

Science

40 questions

35 minutes

6-7 passages

As in other subjects, NEVER spend test time reading the instructions. See below:

DIRECTIONS: The passage in this test is followed by several questions. After reading the passage, choose the best answer to each question and fill in the corresponding oval on your answer document. You may refer to the passage as often as necessary.

You are NOT permitted to use a calculator on this test.

1) Timing is hard!

I was unable to get through all the questions of the science exam but still scored above college ready. You can too! You got this.

2) Recommended timing

You have approximately .52 seconds on each question. I recommend reading the passage first and then answering the questions.

3) Math!

There is no calculator. Basic metric conversions like mm, kg, km, etc. are sometimes asked. These questions can be done by dividing or multiplying by a base 10 number (10, 100, 1000). Make sure you look up conversions you need memorized. I would anticipate approximately 2-4 questions containing this info.

You may need to do some basic addition and subtraction.

There will be no complicated math. So, if the math you are doing is not basic addition, subtraction, multiplication, or division you are doing it wrong.

4) More reading comprehension than science facts

This exam tests your ability to perform reading comprehension of a science text.

5) Searching for the science info you need

Some science background is helpful. I recommend some internet searches about everything you need to know for Science ACT. I used an article from Prep Scholar, “The Only Actual Science You Need to Know for ACT science.”

6) Science you will need for sure

- ✓ The pH scale (lower numbers acidic, higher numbers basic)
- ✓ Water is the universal solvent (solvent dissolves things solute is dissolved)
- ✓ Bio definitions of heterotrophs, autotrophs, detritivore, ext.
- ✓ Photosynthesis
- ✓ Cellular Respiration
- ✓ BOYLE’S LAW
- ✓ Wavelength, frequency, ext.
- ✓ Gravity, motion, etc.
- ✓ Earth science, erosion, waterways, water cycle, climate change, etc.
- ✓ Experimental design (independent variable, dependent, control)
- ✓ Inverse relationship=one goes up the other comes down or vice versa
- ✓ Direct relationship= both go up or both come down

- ✓ Graph slope (Secondary Math 1, 2, 3). You must know positive and negative slope. You read graphs left to right. Use “ant man.” *Put ant man on the graph and see if he walks up or down the slope of the graph from the left to the right. (Mr. K uses ant man so ask him if you do not know).*
- ✓ Reading charts, graphs, images, etc.
- ✓ Predicating results
Example:
If more time keeps making the experiment get hotter what will 5 more minutes do? It will get hotter (you have now eliminated two answers). Which number is it? Has the heat been increasing at a rate of 10 degrees Celsius for every 10 minutes. The temperature will increase 5 degrees Celsius in 5 minutes.
- ✓ Independent vs. dependent variables
(Yes, I mentioned this twice intentionally).
The independent variable is the number of slices of pie you eat. It is independent of anything. The dependent variable is how bad your stomach hurts (dependent on how many slices of pie you eat). 😊
(Example above and the one following from Mr. Kukorlo’s math class.)
- ✓ Mass, density, and volume.
Volume is the space. The garbage can’s volume is how much space the physical can takes up. Density is the amount of mass per unit of volume. How densely is it packed? Last but not least, is mass, which is the amount of stuff. The more stuff you put in the garbage bag the fuller it becomes (more density, more mass, same volume of can).
- ✓ Punnett Squares!! I saw single trait or mono hybrid cross Punnett squares. I did not see dihybrid crosses.

7) Classes

- ✓ Earth Science
 - pay attention to astronomy unit
 - to climate change
- ✓ Biology
 - pay attention to evolution and genetics

- ✓ Physics (strong recommendation to take physics)
 - I would consider practicing some physics. Not necessarily all the fancy calculations but the physics concepts of springs, pulleys, gravity, light spectrums, etc.
- ✓ Chemistry
 - pay attention to chemical equations
 - to Boyle's law, other gas laws, etc.
 - to acids, bases
 - electrons, neutrons, protons
- ✓ I have not seen anatomy or physiology on either of my exams or practice tests. ☺

Note: You do not have to take all these classes to do well.

8) Conflicting viewpoints takes the longest

If you are good at English and Reading this may be your best section. It took me about 10 minutes but was one of my better sections. Underline the viewpoints as you go. Underline experiment passages as well.

Practice your timing. Take lots of practice tests! I was failing my practice exams till I got the ACT science book prep guide. It was very helpful. If you cannot buy the book look into the categories and learn how to identify which categories you are the best at. Divide your tests and know how long each type of question takes you. Do the experiment ones take the longest? Are you the worst at conflicting viewpoints? Do you keep failing the chemistry passages? Questions like these can help you pinpoint your weaknesses and fix them before test day.

Good luck from someone who struggled on the practice science exams and studied till they were able to succeed.

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