

OAT and OGT Test Taking Strategies and Skills
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Preface: I taught science OGT intervention courses to students who had failed the science OGT one or more times. The ideas in this packet are based on techniques that I used with students in my classes. My passage rate was 95% over 10 years. Sample questions were taken from the 8th grade Science OAT released questions on the ODE success portal. This packet is intended for use by students, parents, and teachers. Copy as needed.

What Students Can Do Before The Test To Increase Success:

Tip #1- Make sure you get a good night of sleep the night before (at least 8 or 9 hours). Research has shown that when your brain does not receive enough sleep, the portion of your brain responsible for thinking and processing does not function as well as when it has had adequate sleep.

Tip #2- Eat a breakfast of carbohydrates and protein. Carbohydrates will provide immediate energy, and proteins can be broken down to sustain your energy level. If you do not eat, your brain will be busy sending electrical signals to your digestive system to stimulate hunger cues, like a growling stomach. This growling will be distracting to you of course, but your brain will also be distracted from its thinking processes.

Tip #3- Dress in layers on test day. Room temperatures are beyond your control, but if you have on layers, like a sweatshirt over top of a tee shirt, you can adjust to the temperature of the room. If the room is too hot, you can take off a layer. If the room is too cold, you can put a sweatshirt on. When you are too hot or cold, your brain will be busy sending messages to your body to begin sweating or shivering. Your brain should be focusing on the test, and yes, it can multi-task, but doing several things at once will cause some things to not be done well. For example, I can watch television and iron at the same time, but when I do, I sometimes burn holes in my clothes.

Tip #4- Bring extra pencils and wear a watch. Bring peppermints if you are allowed to. Peppermints have been proven to heighten alertness. If you find yourself, getting sleepy or not focusing, pop a mint in your mouth. It will wake up your brain.

Strategies to Help Increase Success During The Test:

Tip #1- Read all of the directions. Do you want to be the student who fails because you did not follow the instructions? I wouldn't want to.

Tip #2- Stay relaxed and confident. Tell yourself that you are well prepared and are going to do well. If you feel anxious, take several slow deep breaths.

Tip #3- Read all passages and information that goes with the question. Take notes on the passage or circle key points made in the reading that you think may help you answer a question later. Pretend that you are making up the questions on that reading. What would you ask someone? Write down the answers to your questions off to the side of the reading.

Example:

A park is home to a large number of robins, squirrels and rabbits. The robins and squirrels live in the park's trees. The robins feed on earthworms and insects that live on the ground. The squirrels eat the acorns produced by the park's oak trees. The rabbits hide in the bushes and feed on the grass.

What would you circle or take notes on from the passage?

What question would you ask about this passage? _____

Here is the question that was on the OAT:

Which factor would directly limit the number of rabbits that could live in this park?

- A. number of robins
- B. number of bushes
- C. number of acorns
- D. number of squirrels

The question has students analyze what factors would limit the population of rabbits. What do we know about the rabbits?

What two factors would limit the number of rabbits in the park?

So the correct answer choice is: _____

Tip #4- If you are asked to look at a graph or a data table, look at the title. Good titles will always tell you what the graph or data table is trying to tell you. Mentally ask yourself, “What is this graph (or table or picture or diagram) trying to tell me?” then write down the answer. I bet you just answered a question that will be asked.

Example: **Question 15**

Use the following information to answer the question.

Densities of Several Materials Compared to Water

Material	Density (g/mL)
Limestone	2.70
Magnesium	1.74
Sulfur	2.07
Water	1.00
Wax	0.95

Write it down. What is the graph trying to tell you? _____

From the graph, what do you know? _____

Here is the question that was on the OAT:

Which material will float in water?

- A. limestone
- B. magnesium
- C. sulfur
- D. wax

The correct answer is _____ because _____

Tip #5- Make sure that if it is a multiple choice question, read all of the answer choices. You have been told this over and over again, but students often stop at a choice they think is right, so they do not read a better choice (and the correct choice) that appears later.

Tip #6- For multiple choice questions, use your pencil to physically cross out two of the answer choices. Two choices should be easy to eliminate. Most people are visual learners, so it really helps your brain if your eyes can see which choices are no longer possible. You now have the question down to a 50-50 chance if you eliminated correctly- the right answer and one that you need to think about. The one you need to think about is called a distracter choice. There is a flaw in the choice or it is a misconception that many students have.

Example: Question 44

What change would occur if Earth's rate of rotation significantly increased?

- A. The year would be shorter.
- B. The year would be longer.
- C. The day would be shorter.
- D. The day would be longer.

Which two choices did you eliminate? _____

Why? _____

Look at the choices that are left. What science misconception is being tested here? _____

The correct answer is _____

How did Ohio students do on this question?

60% chose the correct answer.

21% chose the distracter.

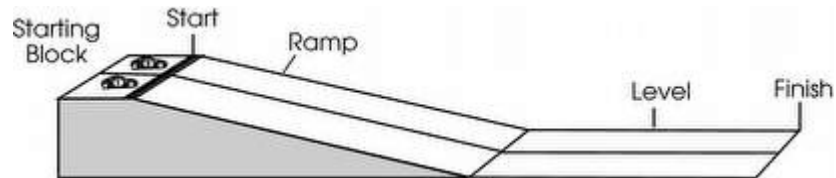
18% did not eliminate the correct two choices to get to 50/50.

Tip #7- Give your brain time to think about the 2 choices left and then pick one. Stick with your choice unless you are 100% positive that you are incorrect. Studies have shown that 95% of the time, your first answer is the correct answer. How many times have you gotten a test back and found out that you missed a question that you had right, but you changed your answer?

