Using ACT and ACT WorkKeys Data to Increase College and Career Readiness

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ACT Account Executive: Arkansas and East Texas

Learning Objectives

- Strategies to optimize the functions of ACT Online Reporting.
- Utilization of the ACT College Readiness Standards and Reporting Categories to strengthen curriculum and instruction.
- Tools for analyzing student data to predict college readiness as it related to AR SQSS Indicators.
- Various applications of ACT solutions to specifically to support district goals.
- Best practices to increase equity and access for all students.

Preparing for College

Anatomy of the ACT

Subject	Question Details	Time
ACT English	5 passages 75 question	45 minutes
ACT Mathematics	60 questions	60 minutes
ACT Reading	5* passages 40 questions	35 minutes
ACT Science	40 questions	35 minutes
ACT Writing (Optional)	1 essay	40 minutes

**including 1 paired-passage set*

The ACT®

SPECIFICATION RANGES BY REPORTING CATEGORY FOR ENGLISH

Reporting Category	Number of Items	Percentage of Test
Production of Writing	22–24	29–32%
Knowledge of Language	11–13	15–17%
Conventions of Standard English	39–41	52–55%
Total Number of Items	75	100%

SPECIFICATION RANGES BY REPORTING CATEGORY FOR READING

Reporting Category	Number of Items	Percentage of Test
Key Ideas & Details	21–24	53–60%
Craft & Structure	10–12	25–30%
Integration of Knowledge & Ideas	6–9	15–23%
Total Number of Items	40	100%

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SPECIFICATION RANGES BY REPORTING CATEGORY FOR MATHEMATICS

Reporting Category	Number of Items	Percentage of Test
Preparing for Higher Mathematics	34–36	57–60%
Number & Quantity	5–7	8–12%
Algebra	7–9	12–15%
Functions	7–9	12–15%
Geometry	7–9	12–15%
Statistics & Probability	5–7	8–12%
Integrating Essential Skills	24–26	40–43%
Modeling	≥12	≥20%
Total Number of Items	60	100%

Notes: Each item reported in Modeling is also reported in either Preparing for Higher Mathematics (and the appropriate subcategory) or in Integrating Essential Skills.

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SPECIFICATION RANGES BY REPORTING CATEGORY FOR SCIENCE

Reporting Category	Number of Items	Percentage of Test
Interpretation of Data	16–20	40–50%
Scientific Investigation	8–12	20–30%
Evaluation of Models, Inferences & Experimental Results	10–14	25–35%
Total Number of Items	40	100%

All subjects test DOK Levels 1, 2, and 3
For Science: Almost all items are DOK Levels 2 and 3

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ACT National Testing

- **For:** Grade 11 primarily; grade 10 (early scores); grade 12 (senior retake)
- **Time:** Seven times a year (typically on Saturdays) in February, April, June, July, September, October, and December
- **Place:** National testing centers
- **Format options:** Primarily Paper-Online Testing coming in December 2023
- **Test types:** ACT or ACT with writing
- **Pricing (2023–2024):** $66 per student for ACT without writing; $91 per student for ACT with writing

TEST DATES

United States, US Territories, and Puerto Rico

The ACT®

2023|2024

Test Dates	Regular Registration Deadline	Late Registration Deadline	Photo Upload and Standby Deadline
September 9, 2023	**August 4**	August 18	September 1
October 28, 2023	**September 22**	October 6	October 20
December 9, 2023	**November 3**	November 17	December 1
February 10, 2024	**January 5**	January 19	February 2
April 13, 2024	**March 8**	March 22	April 5
June 8, 2024	**May 3**	May 17	May 31
July 13, 2024*	**June 7**	June 21	July 5

*No test centers are scheduled in New York for the July test date.

Test Information Release for the 2023–2024 testing year will occur in September, April, and June.
See **www.act.org/the-act/tir** for more information.

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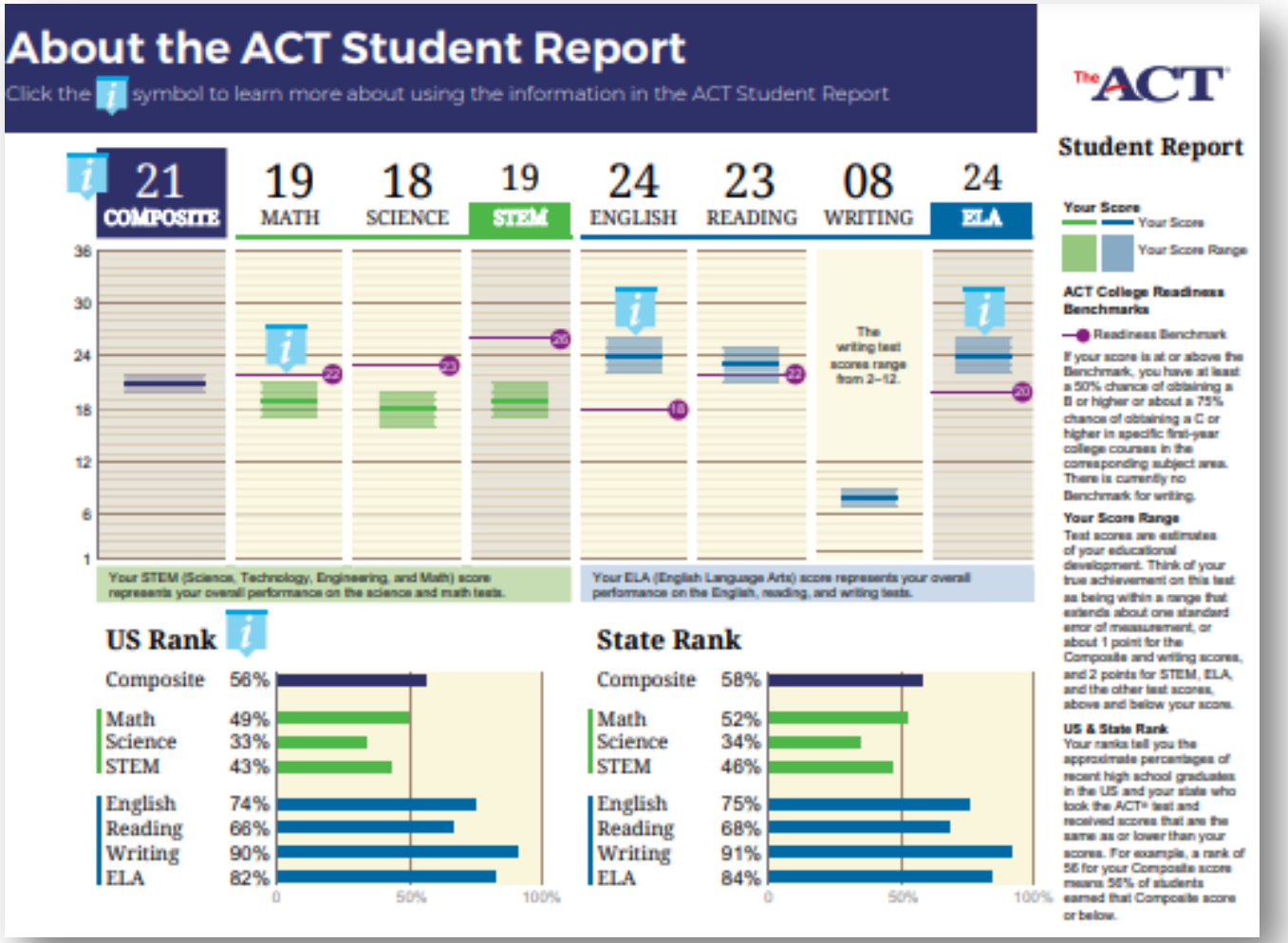
ACT District Testing

- **For:** Grades 9th-12th primarily; grades 9- 10 (early scores); grade 11 (Fall only-practice for ACT State Testing); grade 12 (senior retake)
- **Time:** Multiple Fall and Spring test date options, selected from those on the state and district website
- **Place:** Students' own classrooms during weekday
- **Format options:** On paper or online, per school or district decision
- **Test types:** The ACT test or the ACT test with writing, per school or district decision
- **Pricing (2023–2024):** AR State Rate is $41.50 per student for ACT without writing

Arkansas: ACT District Testing Dates & Deadlines
School Year 2023-2024

Test Administration	Enrollment/ Signed Agreement & School List Deadline*	Paper Test Date	Online Testing Window	Price Per Test (FY24 AR State Match Rate for Paper and Online Tests)	Grades Eligible to Participate in ACT District Testing by Test Administration**
Fall 2023: Test Window 1	August 30, 2023	October 17, 2023	October 17-19 October 24-26	$ 41.50 The ACT (with no writing)	9th grade, 10th grade, 11th grade, and 12th grade
Fall 2023: Test Window 2	August 30, 2023	October 31, 2023	October 31– November 2 November 7-9	$ 41.50 The ACT (with no writing)	9th grade, 10th grade, 11th grade, and 12th grade
Initial Spring 2024: Test Window 1	January 24, 2024	N/A– This window is open to online testing only.	February 27– March 1 March 4-8	$ 41.50 The ACT (with no writing)	9th grade, 10th grade, and 12th grade
Early Spring 2024: Test Window 1	January 24, 2024	March 12, 2024	March 12-15 March 18-22	$ 41.50 The ACT (with no writing)	9th grade, 10th grade, and 12th grade
Early Spring 2024: Test Window 2	January 24, 2024	March 26, 2024	March 26-29 April 1-5	$ 41.50 The ACT (with no writing)	9th grade, 10th grade, and 12th grade
Late Spring 2024: Test Window 1	February 28, 2024	April 9, 2024	April 9-12 April 15-19	$ 41.50 The ACT (with no writing)	9th grade, 10th grade, and 12th grade
Late Spring 2024: Test Window 2	February 28, 2024	April 23, 2024	April 23-26 April 29-30	$ 41.50 The ACT (with no writing)	9th grade, 10th grade, and 12th grade

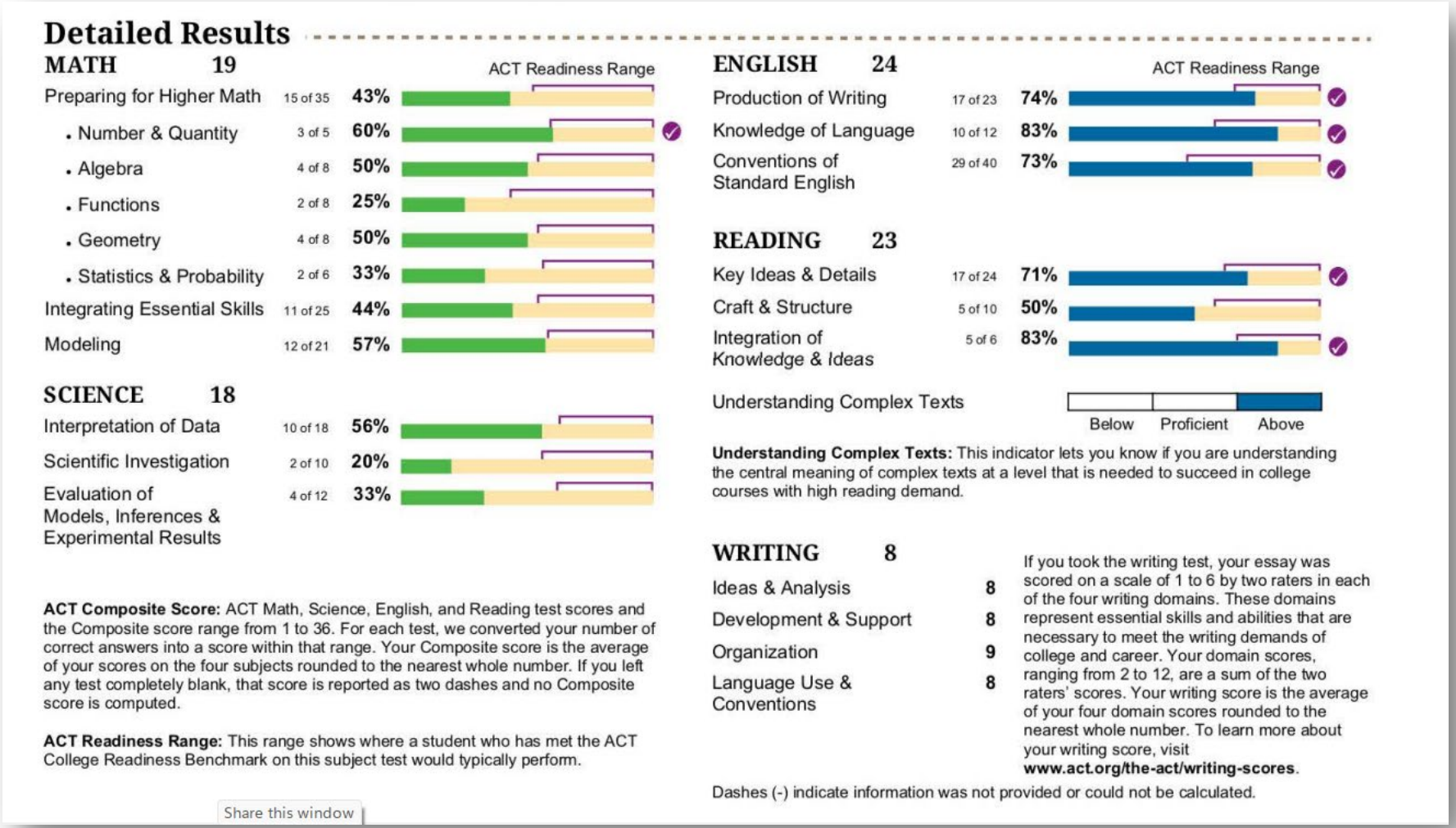
ACT Student Report: The Road Map to Success



Data In Action: Use the Actual Score to Where Students Rank Compared to the ACT College Readiness Benchmarks

Next Steps: Review Skills for Each Reporting Category

ACT Student Report: The Road Map to Success



Detailed Results

MATH 19

			ACT Readiness Range
Preparing for Higher Math	15 of 35	43%	
• Number & Quantity	3 of 5	60%	✓
• Algebra	4 of 8	50%	
• Functions	2 of 8	25%	
• Geometry	4 of 8	50%	
• Statistics & Probability	2 of 6	33%	
Integrating Essential Skills	11 of 25	44%	
Modeling	12 of 21	57%	

SCIENCE 18

Interpretation of Data	10 of 18	56%
Scientific Investigation	2 of 10	20%
Evaluation of Models, Inferences & Experimental Results	4 of 12	33%

ACT Composite Score: ACT Math, Science, English, and Reading test scores and the Composite score range from 1 to 36. For each test, we converted your number of correct answers into a score within that range. Your Composite score is the average of your scores on the four subjects rounded to the nearest whole number. If you left any test completely blank, that score is reported as two dashes and no Composite score is computed.

ACT Readiness Range: This range shows where a student who has met the ACT College Readiness Benchmark on this subject test would typically perform.

Share this window

ENGLISH 24

			ACT Readiness Range
Production of Writing	17 of 23	74%	✓
Knowledge of Language	10 of 12	83%	✓
Conventions of Standard English	29 of 40	73%	✓

READING 23

Key Ideas & Details	17 of 24	71% ✓
Craft & Structure	5 of 10	50%
Integration of Knowledge & Ideas	5 of 6	83% ✓
Understanding Complex Texts		Below / Proficient / Above

Understanding Complex Texts: This indicator lets you know if you are understanding the central meaning of complex texts at a level that is needed to succeed in college courses with high reading demand.

WRITING 8

Ideas & Analysis	8
Development & Support	8
Organization	9
Language Use & Conventions	8

If you took the writing test, your essay was scored on a scale of 1 to 6 by two raters in each of the four writing domains. These domains represent essential skills and abilities that are necessary to meet the writing demands of college and career. Your domain scores, ranging from 2 to 12, are a sum of the two raters' scores. Your writing score is the average of your four domain scores rounded to the nearest whole number. To learn more about your writing score, visit **www.act.org/the-act/writing-scores**.

Dashes (-) indicate information was not provided or could not be calculated.

Data In Action: Use the Detailed Results to Identify Strengths and Areas Of Opportunity by ACT Subject Area

Next Steps: Review Skills for Each Reporting Category

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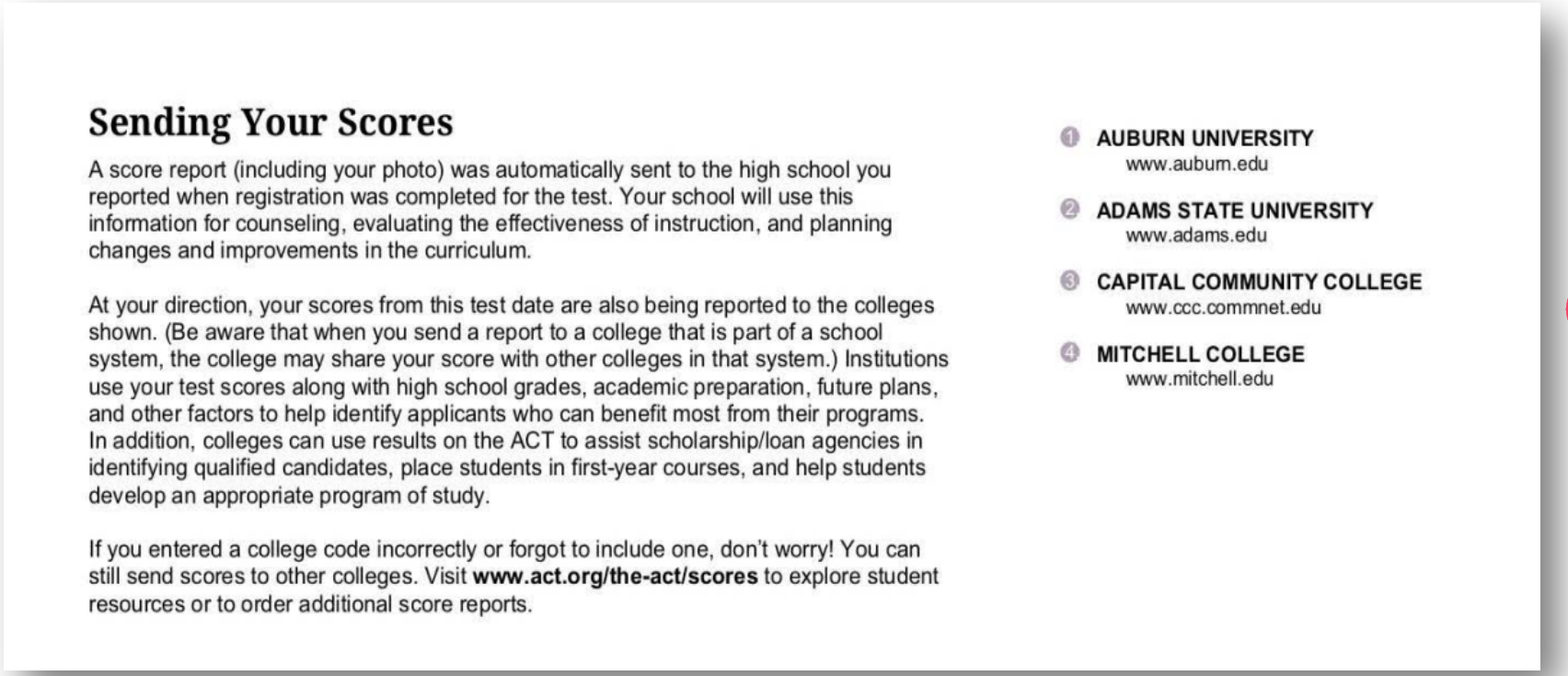

Sending Your Scores

A score report (including your photo) was automatically sent to the high school you reported when registration was completed for the test. Your school will use this information for counseling, evaluating the effectiveness of instruction, and planning changes and improvements in the curriculum.

At your direction, your scores from this test date are also being reported to the colleges shown. (Be aware that when you send a report to a college that is part of a school system, the college may share your score with other colleges in that system.) Institutions use your test scores along with high school grades, academic preparation, future plans, and other factors to help identify applicants who can benefit most from their programs. In addition, colleges can use results on the ACT to assist scholarship/loan agencies in identifying qualified candidates, place students in first-year courses, and help students develop an appropriate program of study.

If you entered a college code incorrectly or forgot to include one, don't worry! You can still send scores to other colleges. Visit **www.act.org/the-act/scores** to explore student resources or to order additional score reports.

1. **AUBURN UNIVERSITY**
   www.auburn.edu
2. **ADAMS STATE UNIVERSITY**
   www.adams.edu
3. **CAPITAL COMMUNITY COLLEGE**
   www.ccc.commnet.edu
4. **MITCHELL COLLEGE**
   www.mitchell.edu

Data In Action: Check Out Where Students are Sending their Scores. This Information will Inform College Exploration and Scholarship Conversations.

Where are your students enrolling after high school? Check out the ACT Graduate Class Reports for more information!

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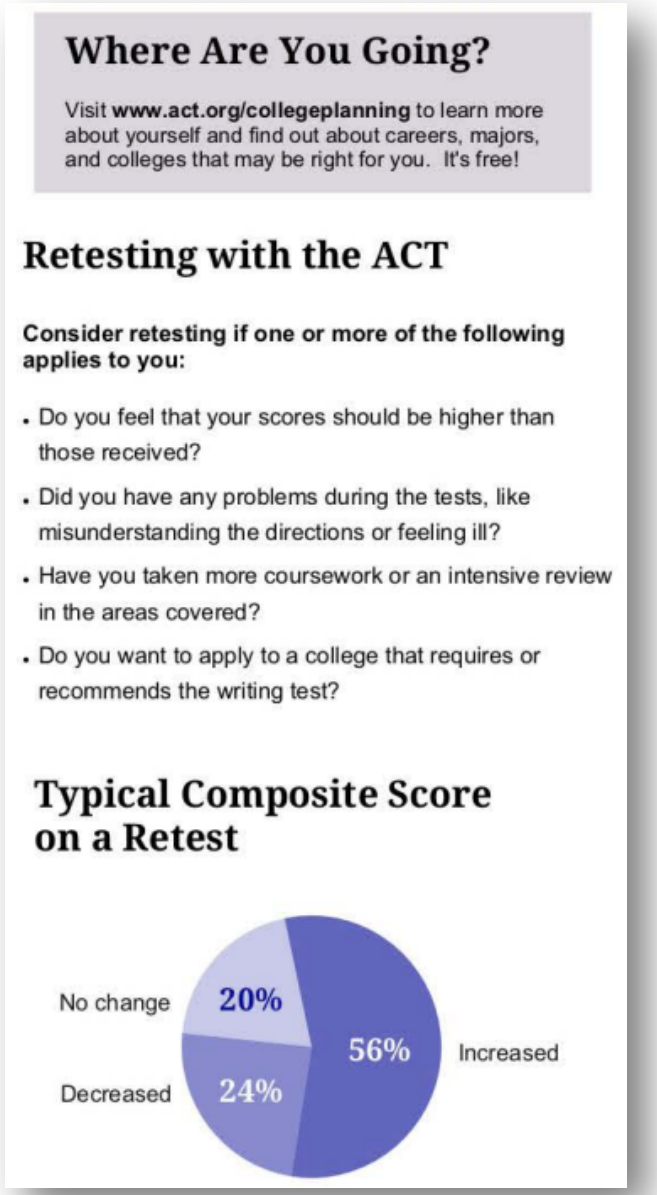
ACT Student Report: The Road Map to Success



Where Are You Going?

Visit **www.act.org/collegeplanning** to learn more about yourself and find out about careers, majors, and colleges that may be right for you. It's free!

