculum is implemented, students will develop consistency in the way they process and answer critical thinking questions (Thompson, et. al. 2003).

What Show What You Know® Products Show:
Graphic organizers are included in supplemental skill-building materials
Read on Target, Show What You Know® Publishing's supplemental reading comprehension and critical thinking skills workbook series for grades 1–6, uses Reading Maps, a form of graphic organizers. These Reading Maps guide students through the thinking process and provide a blueprint for students to build their ideas into a clear, conceptual structure.

In 2003, a study was done to evaluate the effectiveness of the reading comprehension tools contained in *Read on Target*. The study consisted of correlation studies with pre-tests and post-tests on a group of two student test groups. One group used *Read On Target*, and the other did not. Students who used *Read on Target* showed measurable gains on reading comprehension tests. (See *Read on Target* Research).

The *Write on Target* series for grades 1–6, consists of a similar framework utilizing graphic organizers to write to 11 modes of writing. When the appropriate graphic organizer is used, teachers are able to trace a student's thinking during the planning and writing stages. The graphic organizer helps improve a student's organizational structure with a clear beginning, middle, and end. Students are able to write to the purpose of the mode, even when the student's final products are not fully developed. This allows teachers to see where students are breaking down in their writing process and offers a plan for appropriate intervention.

Math on Target, for grades 3–5, uses Math Maps, a form of graphic organizers, to provide an approach for working through any math problem. It presents mathematics problems that help students develop the conceptual understanding and higher-level thinking skills. *Math on Target* provides sample problems for modeling, practice, and diagnostic assessment purposes. Once again, this makes it easy for a teacher to analyze where students break down in their knowledge of facts, skills, and mathematical processes that have already been

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taught in the regular mathematics program.

The *Science on Target* series for grades 3–6 uses graphic organizers to walk students through science scenarios. Each scenario includes a checklist, an activity, and questions that measure students' understanding of the grade-appropriate science concept. Graphic organizers provide a visual framework of a student's thought process and show where students may be breaking down in that thought process. *Science on Target* uses a step-by-step procedure to build students' science skills while helping teachers diagnose and evaluate students' science comprehension.

Social Studies on Target, for grade 5, is designed to improve students' social studies, language arts, communication, and analytical skills. Social studies scenarios consist of research-based graphic organizers, checklists, vocabulary review, rubrics, and questions that test students' application of social studies knowledge. Graphic organizers provide students with ways to think about, arrange, and represent their ideas with fifth-grade social studies concepts.

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