# Power Up: Math ACT Prep, Week 1

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**Time Frame** 35 minutes

## Essential Question(s)

How can I increase my ACT score?

## Summary

In this activity, each student will reflect on their most recent ACT score and set a goal for a future ACT. Students will learn how to read their ACT score report and then apply this knowledge to set a goal for both their composite and math scores. Students will choose at least one action to practice as a good habit leading up to their next ACT. 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 math section.
- Evaluate current ACT performance and set a realistic goal for the overall test and the math component.

## Attachments

- Activity Slides—Math ACT Prep, Week 1.pdf
- Activity Slides—Math ACT Prep, Week 1.pptx
- Goal Setting—Math ACT Prep, Week 1 - Spanish.pdf
- Goal Setting—Math ACT Prep, Week 1.pdf
- MyACT Quick Start Guide.pdf

## Materials

- Activity Slides (attached)
- Goal Setting handout (attached; one per student)
- MyACT Quick Start Guide document (attached; for teacher use)
- Sticky notes (one per student)
- Coloring utensils (highlighters or colored pencils; 1–2 per student)
- Pencil/pen
- Device to access ACT score or a printed report (for each student)
- Calculators (optional)

5 minutes

# Introduction

**Teacher's Note: Motivation**

Standardized testing, particularly the ACT, continues to be a metric used by many universities and scholarship organizations. Now is the time to motivate students to power up their ACT knowledge and show what they know on this important test. Many students lack knowledge of basic tips and tricks that could lead to big score gains, and some need a refresher on specific content that the ACT assesses. This 10-week series addresses key components of the math assessment and equips students with what they need to boost their scores.

Introduce the activity using the attached **Activity Slides**. Share the essential question on **slide 3** and the learning objectives from **slide 4**.

Transition to **slide 5**. Explain to students that they are going to watch a video about their ACT score report. Let them know that their report may look a little different than what is shown. Play the video on the slide, "Understanding Your ACT Score Report."

**Embedded video**
https://youtube.com/watch?v=0um8vhbOBM4

Stop the video at the 3:06 mark as this covers the necessary ground for overall scores. If time allows, continue watching the video, as the remainder covers subscore areas and planning for retaking the exam.

Show **slide 6** and ask students to share the Point of Most Significance (POMS) from the video. What did they feel was the most useful piece of information? If time allows, ask for a few volunteers to share.

25 minutes

# Activity

**Teacher's Note: Preparation**

You may need to coordinate with a school counselor or site testing coordinator to ensure students have access to their ACT ID number and the month and year in which they took the ACT. Make sure students have this information before starting this activity.

If students do not have an online account, help them create one using the attached **MyACT Quick Start Guide**, which provides detailed instructions for creating an online account.

Show **slide 7** and direct students to access the ACT student portal at my.act.org. Let students know that they can track their progress and set goals from test to test if they have access to their ACT online portal.

Have students navigate to their score report. Hand out the **Goal Setting** handout. Display **slide 8** and have them use coloring utensils to fill in their current composite score and math score, 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, let them know that improving this score can provide more options if they later decide to pursue a degree. Share that their scores are also used to show the state what students have learned. If your school has an average goal to achieve, you can share that here.

Direct students to use the information from slide 9 and their current composite score to select a goal composite score. Have students use their coloring utensil to shade in the goal row for their composite ACT score. Encourage students to be realistic about their goal setting. This may mean if their current score is in the 13–15 range, a good realistic goal would be in the 16–19 range even if they want to attend a research university. This goal is just for the next ACT. 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 take the test at school. They can take the ACT again during their senior year or even during the summer before their senior year.

If students are unsure how to pick a goal, recommend one step above where they currently are. 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.

Direct students' attention to the Math Section Score portion of their handout. Have them set a goal for their math score. Remind students that their composite score is an average of all four sections of the ACT. This means that they can consider their strengths and weaknesses to average at their goal composite score. However, their goal for the math section should be both higher than their current score and near their composite goal. Have students use their coloring utensil to shade in the goal row for their math section score.

Once students have set their score goals, move to **slide 10.** Transition students into thinking about how to achieve these goals. Explain to students that this slide shows how many math questions hey would need to answer correctly to get each corresponding score on the math section of the ACT.

Direct students to use their goal to determine how many questions they need to answer correctly, recording their findings on their handout. For example, if a student selects a goal for the math section to be in the 20–23 range, have them now pick a more specific goal of 20, 21, 22, or 23. If a student previously scored a 16 on the math section of the ACT, they might set their next goal at a score of 20 and would therefore need to answer 29 questions correctly.