Retesting with the ACT

Consider retesting if one or more of the following applies to you:

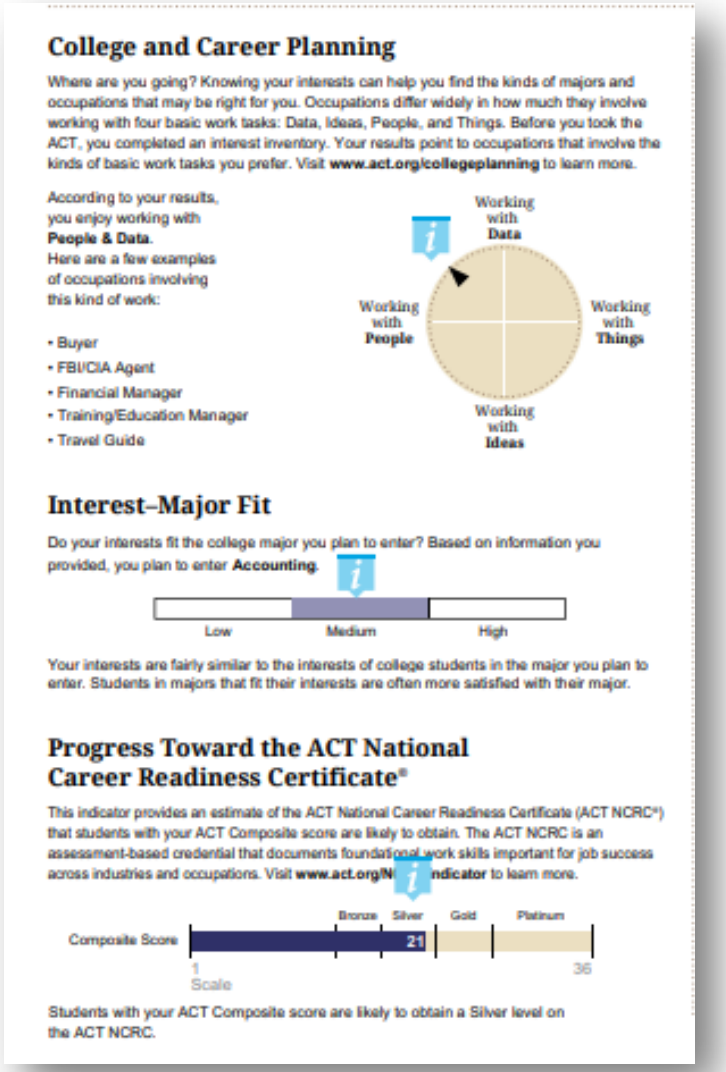
- Do you feel that your scores should be higher than those received?
- Did you have any problems during the tests, like misunderstanding the directions or feeling ill?
- Have you taken more coursework or an intensive review in the areas covered?
- Do you want to apply to a college that requires or recommends the writing test?

Typical Composite Score on a Retest

Data In Action: Discuss the Option of Retesting. Retesting has Real Value to Increase Scholarship Earning Potential and Placement in College Credit Courses and/or Specialized Programs.

Is there time to retest? Are there areas for improvement?

ACT Student Report: The Road Map to Success



College and Career Planning

Where are you going? Knowing your interests can help you find the kinds of majors and occupations that may be right for you. Occupations differ widely in how much they involve working with four basic work tasks: Data, Ideas, People, and Things. Before you took the ACT, you completed an interest inventory. Your results point to occupations that involve the kinds of basic work tasks you prefer. Visit **www.act.org/collegeplanning** to learn more.

According to your results, you enjoy working with **People & Data**. Here are a few examples of occupations involving this kind of work:

- Buyer
- FBI/CIA Agent
- Financial Manager
- Training/Education Manager
- Travel Guide

Interest–Major Fit

Do your interests fit the college major you plan to enter? Based on information you provided, you plan to enter **Accounting**.

Your interests are fairly similar to the interests of college students in the major you plan to enter. Students in majors that fit their interests are often more satisfied with their major.

Progress Toward the ACT National Career Readiness Certificate®

This indicator provides an estimate of the ACT National Career Readiness Certificate (ACT NCRC®) that students with your ACT Composite score are likely to obtain. The ACT NCRC is an assessment-based credential that documents foundational work skills important for job success across industries and occupations. Visit **www.act.org/N ndicator** to learn more.

Students with your ACT Composite score are likely to obtain a Silver level on the ACT NCRC.

Data In Action: Check Out How Their Interests and Intended Academic Major Align. This Information will Inform College and Career Conversations.

How does the data inform conversations with students and parents?

Resources to Optimize College Readiness

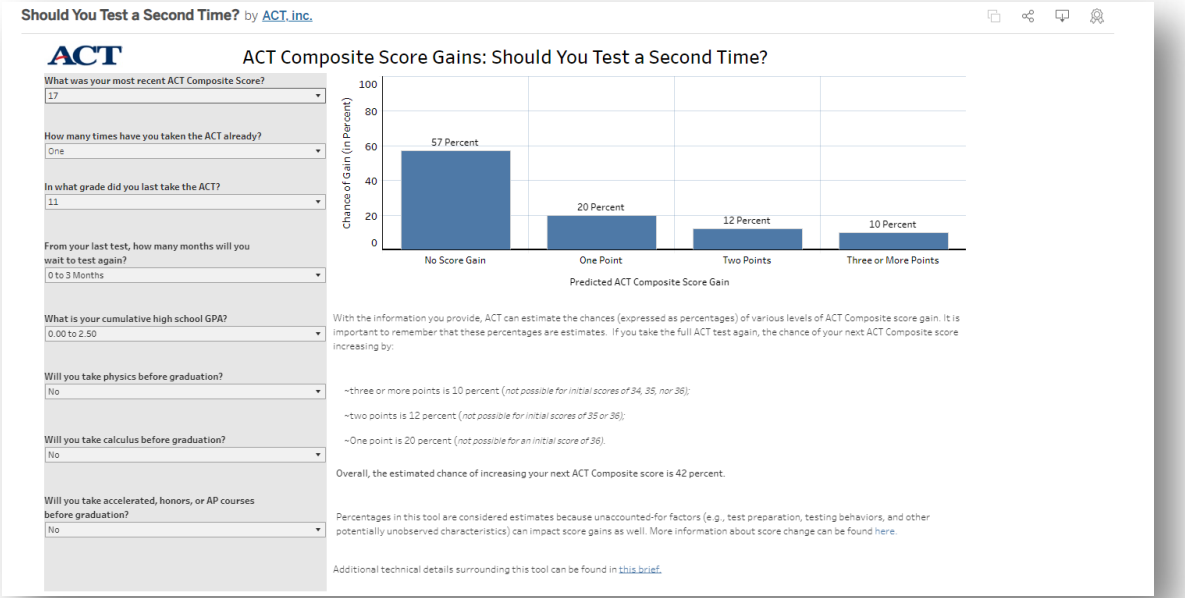
Retesting to Mange Goals

STUDENT BENEFITS

- Increase the Academic Placement Into College-Level Courses for Student
- Increase in the Scholarship Earning Potential of Students

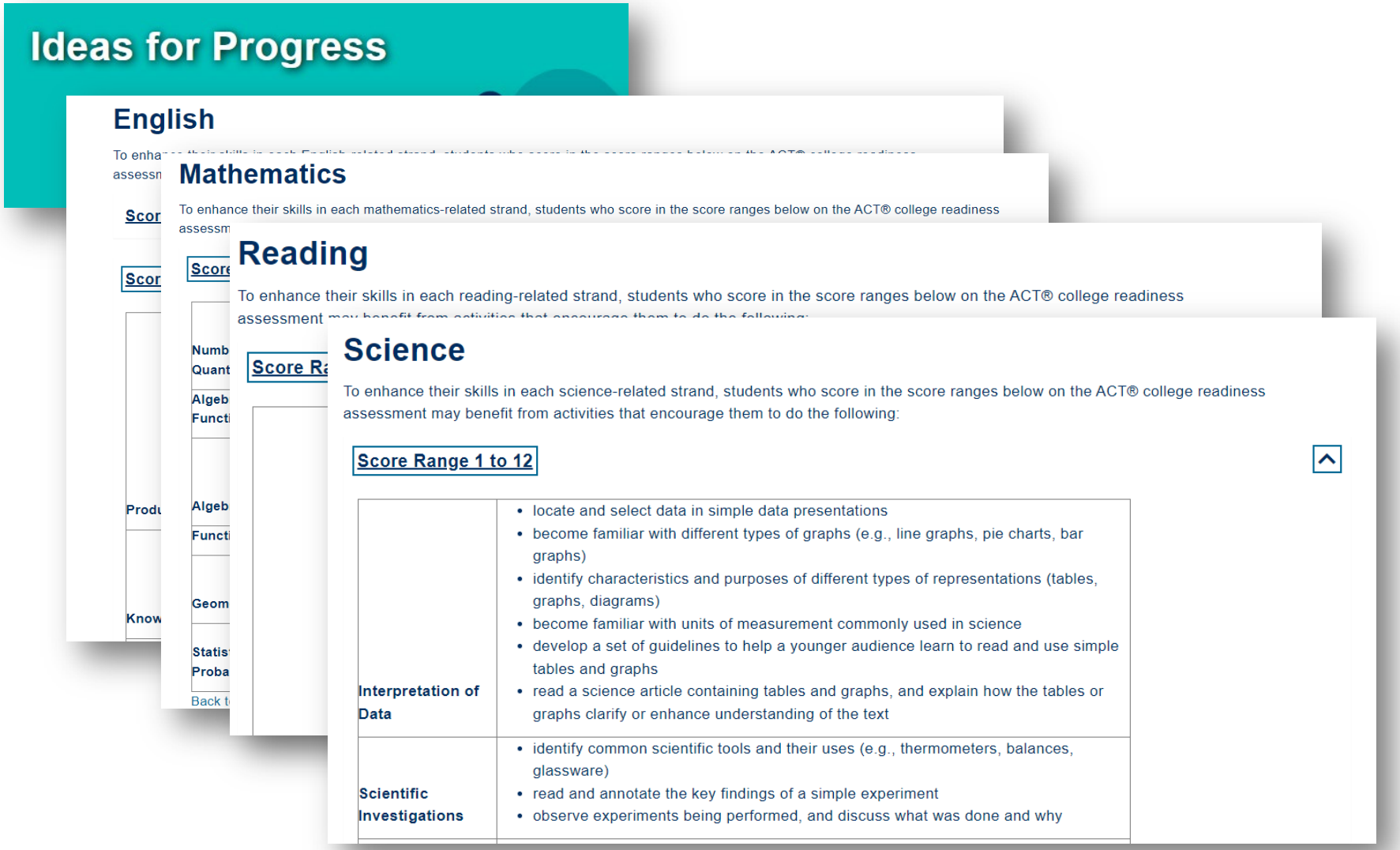
DISTRICT BENEFITS

- Improve access to senior retesting for students from underserved groups
- Increase in postsecondary qualifications
- Increase in motivation for learning



Scan the QR Code to Access the FREE Tool for Guidance on Retesting

Activities to Increase ACT Subject Area Scores



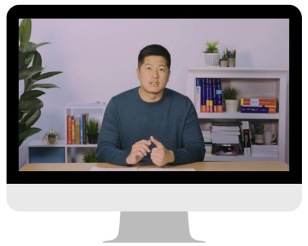
Scan the QR Code to Access The Ideas for Progress

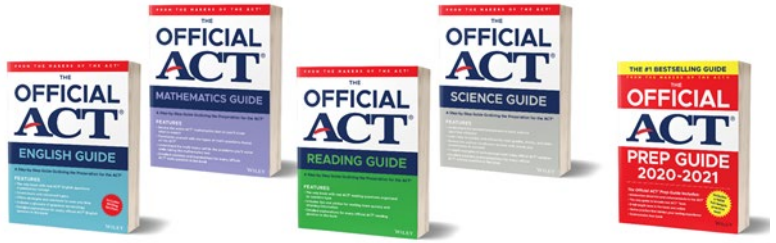
ACT®

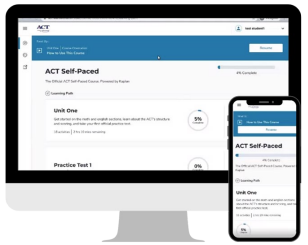
Choose the official options!

Official prep. ACT produces the best test prep to match its ACT test.

- Only prep material with authentic practice tests
- Offers information to help teachers align their courses with the expectations of the ACT
- Based on ACT College and Career Readiness Standards as well as the ACT test







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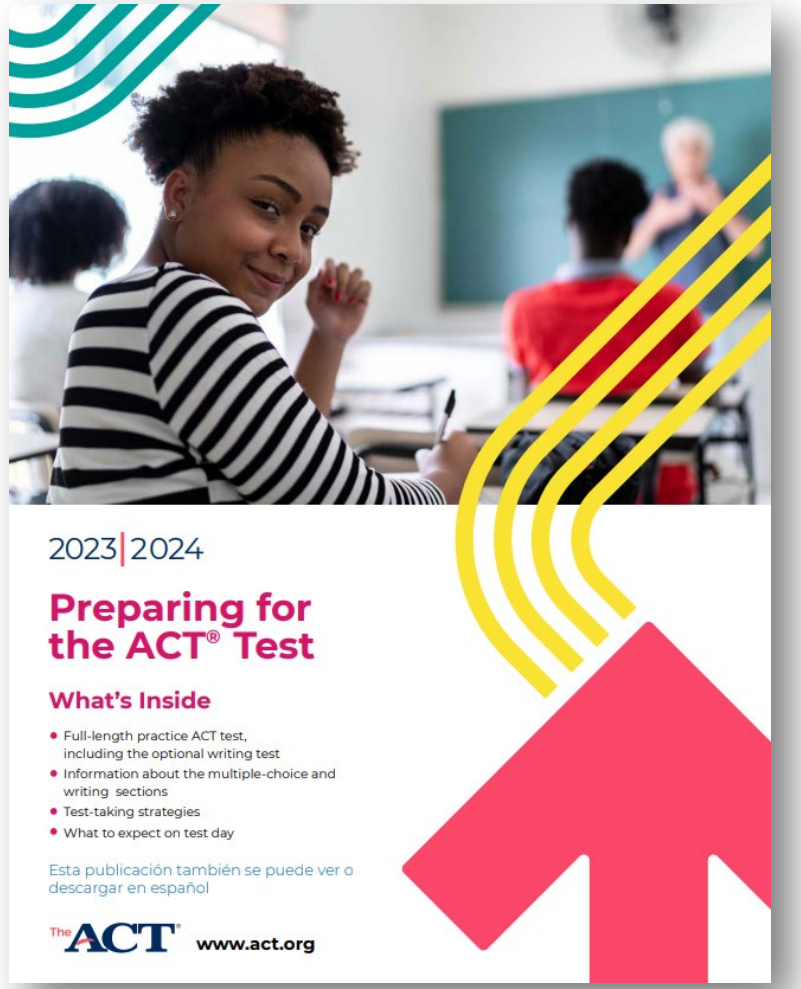
TEST OPTIMAL: FREE TEST PREP

- Free online practice test in MyACT
- Download the *Preparing for the ACT Test*
  - Helpful Hints
  - Test-Taking Tips
  - One complete practice test



Scan the QR Code to Get your Copy of the Preparing for the ACT

ACT®

Practice Before the ACT: PreACT 8/9 & PreACT

PreACT® 8/9

- An 8th/9th grade test aligned to the PreACT and ACT tests
- Multiple-choice paper assessment
- Flexible testing administration dates
- Monitors progress toward college and career readiness
- Predicts performance on the PreACT and the ACT
- Provides an indicator of progress toward career readiness
- $17/scored assessment when bundled with district testing

PreACT®

- 10th grade multiple-choice paper assessment
- Shorter in length than the ACT
- Flexible testing administration dates
- Predicts performance on the ACT
- Rapid reporting means earlier and more effective intervention and planning
- Provides an indicator of progress toward career readiness
- $17/scored assessment when bundled with district testing

ACT®

ACT Online Prep

ONLINE LEARNING AT THEIR OWN PACE AND TIMING

Your students may learn best working at their own pace online. Applying the same research and expertise used in creating the ACT, ACT® Online Prep is an engaging, interactive test prep program that offers:

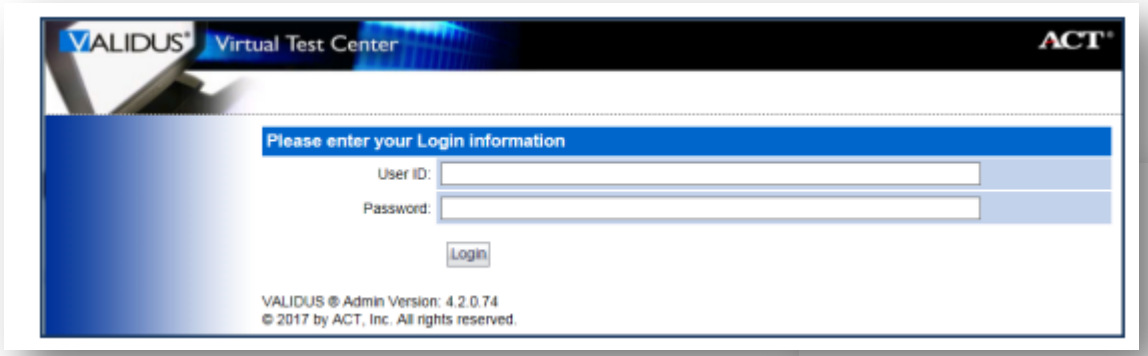
- Flexible, personalized learning paths customized to students' needs and test timeframes, so they can review material at the right pace
- Online or mobile app access anytime or anywhere
- The ability to assign coursework in the program for students to complete as part of a test prep class
- Administrator dashboards to track students' progress at an individual and aggregate level, including usage, performance, and areas in which an entire class may need help
- The ACT Online Prep Educator Guide that provides ideas for incorporating ACT Online Prep for students to improve achievement in English, Reading, Mathematics, and Science.

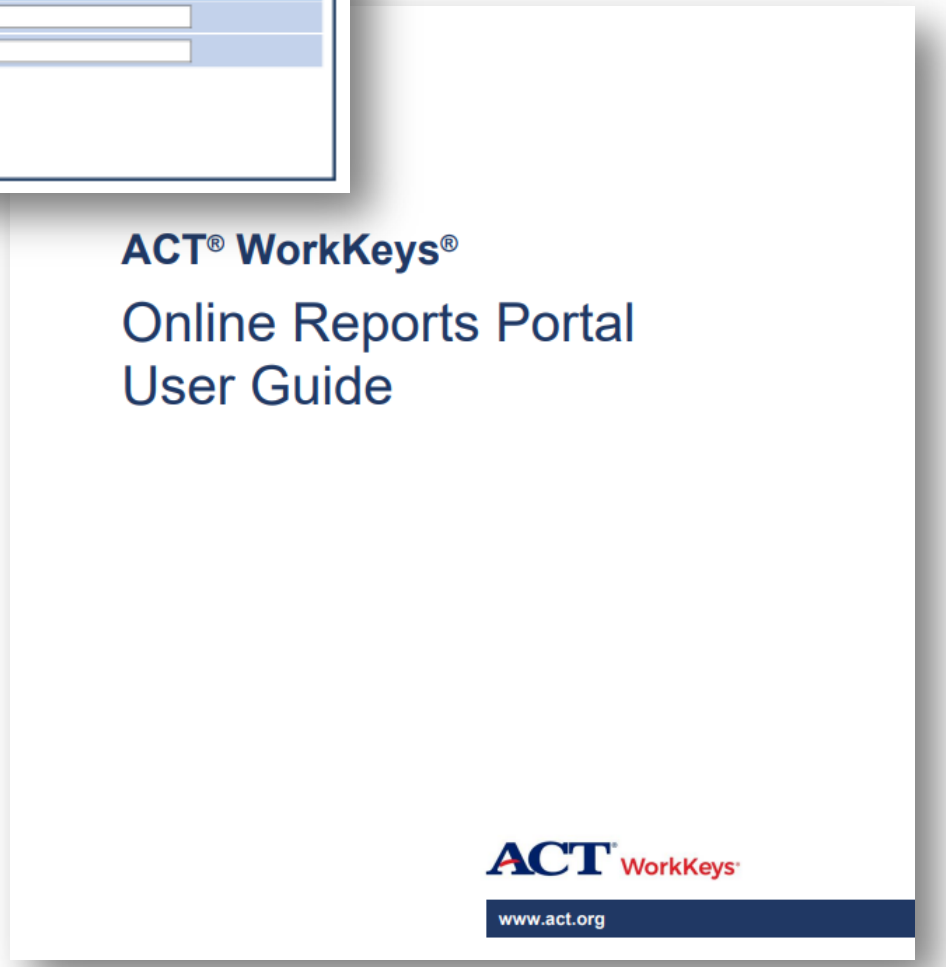
RESOURCES FOR ACT ONLINE PREP

- ACT Online Prep Order Form
- AOP Educator Guide

Preparing for Career

ACT WorkKeys Score Reports





ACTION ITEM:
SCAN THE QR CODE TO ACCESS THE ACT WORKKEY ONLINE REPORTS USER GUIDE

ACT

ACT WorkKeys Score Reports

ACT WorkKeys

Score Reports Available in Online Reports Portal

This document introduces the reports available in the ACT® WorkKeys® Online Reports Portal feature, which is an application program that interfaces with the Validus™ system. The Online Reports Portal is where various types of examinee score reports may be generated and exported to be saved and printed. It is accessible only to users with the role of **Portal Manager** on their Validus account. For more information on each of these reports, see the **Online Reports Portal Guides** section at the ACT WorkKeys Administration website.

Note:

- *Reports are available in the Reports Portal two business days after scoring takes place.*
- *To view an example of each of these score reports, select the report name.*
- *"Group" reports only apply to ACT WorkKeys tests taken online.*

Report Name	Test Taken	
	Online	Paper
Data Export Report	Yes	Yes
Individual Score Reports (by Group)	Yes	No
Individual Score Reports (by Examinee)	Yes	Yes
Individual Summary Score Report	Yes	Yes
Summary Score Report	Yes	Yes

Report Name	Test Taken		What It Shows	How You Can Use It
	Online	Paper		
Personal Skills Assessment List Reports · Fit Assessment List Report · Talent Assessment List Report	Yes	No	• Reports for all Personal Skills/Soft Skills (Fit and Talent t • Roster tests wi	• Share with an employer
Roster Score Report	Yes	Yes	• List of e and the range y *Note: For score cann the studen*	
Individual Score vs. Profile Report	Yes	Yes	• Scores that are ACT W	
Group vs. Profile Report	Yes	No	• Scores to score profiled	
Registered to Test Report	Yes	No	• List of a tests, b	
Test Usage Report	Yes	Yes	• Count c range	
Local Scan Instant Score Report	No	Yes	• Examin per pag o for o o for a *Note: Simi*	

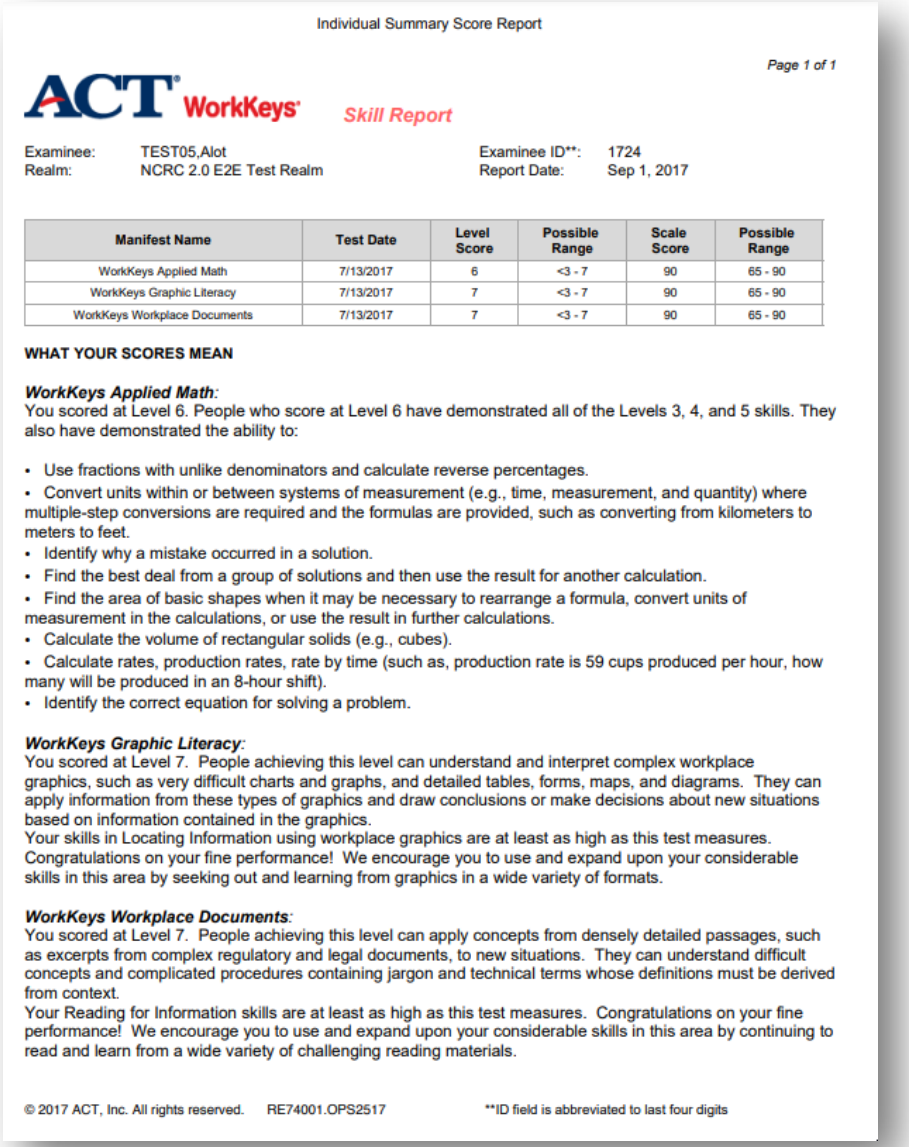
Report Name	Test Taken		What It Shows	How You Can Use It
	Online	Paper		
Invoice Report Paper Based Testing	No	Yes	• This report includes the candidate and test detail for only the paper-based tests that comprise the invoice. The report contains a row for each candidate's test along with the additional detail of that test.	• Exports as a PDF or Excel document. Provides the paper-based tests that are included in the invoice for which the report was run.
Certificate Data Export	Yes	Yes	• Career Readiness certificate details along with the ACT WorkKeys test scores that qualify the candidate for the specific certificate level for the selected agency and/or testing location	• Import certificate data into another system for analysis or archiving
Test Data Export	Yes	Yes	• ACT WorkKeys test scores, including a row for each test taken at the selected Testing Location for the selected time period	• Import test scores into another system for analysis or archiving
Certificates by Certificate ID	Yes	Yes	• ACT Career Readiness Certificate, including the certificate level achieved and the ACT WorkKeys test scores that qualify the candidate for the specific certificate level, for a given candidate ID	• Output is a single Career Readiness Certificate in PDF format for a given certificate ID (if the candidate qualified for an NCRC).
Certificates by Testing Location	Yes	Yes	• ACT Career Readiness Certificates for the selected Testing Location and time period, including the certificate level achieved and the ACT WorkKeys test scores that qualify the candidate for the specific certificate level	• Output is Career Readiness Certificates in PDF format for all examinees who tested at a given testing location (for candidates who qualified for an NCRC).
Certificate Count by Testing Location	Yes	Yes	• ACT Career Readiness Certificate counts for the selected testing location and time period, including the certificate counts broken out by certificate type and level.	• Exports as a PDF or Excel document. Provides a count of certificates earned for the specified testing location and time period.
Qualification Letter by Certificate ID	Yes	Yes	• ACT WorkKeys Qualification Letter, including the certificate level achieved and the log in information for the candidate.	• Output is a single Qualification Letter in PDF format for a given certificate ID (if the candidate qualified for an NCRC). • Print and give to the candidate so they know what certificate level they have earned and how to access MyWorkKeys.
Qualification Letter by Testing Location	Yes	Yes	• ACT WorkKeys Qualification Letters for the selected testing location and time period, including the certificate level achieved and the ACT WorkKeys test scores that qualify the candidate for the specific certificate level.	• Output is a set of Qualification Letters in PDF format for the selected testing location and time period (for candidates who qualified for an NCRC). • Print and give to the candidates so they know what certificate level they have earned and how to access MyWorkKeys.

