Power Up: Science ACT Prep, Week 5

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Time Frame 35

Essential Question(s)

How can I increase my ACT score?

Summary

In this fifth science ACT prep activity, students learn strategies for evaluating trends in graphs. First, students complete WIS-WIM notes to record what they see and what in means when looking at a graph. Then students evaluate a series of graphs and tables to determine what trends they observe. Finally, they will apply the skills they have been learning across the series to an ACT-style passage and question set. This is the fifth activity in a 10-week "Power Up" series for ACT Prep.

Learning Goals

- Analyze tables and graphs to understand trends
- Evaluate data to answer a question
- Build testing stamina to power through the test

Attachments

- Activity Slides—Science ACT Prep, Week 5.pdf
- Activity Slides—Science ACT Prep, Week 5.pptx
- Getting Salty (Teacher Guide)—Science ACT Prep, Week 5.docx
- Getting Salty (Teacher Guide)—Science ACT Prep, Week 5.pdf
- Getting Salty—Science ACT Prep, Week 5.docx
- Getting Salty—Science ACT Prep, Week 5.pdf
- WIS-WIM Notes—Science ACT Prep, Week 5 - Spanish.docx
- WIS-WIM Notes—Science ACT Prep, Week 5 - Spanish.pdf
- WIS-WIM Notes—Science ACT Prep, Week 5.docx
- WIS-WIM Notes—Science ACT Prep, Week 5.pdf
- What's Trending—Science ACT Prep, Week 5 - Spanish.docx
- What's Trending—Science ACT Prep, Week 5 - Spanish.pdf
- What's Trending—Science ACT Prep, Week 5.docx
- What's Trending—Science ACT Prep, Week 5.pdf

Materials

- Activity Slides (attached)
- WIS-WIM Notes handout (attached; half page per student)
- What’s Trending handout (attached; one per student)
- Getting Salty handout (attached; one per student)
- Pen/pencil

5 minutes

Introduction

Teacher's Note: ACT Enhancements

The following resource has been updated to better align with the test changes that began in April 2025 for the online test and in September 2025 for the paper-pencil test. Some outside resources linked are based on the previous version of the ACT. Learn more about enhancements to the ACT in 2025.

Use **slides 1-4** to introduce the lesson and go over the essential question and lesson objectives. Give each student the attached half sheet **WIS-WIM Notes**. Display the graph on **slide 5**. This is a graph on time spent on the test versus time spent reading the passages. Using the WIS-WIM strategy, have students jot down what they see on the slide and what they think it means. Select a few students to share out. Ask students what happens to the time they have available to answer questions as they take more time to read instructions and passages. Emphasize the use of any key vocabulary students use like trend, decrease, or axis.

Sample Student Response

If you take less time reading the passages and directions you have more time for answering questions.

The trend is negative. Your time for answering decreases as your time spent reading passages increases.

Explain that the science section asks students to answer 40 questions in 40 minutes. This means students should be answering each question in one minute if they don't take into account the time needed to read the passage. Every minute they spend reading instructions and the passages results in time taken away from answering questions, which is why it is important to skim passages rather than reading them closely. This is why it's also important to know the science instructions beforehand so students do not need to read them during the test. In addition to the challenge of answering all questions in the time allotted, the science test is the last section they take for the ACT unless they also take the writing test. That means students are often tired at this point in the test. That said, science can be one of the easiest sections to gain a boost to their overall score, so it is worthwhile to maintain their efforts until the end.

Show **slide 6**. This slide has the instructions for the science test. Explain that you will read this now and answer any questions they might have. Knowing these instructions beforehand means they will not have to devote any time to reading them the day of the test and can get right to work reading passages and answering questions.

