Practical skills in biomolecular sciences pdf

ACT Science is like a double rainbow: unique, complicated to understand, and people get scared when they see it. Unlike a double rainbow, which tends to scare people because of its impressiveness, the ACT science section tends to scare people because of the crazy weather crisis with only 35 minutes to answer 40 questions. Still, if you want to do well in ACT Science, you can't help it. You have to buckle down and create a great curriculum. The good news is that there are several easy steps to take to make sure you are studying for the ACT science section the right way. Here's an overview of what this guide covers: What study materials use the importance of using realistic timing How you should be reviewing your practice tests By memorizing what ACT science expects you to know step 1: Study with official materials This step may seem obvious, but in order to get the most out of your study, you need to study it with ACT Science specific material. As I said before, the ACT Science section is different from other scientific tests you've done; your AP or IB science study materials won't help you here. You need to find ACT study materials that you like to work with and that fit your study schedule. The highest quality source of practice testing is almost always official ACT practice tests. If you like my approach then you'll love the PrepScholar program. We do heavy lifting for you by splitting our preparation material into specific skills. We will automatically detect your weaknesses and give you lessons and focused questionnaires to improve these skills. Also, check out our article on recommended ACT preparation books. You should take a minimum of four sections of act science long-term practice before the date of the test. Step 2: Sticking to the Real Time Section of Science ACT is the tightest time crisis of any section of the test: 7 passages, 40 questions, 35 minutes, leaving only 52.5 seconds to answer each question. It is necessary to stay at a rate of five minutes per passage. If you do not do so in your practice, you will not be able to do so on the day of the test. You should be taking a minimum of four practice tests, but I would say you should take about seven to eight sections of ACT Science practice to nail down this timing. Don't disturb the dragon. Step 3: Review your bugs This is the most important step of all. After taking the practice test, don't just score your try and move on to the next one. You need to really review your mistakes. When reviewing practice tests, people tend to have some or all of these wrong impulses: Impulse 1: Focusing on what you did right and ignoring what you did wrong (not helpful). Impulse 2: Without taking into the questions he got wrong because they were just sloppy (unhelpful) errors. Impulse 3: Focusing on the fact that you have things wrong and ignoring the review in favor of self-complacency (popular with some over-whipping, and yet... not yet useful). These impulses are not helpful! Review is the most important step in your Process. It's how you learn and improve. Your review of your ACT Science questions should be different depending on the type of passage. If you do not know the three types of ACT SCIENCE PASSAGES, I recommend reading our other article before continuing to read this article. As a brief review, there are three types of ACT scientific passages: 3 Passages of data representation 3 Passages research summary 1 Conflicting views Passages of representation of passages data and passages of research summary are very similar. Both use visuals (graphs, tables, etc.) as the main way to transmit information. We will evaluate your mistakes for both of you in the same way. Conflicting views Passages are the most unique since they usually have no visuals. We will use a different approach to assess your mistakes. Reviewing the passages of research summary and data representation cannot always be invincible. Start by analyzing your confidence for each question. Classify each question as omitted, guessed (after the removal process), or (you think you knew). Do this for all the questions, even the ones you have well. Be sure to review all the questions you skipped or guessed (even if you have some of those guessed right). For sautéed questions: Why did you skip? Have you run out of time? You should never skip the ACT as there is no penalty for guessing. Be sure to leave yourself enough time at the end to at least choose a card in the bubble for the remaining questions. For guessed questions: Why did you guess right? Why did you guess wrong? Is there a difference in how you approached guessed questions that you are right compared to those you got wrong? Then understand the reason why the question was mistaken. Categorize your errors in 1 of 6 areas. Misread visuals Do not understand a trend Do not understand the configuration of the experiment Misread passage Without knowing a scientific fact Neglected error I will go into more details about each type of error below. Error Type 1: Misread visuals This is one of the most common mistakes since it is easy to make, and applies to a lot of questions in ACT science. Haven't you read charts, tables, diagrams, or charts correctly? If so, what have you misread? What didn't you understand? Be sure to punch this skill as it is the most tested in the SCIENCE ACT section. Here is an example of a factual question: there are several mistakes you can