Do your students need to increase a score level to earn a higher NCRC? Ask me about retesting for ACT WorkKeys!

ACT

ACT WorkKeys: Individual Summary Score Report

Scan the QR Code to Access Additional Information on Using WorkKeys Scores



Individual Summary Score Report

Page 1 of 1

ACT WorkKeys *Skill Report*

Examinee: TEST05,Alot
Realm: NCRC 2.0 E2E Test Realm
Examinee ID**: 1724
Report Date: Sep 1, 2017

Manifest Name	Test Date	Level Score	Possible Range	Scale Score	Possible Range
WorkKeys Applied Math	7/13/2017	6	<3 - 7	90	65 - 90
WorkKeys Graphic Literacy	7/13/2017	7	<3 - 7	90	65 - 90
WorkKeys Workplace Documents	7/13/2017	7	<3 - 7	90	65 - 90

WHAT YOUR SCORES MEAN

WorkKeys Applied Math:
You scored at Level 6. People who score at Level 6 have demonstrated all of the Levels 3, 4, and 5 skills. They also have demonstrated the ability to:

- Use fractions with unlike denominators and calculate reverse percentages.
- Convert units within or between systems of measurement (e.g., time, measurement, and quantity) where multiple-step conversions are required and the formulas are provided, such as converting from kilometers to meters to feet.
- Identify why a mistake occurred in a solution.
- Find the best deal from a group of solutions and then use the result for another calculation.
- Find the area of basic shapes when it may be necessary to rearrange a formula, convert units of measurement in the calculations, or use the result in further calculations.
- Calculate the volume of rectangular solids (e.g., cubes).
- Calculate rates, production rates, rate by time (such as, production rate is 59 cups produced per hour, how many will be produced in an 8-hour shift).
- Identify the correct equation for solving a problem.

WorkKeys Graphic Literacy:
You scored at Level 7. People achieving this level can understand and interpret complex workplace graphics, such as very difficult charts and graphs, and detailed tables, forms, maps, and diagrams. They can apply information from these types of graphics and draw conclusions or make decisions about new situations based on information contained in the graphics.
Your skills in Locating Information using workplace graphics are at least as high as this test measures. Congratulations on your fine performance! We encourage you to use and expand upon your considerable skills in this area by seeking out and learning from graphics in a wide variety of formats.

WorkKeys Workplace Documents:
You scored at Level 7. People achieving this level can apply concepts from densely detailed passages, such as excerpts from complex regulatory and legal documents, to new situations. They can understand difficult concepts and complicated procedures containing jargon and technical terms whose definitions must be derived from context.
Your Reading for Information skills are at least as high as this test measures. Congratulations on your fine performance! We encourage you to use and expand upon your considerable skills in this area by continuing to read and learn from a wide variety of challenging reading materials.

© 2017 ACT, Inc. All rights reserved. RE74001.OPS2517 **ID field is abbreviated to last four digits

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ACT WorkKeys: Individual Summary Score Report

Individual Summary Score Report

Page 1 of 1

ACT® WorkKeys® *Skill Report*

Examinee: TEST05,Alot
Realm: NCRC 2.0 E2E Test Realm

Examinee ID**: 1724
Report Date: Sep 1, 2017

Manifest Name	Test Date	Level Score	Possible Range	Scale Score	Possible Range
WorkKeys Applied Math	7/13/2017	6	<3 - 7	90	65 - 90
WorkKeys Graphic Literacy	7/13/2017	7	<3 - 7	90	65 - 90
WorkKeys Workplace Documents	7/13/2017	7	<3 - 7	90	65 - 90

MANIFEST NAME is the name of the ACT WorkKeys test you took.

LEVEL SCORE is the score you earned on the test.

SCALE SCORE is mainly used for training purposes to track growth.

POSSIBLE RANGE shows the lowest and highest possible Level and Scale Score for an assessment.

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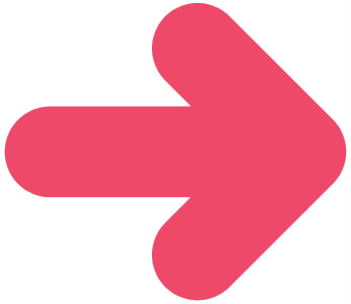
ACT WorkKeys: Individual Summary Score Report

WHAT YOUR SCORE MEANS gives the student information about the skills you demonstrated on this test.



WHAT YOUR SCORES MEAN

WorkKeys Applied Math:
You scored at Level 6. People who score at Level 6 have demonstrated all of the Levels 3, 4, and 5 skills. They also have demonstrated the ability to:

- Use fractions with unlike denominators and calculate reverse percentages.
- Convert units within or between systems of measurement (e.g., time, measurement, and quantity) where multiple-step conversions are required and the formulas are provided, such as converting from kilometers to meters to feet.
- Identify why a mistake occurred in a solution.
- Find the best deal from a group of solutions and then use the result for another calculation.
- Find the area of basic shapes when it may be necessary to rearrange a formula, convert units of measurement in the calculations, or use the result in further calculations.
- Calculate the volume of rectangular solids (e.g., cubes).
- Calculate rates, production rates, rate by time (such as, production rate is 59 cups produced per hour, how many will be produced in an 8-hour shift).
- Identify the correct equation for solving a problem.

WorkKeys Graphic Literacy:
You scored at Level 7. People achieving this level can understand and interpret complex workplace graphics, such as very difficult charts and graphs, and detailed tables, forms, maps, and diagrams. They can apply information from these types of graphics and draw conclusions or make decisions about new situations based on information contained in the graphics.
Your skills in Locating Information using workplace graphics are at least as high as this test measures. Congratulations on your fine performance! We encourage you to use and expand upon your considerable skills in this area by seeking out and learning from graphics in a wide variety of formats.

WorkKeys Workplace Documents:
You scored at Level 7. People achieving this level can apply concepts from densely detailed passages, such as excerpts from complex regulatory and legal documents, to new situations. They can understand difficult concepts and complicated procedures containing jargon and technical terms whose definitions must be derived from context.
Your Reading for Information skills are at least as high as this test measures. Congratulations on your fine performance! We encourage you to use and expand upon your considerable skills in this area by continuing to read and learn from a wide variety of challenging reading materials.

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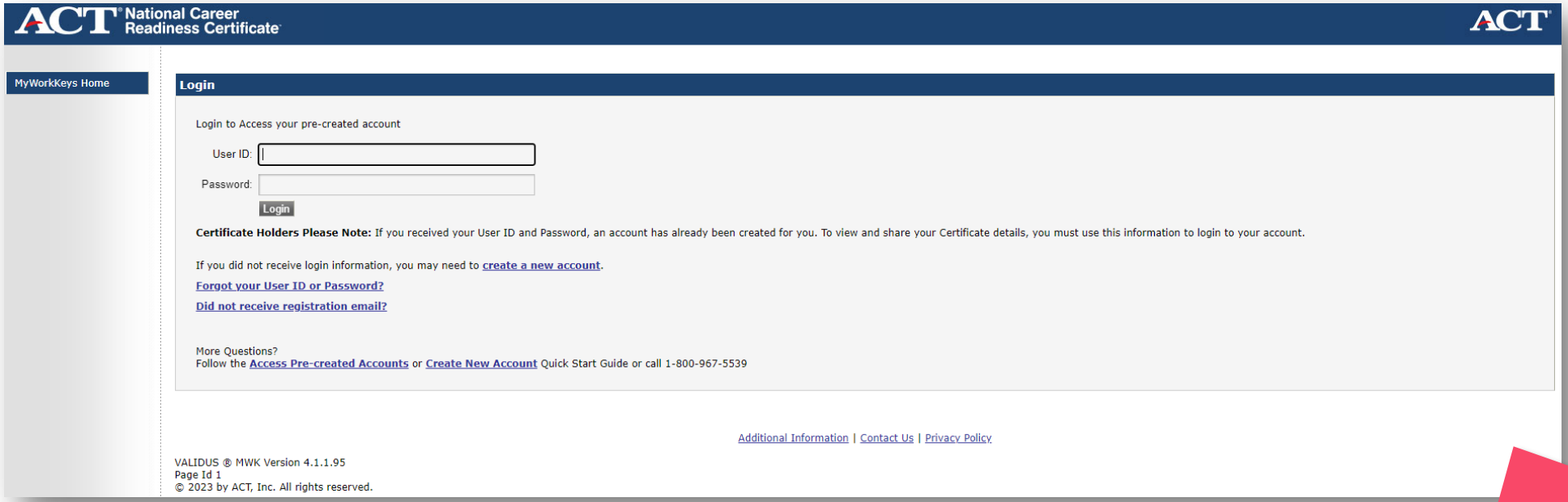
My WorkKeys



Student portal for all things ACT WorkKeys!

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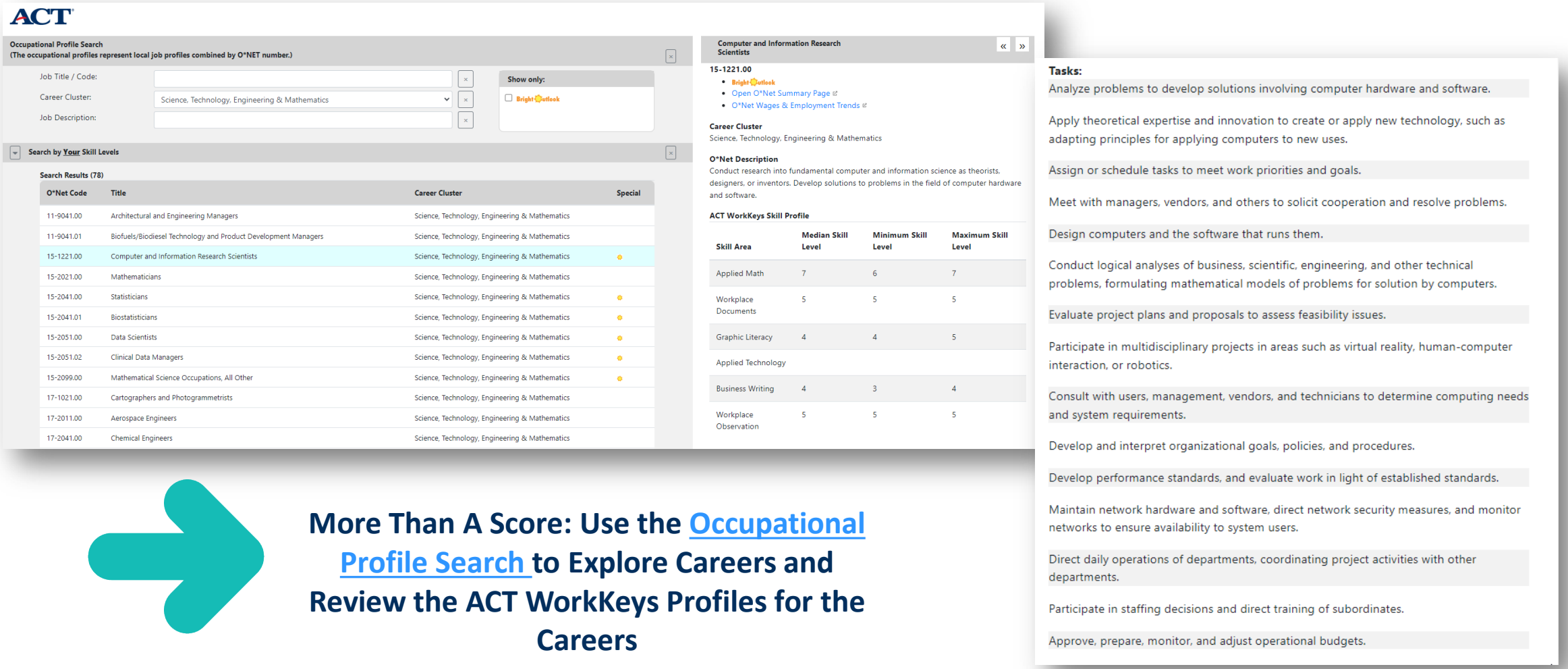
More Than A Score: Using NCRC Levels for Career Exploration



ACT

Occupational Profile Search
(The occupational profiles represent local job profiles combined by O*NET number.)

Job Title / Code:
Career Cluster: Science, Technology, Engineering & Mathematics
Job Description:

Show only:
Bright Outlook

Search by Your Skill Levels

Search Results (78)

O*Net Code	Title	Career Cluster	Special
11-9041.00	Architectural and Engineering Managers	Science, Technology, Engineering & Mathematics	
11-9041.01	Biofuels/Biodiesel Technology and Product Development Managers	Science, Technology, Engineering & Mathematics	
15-1221.00	Computer and Information Research Scientists	Science, Technology, Engineering & Mathematics	
15-2021.00	Mathematicians	Science, Technology, Engineering & Mathematics	
15-2041.00	Statisticians	Science, Technology, Engineering & Mathematics	
15-2041.01	Biostatisticians	Science, Technology, Engineering & Mathematics	
15-2051.00	Data Scientists	Science, Technology, Engineering & Mathematics	
15-2051.02	Clinical Data Managers	Science, Technology, Engineering & Mathematics	
15-2099.00	Mathematical Science Occupations, All Other	Science, Technology, Engineering & Mathematics	
17-1021.00	Cartographers and Photogrammetrists	Science, Technology, Engineering & Mathematics	
17-2011.00	Aerospace Engineers	Science, Technology, Engineering & Mathematics	
17-2041.00	Chemical Engineers	Science, Technology, Engineering & Mathematics	

Computer and Information Research Scientists

15-1221.00

- Bright Outlook
- Open O*Net Summary Page
- O*Net Wages & Employment Trends

Career Cluster
Science, Technology, Engineering & Mathematics

O*Net Description
Conduct research into fundamental computer and information science as theorists, designers, or inventors. Develop solutions to problems in the field of computer hardware and software.

ACT WorkKeys Skill Profile

Skill Area	Median Skill Level	Minimum Skill Level	Maximum Skill Level
Applied Math	7	6	7
Workplace Documents	5	5	5
Graphic Literacy	4	4	5
Applied Technology			
Business Writing	4	3	4
Workplace Observation	5	5	5

Tasks:

Analyze problems to develop solutions involving computer hardware and software.

Apply theoretical expertise and innovation to create or apply new technology, such as adapting principles for applying computers to new uses.

Assign or schedule tasks to meet work priorities and goals.

Meet with managers, vendors, and others to solicit cooperation and resolve problems.

Design computers and the software that runs them.

Conduct logical analyses of business, scientific, engineering, and other technical problems, formulating mathematical models of problems for solution by computers.

Evaluate project plans and proposals to assess feasibility issues.

Participate in multidisciplinary projects in areas such as virtual reality, human-computer interaction, or robotics.

Consult with users, management, vendors, and technicians to determine computing needs and system requirements.

Develop and interpret organizational goals, policies, and procedures.

Develop performance standards, and evaluate work in light of established standards.

Maintain network hardware and software, direct network security measures, and monitor networks to ensure availability to system users.

Direct daily operations of departments, coordinating project activities with other departments.

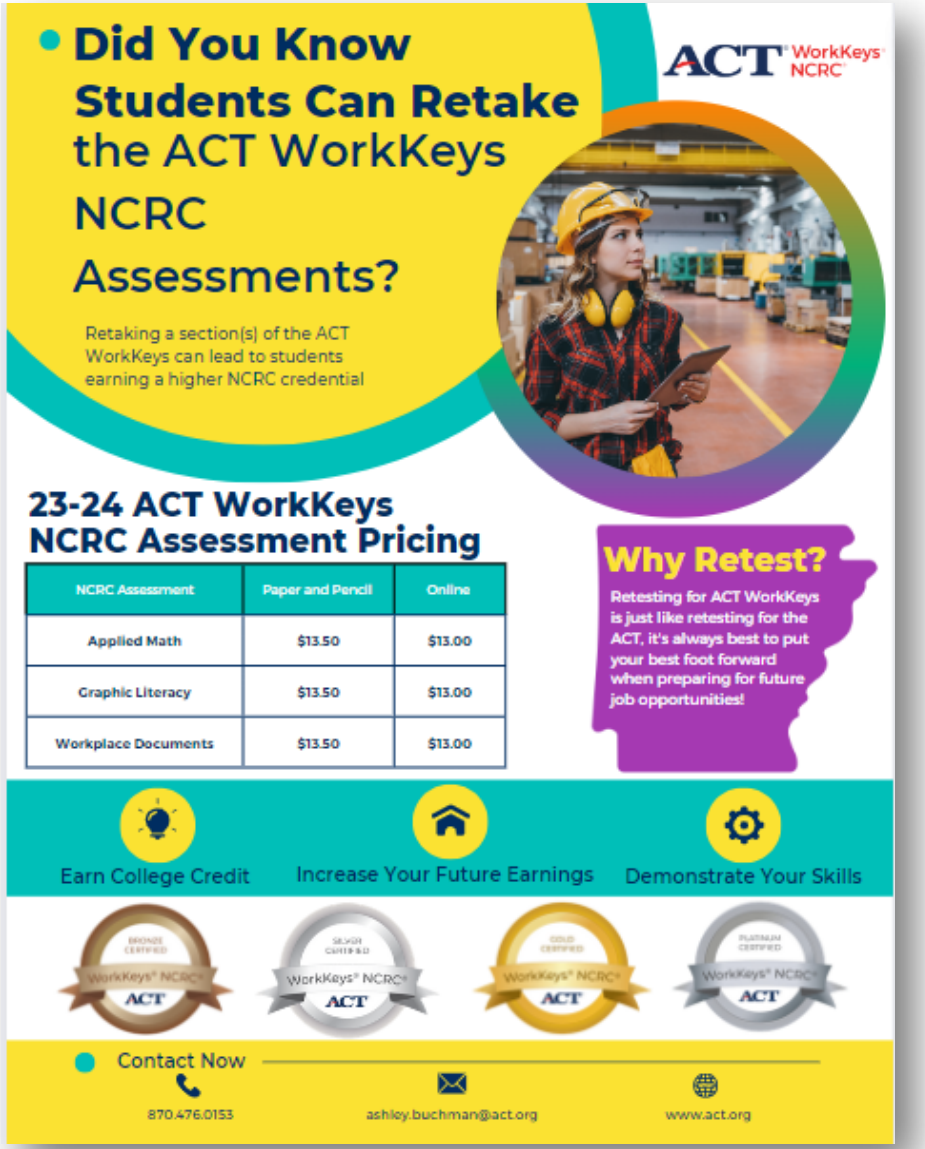
Participate in staffing decisions and direct training of subordinates.

Approve, prepare, monitor, and adjust operational budgets.

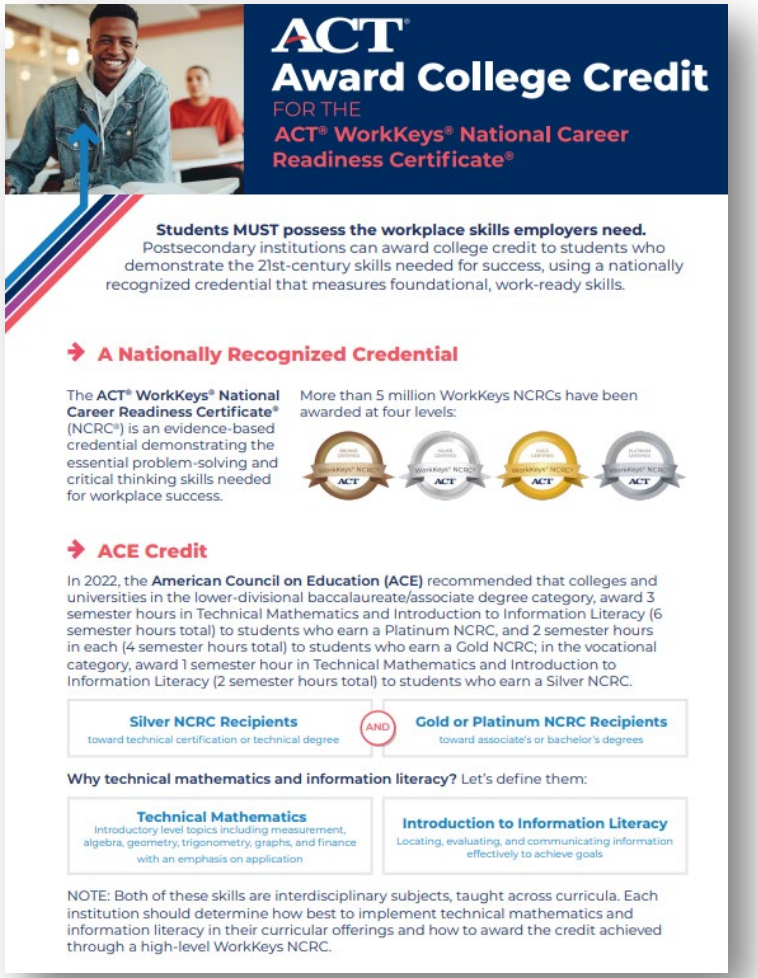
More Than A Score: Use the Occupational Profile Search to Explore Careers and Review the ACT WorkKeys Profiles for the Careers

ACT

Arkansas and ACT WorkKeys: Retesting Has Value!