Tip #8- Short answer questions are worth 2 points because there are usually two tasks or things to do. Extended response questions are worth 4 points because they involve the completion of four tasks. After reading the question, circle the “task verbs”. Task verbs are your directions of what you need to do.

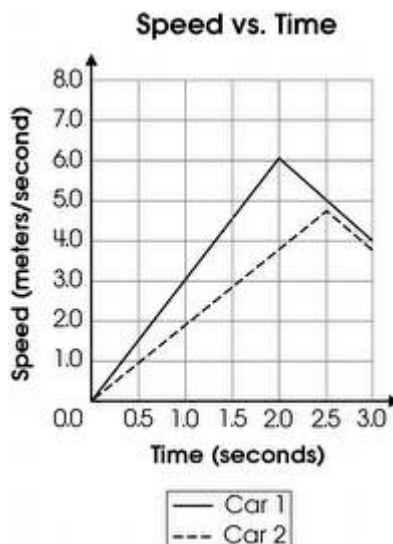
Example: Toy Car Race

Ms. Williams’ science class uses a toy car race to study and collect data about forces and motion. The racetrack shown has a 6-meter ramp and a 5-meter level section to the finish line. Two cars compete at a time.



The data table and graph below show the speed and total distance traveled for car 1 and car 2 during the first three seconds of a race.

Speed and Distance Data for Car 1 and Car 2				
Time (seconds)	Car 1		Car 2	
	Speed (meters/second)	Total Distance Traveled (meters)	Speed (meters/second)	Total Distance Traveled (meters)
0.0	0.0	0.00	0.0	0.00
0.5	1.5	0.38	1.0	0.24
1.0	3.0	1.50	1.9	0.96
1.5	4.5	3.38	2.9	2.16
2.0	6.0	6.00	3.8	3.84
2.5	5.0	8.75	4.8	6.00
3.0	4.0	11.00	3.8	8.16



In your **Answer Document**, state which car won the race. Provide support to explain why your answer is correct. (2 points)

What would you circle as the task verbs? _____ and

Tip #9- Answer the task verbs one at a time. For all of the tests except for writing, students do NOT need to write in complete sentences. Spelling does not count against you either, so if you know you should use a word that you can't spell, use it anyway. As long as you get it close enough so the grader knows what word you meant, you will get credit. They want to know that you know the right vocabulary, so use it even if you can't spell it. Write as neatly as you can so the grader can read what you wrote. Be sure to keep your answer inside of the answer box on the answer document. Anything written outside of the box is not graded. A strategy to use is to write the task verbs down with an equal sign after it. Like this:

State winner =

Provide support =

Write your answer to this question in the answer box.

Tip #10- Understand how the short answer and extended response questions are graded.

All short answer and extended response questions are graded using a rubric. If you state in your answer what is on the rubric, you will get the points for it.

Here is the grading rubric for the toy car question:

Points**Student Response**

- 2** The response identifies car 1 as the winner and provides a correct AND supported reason.
The response provides that car 1 won the race
- 1** OR
- A reason why car 1 won the race.
- The response fails to correctly identify the winner as car 1 or provide a reason why car 1 won. The response does not meet the criteria required to earn one point. The response indicates inadequate or no understanding of the task and/or the idea or concept needed to answer the item. It may only repeat information given in the test item. The response may provide an incorrect solution/response and the provided supportive information may be totally irrelevant to the item, or possibly, no other information is shown. The student may have written on a different topic or written, "I don't know."
- 0**

Student Sample Answers**2 Point Sample Answer**

This answer was given a score of 2 because it names car 1 as the winner and gives the right reason for this answer ("car 1 won the race because it was first one to reach the finish line, which was at 11 m. In 3 seconds, car 1 was already at the finish line while car 2 was still at 8.16 meters").

Car 1 won the race because it was first one to reach the finish line, which was at 11 m. In 3 seconds, car 1 was already at the finish line while car 2 was still at 8.16 meters.

1 Point Sample Answer

This answer was given a score of 1 because it names car 1 as the winner ("Car 1 won the race"). But the reason that is given only restates that car 1 is the winner ("It got to the finish line first").

Car 1 won the race. It got to the finish line first.

0 Point Sample Answer

This answer was given a score of 0 because it names car 2 as the winner and gives the wrong reasoning ("Car 2 won because car 1 finished 4.0 sec. and car 2 finished in 3.8 sec."). The reasoning is wrong because it confuses time with speed.

CAR 2 won because CAR 1 Finished 4.0 sec +
CAR 2 Finished in 3.8 sec.

Tip #11- Never leave anything blank. If you do not answer the short answers and extended responses, you will more than likely not pass. The multiple choice questions are only worth one point each where as the short answers are worth 2 points each and the extended responses are worth 4. You would need to get every single multiple choice question right to get a 50% on the test.

Tip #12- If a question has you puzzled, skip it and go on to something else. While you are working on another question, your subconscious mind will be working on the answer to the question that you skipped. The answer may "hit you"- when it does, write it down in your test booklet. Finish the question you were working on, then go back and do the question you skipped using your notes.

Tip #13- Use the whole time to take the test that you are given. Your brain will make mistakes if it is rushed. When you are finished, read every question again and look for mistakes. If you are positive that you made a mistake, fix it.

Tip#14- Do not panic. There will be questions to which you do not know the answers. Very few students get more than 90% on the state exams. They are challenging for a reason. They (state officials) want to see what students in their state know. Creating a test that is too easy that most students do very well on does not tell them anything about the ability level of the students. If you get around 70% of the questions correct, you will pass the test.

I hope you found this packet helpful. Good Luck!