Please let students know that this chart serves as a helpful estimate, as these values can change from test to test. This information could also explain why a student may have earned a 16 on their previous math section after answering 28 questions correctly.

### Teacher's Note: Slide 10

If students wonder about the gaps in numbers, let them know that they cannot get 0.5 or 2.5 questions right, so it is impossible to score some of those single-digit values on the math portion of the ACT.

The official ACT exam may have a different key to convert the number of questions correct (raw score) to the scale of 1-36 (scale score). **The chart on the slide serves as a helpful estimate.**

Once students record how many questions they want to answer correctly, ask the class, "How many questions are on the math portion of the ACT?" Once you hear the answer (60 questions), ask them to calculate the **percentage of questions** they need to answer correctly based on the **number of correct answers** they plan to strive for. (If students do not know that there are 60 questions on the math section, give them this information.) Allow students to use calculators to determine these percentages.

Once students have started working on calculating their percentages, transition to **slide 11**. Use this slide to help students who are unsure how to find the percentage.

Ask the class to think about the following question: "*What is an action you can take between now and the next ACT exam to help improve your score?*"

After giving the students a few moments to think, move to **slide 12**. Ask students to read through the list of possible actions on their handout and commit to one action they can practice in the coming weeks. Explain that in the coming weeks they will have the option to add other actions. For now, based on what they know about themselves and their goals, have them commit to just one action they can take and practice as a habit. Have students record the number of their selected action in the chart at the bottom of their handout. If they prefer and have enough room, students can instead copy the entire goal.

Ask students to use the columns to record each date they practice that skill to power up their ACT abilities.

### Teacher's Note: Goal Setting and Fee Waivers for Future ACT Tests

Students may want a much larger jump for their scores. Encourage dreaming big but setting smaller obtainable goals along the way. Students can set one of these smaller goals for themselves and plan to increase that goal once they meet it. Let students know that just taking a test multiple times can help to improve their score because they will become familiar with the test setting and content.

For students who might be concerned about testing costs, share information on fee waivers available to some students using the video on **slide 13,** "How to Apply for an ACT Fee Waiver," or direct students to ACT Fee Waiver Program: 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 Setting handout will be important for this 10-week series of activities. Students will set new goals at two other times in the coming lessons and need this sheet for reference. Keep your students' sheets in the classroom if possible. Consider having students take pictures of their Goal Setting handouts to help remind them to practice their goals.

If you do not have the space to keep students' Goal Setting handouts in your classroom, encourage students who have a device to take a picture of their goal sheet to keep. Let them know to bring the handout back to class with them each time.

Direct students to put their Goal Setting handouts in a designated space and remind them that they will revisit the handout at a later time. If time allows, recommend to students that they set an alarm or reminder on their device to help them remember to practice their selected action.

5 minutes

# Wrap-Up

**Teacher's Note: Preparation**

Students will use sticky notes to create a bar graph representing the goals of the entire class. Find space on a wall or use large chart paper and put the numbers 1–6 along the bottom x-axis. The illustration on **Slide 14** shows what a finished bar graph might look like.

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.

For a helpful visual representation of classroom goals and to monitor goal setting, use the strategy Sticky Bars to record which actions students are drawn to.

Display **slide 14**. Give each student a sticky note and have them write their name on the note. Next, have students come up to the chart and place their notes above the goal they selected, creating a bar graph. This visual can be used from week to week to check in with students about whether they are working on their goals or to discuss which goals are most important to the class.

# 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 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). 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


- ACT. (2017, September 28). *Understanding Your ACT Score Report*. [Video]. YouTube. https://youtu.be/0um8vhbOBM4
- ACT. (2019, June 5). *How to Apply for an ACT Fee Waiver*. [Video]. YouTube. https://youtu.be/8KVRiyY6h0I
- ACT. (2022). *MyACT Quick Start Guide*. https://success.act.org/s/article/MyACT-Quick-Start-Guide
- ACT. (2023). *ACT Fee Waiver Program. https://www.act.org/content/act/en/products-and-services/the-act/registration/fees/fee-waivers.html*
- 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).
- K20 Center. (n.d.). POMS: Point of Most Significance. Strategies. https://learn.k20center.ou.edu/strategy/101
- K20 Center. (n.d.). Sticky Bars. Strategies. https://learn.k20center.ou.edu/strategy/129
- 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