ACE Credit Recommendations for WorkKeys NCRC



ACT

Award College Credit

FOR THE

ACT® WorkKeys® National Career Readiness Certificate®

Students MUST possess the workplace skills employers need.
Postsecondary institutions can award college credit to students who demonstrate the 21st-century skills needed for success, using a nationally recognized credential that measures foundational, work-ready skills.

A Nationally Recognized Credential

The **ACT® WorkKeys® National Career Readiness Certificate®** (NCRC®) is an evidence-based credential demonstrating the essential problem-solving and critical thinking skills needed for workplace success.

More than 5 million WorkKeys NCRCs have been awarded at four levels:

ACE Credit

In 2022, the **American Council on Education (ACE)** recommended that colleges and universities in the lower-divisional baccalaureate/associate degree category, award 3 semester hours in Technical Mathematics and Introduction to Information Literacy (6 semester hours total) to students who earn a Platinum NCRC, and 2 semester hours in each (4 semester hours total) to students who earn a Gold NCRC; in the vocational category, award 1 semester hour in Technical Mathematics and Introduction to Information Literacy (2 semester hours total) to students who earn a Silver NCRC.

Silver NCRC Recipients	AND	Gold or Platinum NCRC Recipients
toward technical certification or technical degree		toward associate's or bachelor's degrees

Why technical mathematics and information literacy? Let's define them:

Technical Mathematics	Introduction to Information Literacy
Introductory level topics including measurement, algebra, geometry, trigonometry, graphs, and finance with an emphasis on application	Locating, evaluating, and communicating information effectively to achieve goals

NOTE: Both of these skills are interdisciplinary subjects, taught across curricula. Each institution should determine how best to implement technical mathematics and information literacy in their curricular offerings and how to award the credit achieved through a high-level WorkKeys NCRC.

A Nationally Recognized Credential

Skills demonstrated by receiving higher-level WorkKeys NCRCs include:

- Solving technical problems
- Identifying data trends
- Inferring word meaning from context
- Applying instructions to new situations
- Identifying implied details
- Sorting through materials to find critical information
- Making decisions based on detailed information

All of these abilities are contained within the definitions of **technical mathematics** and **information literacy.**

In 2007, the Association of American Colleges and Universities identified these two skills as **essential** postsecondary learning outcomes and **necessary skills** for the 21st-century economy.

Conclusions

- Institutions **must** produce graduates with skills that employers want, as measured by the WorkKeys NCRC.
- Credits awarded for WorkKeys NCRC attainment should align with an institution's mission, curricular offerings, and student learning goals.
- At-risk students would stand to benefit from a skills-based educational system.
- Awarding college credit for attaining a WorkKeys NCRC sends a positive message to students, offers faster progress to postsecondary degrees and credentials, and builds confidence.

FIND OUT MORE
Download **WK-Brief-NCRC-for-Credit** to see an ACT report on awarding college credit for credential attainment.

ACT

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Doing well on the assessments could mean college credit for students!

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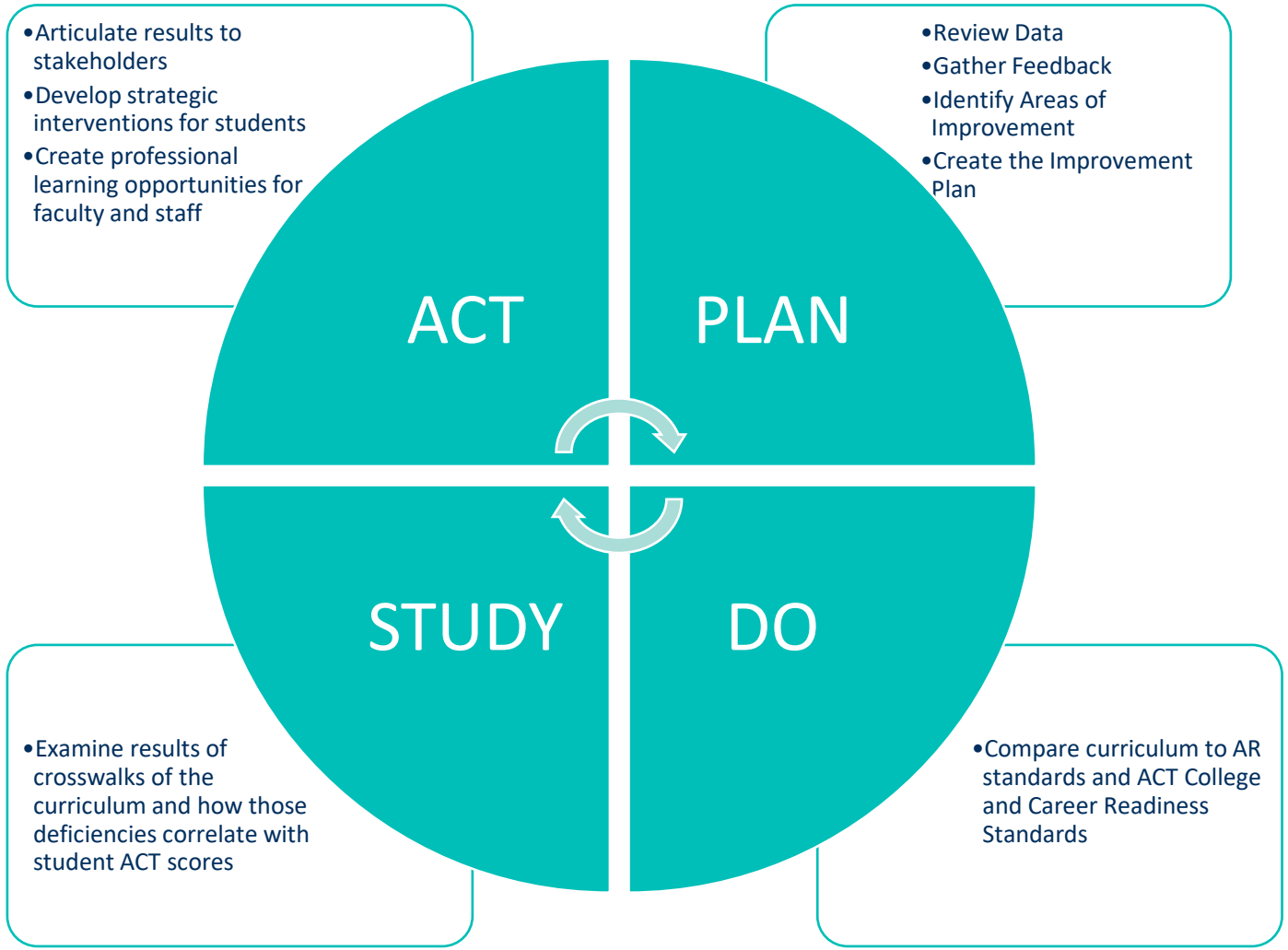
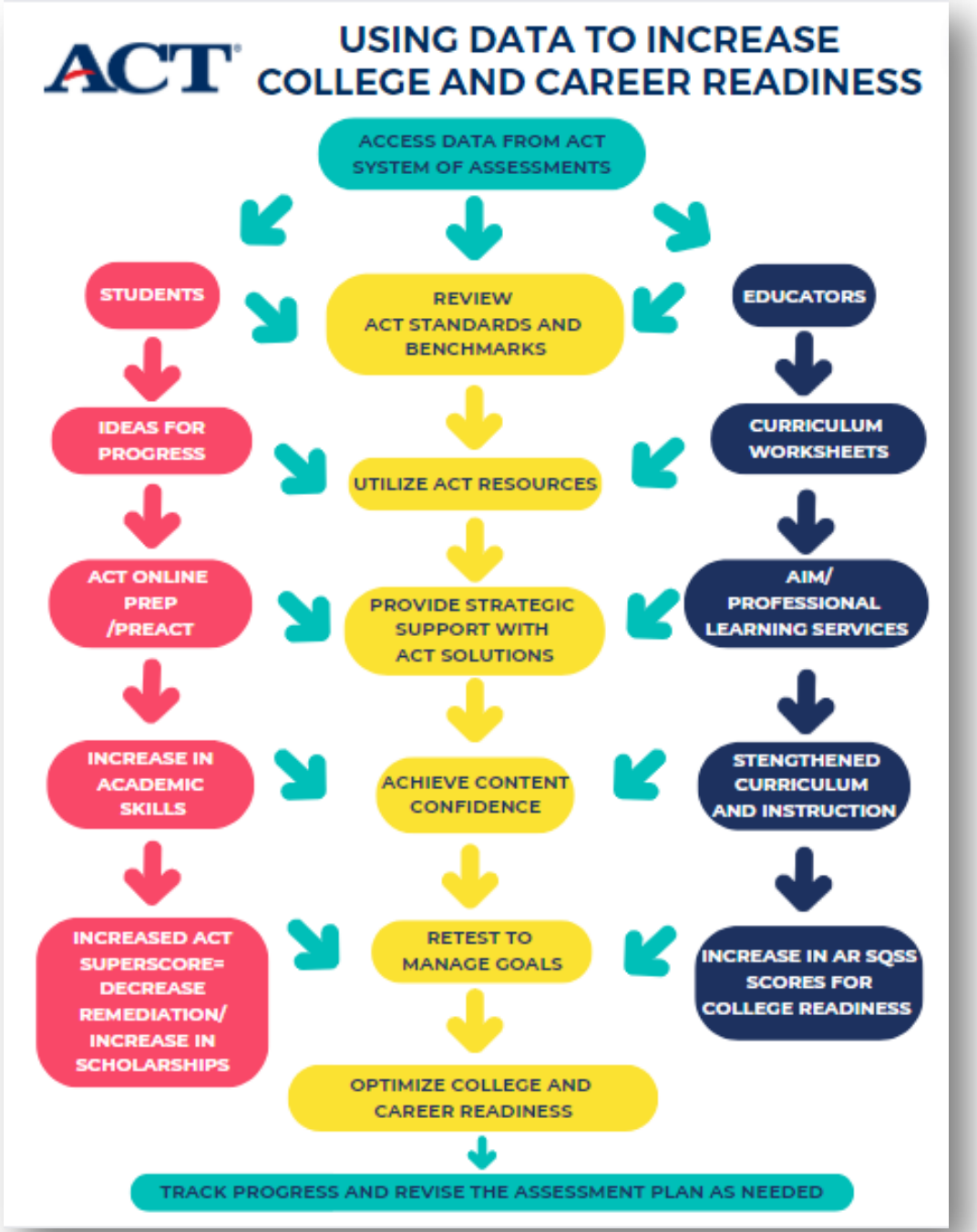
Putting It All Together

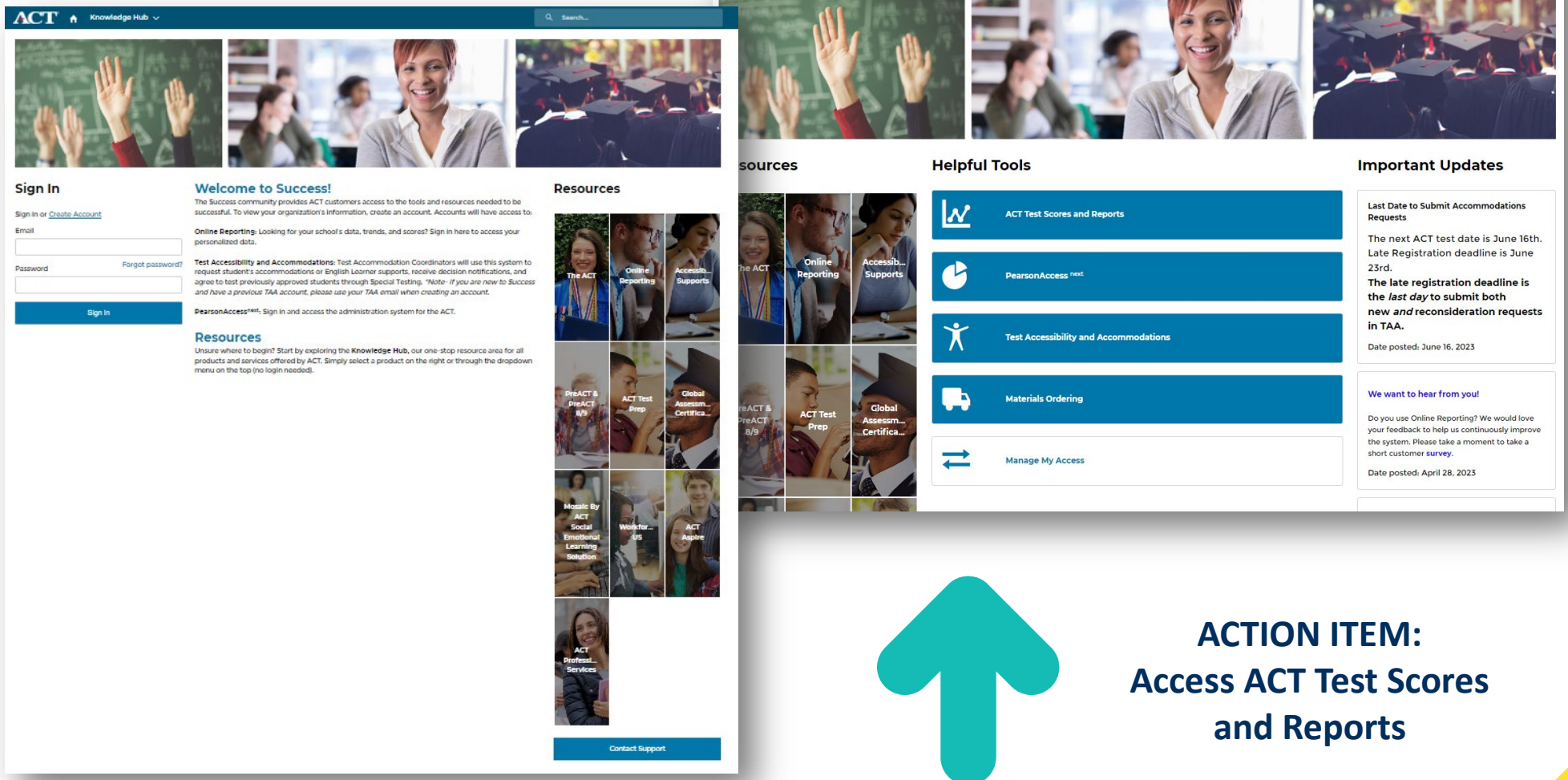
Create the Plan for Improving Student Success and College Readiness




ACT
USING DATA TO INCREASE COLLEGE AND CAREER READINESS
ACCESS DATA FROM ACT SYSTEM OF ASSESSMENTS
STUDENTS
REVIEW ACT STANDARDS AND BENCHMARKS
EDUCATORS
IDEAS FOR PROGRESS
UTILIZE ACT RESOURCES
CURRICULUM WORKSHEETS
ACT ONLINE PREP /PREACT
PROVIDE STRATEGIC SUPPORT WITH ACT SOLUTIONS
AIM/ PROFESSIONAL LEARNING SERVICES
INCREASE IN ACADEMIC SKILLS
ACHIEVE CONTENT CONFIDENCE
STENGTHENED CURRICULUM AND INSTRUCTION
INCREASED ACT SUPERSCORE= DECREASE REMEDIATION/ INCREASE IN SCHOLARSHIPS
RETEST TO MANAGE GOALS
INCREASE IN AR SQSS SCORES FOR COLLEGE READINESS
OPTIMIZE COLLEGE AND CAREER READINESS
TRACK PROGRESS AND REVISE THE ASSESSMENT PLAN AS NEEDED

ACT

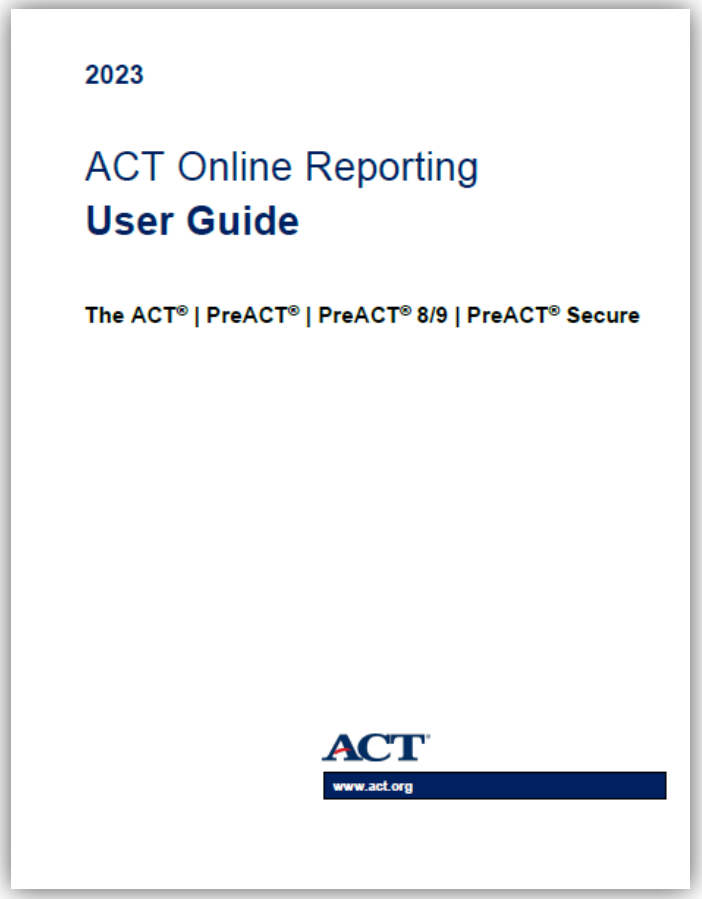
Access Data from ACT System of Assessments



ACTION ITEM:
Log Into success.act.org

ACTION ITEM:
Access ACT Test Scores and Reports

ACT Online Reporting User Guide



Scan the QR Code to Access the ACT Online Reporting User Guide

Let’s Explore ACT College Readiness Standards and Reporting Categories!

Purpose:

- Review scores by ACT Subject Areas and Reporting Categories

Goal:

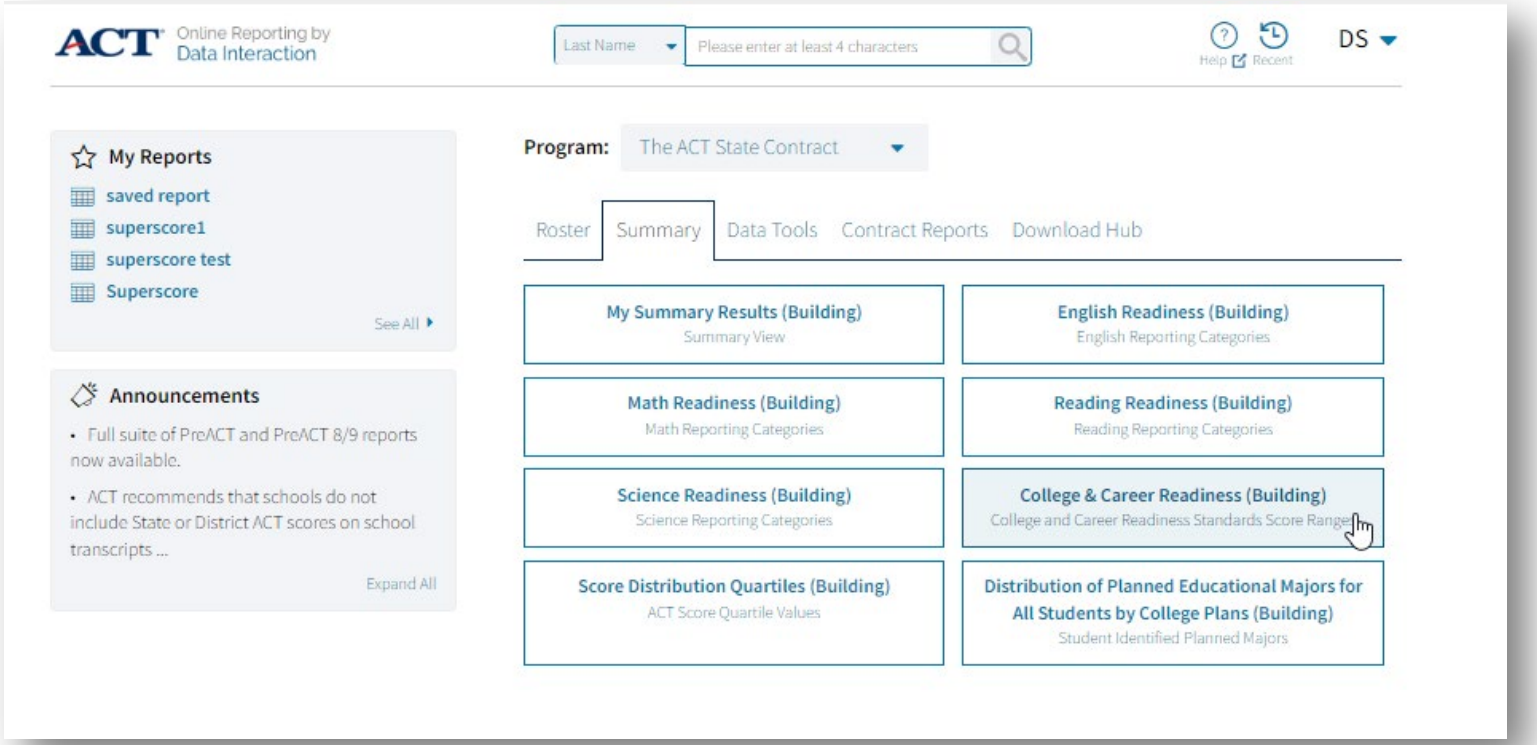
- Identify Areas of Skill Mastery and Opportunities for Improvement

Outcome:

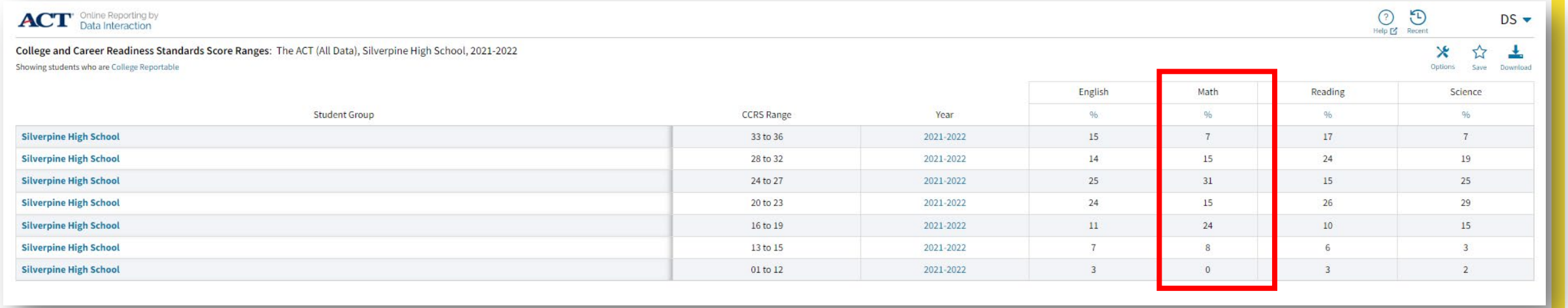
- Utilize the data to identify target student populations in need of strategic inventions to increase college and career readiness

Let’s Explore College Readiness Standards by ACT Subject Areas!

- Utilize the College and Career Readiness Data and Explore Academic Achievement by Reporting Category
  - Note: All ACT and State Contract data are available



Let’s Explore College Readiness Standards by ACT Subject Areas!



