Power Up: Science ACT Prep, Week 1

Essential Question(s)

- How can I increase my ACT score?

Summary

In this first ACT science prep activity, students will focus on reflecting on their score from taking the test and setting a goal for a future ACT. First students review and reflect on test-taking tips from students. Then students review their existing science score before setting a goal to reach on the ACT and science test in particular when they take the test again. Students choose at least one action to practice that will lead to good habits for the ACT and will use their goal sheet to record progress towards meeting their goal. This is the first activity in a 10-week "Power Up" series for ACT Prep.

Learning Goals

- Understand the purpose of the ACT and the importance of the science section.
- Evaluate current ACT performance and set a realistic goal for the overall test and the science component.

Attachments

- MyACT Quick Start Guide.pdf

Materials

- Activity Slides (attached)
- Science Goal Setting handout (attached, one per student)
- Sticky notes
- Pencil/pen
- Device to access ACT score or a printed score report for each student

5 minutes

Introduction

Standardized testing, the ACT in particular, continues to be a metric used by many universities and scholarship organizations. It is time to get students excited and motivated to power up their ACT knowledge and show what they know on this important test. Many students just lack the knowledge of some basic tips and tricks that could lead to big gains in scores and some need a refresher on specific content the ACT assesses. This ten week series will address key components of the science assessment to equip students to boost their scores.

Introduce the lesson using **slide 2**. Share the essential question on **slide 3**, and the objectives from **slide 4**. Next, explain to students that they will be watching a video with tips from students who have taken the ACT and who are sharing what has worked for them. Move to **slide 5** and play the video.

Embedded video

https://youtube.com/watch?v=wLh_pAi1bXs

Display **slide 6** and ask students to share a point of most significance (POMS) from the video. What time or suggestion did they feel was the most valuable?

25 minutes

Activity

Teacher's Note: ACT ID Number

You may need to coordinate with a school counselor or site testing coordinator to make sure students have access to their ACT ID number and the month and year that they took the ACT. Make sure students have access to this information prior to the lesson.

Students can track their progress and set goals from test to test if they have access to their ACT online portal. Have students access the ACT student portal at the website listed on **slide 7**, or have them do a google search for ACT student login. They are looking for the "My ACT Sign In." If students have not accessed their account before, provide them with a copy of the attached **MyAct Quick Start Guide** so they can create an account.

Have students navigate to their score report. If you have students who have taken the ACT multiple times, you may need to remind them we will be focusing on their highest score to date. Hand out the **Science Goal Setting** handout. Display **slide 8** and have them fill in their current composite score and science scores but have them wait to fill in their goals.

Display **slide 9**. Share with students that while some schools are moving toward a test optional format, the ACT can be important in obtaining scholarships and school admissions. If you have students who plan to enter the workforce directly after high school, sharing that improving this score can provide more options if they later decide to pursue a degree and that their score is also used to show the state what our students have learned. If your school has an average goal to achieve you can share that now as well.

Display **slide 10**. This slide shows how many science questions a student has to have correct to get each ACT score 1-36. Students will set a goal for a range of scores. Ask students to consider a reachable goal for their next composite and science score, thinking about what they have just seen on the previous slides. Recommend one step above where they currently are but allow students to set a goal for two steps if you feel like they are ready for the commitment and dedication it would take for a more significant score jump. Remind students that they can improve their score each time they take the test and that this goal is only for the next time they are taking the test at school. Have them look at the row for a goal score in their range and record on their goal sheet the number of problems they would need to get correct.

Move to **slide 11** which has directions for calculating the percent of questions they would need to get right to meet their goal. Using a calculator or scratch paper, have students find this percent by taking the number of questions they recorded on their goal sheet and dividing that number by the total number of questions on the science test (40). Have them multiply that answer by 100 and record the percentage.

Move to **slide 12**. Students will commit to one goal and record it on their goal sheet. Explain that in the coming weeks they will have the option to add other goals. For now, based on what they know about themselves and their goals, have them commit to one action they can take and practice in the coming weeks. They can just record the action number on their chart if they prefer not to copy the entire goal or if there isn't room. They will use the columns to record each date they practice that skill to power up their ACT abilities.

Teacher's Note

Students may want a much larger jump for their scores. Encourage dreaming big but setting smaller obtainable goals along the way. They can set a goal for another jump for the next time they take it. Let students know that just taking a test multiple times can help to improve the score because you become familiar with the setting and content. For students who might be concerned about testing costs you can share information on fee waivers available to some students using the video on **slide 13** or use the link below:

https://www.act.org/content/act/en/products-and-services/the-act/registration/fees/fee-waivers.html

Embedded video

https://youtube.com/watch?v=8KVRiyY6h0I

Teacher's Note: Goal Setting Handout

The goal sheet will be important for this 10 week series of lessons. Students will set new goals at two other times in the lessons and need this sheet for reference. If you do not have the space to keep these sheets in the room, encourage students who have a device to take a picture of their goal sheet to keep and let them know to bring it back to class with them each time.

5 minutes

Wrap-Up

To have a classroom visual and monitor goal setting, use Sticky Bars as an exit ticket for the activity. Find room on a wall or use large chart paper and put the numbers 1-6 along the bottom x axis. Display **slide 14**. Give each student a sticky note and have them write their names on the note. They will place their note above the goal they selected creating a bar graph. This visual can be used from week to week to check in with students on if they are working on their goals or to talk about which goals were most important to the class.

Teacher's Note: Sticky Bars Location

If space is a concern, do the sticky bars activity and then take a picture. You can add this picture to the slides for future ACT lessons as a goal check-in.

Next Steps

Next week's activity, Power Up: ACT Science Prep, Week 2 will review common ACT science vocabulary and can be found here: https://learn.k20center.ou.edu/educator-resource/3133

Research Rationale

Standardized testing in high schools has long stood 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 equity, 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). Aside from admissions, it is also important to keep in mind that standardized test scores can also provide students with scholarship opportunities they wouldn't otherwise have (Klasik, 2013). Though the topic of standardized testing continues to be debated, effective test prep 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. Those 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 time to understand this test including the timing, question types, rigor, and strategies for approaching specific questions can help to 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.
- Bishop, N.S. & Davis-Becker, S. (2016). Preparing examinees for test taking: Guidelines for test developers and test users. 2nd edition. Crocker, L. (Ed). In Handbook of test development (pp. 129-142). Routledge.
- 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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- Klasik, D. (2013). The ACT of Enrollment: The College Enrollment Effects of State-Required College Entrance Exam Testing. Educational Researcher, 42(3), 151–160. http://www.jstor.org/stable/23462378
- 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