15 minutes

Activity

Hand out the attached **What's Trending?** activity. For Part A, the left side of the page has a set of graphs and tables. The right side has notes that resemble notes that students could take on scratch paper during the test to remember what is happening in the graph or table or an important takeaway from the graph. Ask students to match the notes to their corresponding graph for Part A. Instruct them not to go on to Part B yet. Display **slide 7** and have them compare their results to the key. Ask which notes were the most confusing. Ask if there are any other ways to record a note about a graph or table other than the samples given.

Now have students flip over their papers and look at Part B. For Part B, they have a set of tables and graphs, but no notes. Students will need to generate their own notes. Give students time to record their notes then collect their papers to assess if they were able to accurately note key information or trends later. They should mention if the trend was positive or negative and any other key details that might help them answer questions about the content of the table or graph. Monitor those that struggled to make notes as they complete their independent practice in the coming weeks and offer examples of how they could have noted trends to help them answer specific test questions.

10 minutes

Wrap-Up

Let students know that over the next few weeks they will work on pacing and testing stamina. They will practice powering through the test, which will help them to make sure they have the time they need to answer all the questions.

For today's practice test, they will have 5 minutes to read one passage and answer 5 questions about the passage. Remind them that many of the questions focus on interpreting tables, so they should try to apply the skills they learned today to make it through the questions on time.

Display **slide 8**. Hand out the attached **Getting Salty** practice passage and questions face down. Tell students they will turn it over and start when the timer starts.

When time is up ask students how they felt about the pacing and what they should try next time if they struggled to finish.

Sample Student Response

I will read the questions first so I know what they will ask for.

I will write notes or underline as I read.

Use **slides 9-13** to go over the correct answers and reasons the detractors are wrong as time allows.

Research Rationale

Standardized testing in high schools has long been used as a metric for assessing college readiness and school accountability (McMann, 1994). While there has been debate surrounding the accuracy of such metrics, as well as concerns regarding fairness, many institutions of higher education continue to make these scores part of the admissions process (Allensworth & Clark, 2020; Black et al., 2016; Buckley et al., 2020). In addition to admissions, it is important to keep in mind that standardized test scores can also provide students with scholarship opportunities they would not otherwise have (Klasik, 2013). Although the topic of standardized testing continues to be debated, effective test preparation can ensure that our students are set up for success.

With several benefits to doing well on college admissions tests, it is important to consider how best to prepare students for this type of high-stakes test. Students from groups that may historically struggle to find success, such as those in poverty or first-generation college students, especially stand to benefit from effective test preparation (Moore & San Pedro, 2021). The American College Test (ACT) is one option students have for college admissions testing that is provided both at national centers and school sites. Taking the time to understand this test, including the timing, question types, rigor, and strategies for approaching specific questions, can help prepare students to do their best work on test day and ensure their score is a more accurate representation of what they know (Bishop & Davis-Becker, 2016).

Resources

- Allensworth, E. M., & Clark, K. (2020). High school GPAs and ACT scores as predictors of college completion: Examining assumptions about consistency across high schools. Educational Researcher, 49(3), 198-211.
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- Black, S. E., Cortes, K. E., & Lincove, J. A. (2016). Efficacy Versus Equity: What Happens When States Tinker With College Admissions in a Race-Blind Era? Educational Evaluation and Policy Analysis, 38(2), 336–363. http://www.jstor.org/stable/44984542
- Buckley, J., Baker, D., & Rosinger, K. (2020). Should State Universities Downplay the SAT?. Education Next, 20(3).
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- McMann, P. K. (1994). The effects of teaching practice review items and test-taking strategies on the ACT mathematics scores of second-year algebra students. Wayne State University. https://www.monroeccc.edu/sites/default/files/upward-bound/McMannP.-the-effects-of-teaching-practice-review-items-ACT-mathematics-second-year-algebra.pdf
- Moore, R., & San Pedro, S. Z. (2021). Understanding the Test Preparation Practices of Underserved Learners. ACT Research & Policy. Issue Brief. ACT, Inc. https://files.eric.ed.gov/fulltext/ED616526.pdf