ACT Online Reporting by Data Interaction

Help Recent DS

College and Career Readiness Standards Score Ranges: The ACT (All Data), Silverpine High School, 2021-2022

Showing students who are College Reportable

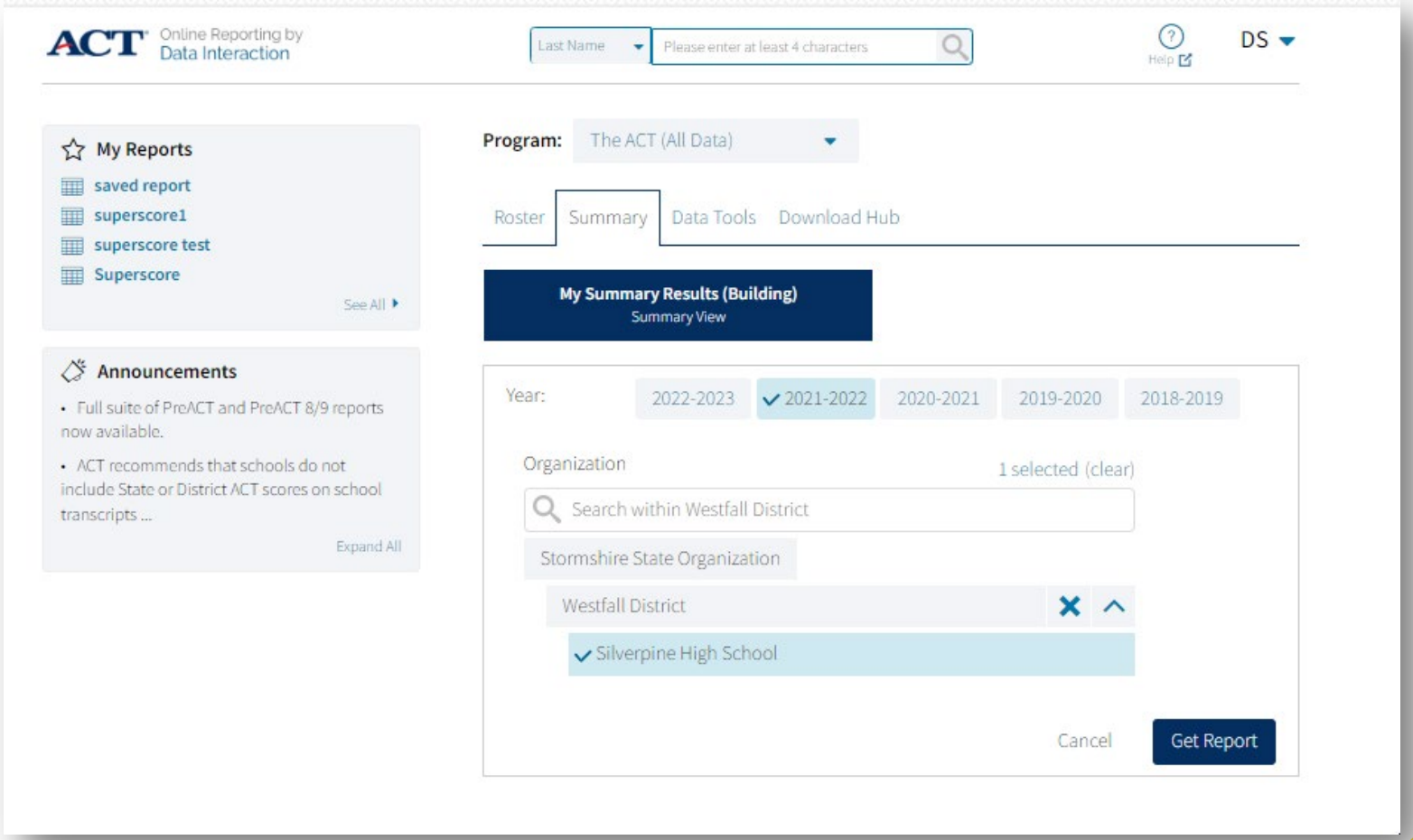
Options Save Download

Student Group	CCRS Range	Year	English %	Math %	Reading %	Science %
Silverpine High School	33 to 36	2021-2022	15	7	17	7
Silverpine High School	28 to 32	2021-2022	14	15	24	19
Silverpine High School	24 to 27	2021-2022	25	31	15	25
Silverpine High School	20 to 23	2021-2022	24	15	26	29
Silverpine High School	16 to 19	2021-2022	11	24	10	15
Silverpine High School	13 to 15	2021-2022	7	8	6	3
Silverpine High School	01 to 12	2021-2022	3	0	3	2

ACT®

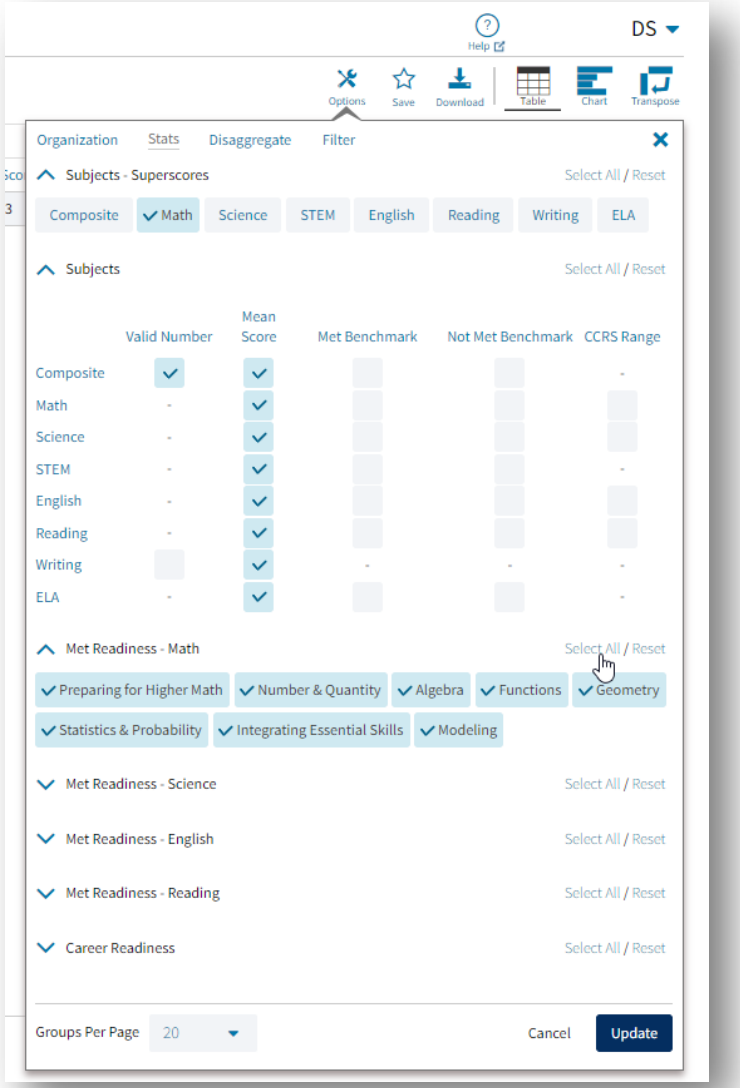
Let's Explore the ACT Reporting Categories!

- Summary Tab
  - Select the Year, Term, and Organization you wish to view
  - Click Get Report

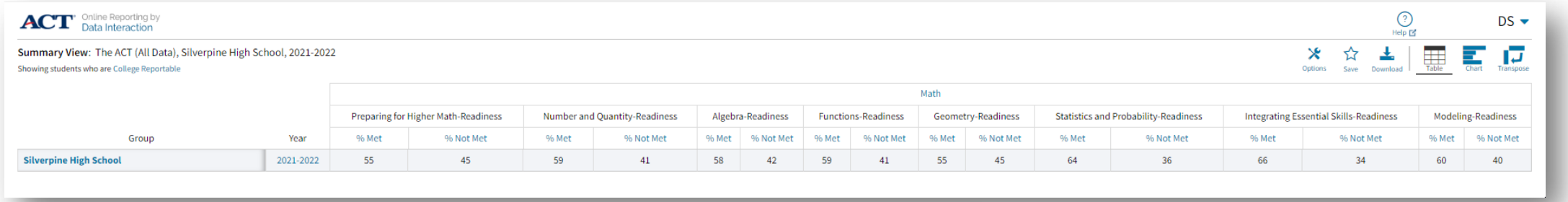


Let's Explore the Reporting Categories!

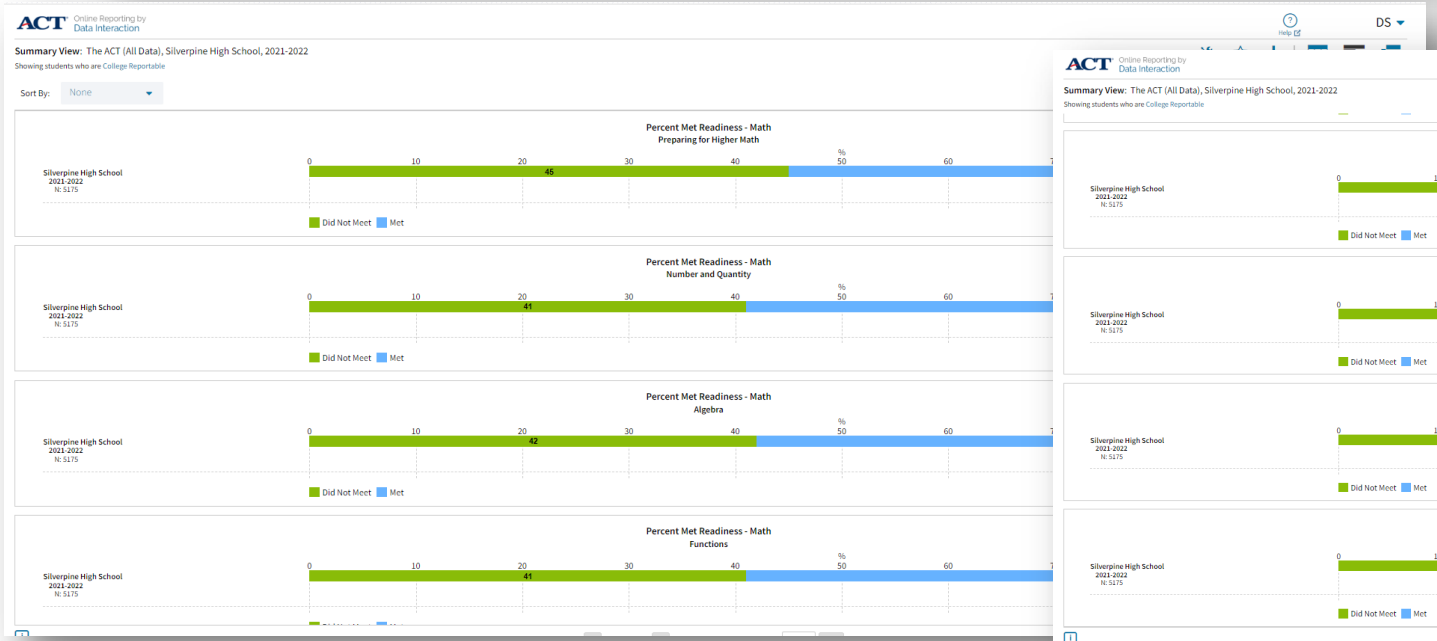
- Instructions: Pick an ACT Subject Area (i.e., English, Math, Reading, or Science)
- Go through the previous steps to locate the Superscores for the selected ACT Subject Area
  - Be sure to reset the subjects on the Superscores to select only one subject and select all the reporting categories.

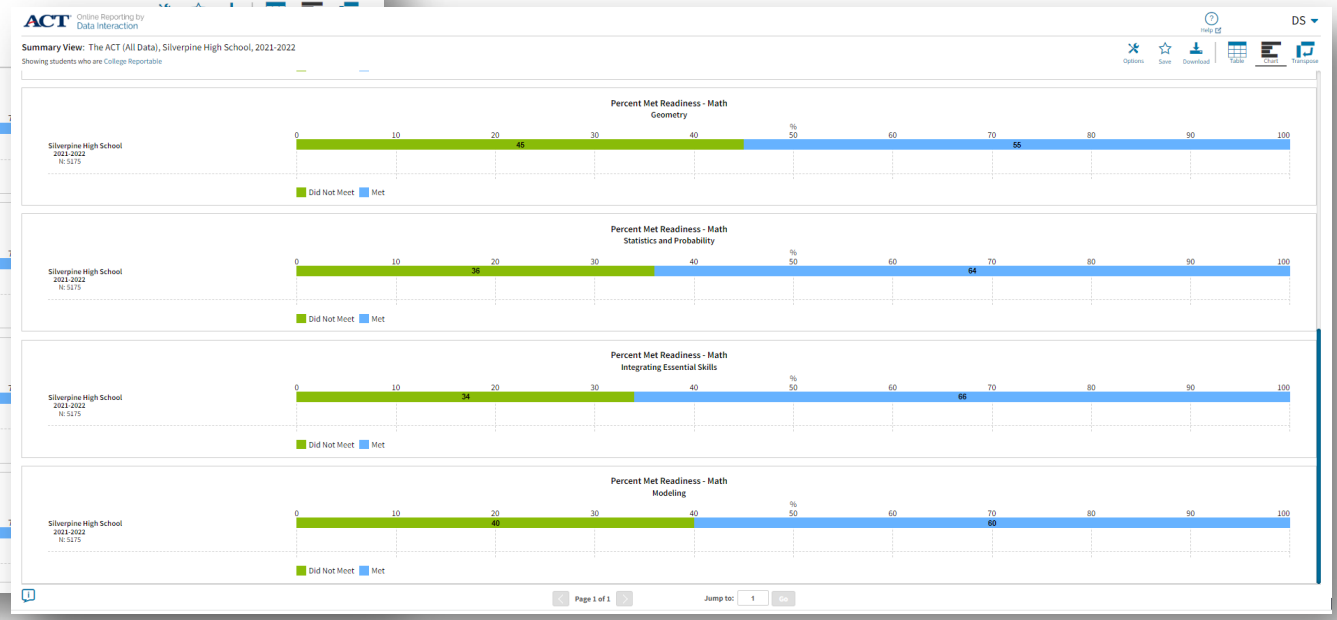


Let’s Explore the Reporting Categories!



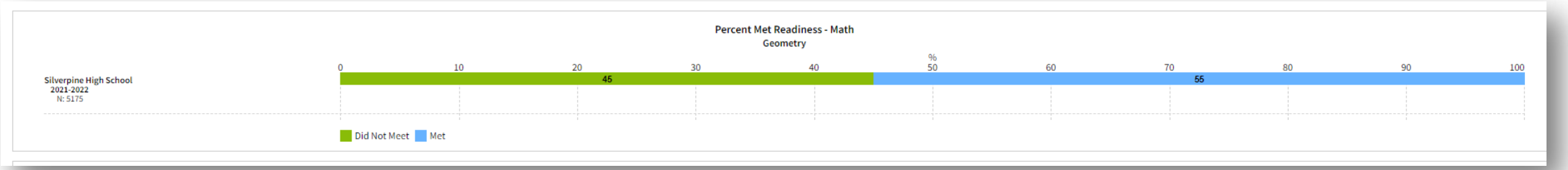
Group	Year	Math															
		Preparing for Higher Math-Readiness		Number and Quantity-Readiness		Algebra-Readiness		Functions-Readiness		Geometry-Readiness		Statistics and Probability-Readiness		Integrating Essential Skills-Readiness		Modeling-Readiness	
		% Met	% Not Met	% Met	% Not Met	% Met	% Not Met	% Met	% Not Met	% Met	% Not Met	% Met	% Not Met	% Met	% Not Met	% Met	% Not Met
Silverpine High School	2021-2022	55	45	59	41	58	42	59	41	55	45	64	36	66	34	60	40





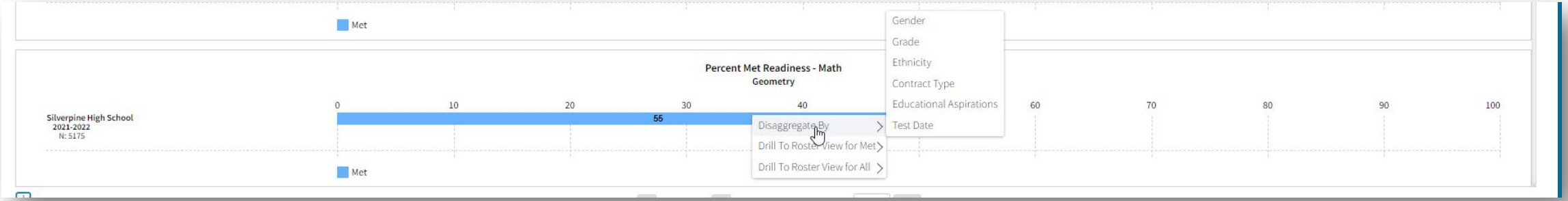
Let’s Explore the Reporting Categories!

- Why are students not making it in _____ area?
  - Example: Why do we only have 55% of students who met readiness in Geometry?



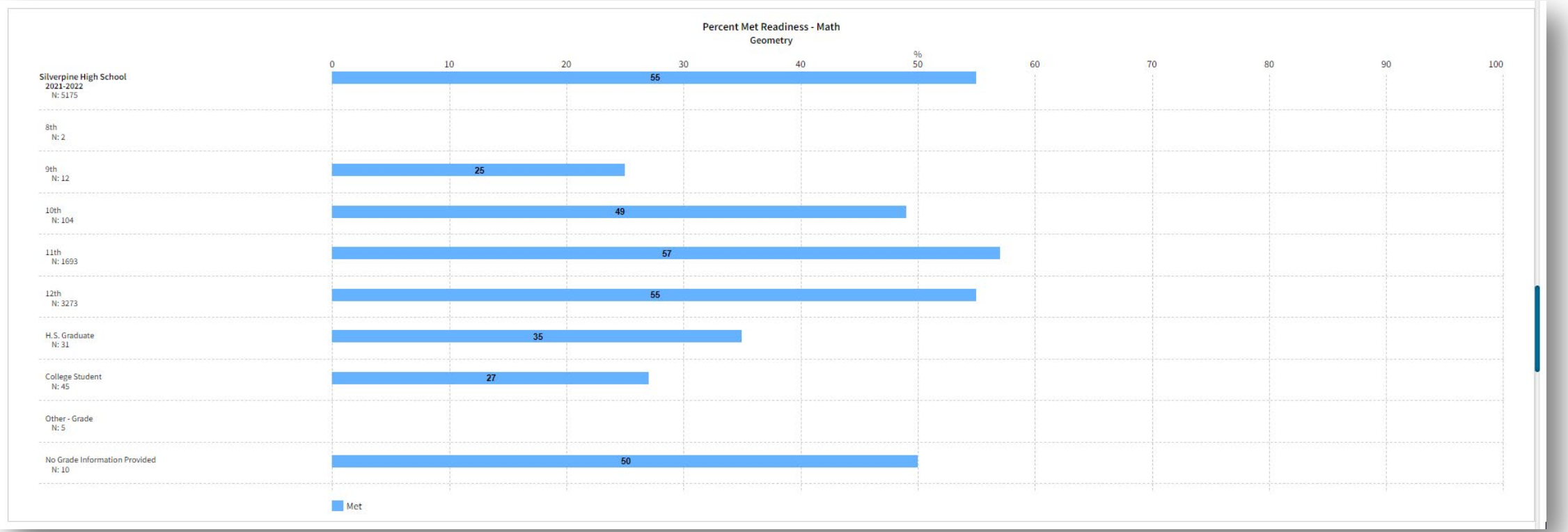
Let’s Explore the Reporting Categories!

- Let’s Dig In Further and Disaggregate the Data



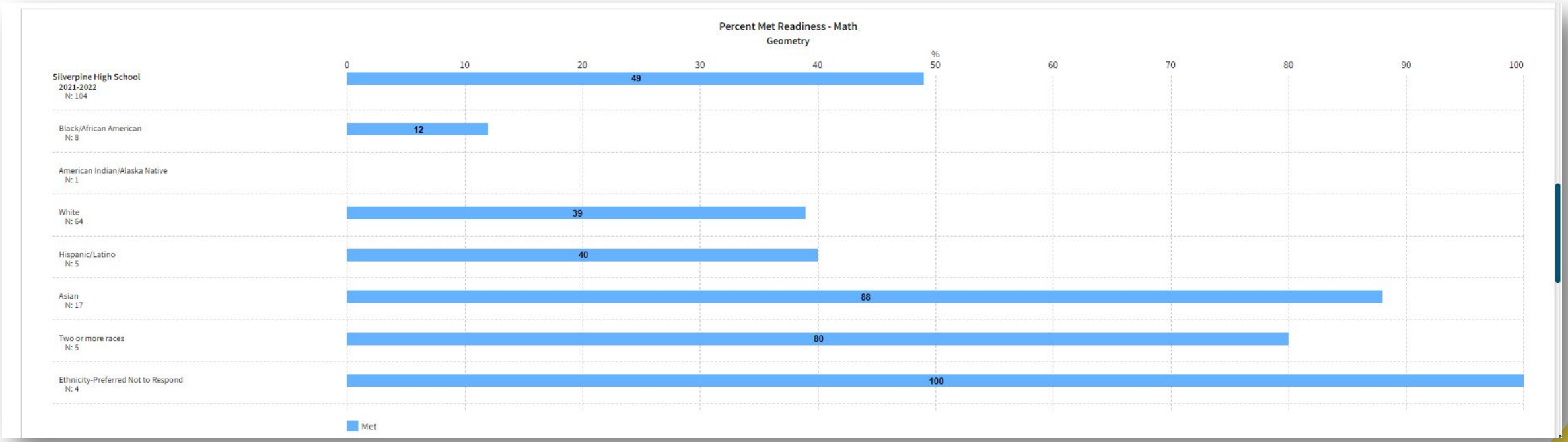
Let’s Explore the Reporting Categories!

- Disaggregate the Data
  - Grade



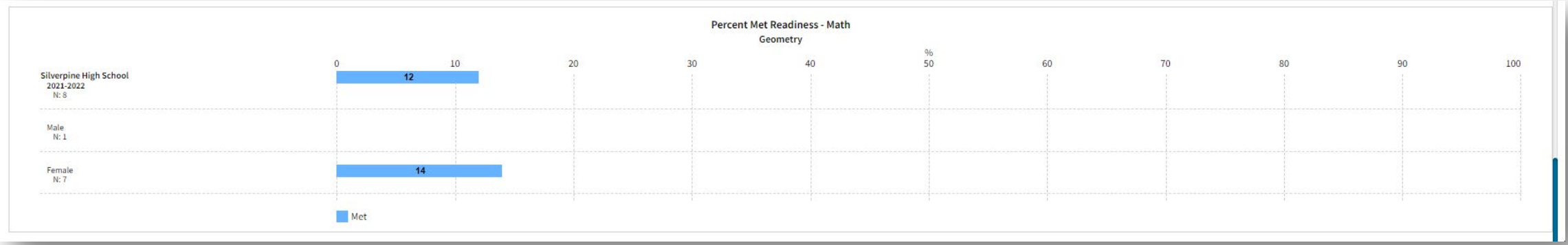
Let's Explore the Reporting Categories!

- Disaggregate the Data
  - Students who are 10th grade broken down by Ethnicity



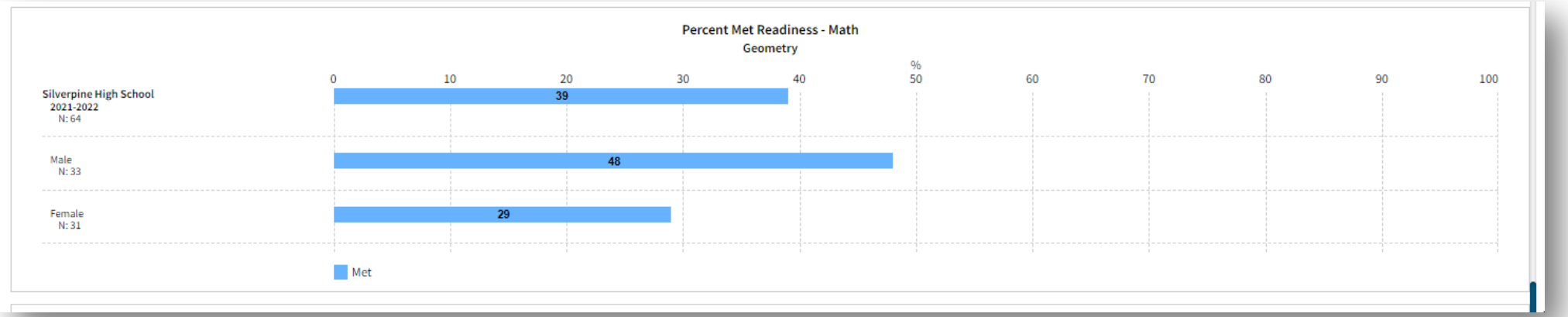
Let's Explore the Reporting Categories!

- Disaggregate the Data
  - Students who are in 10th grade and who are Black/African American



Let’s Explore the Reporting Categories!