make when misreading charts. Have you looked completely at the wrong figure? Example: You accidentally used the top graph of the percentage Captured finches from Island A? You should have used the two lower charts that covered the percentage of captured finches on Island B and C. Have you misread the values along the x-axis or y-axis? Example: Do you think he said 8 instead of 10? Not done misread labels along x axis or y axis? Example: Do you think the bec depth has been measured along the Y axis? Haven't you noticed a key? Example: many visuals will have a key with them. Keys are usually very important. Don't ignore them. You will recognize these errors when your choice of response is very different from the correct answer. If you think you may have misread the visual, start by analyzing the question. Was he referring to a specific figure? Have you looked at Figure 2 when he said Figure 1? If you didn't refer to a specific figure in the question, did the answer options have numbers? For example, in question 1 above, answers A, B, C and D have numbers: 8 mm, 9 mm, 10 mm, etc. If the answer options contain numbers, it's a safe bet that you either needed to read a visual or understand a trend to answer the question correctly. I will explore understanding a trend bug below. If you think you struggle to understand visuals, you need to focus on improving this skill as it is the most proven skill in the ACT Science section. In order to improve, I would recommend taking some ACT science sections without time. Take as long as you need to answer each question and dissect the visuals provided. Type control and variables. Type the values for each data point. By taking this seemingly tedious step, you will make sure to understand the information that the visual is trying to convey. After reaching an acceptable score when taking sections without time, I would start taking timed sections immediately. As I said before, you'll need to nail down the time of 5 minutes per passage to succeed in the ACT science section. Type of error 2: Not understanding a trend This error is usually related to the interpretation of questions and trend calculations. Couldn't describe the relationship of the data? Growing, decreasing, direct, indirect? Weren't you able to extrapolate/interpolate a trend? Here's an example of an interpretation trends question: Answering this question requires understanding what caused small or large seeds to be more abundant. In this case, this chart below and the two sentences above provide the information you need. If you misread the chart or mixed these sentences, you may have received the wrong response. According to both sentences, small seeds are abundant during wet years. According to the graph, 1984 was a wet year, so J. 1984 is the right answer. I would recommend the same approach to solving this problem as with the mis-reading of visuals. Take practice sections inoport time. Try to take advantage of the visuals the extrapolation of the data. Draws the line as if it went further. Follow the table. Place the up and down arrows in case the point-to-point or down from point to point. Once you start to excel at these interpretation trends and calculation questions, return to the 5-minute pace per passage. Error Type 3: Don't understand your experiment settings this error is experimental design/research issues and hypothetical experimental issues. Didn't you understand the intention of the researcher? Haven't you understood the design of the experiment? Didn't you know the control versus the variables? Here's an example of an experimental design question: Answering this question requires understanding what the titrant and sample solution was. In this case, the passage defines what a titrant is and what sample solution it is, but if you misread the passage, it's easy to mix it, especially since it's just a lot of liquid that you mix anyway. Be sure to skim the passage of this information if you can't find out only about the visuals. Error Type 4: Misread Passage Did you miss the key passage information needed to answer questions? Be sure to read carefully. If you are not 100% sure what the answer is, go back and skim if you have the time. Try to be 100% sure before moving on to the next question. As for the question in error type 2, it would be easy to misread the two sentences you need to answer the question correctly. If you were reading too quickly, you may think that small seeds were plentiful during the dry years and respond incorrectly. Take the time and make sure you understand what you read, so get the right answer. Error type 5: Not knowing a scientific fact if you read our article on the only real science you need to know for ACT science, this error is in these questions. These questions only appear about four times per test and require external scientific knowledge. To make sure the error is due to a lack of external knowledge, reread the entire passage and make sure you don't get the information you needed to answer the question. If you still think it's an external knowledge question, make a quick card with information you didn't know. Study the quick cards, so get the information down. You have to make quick cards for all the themes of the only real science article and punch yourself. Also, be sure to do some additional light research to update your memory of this concept. You don't need to read a book on the subject, but just make sure you have a basic understanding