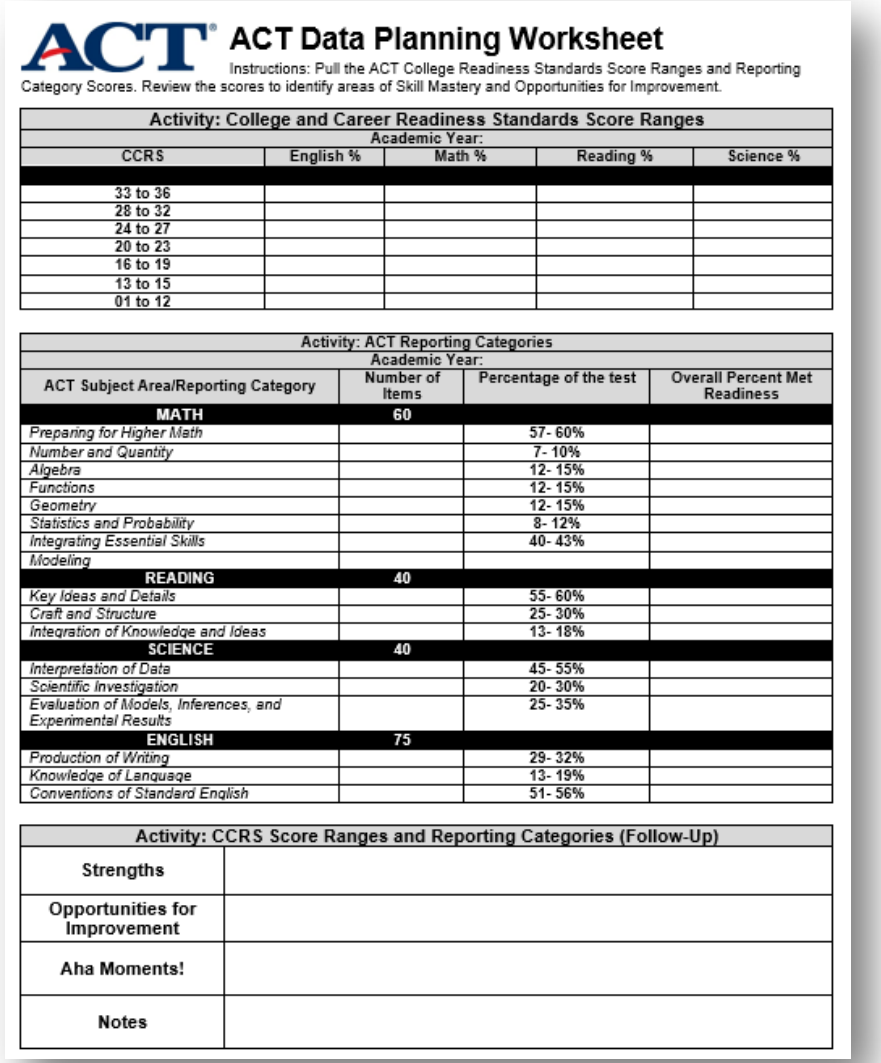
- Disaggregate the Data
  - Students who are in 10th grade and who are White



Let's Explore ACT College Readiness Standards and Reporting Categories!

Add the data and follow-up notes to the Planning Worksheet!

Be Ready to Share Aha Moments!



ACT Data Planning Worksheet

Instructions: Pull the ACT College Readiness Standards Score Ranges and Reporting Category Scores. Review the scores to identify areas of Skill Mastery and Opportunities for Improvement.

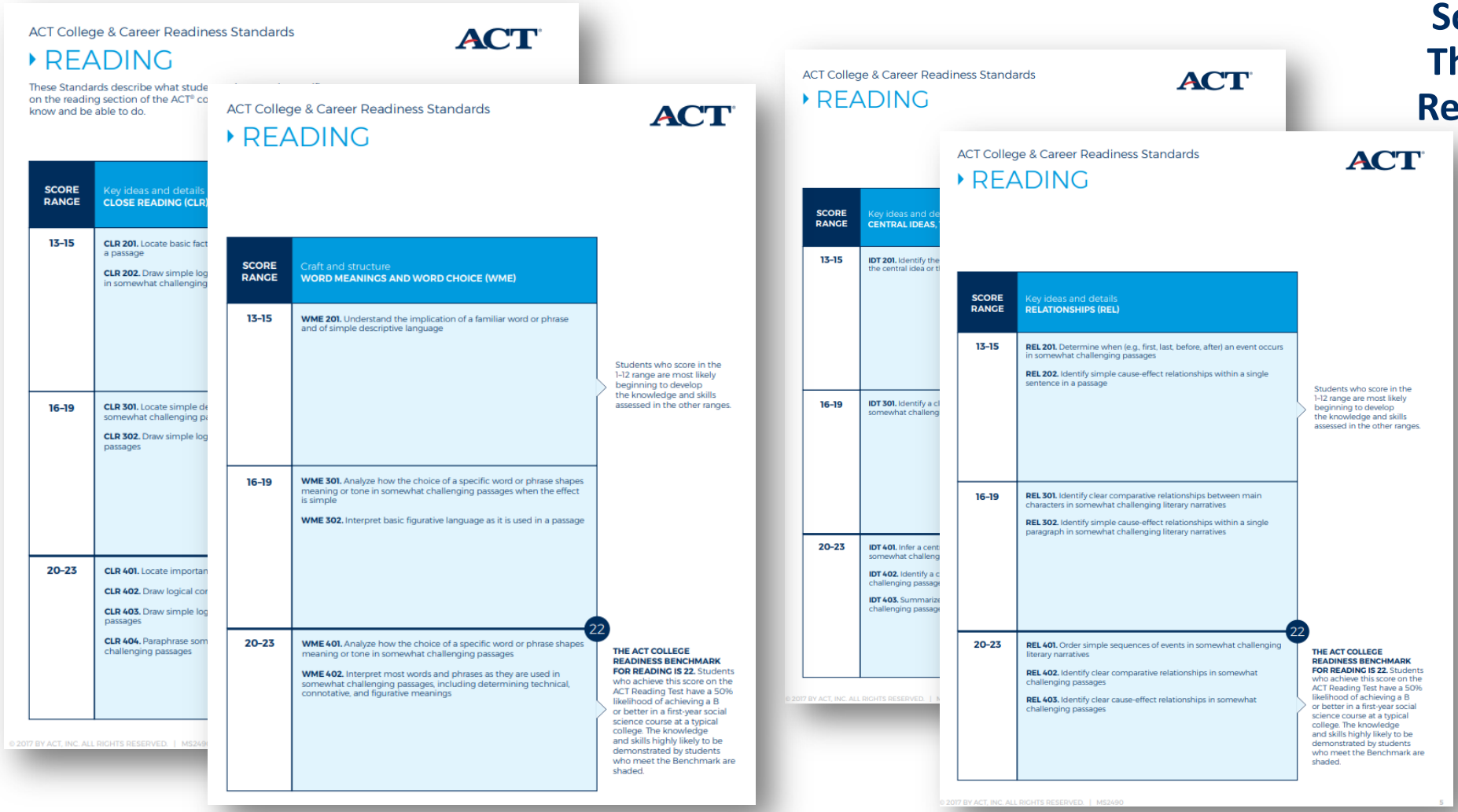
Activity: College and Career Readiness Standards Score Ranges				
Academic Year:				
CCRS	English %	Math %	Reading %	Science %
33 to 36				
28 to 32				
24 to 27				
20 to 23				
16 to 19				
13 to 15				
01 to 12				

Activity: ACT Reporting Categories			
Academic Year:			
ACT Subject Area/Reporting Category	Number of Items	Percentage of the test	Overall Percent Met Readiness
MATH	**60**		
Preparing for Higher Math		57- 60%	
Number and Quantity		7- 10%	
Algebra		12- 15%	
Functions		12- 15%	
Geometry		12- 15%	
Statistics and Probability		8- 12%	
Integrating Essential Skills		40- 43%	
Modeling			
READING	**40**		
Key Ideas and Details		55- 60%	
Craft and Structure		25- 30%	
Integration of Knowledge and Ideas		13- 18%	
SCIENCE	**40**		
Interpretation of Data		45- 55%	
Scientific Investigation		20- 30%	
Evaluation of Models, Inferences, and Experimental Results		25- 35%	
ENGLISH	**75**		
Production of Writing		29- 32%	
Knowledge of Language		13- 19%	
Conventions of Standard English		51- 56%	

Activity: CCRS Score Ranges and Reporting Categories (Follow-Up)	
Strengths	
Opportunities for Improvement	
Aha Moments!	
Notes	

Taking Action on the Data!

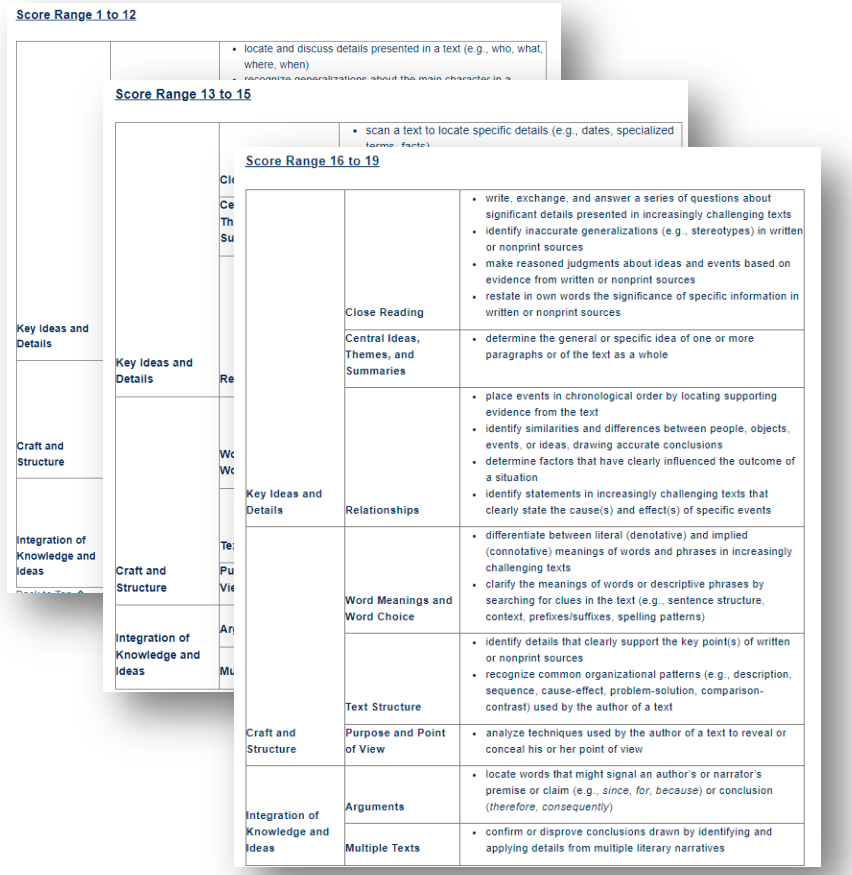
Review ACT College and Career Readiness Standards for Reading



Scan the QR Code to Access The ACT College and Career Readiness Reading Standards

Utilize ACT Resources

STUDENTS: Ideas for Progress



Score Range 1 to 12

Key Ideas and Details	• locate and discuss details presented in a text (e.g., who, what, where, when)
Craft and Structure	
Integration of Knowledge and Ideas	

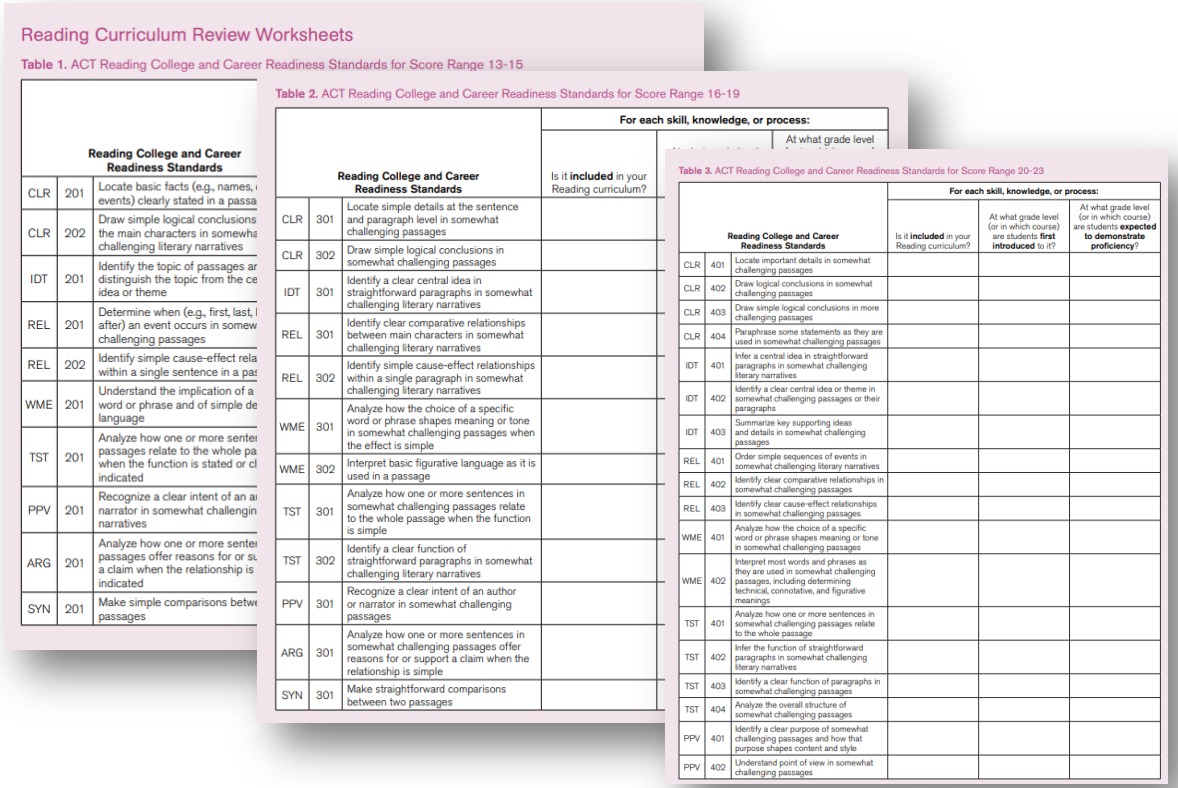
Score Range 13 to 15

Key Ideas and Details	• scan a text to locate specific details (e.g., dates, specialized terms, facts)
Craft and Structure	
Integration of Knowledge and Ideas	

Score Range 16 to 19

Key Ideas and Details	Close Reading	• write, exchange, and answer a series of questions about significant details presented in increasingly challenging texts • identify inaccurate generalizations (e.g., stereotypes) in written or nonprint sources • make reasoned judgments about ideas and events based on evidence from written or nonprint sources • restate in own words the significance of specific information in written or nonprint sources
	Central Ideas, Themes, and Summaries	• determine the general or specific idea of one or more paragraphs or of the text as a whole
	Relationships	• place events in chronological order by locating supporting evidence from the text • identify similarities and differences between people, objects, events, or ideas, drawing accurate conclusions • determine factors that have clearly influenced the outcome of a situation • identify statements in increasingly challenging texts that clearly state the cause(s) and effect(s) of specific events
Craft and Structure	Word Meanings and Word Choice	• differentiate between literal (denotative) and implied (connotative) meanings of words and phrases in increasingly challenging texts • clarify the meanings of words or descriptive phrases by searching for clues in the text (e.g., sentence structure, context, prefixes/suffixes, spelling patterns)
	Text Structure	• identify details that clearly support the key point(s) of written or nonprint sources • recognize common organizational patterns (e.g., description, sequence, cause-effect, problem-solution, comparison-contrast) used by the author of a text
	Purpose and Point of View	• analyze techniques used by the author of a text to reveal or conceal his or her point of view
Integration of Knowledge and Ideas	Arguments	• locate words that might signal an author's or narrator's premise or claim (e.g., *since*, *for*, *because*) or conclusion (*therefore*, *consequently*)
	Multiple Texts	• confirm or disprove conclusions drawn by identifying and applying details from multiple literary narratives

EDUCATORS: ACT Curriculum Worksheets



Reading Curriculum Review Worksheets

Table 1. ACT Reading College and Career Readiness Standards for Score Range 13-15

Reading College and Career Readiness Standards		
CLR	201	Locate basic facts (e.g., names, events) clearly stated in a passa
CLR	202	Draw simple logical conclusions the main characters in somewha challenging literary narratives
IDT	201	Identify the topic of passages ar distinguish the topic from the ce idea or theme
REL	201	Determine when (e.g., first, last, after) an event occurs in somew challenging passages
REL	202	Identify simple cause-effect rela within a single sentence in a pa
WME	201	Understand the implication of a word or phrase and of simple de language
TST	201	Analyze how one or more sente passages relate to the whole pa when the function is stated or cl indicated
PPV	201	Recognize a clear intent of an a narrator in somewhat challengin narratives
ARG	201	Analyze how one or more sente passages offer reasons for or su a claim when the relationship is indicated
SYN	201	Make simple comparisons betwe passages

Table 2. ACT Reading College and Career Readiness Standards for Score Range 16-19

Reading College and Career Readiness Standards			For each skill, knowledge, or process: Is it **included** in your Reading curriculum?	At what grade level (or in which course) are students **first introduced** to it?
CLR	301	Locate simple details at the sentence and paragraph level in somewhat challenging passages		
CLR	302	Draw simple logical conclusions in somewhat challenging passages		
IDT	301	Identify a clear central idea in straightforward paragraphs in somewhat challenging literary narratives		
REL	301	Identify clear comparative relationships between main characters in somewhat challenging literary narratives		
REL	302	Identify simple cause-effect relationships within a single paragraph in somewhat challenging literary narratives		
WME	301	Analyze how the choice of a specific word or phrase shapes meaning or tone in somewhat challenging passages when the effect is simple		
WME	302	Interpret basic figurative language as it is used in a passage		
TST	301	Analyze how one or more sentences in somewhat challenging passages relate to the whole passage when the function is simple		
TST	302	Identify a clear function of straightforward paragraphs in somewhat challenging literary narratives		
PPV	301	Recognize a clear intent of an author or narrator in somewhat challenging passages		
ARG	301	Analyze how one or more sentences in somewhat challenging passages offer reasons for or support a claim when the relationship is simple		
SYN	301	Make straightforward comparisons between two passages		

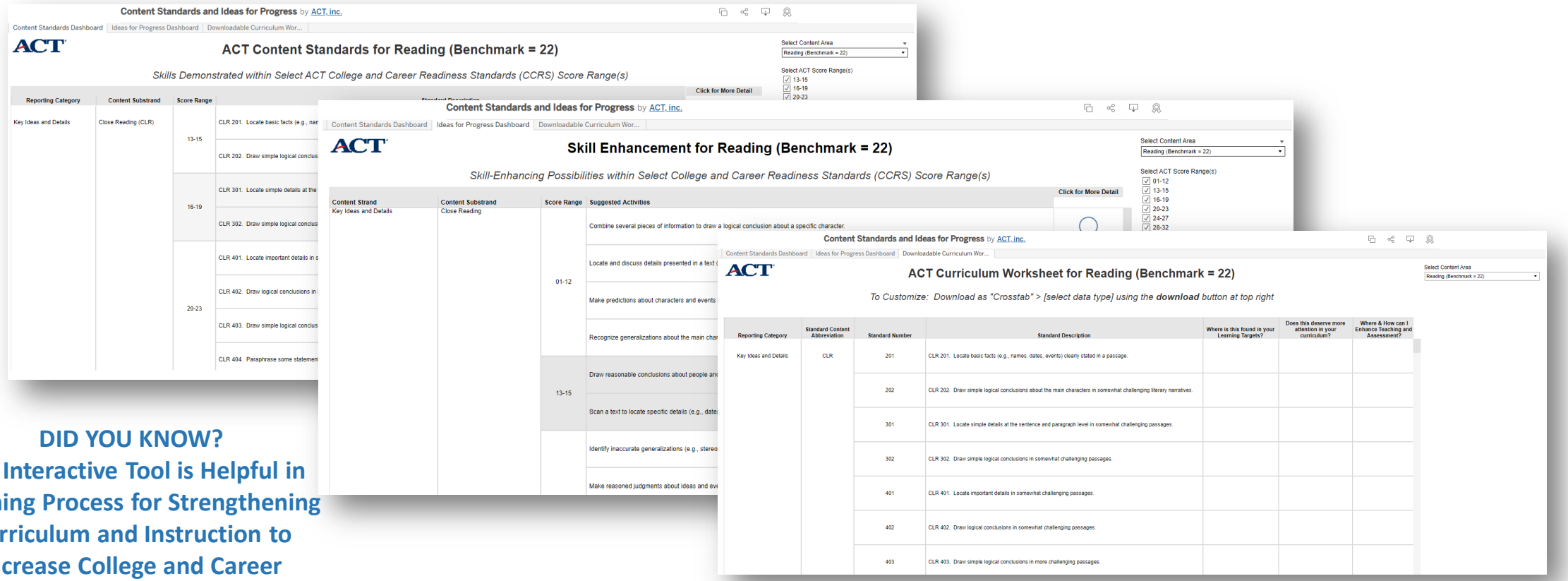
Table 3. ACT Reading College and Career Readiness Standards for Score Range 20-23

Reading College and Career Readiness Standards			For each skill, knowledge, or process: Is it **included** in your Reading curriculum?	At what grade level (or in which course) are students **first introduced** to it?	At what grade level (or in which course) are students **expected to demonstrate proficiency**?
CLR	401	Locate important details in somewhat challenging passages			
CLR	402	Draw logical conclusions in somewhat challenging passages			
CLR	403	Draw simple logical conclusions in more challenging passages			
CLR	404	Paraphrase some statements as they are used in somewhat challenging passages			
IDT	401	Infer a central idea in straightforward paragraphs in somewhat challenging literary narratives			
IDT	402	Identify a clear central idea or theme in somewhat challenging passages or their paragraphs			
IDT	403	Summarize key supporting ideas and details in somewhat challenging passages			
REL	401	Order simple sequences of events in somewhat challenging literary narratives			
REL	402	Identify clear comparative relationships in somewhat challenging passages			
REL	403	Identify clear cause-effect relationships in somewhat challenging passages			
WME	401	Analyze how the choice of a specific word or phrase shapes meaning or tone in somewhat challenging passages			
WME	402	Interpret most words and phrases as they are used in somewhat challenging passages, including determining technical, connotative, and figurative meanings			
TST	401	Analyze how one or more sentences in somewhat challenging passages relate to the whole passage			
TST	402	Infer the function of straightforward paragraphs in somewhat challenging literary narratives			
TST	403	Identify a clear function of paragraphs in somewhat challenging passages			
TST	404	Analyze the overall structure of somewhat challenging passages			
PPV	401	Identify a clear purpose of somewhat challenging passages and how that purpose shapes content and style			
PPV	402	Understand point of view in somewhat challenging passages			

ACT®

Utilize ACT Resources

EDUCATORS: ACT Content Standards and Ideas for Progress

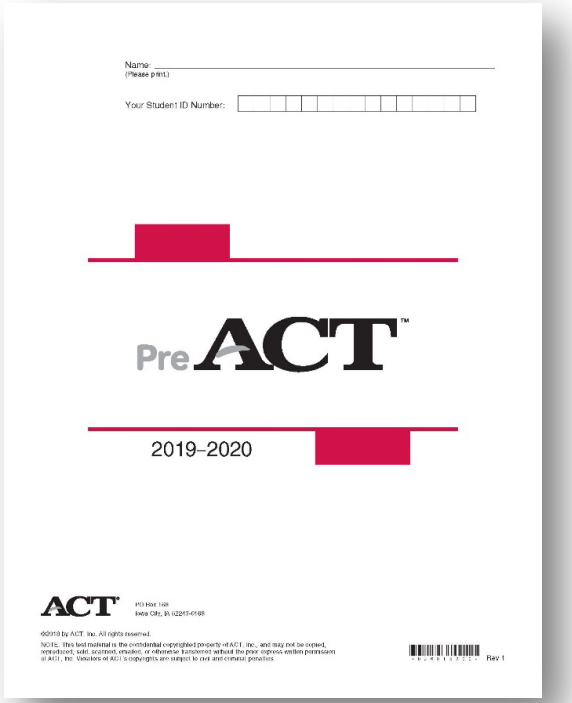


DID YOU KNOW?
The Interactive Tool is Helpful in Planning Process for Strengthening Curriculum and Instruction to Increase College and Career Readiness

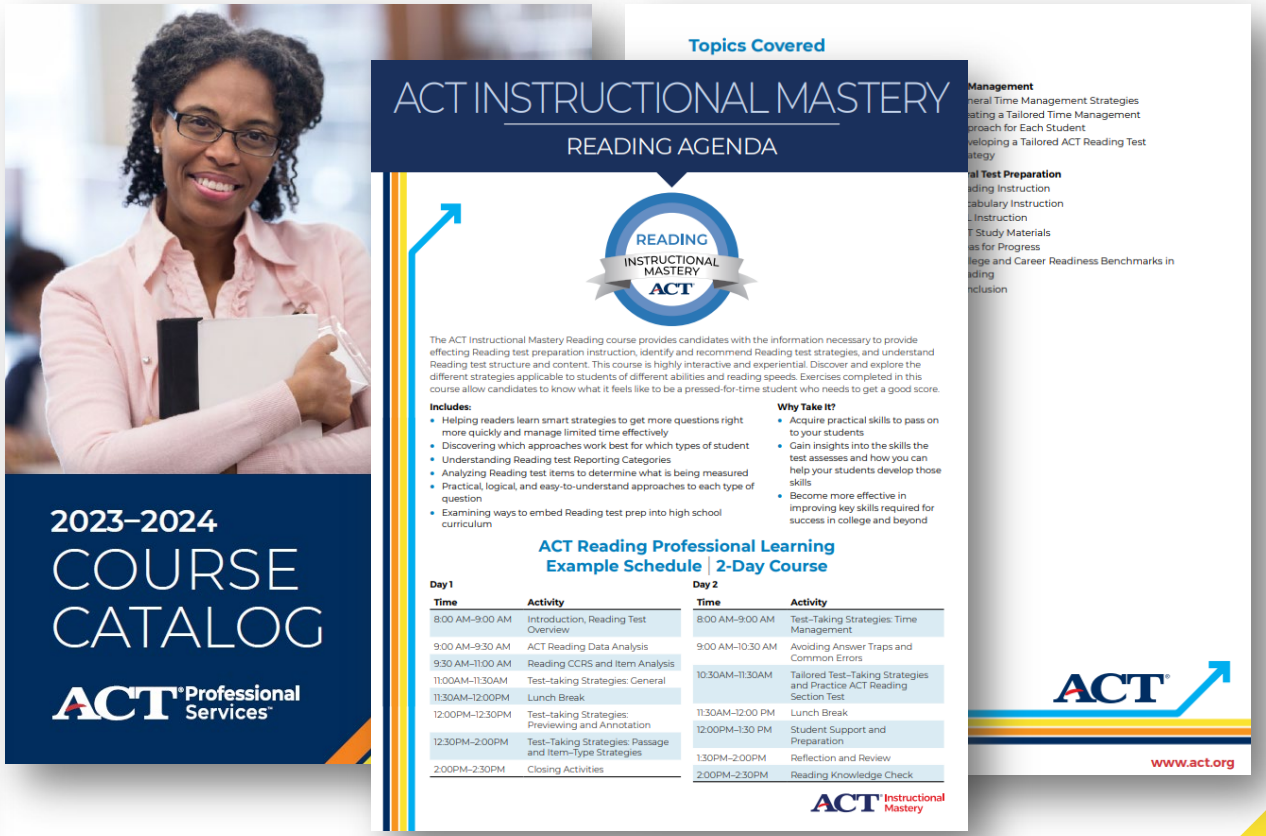
Provide Strategic Support with ACT Solutions

STUDENTS: ACT Online Prep and/or PreACT Assessments

ACT® Online Prep™



EDUCATORS: AIM and/or ACT Professional Services

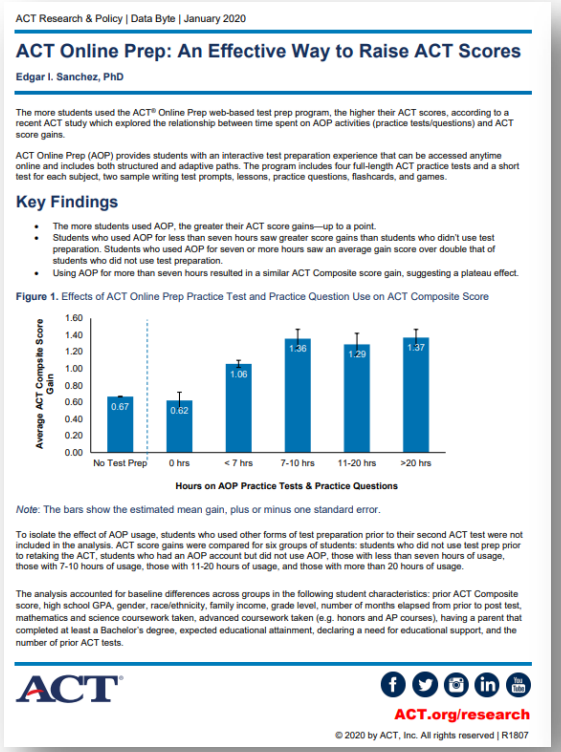


ACT®

Achieve Content Confidence

STUDENTS: Increased Academic Skills

EDUCATORS: Strengthened Curriculum and Instruction



ACT Research & Policy | Data Byte | January 2020

ACT Online Prep: An Effective Way to Raise ACT Scores

Edgar I. Sanchez, PhD

The more students used the ACT® Online Prep web-based test prep program, the higher their ACT scores, according to a recent ACT study which explored the relationship between time spent on AOP activities (practice tests/questions) and ACT score gains.

ACT Online Prep (AOP) provides students with an interactive test preparation experience that can be accessed anytime online and includes both structured and adaptive paths. The program includes four full-length ACT practice tests and a short test for each subject, two sample writing test prompts, lessons, practice questions, flashcards, and games.

Key Findings

- The more students used AOP, the greater their ACT score gains—up to a point.
- Students who used AOP for less than seven hours saw greater score gains than students who didn't use test preparation. Students who used AOP for seven or more hours saw an average gain score over double that of students who did not use test preparation.
- Using AOP for more than seven hours resulted in a similar ACT Composite score gain, suggesting a plateau effect.

Figure 1. Effects of ACT Online Prep Practice Test and Practice Question Use on ACT Composite Score

Note: The bars show the estimated mean gain, plus or minus one standard error.

To isolate the effect of AOP usage, students who used other forms of test preparation prior to their second ACT test were not included in the analysis. ACT score gains were compared for six groups of students: students who did not use test prep prior to retaking the ACT, students who had an AOP account but did not use AOP, those with less than seven hours of usage, those with 7-10 hours of usage, those with 11-20 hours of usage, and those with more than 20 hours of usage.

The analysis accounted for baseline differences across groups in the following student characteristics: prior ACT Composite score, high school GPA, gender, race/ethnicity, family income, grade level, number of months elapsed from prior to post test, mathematics and science coursework taken, advanced coursework taken (e.g. honors and AP courses), having a parent that completed at least a Bachelor's degree, expected educational attainment, declaring a need for educational support, and the number of prior ACT tests.

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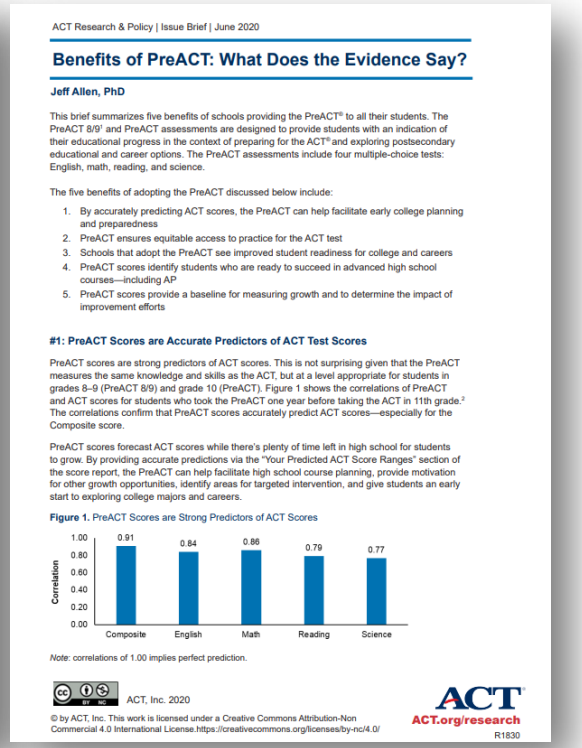

ACT Research & Policy | Issue Brief | June 2020

Benefits of PreACT: What Does the Evidence Say?

Jeff Allen, PhD

This brief summarizes five benefits of schools providing the PreACT® to all their students. The PreACT 8/9[1] and PreACT assessments are designed to provide students with an indication of their educational progress in the context of preparing for the ACT® and exploring postsecondary educational and career options. The PreACT assessments include four multiple-choice tests: English, math, reading, and science.

The five benefits of adopting the PreACT discussed below include:

1. By accurately predicting ACT scores, the PreACT can help facilitate early college planning and preparedness
2. PreACT ensures equitable access to practice for the ACT test
3. Schools that adopt the PreACT see improved student readiness for college and careers
4. PreACT scores identify students who are ready to succeed in advanced high school courses—including AP
5. PreACT scores provide a baseline for measuring growth and to determine the impact of improvement efforts

#1: PreACT Scores are Accurate Predictors of ACT Test Scores

PreACT scores are strong predictors of ACT scores. This is not surprising given that the PreACT measures the same knowledge and skills as the ACT, but at a level appropriate for students in grades 8–9 (PreACT 8/9) and grade 10 (PreACT). Figure 1 shows the correlations of PreACT and ACT scores for students who took the PreACT one year before taking the ACT in 11th grade.[2] The correlations confirm that PreACT scores accurately predict ACT scores—especially for the Composite score.

PreACT scores forecast ACT scores while there's plenty of time left in high school for students to grow. By providing accurate predictions via the "Your Predicted ACT Score Ranges" section of the score report, the PreACT can help facilitate high school course planning, provide motivation for other growth opportunities, identify areas for targeted intervention, and give students an early start to exploring college majors and careers.

Figure 1. PreACT Scores are Strong Predictors of ACT Scores

Note: correlations of 1.00 implies perfect prediction.

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ACT

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R1830

Former AIM Participants Share Feedback:

95% of more than 500 participants say "Yes, I would recommend this workshop to other educators

- It was much more engaging and interactive than I expected, so I retained a lot of what was said and reviewed
- I liked when it discussed the mistakes and how to avoid them
- Good mix of whole group, small group, individual activities
- I did not realize how much I did not know about the English section of the test
- It brought the test to life instead of just pages of script. Collaboration was very beneficial as the test was analyzed
- I altered what I left for my sub this morning based on what I learned yesterday about the types of grammar concepts

ACT®

Retest to Manage Goals

STUDENTS: Increased

ACT Superscore=

Decrease Remediation and Increase in Scholarships

How Hard Is It To Increase My Score?
The number of questions to answer correctly to meet the subject-area benchmarks is highlighted in green.

This scale can vary slightly from test to test but notice that, in most cases, you only need to get 2-3 more questions correct to hit the next score level for each subject.

ACT Scale	English	Math	Reading	Science	ACT Scale
36	72-75		39-40	39-40	36
35	68-71	58	37-38	38	35
34	66-67	56	36		34
33	65	55	35	36	33
32	64		34	35	32
31	63	53	33	34	31
30	62	51-52	32	33	30
29	61	49-50	31	32	29
28	59-60	48	30		28
27	58	44-47	29	31	27
26	56-57	41-43		30	26
25	54-55	39-40	28	28-29	25
24	51-53	37-38	26-27	26-27	24
23	49-50	35-36	25	24-25	23
22	47-48	34	23-24	22-23	22
21	44-46	32-33	22	21	21
20	41-43	31	21	19-20	20
19	39-40	29-30	19-20	17-18	19
18	37-38	27-28	18	16	18
17	35-36	24-26	17	14-15	17
16	33-34	20-23	16	13	16

EDUCATORS: Increased AR

SQSS Indicators Scores for College Readiness

School Quality and Student Success Indicators

Indicator	Grade Level or Cohort for Points Available	Points for Student
Student Engagement	Grades K -11	Point based on Chronic Absence (CA) risk level: CA<5% = 1.0 Point 5< =CA < 10% = 0.5 Point CA >=10% = 0.0 Point
Science Achievement	Grades 3 – 10	Ready or Exceeds = 1.0 Point Close or Not Ready = 0.0 Point
Science Growth	Grades 4 – 10	Using ACT Aspire Science Value-Added Score Percentile Rate VAS PR ≥ 75 = 1.0 Point 25 ≤ VAS PR < 75 = 0.5 Point VAS PR ≤ 25 = 0.0 Point
Reading at Grade Level	Grades 3 – 10	Ready or Exceeds = 1.0 Point Close or Not Ready = 0.0 Point
ACT	Grade 12 Cycle 7 Enrollment	Best ACT Composite Score ≥ 19 = 1.0 Point Use best ACT score from prior 3 years.
ACT Readiness Benchmark	Grade 12 Cycle 7 Enrollment	ACT Reading ≥ 22 = 0.5 point ACT Math ≥ 22 = 0.5 point ACT Science ≥ 23 = 0.5 point Use best ACT score from prior 3 years for each subject.
GPA 2.8 or better on 4.0 scale	Grade 12 Cycle 7 Enrollment	High school final GPA ≥ 2.8 = 1.0 Point
Community Service Learning Credits Earned	Grade 12 Cycle 7 Enrollment	1 or more SL credits earned = 1.0 Point Act 648 of 1993 course #496010 or other state approved courses Credits earned at any time during grades 9 - 12

Optimize College and Career Readiness

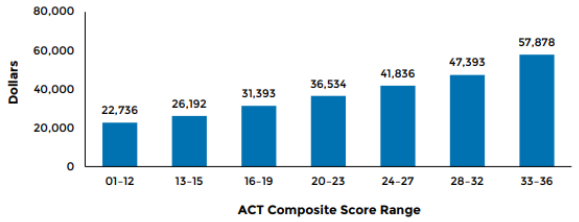
STUDENTS: Increased College and Career Readiness Can Lead to Success in College and Secure a Higher Income

The Importance of Graduating from High School College and Career Ready: The Positive Relationship between ACT Score and Future Earnings

Krista D. Mattern, PhD, and Ty M. Cruce, PhD

Previous research has linked higher levels of academic preparation as measured by the ACT® to postsecondary success, such as earning higher college grades and completing a college degree in a timely manner.[1] This ACT Data Byte extends these findings, illustrating the positive relationship between graduating from high school college and career ready and future annual earnings. Data from a collaboration between ACT and Opportunity Insights–a non-profit organization located at Harvard University–show that the annual earnings individuals' report during their late 20s are positively related to their academic achievement level measured during high school.[2]

Figure 1. Mean Annual Earnings (in 2016 dollars) at Age 28 by ACT Composite Score Range



Notes. Based on over 9.1 million ACT-tested individuals who were born between 1979 and 1987. Mean annual earnings are calculated using all ACT-tested individuals, including those individuals (9%) who reported *no* positive income at the age of 28. The positive relationship between ACT Composite score range and mean annual earnings remains when the sample is limited to only those individuals who reported positive income at the age of 28.

Criterion-Related and Differential Validity of ACT® WorkKeys® in Arkansas

Jeffrey Conway, PhD

Introduction

In the winter of 2020, ACT and the Arkansas Department of Higher Education (ADHE) entered into a data sharing agreement where the ADHE would share educational data on several cohorts of incoming college freshmen and ACT would match that data to its test records. The original purpose of this work was to create high school to college success reports using ACT® test scores as a predictor. The purpose of this paper is to outline an additional use of this data by examining the validity of ACT® WorkKeys® scores in predicting first-year college GPA and to examine if any differential validity, based on gender or ethnicity, existed in predicting first-year college GPA. ACT WorkKeys tests students on foundational workplace skills (e.g., mathematics, reading comprehension, interpretation of graphics). Moreover, students can earn an ACT® WorkKeys® National Career Readiness Certificate® (NCRC®), which certifies skills to potential employers and postsecondary training programs (ACT, 2014). The NCRC is determined based on three assessments: ACT® WorkKeys® Applied Math, ACT® WorkKeys® Workplace Documents, and ACT® WorkKeys® Graphic Literacy.

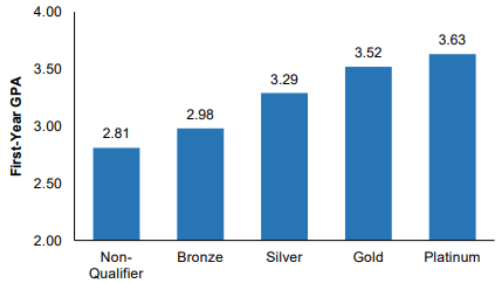
Data

To start, a unique identifier using first name, last name, and date of birth was created to find matching WorkKeys Assessment scores. Next, a unique dataset was created which contained WorkKeys scores and first-year college GPA for students within the Arkansas educational system at either a 2- or 4-year institution. The students took WorkKeys in high school prior to enrollment. This dataset contained 964 students. The sample was 52% female. The sample was 63% White, 20% Black/African American, 11% Hispanic/Latino, with the remaining proportion of the sample coming from Asian (1%), Native American (0.5%), Pacific Islander (0.5%), and Multiracial groups (4%). Lastly, the distribution of NCRC distinctions were as follows: Non-Qualifier (9%), Bronze (26%), Silver (32%), Gold (22%), and Platinum (11%). Descriptive statistics of the key variables of the study are in Table 1.

Table 1. Descriptive Statistics

Variable	Mean	SD	Scale
GPA	3.25	0.63	0–4.33
WK Applied Math	79.12	4.58	65–90
WK Graphic Literacy	79.26	4.17	65–90
WK Workplace Documents	79.35	4.02	65–90

Figure 1. Average First-Year GPA by NCRC Level



Differential Validity Overview

Differential validity occurs when the relationship between test scores and an outcome varies by subgroup, which could suggest that the interpretation of scores should vary by subgroup. Differential validity is examined using regression where interactions between test scores and subgroups are tested to determine whether best-fit regression lines differ by subgroup. According to the *Standards for Educational and Psychological Testing* (2014, p. 70), "In cases where there is credible evidence of differential validity, developers should provide clear guidance to the test user about when and whether valid interpretations of scores for their intended uses can or cannot be drawn for individuals from these subgroups." Based on this standard, it is important to test whether WorkKeys Assessments create differential validity when predicting first-year GPA based on gender and race/ethnicity. The differential validity for WorkKeys has not been empirically tested before.

Differential Validity Results

The first differential validity analysis was focused on gender. The regression test using gender produced a significant interaction between NCRC level and gender ($\beta = -0.25$, $p < .01$). The direction of the interaction favored men over women. Hence, NCRC level overpredicts the GPA level of men (versus women). The results of this analysis are plotted in Figure 2, which shows a stronger slope in the blue line for women as opposed to the orange line for men, creating a difference in intercepts for the separate regression equations. Stated simply, women outperform predictions, relative to men, regarding GPA. As women continue to outnumber men in higher education, this small effect could serve to close this gap. This is a common finding across ACT research and one reason for the difference could be that women tend to have higher psychosocial factors (Ndum et al., 2015).

Optimize College and Career Readiness

STUDENTS: Increased College and Career Readiness Can Lead to Success in College and Secure a Higher Income

The ACT College Readiness Benchmarks

The ACT College Readiness Benchmarks are the ACT scores that represent the level of achievement required for students to have a **50% chance of obtaining a B or higher** or about a 75-80% chance of obtaining a C or higher in corresponding credit-bearing courses.

Progress Indicator and Refreshed WorkKeys

The Progress Toward the ACT NCRC indicator provides students who take the ACT with information about their level of career readiness based on their ACT composite score. More specifically, this indicator provides an estimate of students' likely achievement level for the ACT WorkKeys NCRC.

Based on the most recent ACT/WorkKeys linking study, students who earn an ACT composite score of:
<13 are unlikely to obtain an **ACT NCRC**
13 to 16 are most likely to obtain a **Bronze NCRC**
17 to 21 are most likely to obtain a **Silver NCRC**
22 to 26 are most likely to obtain a **Gold NCRC.**

Higher NCRC Levels Correlate to High Income Levels

Performing well on the ACT WorkKeys Assessments and earning a higher WorkKeys NCRC level can help people secure higher incomes in the short and long terms, research confirms.

Individuals who took WorkKeys in 2011 and **earned an NCRC tended to increase their incomes at a rate much greater** than national trends.

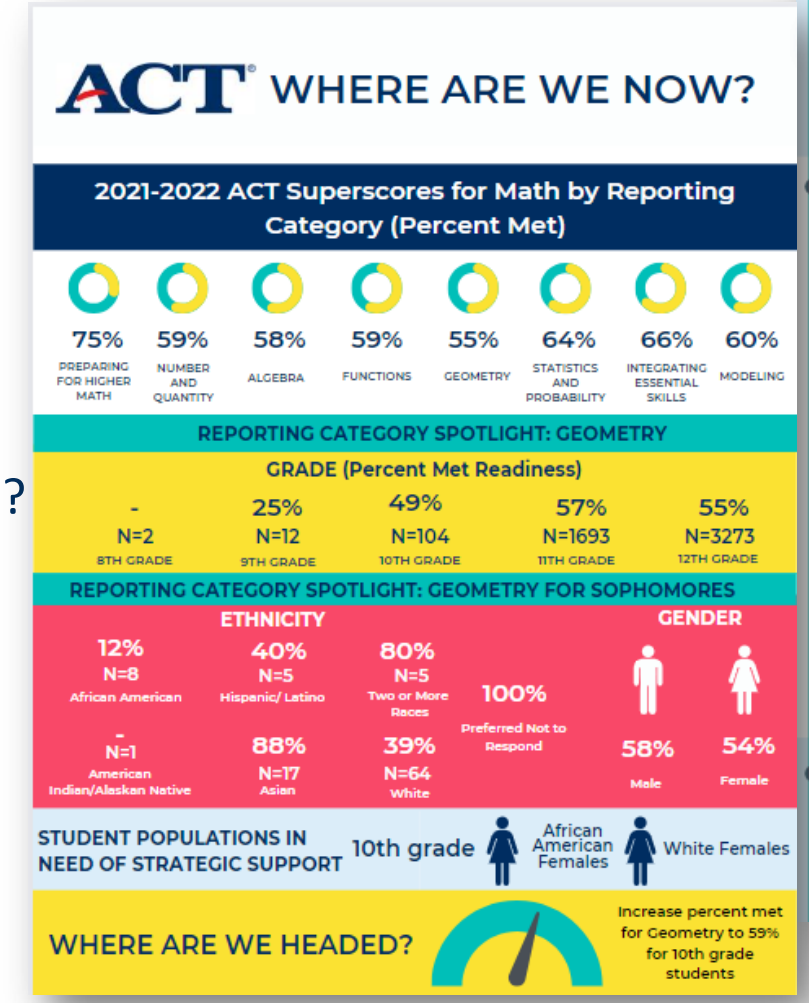
Short-term income trends were similar for all high school WorkKeys testers, but those who earned higher NCRC levels—especially Gold or Platinum—increased their incomes at a much faster rate starting three years after testing.

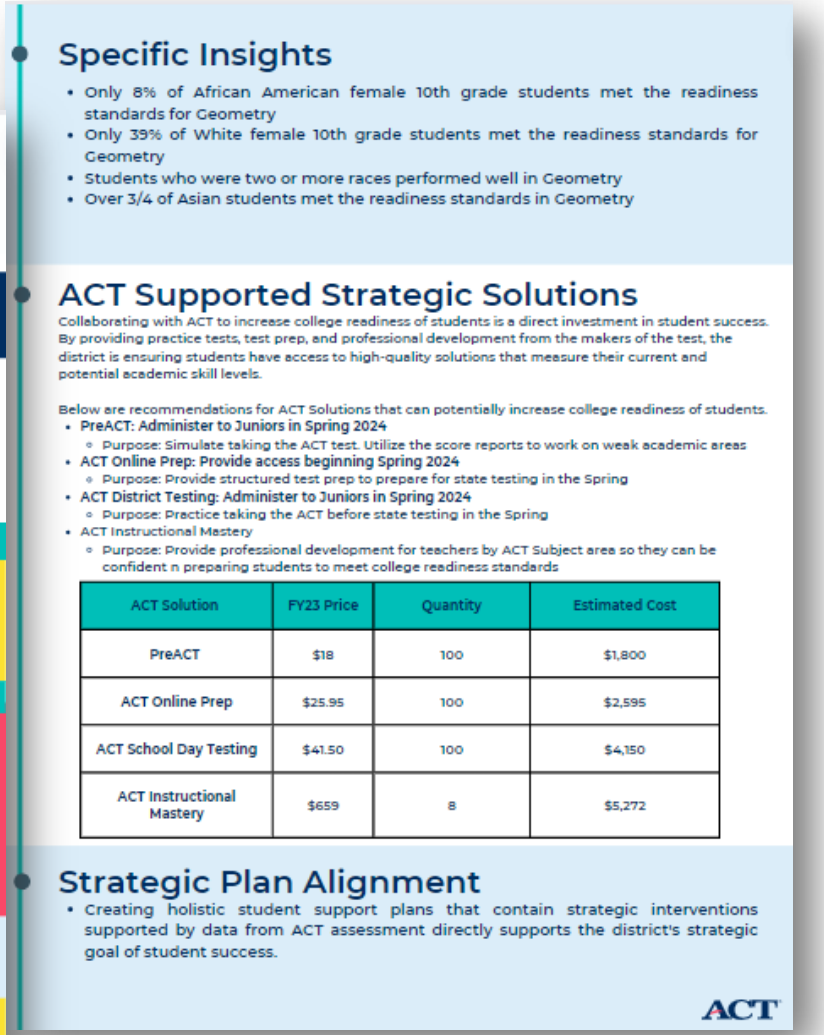
"Skills to Pay the Bills"

Communicate to Stakeholders

Key Elements to Include:

- Findings from the Data
- Solutions to Increase College Readiness
- Linkage of Solutions to Strategic Plan
- Potential Impact on College Readiness of Students
- What Does Success Look Like?
- Implementation Timeline
- Opportunity for Feedback





What’s the Plan?

Immediate Strategies to Increase College and Career Readiness

Fall

- **Administer the PreACT to ALL 8th, 9th, and 10th grade students**
  - Use the ACT student data from the test to identify areas of individual success plans
    - **Benefit:** Academic college and career readiness baselines are established for all students
    - **ACT Research Supported Strategy:** Average ACT Scores increase 1-2 points
- **Administer ACT District Testing to ALL Juniors**
  - Use the ACT student data from the test to identify areas of individual success plans
    - Support Juniors with test prep via **ACT Online Prep** to prepare for ACT State Testing in the Spring
  - **Potential Benefits**
    - Establishment of college and career readiness baselines for all students
    - Reduced test anxiety for State Testing
    - Increase in ACT Scores
- **Provide Seniors with an Opportunity to Retest: ACT District Testing**
  - All students are guaranteed the opportunity to take the ACT more than once during high school
    - **Potential Benefits**
      - The ACT: Increased scholarship earning potential and/or correct academic placement

Spring

- **Administer the PreACT to ALL 8th, 9th, and 10th grade students**
  - Use the ACT student data from the test to identify areas of individual success plans
    - **Benefit:** Academic college and career readiness baselines are established for all students
    - **ACT Research Supported Strategy:** Average ACT Scores increase 1-2 points

Fall 2023- Spring 2024

- **Provide teachers with the opportunity to participate in ACT Instructional Mastery Courses**

ACT Supported Assessment Plan

Grade	Fall	Spring
8th grade	PreACT 8/9	PreACT 8/9
Freshman	PreACT 8/9	PreACT 8/9
Sophomores	PreACT	PreACT
Juniors	ACT Online Prep™ The ACT	The ACT (State Funded)
Seniors	The ACT	ACT WorkKeys Assessments

ACT Supported Professional Growth Plan

ACT Subject	Course Schedule	Participants
English	TBD	TBD
Math	TBD	TBD
Reading	TBD	TBD
Science	TBD	TBD
Writing	TBD	TBD

ACT®

Long-Term Strategies to Increase College and Career Readiness

Analyze ACT Student Data To Strengthen Curriculum And Instruction

- Utilize ACT Curriculum Worksheets to identify areas of growth in each of the ACT subject areas
- Provide teachers with high-quality professional development to increase content confidence for the ACT

Assess Students Regularly with ACT Connected Assessments

- Integrate ACT assessments into the district assessment plan to assess students regularly so they understand their progress is related to future success and not just a score

Collect Feedback from Stakeholders to Plan for the Future and Embrace Innovation

- Incorporate feedback from internal external stakeholders to continue to streamline priorities and empower the school communities to accelerate student progress

ACT®

Moving Forward with ACT Supported Strategies: Benefits for Students and Your School District

STUDENT BENEFITS

- Increase the Academic Placement Into College-Level Courses for Student
- Increase in the Scholarship Earning Potential of Students

DISTRICT BENEFITS

- Increase in ACT Performance Scores for ESSA
- Increase in the Professional Development of Faculty and Staff

LEADERSHIP SUPPORT SERVICE
DIVISION OF ELEMENTARY & SECONDARY EDUCATION

ACT®

Plan: Equity and Access

- Providing ACT Solutions to All Students Ensures Access for All Students
- Identifying Opportunities to Increase College Readiness for Underserved-Students Facilitates a Culture of Equity
- Implementing Strategic Interventions to At-Risk Students Supports a Culture of Equity

Student Success Plans Supported by ACT Solutions

Division of Elementary & Secondary Education	ACT®	YOUR DISTRICT
State Accountability	**ACT Solution**	**Local Implementation**
• Students can input and store state assessment scores and standardized test results (AP, ACT, SAT, etc.)	• Students have access to their scores via MyACT. • Educators have access to student score reports via success.act.org.	• Educators can access the student score reports in ACT Online Reporting, export the data, and upload the information into individual student success plans or student information system.
• Provide students with feedback on individual education and skill deficiencies in comparison to desired career pathway.	• Students have access to PreACT 8/9,PreACT, and ACT scores via MyACT. • Educators have access to student score reports via success.act.org.	• Educators can access the student score reports for PreACT 8/9, PreACT, PreACT Secure, and the ACT in ACT Online Reporting, export the data, and upload the information into individual student success plans or student information system.
• Assessments measuring and providing feedback on student knowledge, skills, ability, and interests with alignment to the 16 career clusters.	• Students have access to PreACT 8/9,PreACT, and ACT scores via MyACT. • Educators have access to student score reports via success.act.org.	• Educators can access the student score reports for PreACT 8/9, PreACT, PreACT Secure, and the ACT in ACT Online Reporting, export the data, and upload the information into individual student success plans or student information system.

ACT®

ESSA School Index: School Quality and Student Success (SQSS)

Division of Elementary & Secondary Education	ACT®	YOUR DISTRICT
State Accountability	**ACT Solution**	**Local Implementation**
• Proficient Reading Level Grades 3-10	•Administer the PreACT Suite (8th -10th grade) to set academic baselines.	Educators can utilize ACT Online Reporting to monitor progress toward the goal of students reading proficiently. • PreACT 8/9 (Scores by Subject area and) • PreACT (Scores by Subject area) • PreACT Secure (Scores by Subject area-Look for trends in the data) • The ACT (Scores by Subject area-Look for trends in the data)
• ACT Composite of 19 or Greater	• Administer the PreACT 8/9 and PreACT to assess academic progress and be informed of predicted ACT scores. • Offer the ACT to Seniors as a retake to improve their scores for scholarships and academic placement.	Educators can utilize ACT Online Reporting to monitor progress toward the goal of ACT Composite of 19 or greater! • PreACT 8/9 (Scores by Subject area and) • PreACT (Scores by Subject area) • PreACT Secure (Scores by Subject area-Look for trends in the data) • The ACT (Scores by Subject area-Look for trends in the data)
• ACT Readiness Benchmark	• Administer the PreACT 8/9 and PreACT to assess academic progress and be informed of predicted ACT scores. • Offer the ACT to Seniors as a retake to improve college readiness.	Educators can utilize ACT Online Reporting to monitor progress toward the goal of increasing the ACT Readiness Benchmark • PreACT 8/9 (Scores by Subject area and) • PreACT (Scores by Subject area) • PreACT Secure (Scores by Subject area-Look for trends in the data) • The ACT (Scores by Subject area-Look for trends in the data)

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ESSA School Index: School Quality and Student Success (SQSS)

Table 2. ACT Cutoff Score Guide for Placement in First-Year College Courses

Course Type	ACT Test	Score Needed for 50% Chance of B or Higher
English Courses		
Standard Composition	English	18
Advanced Composition	English	19
Mathematics Courses		
College Algebra	Mathematics	22
Pre-Calculus	Mathematics	24
Trigonometry	Mathematics	24
Calculus	Mathematics	27
Social Science Courses		
American History	Reading	23
Other History	Reading	23
Psychology	Reading	22
Sociology	Reading	21
Political Science	Reading	22
Natural Science Courses		
Biology	Science	23
Chemistry	Science	26

More than a Score!

Why are we concerned about ACT scores when some colleges and universities are test-optional in their admissions processes?

ACT® College and Career Readiness Benchmarks™

SUBJECT	THE ACT TEST
English	18
Math	22
Reading	22
Science	23
ELA	20
STEM	26

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Reasons to Collaborate with ACT to Increase College Readiness

- **Utilization** of the student data via ACT Online Reporting is critical in reporting on accountability metrics
- **Application** of ACT Curriculum Worksheets to identify areas to strengthen in curriculum and instruction
- **Administration** of the PreACT Suite ensures equitable access to practice for the ACT test
- **Participation** in ACT School Day testing provides your students with the opportunity to assess their academic skills and level of college readiness in a familiar environment
    - Having all students participate raises college awareness and exposure among all students, rather than only self-selected, college-bound students. For some students, the experience may help them realize they have the skills to perform college-level coursework.
- **Comparison** of AR Curriculum Standards and ACT Curriculum Review Worksheets for College and Career Standards

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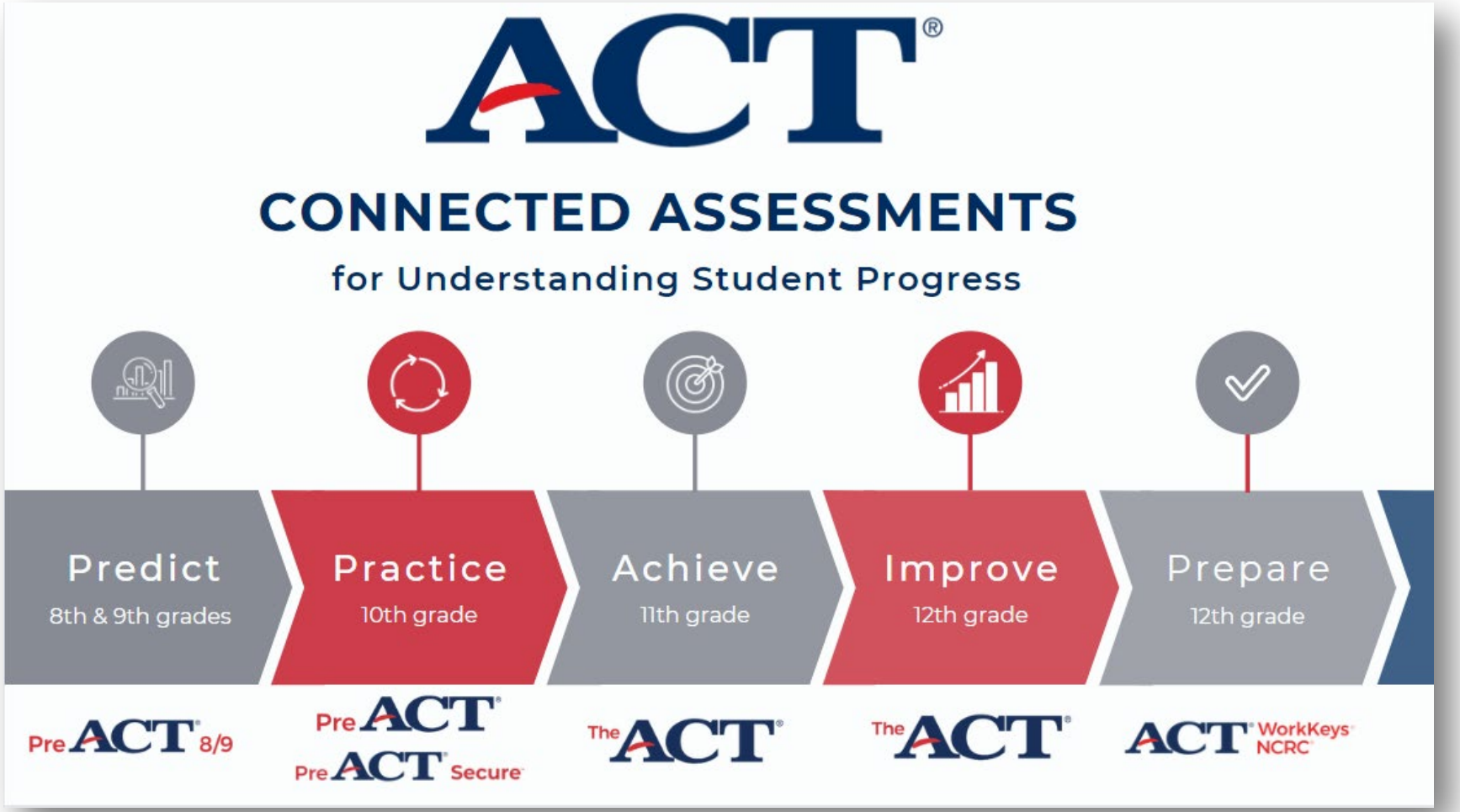
Monitor Progress Toward Goals-Connected Assessments



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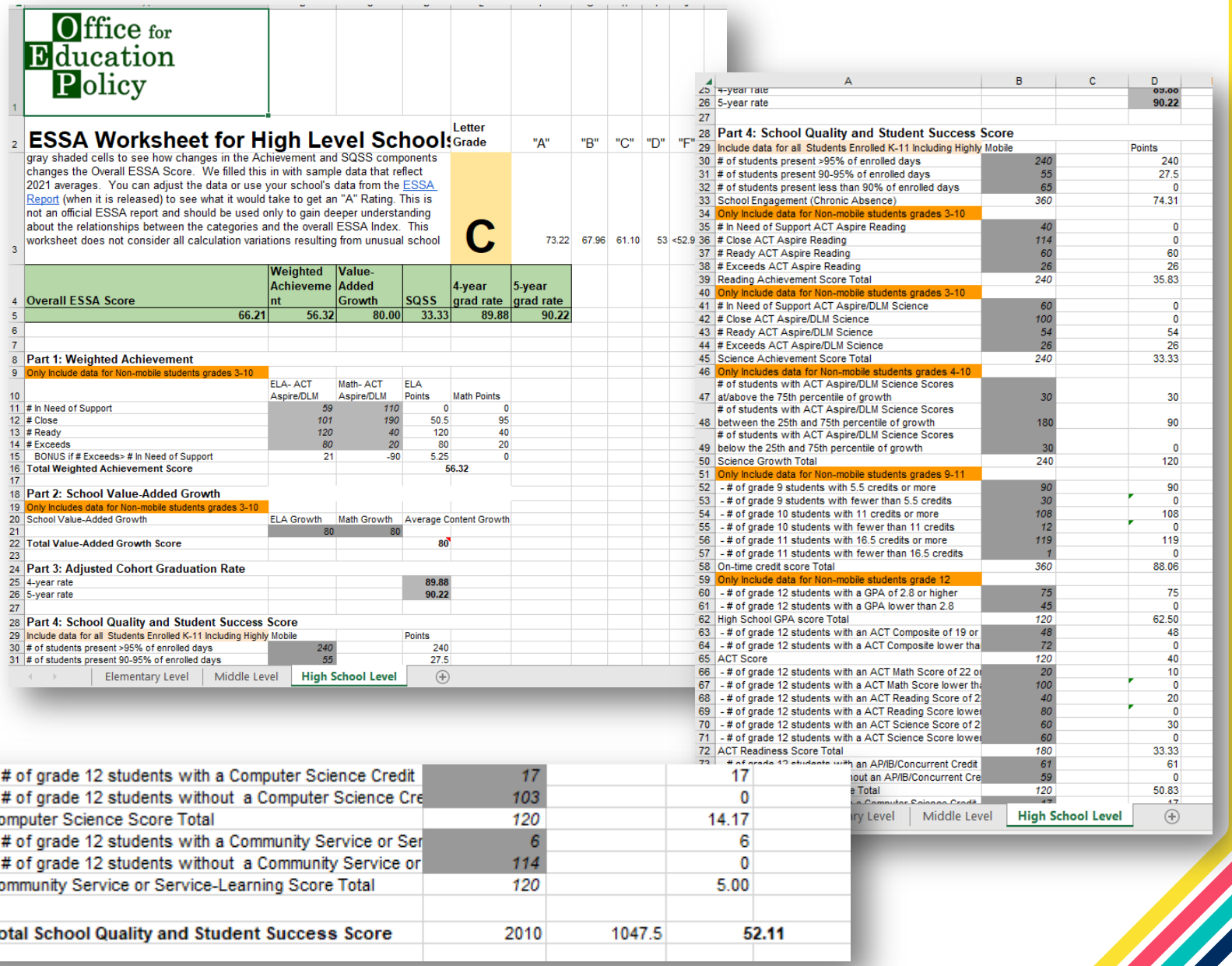
Tracking Tool: ESSA Worksheet for High Schools

- Fill in the gray shaded cells to see how changes in the Achievement and SQSS components changes the Overall ESSA Score.
- We filled this in with sample data that reflect 2021 averages.
- You can adjust the data or use your school's data from the ESSA Report (when it is released) to see what it would take to get an "A" Rating.
- This is not an official ESSA report and should be used only to gain deeper understanding about the relationships between the categories and the overall ESSA Index.
- This worksheet does not consider all calculation variations resulting from unusual school configurations or special circumstances.



Office for Education Policy

ESSA Worksheet for High Level Schools

gray shaded cells to see how changes in the Achievement and SQSS components changes the Overall ESSA Score. We filled this in with sample data that reflect 2021 averages. You can adjust the data or use your school's data from the ESSA Report (when it is released) to see what it would take to get an "A" Rating. This is not an official ESSA report and should be used only to gain deeper understanding about the relationships between the categories and the overall ESSA Index. This worksheet does not consider all calculation variations resulting from unusual school

Letter Grade: C

"A"	"B"	"C"	"D"	"F"
73.22	67.96	61.10	53	<52.9

Overall ESSA Score	Weighted Achievement	Value-Added Growth	SQSS	4-year grad rate	5-year grad rate
66.21	56.32	80.00	33.33	89.88	90.22

Part 1: Weighted Achievement

Only Include data for Non-mobile students grades 3-10

	ELA- ACT Aspire/DLM	Math- ACT Aspire/DLM	ELA Points	Math Points
# In Need of Support	59	110	0	0
# Close	101	190	50.5	95
# Ready	120	40	120	40
# Exceeds	80	20	80	20
BONUS if # Exceeds> # In Need of Support	21	-90	5.25	0
Total Weighted Achievement Score			**56.32**	

Part 2: School Value-Added Growth

Only Includes data for Non-mobile students grades 3-10

School Value-Added Growth	ELA Growth	Math Growth	Average Content Growth
	80	80	
Total Value-Added Growth Score			**80**

Part 3: Adjusted Cohort Graduation Rate

4-year rate	89.88
5-year rate	90.22

Part 4: School Quality and Student Success Score

Include data for all Students Enrolled K-11 Including Highly Mobile		Points
# of students present >95% of enrolled days	240	240
# of students present 90-95% of enrolled days	55	27.5
# of students present less than 90% of enrolled days	65	0
School Engagement (Chronic Absence)	360	74.31
Only Include data for Non-mobile students grades 3-10		
# In Need of Support ACT Aspire Reading	40	0
# Close ACT Aspire Reading	114	0
# Ready ACT Aspire Reading	60	60
# Exceeds ACT Aspire Reading	26	26
Reading Achievement Score Total	240	35.83
Only Include data for Non-mobile students grades 3-10		
# In Need of Support ACT Aspire/DLM Science	60	0
# Close ACT Aspire/DLM Science	100	0
# Ready ACT Aspire/DLM Science	54	54
# Exceeds ACT Aspire/DLM Science	26	26
Science Achievement Score Total	240	33.33
Only Includes data for Non-mobile students grades 4-10		
# of students with ACT Aspire/DLM Science Scores at/above the 75th percentile of growth	30	30
# of students with ACT Aspire/DLM Science Scores between the 25th and 75th percentile of growth	180	90
# of students with ACT Aspire/DLM Science Scores below the 25th and 75th percentile of growth	30	0
Science Growth Total	240	120
Only Include data for Non-mobile students grades 9-11		
- # of grade 9 students with 5.5 credits or more	90	90
- # of grade 9 students with fewer than 5.5 credits	30	0
- # of grade 10 students with 11 credits or more	108	108
- # of grade 10 students with fewer than 11 credits	12	0
- # of grade 11 students with 16.5 credits or more	119	119
- # of grade 11 students with fewer than 16.5 credits	1	0
On-time credit score Total	360	88.06
Only Include data for Non-mobile students grade 12		
- # of grade 12 students with a GPA of 2.8 or higher	75	75
- # of grade 12 students with a GPA lower than 2.8	45	0
High School GPA score Total	120	62.50
- # of grade 12 students with an ACT Composite of 19 or	48	48
- # of grade 12 students with a ACT Composite lower tha	72	0
ACT Score	120	40
- # of grade 12 students with an ACT Math Score of 22 o	20	10
- # of grade 12 students with a ACT Math Score lower tha	100	0
- # of grade 12 students with an ACT Reading Score of 2	40	20
- # of grade 12 students with a ACT Reading Score lowe	80	0
- # of grade 12 students with an ACT Science Score of 2	60	30
- # of grade 12 students with a ACT Science Score lowe	60	0
ACT Readiness Score Total	180	33.33
- # of grade 12 students with an AP/IB/Concurrent Credit	61	61
- # of grade 12 students without an AP/IB/Concurrent Cre	59	0
Total	120	50.83

Elementary Level | Middle Level | High School Level

76	- # of grade 12 students with a Computer Science Credit	17		17
77	- # of grade 12 students without a Computer Science Cre	103		0
78	Computer Science Score Total	120		14.17
79	- # of grade 12 students with a Community Service or Ser	6		6
80	- # of grade 12 students without a Community Service or	114		0
81	Community Service or Service-Learning Score Total	120		5.00
82				
83	**Total School Quality and Student Success Score**	2010	1047.5	**52.11**
84				

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Utilize ACT Resources to Support You and Your Students

- **ACT Account Executive**
  - Ashley Buchman ashley.buchman@act.org
- **ACT Content Standards and Ideas for Progress**
- Click here to access the interactive dashboard
- **ACT Curriculum and Assessment Planner**
  - Click here to access the comprehensive assessment planner
- **ACT Data Tools**
  - Click here to access the data and visualization tools
- **ACT Online Reporting**
  - Click here to access the online reporting platform
  - Click here to access the 2023 ACT Online Reporting User Guide

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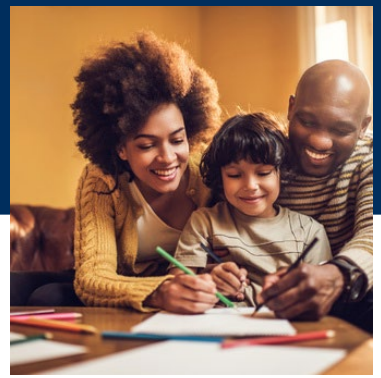
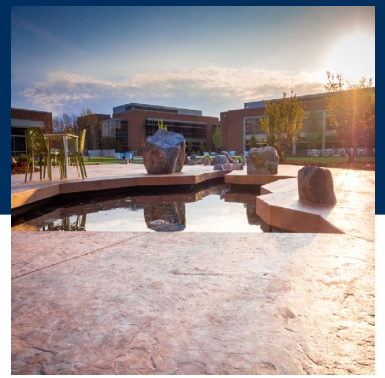

Thank you!

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ASHLEY BUCHMAN-ACT ACCOUNT EXECUTIVE • LET'S CONNECT! •