of the concept. The next question expects you to know that protons are charged positively, electrons are charged negatively, as charges repelle each other, and opposing charges attract each other. Nowhere in the passage is this property of declared charges – you just need to know this from your science class experience. Knowing what you do, you can remove F and H. In this case, the passage stated that the reaction uses protons, so the answer is G. Knowing this material is the only one score between 31 and 36. If you're aiming for a score of 30 or below in the ACT science section, you don't need to spend as much time focusing on these questions as they only account for about four questions per test. error type 6: Neglected error a small miscalculation in question that requires basic math? Did you misread the question? Haven't you seen a NO or EXCEPT? Be sure to read the questions up close and circle or underline the NO or EXCEPT so you don't miss it. It would be very easy to read this too quickly and think that the question is asking which of the following is true. I have seen many of the students who tutor make this mistake, and I have made this mistake myself. Try to read carefully to avoid these sloppy mistakes. By reviewing passages of conflicting views again, start by analyzing your confidence for each question. Label them as omitted, guessed, or known. Try not to jump in the future as you are not penalised for guessing in the ACT. Review all the skipped and guessed problems (even if you have some guessed questions right). Understand the reason why the question was mistaken. Categorizes errors into two categories: Not understanding the point of view Do not understand the differences and similarities in the views Error Type 1: Do not understand the point of view If you read our article on the three types of passages of the science of the act, this error is usually connected to the understanding of the questions of the points of view. If you continue to struggle with the types of questions, circles and/or underlines as you read the passage to make sure you remember each student/scientist's point of view. What's your argument? What do they think? Write yourself a three or less summary word after reading the paragraph i.e. pro-comet theory, anti-comet theory. Answering this question requires understanding the student's point of view 2. In this case, Student 2 said that Algol B became part of the Algolo system because Algol B crossed orbits with the original Algol's system, so the original algolo system exerted a gravitational force on Algol B. Therefore, the answer is H. If you didn't understand the argument of Student 2, you would get that question wrong. Error Type 2: Not understanding differences and similarities in views This error is usually connected to comparing viewpoint questions. Were you able to differentiate between the two scientists/students? How similar were his views? Answering this question requires understanding both the point of view of Scientist 1 and Scientist 2 and knowing the similarities between them. In this case, both agreed that the object exploded 8 km (5 miles) above Earth, so we can remove B, C and D. Therefore, the answer is A. If you didn't know this key similarity between them, you probably would have responded incorrectly. Step 4: Study the science topics that the ACT hopes you know as I mentioned briefly above, take a swidth according to our other paper on the only real science you need to know for the Science section Do some light research to make sure you have a basic understanding of each topic. Make quick cards of this material. Drill until you know it. Because there are 13 topics mentioned in this article and and About four used for practice test, you may not encounter all of them in your studies. You don't want to be surprised on the day of the test, so make quick cards and make sure you meet them! Recap to the best way to study ACT Science Here are the steps to success: Study with real materials ACT Science When you take practice sections, make sure you stick to the real time! (five minutes per passage) Review your practice tests errors. (Don't ignore them! This is the most important step!) Study the scientific subjects the ACT hopes you know you hope you see from ACT Science is easy if you have a good curriculum. What's next? Study hard, review as a pro, and get a 36 in the ACT science section! Get more help cracking the ACT science section. Learn the big secret of ACT Science. Discover the science you need to know, and learn the best way to read passages from ACT Science. Not sure where you want to go in college? Learn how to do university research well. Once, you know where you want to go to school, choose your ACT target score. Read our tips for entering Harvard, the Ivy League and Stanford. Like this article? Do you want to improve your ACT score by 4 points? Check out our best class online ACT preparation program. We guarantee your money back if you don't improve your ACT score by 4 points or more. Our program is totally online, and customizes what you study to your strengths and weaknesses. If you liked this Science lesson, you'll love our program. Along with more detailed lessons, you will have thousands of practice issues organized by individual skills so you learn more effectively. We will also give you a step by step program to follow so you never get confused about what to study next. Check out our 5-day free trial: try: