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PLAN®

Test Supervisor's Manual

ACT®

Visit the ACT website at **www.act.org**.

ACT endorses the *Code of Fair Testing Practices in Education* and the *Code of Professional Responsibilities in Educational Measurement*, guides to the conduct of those involved in educational testing. ACT is committed to ensuring that each of its testing programs upholds the guidelines in each *Code*. A copy of each *Code* may be obtained free of charge from ACT Customer Services (68), P.O. Box 1008, Iowa City, IA 52243-1008, 319/337-1429.

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Contents

The PLAN Program 1

PLAN and the ACT College Readiness System 2
Integrating PLAN With the ACT 3
Tests of Educational Development 3
- English Test 5
- Mathematics Test 5
- Reading Test 6
- Science Test 7

Test Results: What They Tell You 7
- Test Scores 7
- College Readiness Standards 8
- College Readiness Benchmark Scores 9

Norms 10
- National Norms 10
- State Norms 10
- District Norms 10
- School Norms 10

Noncognitive Components 10
- Student Information Section 10
- PLAN Educational Opportunity Service (EOS) 10
- Needs Assessment 11
- Plans and Background 11
- High School Course Information 11
- Local Supplemental Items 11
- UNIACT Interest Inventory 12

Discussing PLAN Results With Students and Parents 13

Student Score Report 13
- Your Scores 13
- Your Plans 17
- Your Career Possibilities 18

Coursework Planner 21

PLAN Reports and Data Services 22

Standard Package 22
Enhanced Reporting Package 25
Optional Reporting Services 25
- Customized Profile Summary Report 25
- Linkage Reports 26

Administering PLAN at Your School 27

PLAN Test Materials 27
- Test Booklets 27
- Other Test Materials 27
- *PLAN Technical Manual* 27
- Accommodated Testing Materials 27

Options to Consider *Before* Administration 28
- 1-Day or 2-Day Administration 28
- Choosing a Testing Option 28
- Pre-ID Labels 28
- Use of Student ID/Social Security Numbers 28
- Optional Sort Codes—Block M 28
- Supplemental Local Items—Block V 29
- Testing Students From Other Schools 29
- Testing Home-Schooled Students 29
- Testing Students Through a Postsecondary Outreach or Other Special Program 29
- Testing Other Than 10th-Grade Students 29

Testing Students with Disabilities and Special Accommodations 30
- Recommended Eligibility Requirements for Accommodated Testing 30
- Accommodated Testing Options 30
- Marking Accommodations Codes on the Answer Folder 31
- Ordering Special-Format Test Materials 31

Scheduling Testing Sessions 31
Make-Up Testing 31
Selecting and Training Testing Staff 31
Selecting Testing Rooms 32
Preparing Students for the Test Day 32
Pre-Test Activities to Be Completed by the Test Supervisor 32

Post-Test Activities to Be Completed by the Test Supervisor 33

Check PLAN Answer Folders 33

Test Form 33

Clarity of Markings 33

Accommodations Codes 33

Scoring Codes 33

Special Status Codes 33

Voiding Answer Folders 34

Completing Your School Header 34

Returning Answer Folders for Scoring 37

Multiple-School Districts 38

Scoring and Reporting Deadlines 38

Disposition of Other Testing Materials 38

References 39

Appendix A: World-of-Work Map 40

Appendix B: Comparing PLAN Results to EXPLORE Results 43

Appendix C: Interpreting Interest Inventory Results 44

Appendix D: Coursework Planner 46

Appendix E: Local Courses to Be Reported on PLAN Course/Grade Information 48

Appendix F: Suggested Training Session Outline 49

Appendix G: Procedures Checklist 50

PLAN Test Supervisor's Comment Form 51

PLAN Customer Services . . . . . back cover

The PLAN Program

The PLAN® program is a curriculum-based, nationally normed assessment program designed to help 10th-grade students explore the world of possibilities open to them, make the most of their opportunities in high school and beyond, and guide them as they start thinking about future educational and career planning. Like all the assessment programs offered by ACT, PLAN is based on the belief that young people—and their parents, teachers, counselors, and school administrators—will make more productive plans and decisions if they have organized, relevant information available when they need it most.

PLAN assesses academic progress, provides an early indicator of college readiness, helps students understand and explore the wide range of career options open to them, and assists them in enhancing a high school coursework plan that prepares them to achieve their post-high school goals. PLAN functions as an independent program or as the midpoint measure of academic progress in the series of longitudinal assessments that constitute a component of the ACT College Readiness System.

The PLAN tests are normed for 10th-grade students who complete the tests under the standardized conditions described in this manual. By carefully following the procedures outlined here and in the *Room Supervisor's Manual*, you will help ensure that all examinees have the same opportunity to demonstrate their competencies and that the scores your students receive are comparable to the scores attained by students in the norming group to which they will be compared.

PLAN and the ACT College Readiness System

The ACT College Readiness System of integrated assessment programs is designed to help you improve students' readiness for college. The ACT College Readiness System provides information about students' academic progress, interests, and career plans at key transition points in their journey to graduation. The ACT College Readiness System longitudinal assessment data enable you to systematically monitor individual and group performance of students over time and evaluate the effectiveness of your curriculum and instruction.

PLAN is the midpoint of the three curriculum-based longitudinal testing programs that constitute a component of the ACT College Readiness System. Each program measures knowledge and skills in the same four core content areas: English, mathematics, reading, and science.

- **EXPLORE®**, for 8th and 9th graders, provides baseline academic information for students at or near the entry point into high school. EXPLORE information can be used to help ensure that students select high school courses that will prepare them for college.
- **PLAN**, for 10th graders, provides a midpoint review of academic progress in high school while there is still time to make any necessary interventions to keep students on track toward their educational and career goals.
- The **ACT®**, typically taken in 11th or 12th grade, measures academic readiness to make successful transitions to college. Figure 1 shows the relationship among the components of these three programs.

COMPONENT	GRADES 8/9	GRADE 10	GRADES 11/12
Career and Educational Planning	EXPLORE: Course Taking Interest Inventory Needs Assessment	PLAN: Course Taking Interest Inventory Needs Assessment	ACT: Interest Inventory Course Taking and Grades Needs Assessment
Objective Assessments	EXPLORE: English Mathematics Reading Science	PLAN: English Mathematics Reading Science	ACT: English Mathematics Reading Science Writing (optional)
Instructional Support	*Connecting College Readiness Standards to the Classroom* College Readiness Standards	*Connecting College Readiness Standards to the Classroom* College Readiness Standards	*Connecting College Readiness Standards to the Classroom* College Readiness Standards
Evaluation	Summary Reports EXPLORE/PLAN Linkage Report	Summary Reports EXPLORE/PLAN Linkage Report PLAN/ACT Linkage Report	Summary Reports PLAN/ACT Linkage Report

Figure 1. EXPLORE, PLAN, and ACT Components

These three longitudinal assessments support attainment of college readiness standards for all students. With 75 percent of today's high school graduates enrolling in college within two years of graduation, and the fact that the skills needed in the workplace are very similar to those needed to succeed in college, it is imperative that students leave high school academically prepared for college. ACT research confirms that if students take rigorous college preparatory courses, they are more likely to be ready for college-level academic work and to need fewer non-credit developmental courses. Students who use information from ACT's three longitudinal assessments of the ACT College Readiness System in their educational planning are more likely to develop the knowledge and skills needed for success in life after high school.

Integrating PLAN With the ACT

The experience of taking the PLAN tests, combined with the selection of rigorous high school courses, will help the students perform their best when they take the ACT. For those students who will go from high school to a vocational school or directly into a career, PLAN provides information that will be useful in the selection of courses to be taken in the junior and senior years in preparation for their career of choice.

PLAN and the ACT have a common purpose—to support students at key decision points in their academic preparation and planning. The programs encourage students to plan and act for their goals and dreams—thus increasing their chances of succeeding in life. And PLAN and the ACT provide information helpful to educators guiding students through these important educational and career decisions.

PLAN and the ACT have a common purpose—to support students at key decision points in their academic preparation and planning.

The English, Mathematics, Reading, and Science tests in EXPLORE, PLAN, and the ACT programs are designed with developmentally articulated test specifications, ensuring that the content measured follows a logical developmental sequence across the high school experience. The programs also share common item formats and follow consistent reporting procedures.

Additionally, PLAN and the ACT share a common set of noncognitive components:

- a career interest inventory
- biographical data
- a student needs assessment
- high school course information

Despite having different upper score ranges, PLAN, with a range of 1–32, and the ACT, with a range of 1–36, are on approximately the same score scale. This allows comparison of a student's scores on the two assessment programs. A score increase from PLAN to the ACT can be interpreted as academic development within the limitations of measurement error. When including results from EXPLORE testing of 8th- or 9th-grade students, a comprehensive measurement of academic development is visible.

Using EXPLORE, PLAN, and the ACT with the same group of students enables a school or district to measure and report students' academic achievement over time and gives students solid information to make decisions for the future. (See Linkage Reports on page 26.)

Tests of Educational Development

PLAN contains four tests—English, Mathematics, Reading, and Science (see Figure 2 on page 4). These tests are designed to measure students' curriculum-related knowledge and the complex cognitive skills important for future education and careers. PLAN results provide students with information that can help them begin making plans for beyond high school.

The fundamental idea underlying the development and use of these tests is that the best way to determine how well prepared students are for further education and for work is to measure as directly as possible the knowledge and skills needed in those settings.

ACT conducted a detailed analysis of three sources of information to determine which knowledge and skills would be measured by PLAN: objectives for instruction in grades 7 through 12 (for all states with published objectives), textbooks on state-approved lists for courses in grades 7 through 12, and input from educators regarding the knowledge and skills taught in grades 7 through 12 that are prerequisite to successful performance in high school and later years. Information from these sources helped to define a scope and sequence for each of the areas measured by PLAN.

ACT periodically conducts the ACT National Curriculum Survey® to ensure the continued appropriateness of the content on EXPLORE, PLAN, and the ACT tests. In 2005–2006, for example, ACT

- reviewed state educational standards from all 49 states that had published such standards;
- surveyed 17,601 middle school/junior high and high school teachers and 13,042 post-secondary entry-level-course faculty; and
- summarized the findings in *Content Validity Evidence in Support of ACT's Educational Achievement Tests: ACT National Curriculum Survey 2005–2006*, published by ACT in early 2007. The study is the only one of its kind in the United States. Its results have a direct and significant impact on the development of the tests in EXPLORE, PLAN, and the ACT. This publication is also available as a PDF file by logging on to **www.act.org**, selecting Research and Policy Issues, and locating ACT National Curriculum Survey under ACT Research and Policy Reports.

The PLAN tests are designed to be developmentally and conceptually linked to those of EXPLORE and the ACT. To reflect that continuity, names of the tests (English, Mathematics, Reading, and Science) are the same across the three programs. The programs are similar in their focus on higher-order thinking skills and in their common curriculum base. Specifications for the PLAN program are consistent with, and should be seen as logical precursors to, the content and skills measured in the ACT.

ENGLISH TEST
(50 items, 30 minutes testing time)

CONTENT/SKILLS COVERED BY TEST	NUMBER OF ITEMS
Usage/Mechanics	30
Punctuation	7
Grammar and Usage	9
Sentence Structure	14
Rhetorical Skills	20
Strategy	6
Organization	7
Style	7
TOTAL	50

MATHEMATICS TEST
(40 items, 40 minutes testing time)

CONTENT/SKILLS COVERED BY TEST	NUMBER OF ITEMS
Pre-Algebra/Algebra	22
Pre-Algebra	14
Elementary Algebra	8
Geometry	18
Coordinate Geometry	7
Plane Geometry	11
TOTAL	40

READING TEST
(25 items, 20 minutes testing time)

CONTENT/SKILLS COVERED BY TEST	NUMBER OF ITEMS
Prose Fiction	8
Humanities	9
Social Sciences	8
TOTAL	25

SCIENCE TEST
(30 items, 25 minutes testing time)

CONTENT/SKILLS COVERED BY TEST	NUMBER OF ITEMS
Data Representation	10
Research Summaries	14
Conflicting Viewpoints	6
TOTAL	30

Note: Four content areas (Earth/Space Sciences, Biology, Chemistry, Physics) are represented in the Science Test. The content areas are distributed over the different formats in such a way that at least one unit, and no more than two units, represent each content area.

Total number of PLAN test items = 145
Total testing time for four tests = 115 minutes

Figure 2. PLAN Tests at a Glance

Other Key PLAN Components

- Estimated ACT Composite Score Range—estimated range within which a student may be expected to score when taking the ACT in the fall of the senior year
- Needs Assessment—highlights students' perceived needs for help
- High School Course/Grade Information—helps evaluate course-taking patterns in light of recommended core
- UNIACT Interest Inventory—helps students explore personally relevant career options
- Educational Opportunity Service (EOS)—links students with relevant college and scholarship information based on PLAN information

English Test

The PLAN English Test measures the student's understanding of the conventions of standard written English (punctuation, grammar and usage, and sentence structure) and of rhetorical skills (strategy, organization, and style). The test stresses the analysis of the kinds of prose that students are required to read and write in most middle- and secondary-school programs, rather than the rote recall of rules of grammar. The test consists of four essays, or passages, each accompanied by a number of multiple-choice test items. Different passage types are employed to provide a variety of rhetorical situations.

Some items refer to underlined portions of the text by offering several alternatives to the portion underlined. The student must decide which choice is most appropriate in the context of the passage. Some items ask about an underlined portion, a section of the text, or the passage as a whole. The student must decide which alternative best answers the question posed. Many items offer as one alternative response "NO CHANGE" from the text.

Two subscores are reported for this test, Usage/Mechanics and Rhetorical Skills.

The six elements of effective writing included in the English Test are described below.

USAGE/MECHANICS

Punctuation: Knowledge of the conventions of internal and end-of-sentence punctuation, with emphasis on the relationship of punctuation to meaning (e.g., avoiding ambiguity, identifying appositives).

Grammar and Usage: Understanding of agreement between subject and verb, between pronoun and antecedent, and between modifiers and the words modified; verb formation; pronoun case; formation of comparative and superlative adjectives and adverbs; and idiomatic usage.

Sentence Structure: Understanding of relationships between and among clauses, placement of modifiers, and shifts in construction.

RHETORICAL SKILLS

Strategy: Ability to develop a given topic by choosing expressions appropriate to an essay's audience and purpose; judging the effect of adding, revising, or deleting supporting material; and judging the relevance of statements in context.

Organization: Ability to organize ideas and to make decisions about cohesion devices: openings, transitions, and closings.

Style: Ability to select precise and appropriate words and images, to maintain the level of style and tone in an essay, to manage sentence elements for rhetorical effectiveness, and to avoid ambiguous pronoun references, wordiness, and redundancy.

Mathematics Test

The PLAN Mathematics Test measures the student's level of mathematical achievement. It emphasizes quantitative reasoning rather than memorization of formulas or computational skills. In particular, it emphasizes the ability to solve practical quantitative problems that require skills encountered in many first- and second-year high school courses (pre-algebra, first-year algebra, and plane geometry). While some material from second-year courses is included on the test, most items, including the geometry items, emphasize content presented before the second year of high school.

The items included in the Mathematics Test cover four cognitive domains: knowledge and skills, direct application, understanding concepts, and integrating conceptual understanding.

"Knowledge and skills" items require the student to use one or more facts, definitions, formulas, or procedures to solve problems that are presented in purely mathematical terms.

"Direct application" items require the student to use one or more facts, definitions, formulas, or procedures to solve straightforward problems that are set in real-world situations.

"Understanding concepts" items test the student's depth of understanding of major concepts by requiring reasoning from a concept to reach an inference or a conclusion.

"Integrating conceptual understanding" items test the student's ability to achieve an integrated understanding of two or more major concepts so as to solve nonroutine problems.

Students are permitted but not required to use calculators when taking this test. If they do so, they should use the calculator they are most familiar with. All of the problems can be solved without a calculator. See the PLAN *Room Supervisor's Manual* for specific limitations on calculators.

The items in the Mathematics Test are classified according to four content categories:

Pre-Algebra: Operations using whole numbers, decimals, fractions, and integers; place value; square roots and approximations; the concept of exponents; scientific notation; factors; ratio, proportion, and percent; linear equations in one variable; absolute value and ordering numbers by value; elementary counting techniques and simple probability; data collection, representation, and interpretation; and understanding simple descriptive statistics.

Elementary Algebra: Properties of exponents and square roots; evaluation of algebraic expressions through substitution; simplification of algebraic expressions; addition, subtraction, and multiplication of polynomials; factorization of polynomials; and solving quadratic equations by factoring.

Coordinate Geometry: Graphing and the relations between equations and graphs, including points and lines; graphing inequalities; slope; parallel and perpendicular lines; distance; and midpoints.

Plane Geometry: Properties and relations of plane figures, including angles and relations among perpendicular and parallel lines; properties of circles, triangles, rectangles, parallelograms, and trapezoids; transformations; and volume.

Two subscores are reported for this test: Pre-Algebra/Algebra, based on the Pre-Algebra and Elementary Algebra items; and Geometry, based on the Coordinate Geometry and Plane Geometry items.

Reading Test

The PLAN Reading Test measures the student's level of reading comprehension. The test questions ask students to derive meaning from three reading passages by (1) referring to what is explicitly stated and (2) reasoning to determine implied meanings. Specifically, questions ask students to use referring and reasoning skills to determine main ideas; locate and interpret significant details; understand sequences of events; make comparisons; comprehend cause-effect relationships; determine the meaning of context-dependent words, phrases, and statements; draw generalizations; and analyze the author's or narrator's voice and method. Each passage is preceded by a heading that identifies what type of passage it is (for example, "Prose Fiction"), names the author, and may include a brief note that helps in understanding the passage. Each passage, whose lines are numbered for reference, is followed by several multiple-choice test items. The test focuses on the kinds of skills readers must use in studying written materials across a range of subject areas, rather than on information from outside the passage, rote recall of facts, isolated vocabulary items, or rules of formal logic.

The test includes prose passages that are representative of the kinds of texts commonly encountered in middle-school and junior-high curricula.

Prose Fiction: Short stories or excerpts from short stories or novels.

Humanities: Excerpts from memoirs and personal essays, and from works on architecture, art, dance, ethics, film, language, literary criticism, music, philosophy, radio, religion, television, and theater.

Social Sciences: Excerpts from works on anthropology, archaeology, biography, business, economics, education, geography, history, political science, psychology, and sociology.

Science Test

The PLAN Science Test measures scientific reasoning skills acquired in general introductory courses in the natural sciences. The test presents five sets of scientific information, each followed by a number of multiple-choice test items. The scientific information is conveyed in one of three different formats: data representation (graphs, tables, and other schematic forms), research summaries (descriptions of several related experiments), or conflicting viewpoints (expressions of several related hypotheses or views that are inconsistent with one another). The items require students to recognize and understand the basic features of, and concepts related to, the provided information; to examine critically the relationships between the information provided and the conclusions drawn or hypotheses developed; and to generalize from given information to gain new information, draw conclusions, or make predictions.

The Science Test is based on the type of content typically covered in early high school science courses. Materials are drawn from biology, chemistry, the Earth/space sciences, and physics. The test emphasizes scientific reasoning skills over recall of scientific content, skill in mathematics, or skill in reading. Students are not permitted to use calculators on the Science Test.

Test Results: What They Tell You

Test Scores

Four test scores (English, Mathematics, Reading, and Science), two subscores for the English Test (Usage/Mechanics and Rhetorical Skills), two subscores for the Mathematics Test (Pre-Algebra/Algebra, and Geometry), and a Composite score (the average of the four test scale scores, rounded to an integer) are reported for the PLAN tests.

For each of the four PLAN tests, the number of questions answered correctly is counted to obtain a raw score, which is then converted to a scale score. Scale scores for the four tests and the Composite range from a low of 1 to a high of 32. Because no test can measure educational development with absolute precision, each PLAN score should be thought of as a range, rather than a precise point. For example, a score of 16 on one of the four tests means that the student's level of educational development in the subject is probably somewhere from a 14 to 18 (16 plus or minus 2). For the Composite Score, the range is plus or minus 1.

EXPLORE and PLAN use a common score scale. This relationship means that students would be expected to receive the same score on EXPLORE and PLAN if they took both test batteries on the same day. When you compare students' EXPLORE scores (most often from grade 8 or 9) to their PLAN scores (most often from grade 10), you can interpret an increase directly and confidently as academic growth, allowing for some amount of measurement error, as described at ACT's website **www.act.org/plan/pdf/PlanTechnicalManual.pdf** and reported in Figure 3 on page 8. Although the tests are on a common scale, there are some differences. PLAN is more difficult than EXPLORE in order to assess the greater academic development that may be expected of 10th graders. This is reflected in the different score ranges of the two test batteries. The maximum score allowed on EXPLORE is 25, whereas PLAN test takers may score as high as 32.

Also, even though EXPLORE and PLAN are on a common scale, and PLAN and the ACT are on a common scale, it cannot be stated that EXPLORE and the ACT are on a common scale. The sameness of the scales holds only for adjacent batteries; EXPLORE and the ACT are too disparate in subject matter and difficulty (8th grade versus 12th grade) for the same-scale property to extend from EXPLORE to the ACT.

The four PLAN subscores, two in English and two in Mathematics, are reported on a scale ranging from 1 to 16. These subscores have been scaled independently from their respective tests, so, for example, the sum of the English subscores will not necessarily equal the English scale score. Neither are the EXPLORE subscores on the same scale as PLAN subscores.

It is possible for an examinee who answers all of the items correctly on a particular test to receive a scale score of less than 32 for that test. If an all-correct raw score were forced to equal a scale score of 32, then a 32 on new PLAN forms might reflect a different level of achievement than a score of 32 on earlier PLAN forms. PLAN scores must be as comparable as possible from year to year so that they can accurately reflect how the overall achievement levels of schools, school districts, and various population groups of students vary from year to year.

It is important to note that while test scores can be compared across different years, within any one year only one form is used. Therefore, if the maximum score on a test is less than 32, it is less than 32 for all examinees who test within that same year.

To provide maximum continuity, the results for PLAN and the ACT are reported on a common score scale with a range of 1–32 for PLAN and a range of 1–36 for the ACT. Each PLAN test score is interpretable as the ACT test score that a student would be expected to achieve if that student had taken the ACT at the time of PLAN testing. No relationship is intended between PLAN and ACT subscores.

PLAN forms are equated through special studies so that scores can be interpreted and compared regardless of the form administered.

Selected technical characteristics of the PLAN tests are given in Figure 3.

ESTIMATED RELIABILITIES ACROSS FOUR FORMS
- range from .80 to .86 for the four tests (for 10th grade).
- range from .71 to .82 for the subscores.
- .94 for the Composite score.

STANDARD ERROR OF MEASUREMENT ACROSS FOUR FORMS
- ranges from 1.4 to 2.0 scale score points for the test scores.
- ranges from 1.3 to 1.6 scale score points for the subscores.
- .90 for the Composite score.

Figure 3. Technical Characteristics

College Readiness Standards™

What do the test scores on PLAN really mean? That is, when a student obtains a certain score on PLAN, what does the score indicate about what that student is likely to know and to be able to do? To respond to those questions, ACT has developed College Readiness Standards™. The College Readiness Standards are statements that describe what students who score in various score ranges are likely to know and to be able to do. The statements reflect the progression and complexity of skills in the four academic areas measured in PLAN—English, mathematics, reading, and science.

www.act.org/standard

PLAN College Readiness Standards are provided for five score ranges (13–15, 16–19, 20–23, 24–27, and 28–32). They communicate educational expectations for students as they prepare for a successful transition to their next level of learning and suggest learning experiences from which students in a particular range are likely to benefit. The College Readiness Standards have been developed to help teachers, curriculum coordinators, guidance counselors, and principals interpret the test scores and to identify which skills students may need in order to move their score to the higher ranges. More information about the College Readiness Standards can be found at **www.act.org/standard**. For information about the use of the College Readiness Standards in interpreting the PLAN test results, please refer to the Student Score Report section on page 13 of this manual and the *PLAN Interpretive Guide for Student and School Reports.*

College Readiness Benchmark Scores

ACT has identified scores for each of the four PLAN tests—English, Mathematics, Reading, and Science—that indicate students' probable readiness for college-level work by the time they graduate from high school. This information can be used to help students improve their academic readiness for college-level work.

TEST	PLAN BENCHMARK SCORES
English	15
Mathematics	19
Reading	17
Science	21

Figure 4. College Readiness Benchmark Scores for PLAN

Students now scoring at or above the PLAN English benchmark score (15) are likely on track to develop the skills necessary to succeed in a college English composition course; those scoring at or above the PLAN Mathematics benchmark score (19) similarly are likely on track to develop the skills necessary to succeed in an entry-level college algebra course; and those scoring at or above the PLAN Science benchmark score (21) are likely on track to develop the skills necessary to succeed in an introductory college-level biology course. Students scoring at or above the PLAN Reading benchmark score (17) are likely on track to develop the skills necessary to succeed in college social science courses. This predictability assumes the student will continue to demonstrate the same level of academic achievement that has been exhibited up to this point. College Readiness Benchmark Scores are also available for EXPLORE and the ACT.

College Readiness Benchmark Scores are based on the actual performance of ACT-tested students in first-year college courses (English Composition, College Algebra, Social Science courses, and College Biology). ACT College Readiness Benchmark Scores were established to correspond to a 50 percent likelihood that students would achieve a grade of B or better in these courses. Then, EXPLORE and PLAN College Readiness Benchmark Scores were identified at grades 8, 9, 10, and 11 that reflected a strong likelihood that students would meet the ACT benchmark scores by the time they graduated from high school.

Norms

National Norms

One way to interpret performance on PLAN is to compare your students' scores to those of a national norming group. Visit **www.act.org/plan/norms** for information on how to use PLAN norms to interpret test scores.

www.act.org/plan/norms

Local comparisons to the national norm group are most appropriate when PLAN is administered under conditions similar to those in the norming study—with all four tests administered in a single session in the standard order, and students having calculators available for use on the Mathematics Test.

Examinees below 10th grade, and 10th-grade students who test in August through January, will receive Fall 10th-Grade Norms. Tenth graders testing in February through June will receive Spring 10th-Grade Norms. Examinees in 11th grade or above will receive Fall 11th-Grade Norms on their student reports.

State Norms

State norms may be reported in states where PLAN use is sponsored statewide or where a large proportion of schools have administered PLAN the previous year. State norms are created from prior year testing data.

District Norms

District norms are available as part of the Enhanced Reporting Package (page 25); they are included on the Data File CD. District norms are calculated for customers who identify themselves as a district, even when there is only a single school (or scoring group) in the district. These norms reflect the results of the students in any scoring group affiliated with that district.

School Norms

School norms are available as part of the Enhanced Reporting Package (page 25); they appear on the Student Score Reports and the Student List Report, and are included on the Data File CD. School norms reflect the results of the students in a single scoring group.

Noncognitive Components

In addition to measuring academic achievement, PLAN provides critical information for helping students improve their skills, explore careers, and build rigorous high school course plans. By completing the noncognitive components of PLAN, your students will receive valuable information to enhance the career and educational planning process.

Student Information Section

The *Student Information Section* of the answer folder collects basic demographic information about each student who takes PLAN:

- Name
- Student ID number
- Birth date
- Gender
- Current grade in school
- Racial/ethnic background

The student's name, ID, and birth date help you match your school records and help ACT in matching the student's PLAN scores to other ACT tests (EXPLORE and the ACT). Gender, current grade, and racial/ethnic background are necessary to provide complete information for your school summary reports.

PLAN Educational Opportunity Service (EOS)

The PLAN Educational Opportunity Service (EOS) is a free college and scholarship information service for students who take PLAN. EOS enables students to receive important information about educational, scholarship, career, and financial aid opportunities from colleges, governmental agencies, ACT, and other organizations who may want to send information to students with special characteristics (e.g., those who live in a particular state, who express a particular career preference, or whose PLAN scores fall in a given range).

By responding "yes" to the question in block I on page 1 of their PLAN answer folder, students authorize ACT to release information—name, mailing address, e-mail address, gender, date of birth, racial/ethnic background, high school, grade in school, and career choice—to colleges and organizations offering programs that the student may be interested in exploring. All organizations that receive this information have agreed to use it only for this purpose. Names are not provided to the military or for any commercial purpose. **(Note: School ID, SSN, and test scores are not reported through EOS.)**

Needs Assessment

A brief *Needs Assessment* gives students an opportunity to indicate a need for assistance in seven selected academic areas and enabling skills. Students are asked to indicate whether they need additional help in the following areas:

- Making plans for my education, careers, and jobs after high school
- Improving writing skills
- Improving reading speed or comprehension
- Improving study skills
- Improving mathematical skills
- Improving computer skills
- Improving public speaking skills

Plans and Background

The *Plans and Background* section asks students about the following:

- Language the student knows best
- High school program of study
- High school coursework plans in five subject areas
- Participation in accelerated, honors, or outreach programs
- Parents' highest levels of education
- Educational and career plans after high school

When indicating career plans, students are asked to examine a list of twenty-six career areas and sample occupations and select the area that best represents their current interests. These career areas are shown in Figure 6, page 19.

The information from this section helps guide students in discussions about future educational and career plans.

High School Course Information

The Course Information section of the PLAN answer folder collects information about the core courses students have taken and plan to take before completing high school. Descriptors of courses that constitute the typical high school core curriculum are included to help students relate each of the 30 courses listed to courses offered in their own schools.

This kind of information is useful to school counselors, faculty, and administrators. If students are not taking or planning to take the specific courses appropriate to their career area of interest, counselors can guide them into courses that will best prepare them for further training or allow them to get relevant experience in a particular occupational area. For teachers, curriculum coordinators, and administrators, the course information can be used in conjunction with PLAN scores and ACT scores to study the relationship between the curriculum and student performance on these tests.

Local Supplemental Items

The PLAN answer folder facilitates collection of student responses to as many as twelve supplemental items developed by your school or district. Questions for this section might cover topics such as the number of hours spent studying, watching television, or working each day or week; interest in vocational/technical courses; and student opinions about various aspects of the school environment. Questions must be designed to collect only one response per question. The PLAN School Profile Summary Report includes a table summarizing student responses by item number and response option.

UNIACT Interest Inventory

As career choices become more complex, one of the most difficult challenges facing today's adolescents is the identification of career options appropriate for their personal goals and interests. To help students make informed choices, it is important to provide them with a panoramic view of their options in the worlds of work and education, and then help them to explore options within these worlds. The Unisex Edition of the ACT Interest Inventory (UNIACT) provides a focus to career exploration. Instead of trying to single out the "right" occupation, it points to regions of the world of work that students may want to explore.

UNIACT is based on the typology described in Holland's (1997) theory of careers. The six UNIACT scales, each based on 12 items, were developed to parallel Holland's six interest and occupational types or "career clusters." ACT research on interest structure indicates that most of what is measured by scales assessing Holland's six interest types can be summarized by two dimensions—the Data/Ideas and Things/People Work Task Dimensions. They provide the basis for the ACT World-of-Work Map described in Appendix A.

When students complete the UNIACT, they indicate whether they like, dislike, or are indifferent to each of the 72 activities. UNIACT items emphasize familiar work-related activities and avoid job titles that are unfamiliar to most students (e.g., radiologic technologist) or may be subject to sex-role stereotypes (e.g., carpenter, secretary). This minimizes differences in the career options suggested to males and females, and permits the use of combined-sex norms.

UNIACT results are presented as World of Work Map "regions." Students typically obtain three regions: the region containing the coordinate point and the two adjacent regions. A student's map regions summarize his or her preferences for data, ideas, people, and things work tasks. Thus, the student's map regions link measured interests to career options. The Student Score Report (see Figure 5a on page 15) shows the student's UNIACT results as shaded regions on the World-of-Work Map and the Career Area List.

UNIACT scores are reported as stanines in the "Information for Counselors" box of the Student Score Report. Details for interpreting these scores are provided on page 20. Specifics concerning UNIACT norms, reliability, and validity are reported in *The ACT Interest Inventory Technical Manual* (ACT, 2009).

Discussing PLAN Results With Students and Parents

One of the most critical aspects of assessment is interpreting the results. Often the information suggests dimensions of a student's academic profile that, when considered singly, add little to what a good teacher already knows. When considered together, however, the integrated results offer a rich resource to the teacher, the student, and the parent in exploring and planning for the future. *Using Your PLAN Results* will introduce students and parents to the wealth of information presented on the PLAN Score Report.

The following ideas for interpreting and discussing PLAN results are presented in relation to the various components of the program. These ideas are intended to stimulate thinking and discussion about each area of assessment results, but, more importantly, to encourage the integrated review of the results. See a Sample PLAN Score Report in Figures 5a and 5b on pages 15 and 16.

Student Score Report

Your Scores
www.planstudent.org

The results of the four tests provide a snapshot of student academic skills and knowledge in English, mathematics, reading, and science. Information available from scale scores and norms (cumulative percentiles) for each test, subscore, and the Composite can be very useful in evaluating a student's general knowledge in each area and determining how the student compares to other PLAN-tested students.

Subscores from the English Test and the Mathematics Test can help the teachers and students grasp more fully the student's specific areas of strength and weakness in working with English and math. Test results can be used to guide individual coursework plans and to direct attention to areas that need more focus.

CUMULATIVE PERCENTS

The column labeled "In the U.S." shows how students' scores compared with those of students in the appropriate national norm group. (Visit **www.act.org/plan/norms** for a description of these norm groups.) The columns labeled "In Your School" and "In Your State" may show how students' scores compare to those of students in their own school or state. State norms are typically reported only in states where PLAN is administered to a large portion of the 10th graders. The norms reported here are defined as the percent of students in the comparison group who received a given score or lower.

COLLEGE READINESS STANDARDS

What do the test scores on PLAN mean? What does the student know and what is she able to do? College Readiness Standards help answer these questions by describing the types of skills and knowledge typically demonstrated by students who score in particular score ranges on each test of PLAN.

www.act.org/standard

The PLAN College Readiness Standards are sets of statements that represent widely held learning goals or expectations of what students should have learned up to 10th grade. These goals are important for success in high school and beyond. The Standards show how skills can progress, becoming increasingly sophisticated from score range to score range. College Readiness Standards are provided for five score ranges (13–15, 16–19, 20–23, 24–27, and 28–32) in the four academic areas measured by PLAN: English, mathematics, reading, and science. The College Readiness Standards can be found at **www.act.org/standard**.

It is important to acknowledge that PLAN does not measure everything students have learned in schooling thus far, nor does any particular test measure everything necessary for students to know to be successful in their remaining high school experience. PLAN includes questions from large domains of skills and from areas of knowledge that have been judged important for success in high school and beyond. Thus, the College Readiness Standards should be interpreted in a responsible way that will help students understand what they need to know and do if they are going to make a success of high school and postsecondary education.

OTHER CONSIDERATIONS

When evaluating the results of any of the tests, teachers will want to determine whether scores are consistent with the student's performance in class and with his or her GPA. In the case of discrepancies (for example, where the student performs well in class but not well on the tests), it may be valuable to determine whether the student has difficulty taking standardized tests. An examination of the fit of the tests' content relative to the curricular objectives of the student's classes also may be helpful.

In looking at the overall profile, it is often possible to see that a student performs well in some areas and not as well in others. Some students, for example, will score better on the English and Reading Tests and less well on the Mathematics and Science Tests, as indicated by their standings relative to the national norms. A review of the student's coursework plans and career and educational plans will help identify what the student plans to do. It will be the teacher's role to help the student strengthen those weaker areas in ways appropriate to the student's needs and plans.

November 6, 2009 **PN:** 99244642 123876

PLAN

Your Score Report

TAYLOR, ANN C
1404 8TH ST
ANYTOWN, USA 00000

GRADE: 10
SORT CODE: 5

SCHOOL NAME: EXAMPLE HIGH SCHOOL **SCHOOL CODE:** 000000 **TEST FORM:** 00A **TEST DATE:** OCTOBER 23, 2009

ACT

Your Scores

Percent of students scoring at or below your score

	Score Range (1-32)	In the U.S. (Fall 10th)	In Your School	In Your State
Composite Score	**18**	64%	54%	71%
English	**20**	79%	78%	82%
Usage/Mechanics (1-16)	11	85%	83%	85%
Rhetorical Skills (1-16)	10	74%	72%	78%
Mathematics	**17**	57%	49%	70%
Pre-Alg./Algebra (1-16)	08	58%	52%	68%
Geometry (1-16)	08	53%	38%	64%
Reading	**20**	78%	74%	81%
Science	**16**	32%	20%	41%

More Info at www.planstudent.org

Your Estimated ACT Composite Score Range

19-23

Use this score range to help plan for college.

Your Educational Plans for After High School

4-Year College or University

Your Plans

Your High School Course Plans Compared to Core

Core means minimum number of high school courses recommended to prepare for college.

	You: / Core:	0 Years	1 Year	2 Years	3 Years	4 Years	5+ Years
English							
Mathematics							
Social Studies							
Science							

About Your Course Plans. Your plans fall short of recommended courses. Consider taking additional courses in Science. You may want to talk to your counselor or teacher to make sure you are getting the courses you need.

College Readiness

Students scoring at or above these benchmark scores, and taking college prep courses throughout high school, will likely be ready for first-year college courses. How do your scores compare?

	Benchmark Scores (10th Grade)	Your score is: Below	At	Above
English	15			✓
Mathematics	19	✓		
Reading	17			✓
Science	21	✓		

About Your Scores. One or more of your PLAN scores fall below the benchmark scores that show readiness for college-level work. Suggestions for improving your skills are listed on the back of this report. Also, talk to your counselor or teacher about courses that can improve your skills. Check college websites to learn more about their admission requirements.

Admission Standards

Colleges differ in their admission standards. For example, most students in "selective" colleges have ACT Composite scores in the range of 21 to 26. Some admitted students may have scores outside the range.

Admission Standard	Typical Scores
Open	16–21
Traditional	18–24
Selective	21–26
Highly Selective	25–30

Profile for Success

Your Career Area Preference

Management

Successful college sophomores in majors related to your preferred Career Area typically have ACT Composite scores of:

21-25

See *Using Your PLAN Results.*

Your reported needs

- ✓ Making plans for my education, career, and work after high school
- Improving my writing skills
- ✓ Improving my reading speed and comprehension
- ✓ Improving my study skills
- ✓ Improving my mathematical skills
- Improving my computer skills
- ✓ Improving my public speaking skills

TAYLOR, ANN C

Your Career Possibilities

STEP 1: You and the World of Work

The World-of-Work Map is your key to hundreds of jobs in the work world. The Map shows 26 Career Areas (groups of similar jobs) according to their basic work tasks involving people, things, data, and ideas.

The Map is divided into 12 regions. Each region has a different mix of work tasks. For example, Career Area P (Natural Science & Technologies) mostly involves working with ideas and things.

STEP 2: Your Interests

When you completed PLAN you were asked to:
- choose a Career Area you would like.
- complete an interest inventory.

Your results are shown on the World-of-Work Map below.
- You chose Career Area C: Management.
- Your interest inventory results suggest that you may enjoy jobs in map regions 3, 4, and 5. See the Career Areas in those regions.

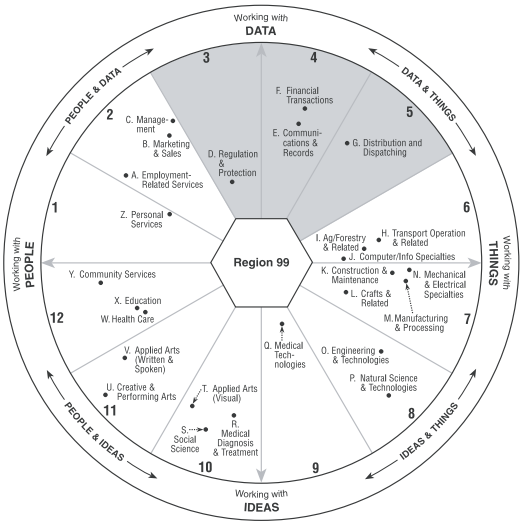
STEP 3: Exploring Career Options

The Career Area List below shows examples of jobs in each of the 26 Career Areas. Review all of the Career Areas, especially those that are shaded.

Circle at least two Career Areas that have jobs you might like best.

Find out more about jobs that are right for you. Use the tips in your booklet, or go to **www.planstudent.org.**

World-of-Work Map



Information for Counselors *Scores: R5 I4 A3 S4 E7 C6*
%Like, Indifferent, Dislike: 22—38—40

Career Area List

A. Employment-Related Services
Human Resources Manager; Recruiter; Interviewer

B. Marketing & Sales
Agents (Insurance, Real Estate, etc.); Retail Salesworker

C. Management
Executive; Office Manager; Hotel/Motel Manager

D. Regulation & Protection
Food Inspector; Police Officer; Detective

E. Communications & Records
Secretary; Court Reporter; Office Clerk

F. Financial Transactions
Accountant; Bank Teller; Budget Analyst

G. Distribution & Dispatching
Warehouse Supervisor; Air Traffic Controller

H. Transport Operation & Related
Truck/Bus/Cab Drivers; Ship Captain; Pilot

I. Agriculture, Forestry & Related
Farmer; Nursery Manager; Forester

J. Computer & Information Specialties
Programmer; Systems Analyst; Desktop Publisher; Actuary

K. Construction & Maintenance
Carpenter; Electrician; Bricklayer

L. Crafts & Related
Cabinetmaker; Tailor; Chef/Cook; Jeweler

M. Manufacturing & Processing
Tool & Die Maker; Machinist; Welder; Dry Cleaner

N. Mechanical & Electrical Specialties
Auto Mechanic; Aircraft Mechanic; Office Machine Repairer

O. Engineering & Technologies
Engineers (Civil, etc.); Technicians (Laser, etc.); Architect

P. Natural Science & Technologies
Physicist; Biologist; Chemist; Statistician

Q. Medical Technologies (also see Area W)
Pharmacist; Optician; Dietitian; Technologists (Surgical, etc.)

R. Medical Diagnosis & Treatment (also see Area W)
Physician; Pathologist; Dentist; Veterinarian; Nurse Anesthetist

S. Social Science
Sociologist; Political Scientist; Economist; Urban Planner

T. Applied Arts (Visual)
Artist; Illustrator; Photographer; Interior Designer

U. Creative & Performing Arts
Writer; Musician; Singer; Dancer; TV/Movie Director

V. Applied Arts (Written & Spoken)
Reporter; Columnist; Editor; Librarian

W. Health Care (also see Areas Q and R)
Recreational Therapist; Dental Assistant; Licensed Practical Nurse

X. Education
Administrator; Athletic Coach; Teacher

Y. Community Services
Social Worker; Lawyer; Paralegal; Counselor; Clergy

Z. Personal Services
Waiter/Waitress; Barber; Cosmetologist; Travel Guide

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Figure 5a. PLAN Student Score Report (Side 1)

TAYLOR, ANN C

Your Skills

More Info at www.planstudent.org

Ask for your test booklet so you can review the questions and your answers.
"+" = correct answer, "o" = no response, "★" = marked more than one answer

Suggestions for improving your skills are based on your scores.

English

SUBSCORE AREA
(u = Usage; r = Rhetorical Skills)

Question	Correct Answer	Your Answer	Subscore	Question	Correct Answer	Your Answer	Subscore	Question	Correct Answer	Your Answer	Subscore
1	A	+	u	18	D	+	r	35	A	+	r
2	C	+	u	19	D	C	u	36	B	C	r
3	A	+	u	20	A	+	u	37	D	o	u
4	D	+	r	21	C	+	r	38	D	o	u
5	B	+	r	22	C	B	r	39	A	+	r
6	B	A	r	23	A	+	r	40	B	+	r
7	D	+	u	24	B	+	u	41	C	B	r
8	A	+	u	25	B	+	u	42	D	+	r
9	C	+	r	26	A	D	r	43	C	+	u
10	B	A	u	27	C	+	r	44	A	+	u
11	A	+	u	28	D	+	r	45	D	B	r
12	D	C	r	29	B	+	u	46	B	C	r
13	D	+	r	30	D	+	r	47	A	+	r
14	B	o	r	31	A	+	u	48	A	+	r
15	A	+	r	32	C	+	u	49	B	+	r
16	B	A	r	33	C	+	u	50	B	A	r
17	C	+	u	34	C	B	r				

- **You correctly answered 34 out of 50 questions.**
- **You omitted 3 questions.**
- **You incorrectly answered 13 questions.**

Content Areas	To improve your skills you can:
Topic Development	challenge yourself by reading new kinds of books; experiment with new writing styles
	rewrite a paper, sharpening its focus by cutting sentences not directly related to the topic
	add examples to illustrate or support major points
Organization	use transitions (like *similarly* or *to repeat*) to compare or emphasize ideas
	have a classmate read your paper to see if sentences need to be reordered for clarity
	try different openings and closings for a paper; say which works best and why
Word Choice	make sure repetition in a paper is purposeful (to provide emphasis, unity, etc.)
	verify that each pronoun clearly refers to a noun or noun phrase
	reread writing to make sure the words convey the same tone or vary in tone for a good reason
Sentence Structure	learn the difference between uses of coordinating conjunctions (like *and* or *but*) and subordinating conjunctions (like *after* or *though*)
	make sure pronoun person is consistent in a sentence; for instance, avoid shifts from *one* ("When one sees . . .") to *you* (" . . . you are impressed.")
Usage	check possessive pronouns (like *her* or *his*) to make sure they are used correctly
	use the word *have* (not *of*) following verbs like *could, would,* and *should*
Punctuation	use commas, dashes, or parentheses to set off nonessential information in a sentence
	delete unneeded commas in compound constructions, as in "Flags waved[,] and rustled."
	check to make sure semicolons are not used between a dependent and independent clause in a sentence (for example, "He ran all the way to school[;] because he was late.")

Mathematics

SUBSCORE AREA
(a = Algebra; g = Geometry)

Question	Correct Answer	Your Answer	Subscore	Question	Correct Answer	Your Answer	Subscore	Question	Correct Answer	Your Answer	Subscore
1	A	+	a	15	A	+	a	29	B	C	g
2	C	+	a	16	B	A	a	30	D	+	g
3	A	+	a	17	C	+	a	31	A	+	a
4	D	+	a	18	D	+	a	32	C	+	a
5	B	+	g	19	D	C	g	33	C	B	g
6	B	A	g	20	A	+	g	34	C	B	g
7	D	+	g	21	C	+	a	35	A	+	g
8	A	B	a	22	C	B	a	36	B	C	g
9	C	+	a	23	A	+	g	37	D	B	a
10	B	A	g	24	B	C	g	38	D	o	a
11	A	+	g	25	B	+	a	39	A	o	g
12	D	C	g	26	A	D	a	40	B	+	g
13	D	B	g	27	C	+	a				
14	B	o	a	28	D	C	g				

- **You correctly answered 21 out of 40 questions.**
- **You omitted 3 questions.**
- **You incorrectly answered 16 questions.**

Content Areas	To improve your skills you can:
Basic Operations	determine the discount price of items on sale (for example, an item that normally cost $10.00 is on sale for 13% off, so the sale price of the item is $8.70)
Probability	calculate the score value you need on your next math test to raise your overall grade by a certain percent
	predict the outcome of simple events (for example, the sum of two 6-sided fair number cubes when rolled)
Numbers: Concepts and Properties	research, and discuss with others, the uses of number sequences (for example, Fibonacci, arithmetic, geometric)
Expressions, Equations, and Inequalities	obtain lists of formulas and practice substituting positive and negative whole numbers into the formulas to evaluate
	practice adding and subtracting algebraic expressions such as $(3h + 8k) - (5h - 2k) = -2h + 10k$
	practice solving two-step equations such as $2x - 18 = -32$; $2x = -14$; $x = -7$
Graphical Representations	draw coordinate maps of your school, home, town, etc., labeling one point as the origin (0,0) and locating all other points appropriately; recognize lines that are vertical or horizontal and increasing and decreasing slopes of lines
	use number lines to represent lengths of segments (for example, have a friend point to any two points on a meterstick and mentally calculate the distance between the two points)
Properties of Plane Figures	determine how the sum of the interior angles of polygons are related (for example, cut the angles off of a triangle and arrange them to make a line; cut the angles off of a quadrilateral and arrange them to make a circle)
Measurement	quiz yourself and practice using the basic area and perimeter formulas for various polygons

Reading

Question	Correct Answer	Your Answer	Question	Correct Answer	Your Answer	Question	Correct Answer	Your Answer
1	A	+	10	B	A	19	D	C
2	C	+	11	A	+	20	A	+
3	A	B	12	D	C	21	C	+
4	D	+	13	D	+	22	C	B
5	B	+	14	B	o	23	A	+
6	B	A	15	A	+	24	B	C
7	D	+	16	B	A	25	B	+
8	A	B	17	C	+			
9	C	+	18	D	+			

- **You correctly answered 15 out of 25 questions.**
- **You omitted 1 question.**
- **You incorrectly answered 9 questions.**

Content Areas	To improve your skills you can:
Main Ideas and Author s Approach	take notes on a challenging text; decide how the information fits together as a whole
	practice writing brief summaries of books you have read
	decide who is telling a story (a child, an adult, etc.) and if that viewpoint relates the story well
Supporting Details	understand textual details and how they contribute to the author's or narrator's message (for example, strengthening or clarifying it)
	write an essay about something you've read, supporting your ideas with evidence
Relationships	use a chart or web to connect a series of events in a text or film, or from an everyday occurrence, justifying your chosen sequence
	decide whether comparisons made by the author or narrator help you understand relationships
Meanings of Words	look up word meanings and determine how the words an author or narrator uses affect people's impressions of a topic or issue
Generalizations and Conclusions	defend or challenge the author's or narrator's claims in a text by locating key pieces of information in other sources
	make accurate generalizations (avoiding oversimplifications) based on details in the text (for example, "You live *there*—in that polka-dotted house?" suggests disbelief)

Science

Question	Correct Answer	Your Answer	Question	Correct Answer	Your Answer	Question	Correct Answer	Your Answer
1	A	+	11	A	+	21	C	+
2	C	+	12	D	C	22	C	B
3	A	C	13	D	+	23	A	+
4	D	A	14	B	o	24	B	C
5	B	+	15	A	+	25	B	C
6	B	A	16	B	A	26	A	D
7	D	+	17	C	+	27	C	+
8	A	B	18	D	A	28	D	B
9	C	A	19	D	C	29	B	C
10	B	A	20	A	+	30	D	C

- **You correctly answered 12 out of 30 questions.**
- **You omitted 1 question.**
- **You incorrectly answered 17 questions.**

Content Areas	To improve your skills you can:
Interpretation of Data	know how to locate several pieces of data in a complex table or graph (for example, a graph with several curved lines or axes displaying values that increase by powers of ten)
	take data from an experiment you or others did and use it to make a line graph and a bar graph
	describe how the values of several pieces of data from a line graph are different (for example, larger or smaller)
Scientific Investigation	do an experiment that includes a *control group* (something used as the basis for comparison) and that uses procedures with several steps
	create a one-step experiment that will answer a specific question
	tell how two experiments are the same or different
Evaluation of Models, Inferences, and Experimental Results	read descriptions of actual experiments and, in each case, see if the reported results support the hypothesis
	read a scientist's opinion about an observation and figure out what assumptions the scientist made in forming that opinion

Figure 5b. PLAN Student Score Report (Side 2)

ESTIMATED ACT COMPOSITE SCORE RANGE

Based on the PLAN Composite score reported, this is the range within which the student's ACT Composite score would be expected to fall if he or she takes the ACT as a 12th grader.

The ACT is very similar in content and format to PLAN, but is more difficult than PLAN, as it includes materials appropriate to higher grade levels. Therefore, the ACT Composite score scale (1–36) extends higher than the PLAN Composite score scale (1–32). Estimated ACT Composite score ranges depend on when the examinee takes PLAN, and on the assumption that they will take the ACT during the fall of 12th grade. The ACT Composite score range for each PLAN Composite score includes approximately the middle 75 percent of the ACT Composite scores actually earned by students with that PLAN Composite score. The Estimated ACT Composite tables can be found at **www.act.org/plan/norms**.

Because both PLAN and the ACT are curriculum-based testing programs, students may fall short of or improve upon their estimated ACT Composite score ranges because of changes in the difficulty of the courses they take, their motivation for academics or school in general, study habits, home life, etc.

Estimated ACT Composite score ranges can be used to explore options for postsecondary education. Just below the Estimated ACT Composite Score Range, the PLAN Score Report also shows the typical achievement levels, represented by ACT Composite scores, of students enrolling in colleges with various admission standards. Students can compare their estimated ACT Composite score range with the ranges shown to help them consider which colleges may be best suited to their expected academic preparation.

Students should be reminded that the ACT Composite score range is an estimate, not a guarantee. If the student does not maintain good academic work in high school, his or her actual ACT Composite may fall short of the estimate. The converse is also true; some students who improve their academic performance may earn ACT Composite scores higher than estimated.

Your Plans

YOUR HIGH SCHOOL COURSE PLANS COMPARED TO CORE

This section compares courses the student has taken and plans to take to a set of core courses (four years of English and three years each of mathematics, social studies, and science), recommended by ACT as the minimum for students to be prepared for entry-level college courses or work training. Students who take the recommended core curriculum are generally better prepared for college-level courses or work training than students who do not take core.

COLLEGE READINESS

This section compares the student's scores on each of the four PLAN tests to the PLAN College Readiness Benchmark Scores to provide an indication of how well students are preparing for college-level work by the time they graduate from high school. Students scoring at or above these benchmark scores are likely on track to succeed in introductory college-level coursework. Students scoring below the benchmark scores can identify areas of academic need, with time remaining before graduation to get on track for college.

YOUR EDUCATIONAL PLANS FOR AFTER HIGH SCHOOL

This section provides self-reported plans for post-high school education or training. This can be a stimulus for discussion about how career plans, postsecondary education or job training plans, and academic skill development influence each other.

ADMISSION STANDARDS

This section provides an idea of the achievement levels of students attending colleges in each admission category, ranging from Open to Highly Selective. The chart shows typical ACT scores of freshmen enrolling in colleges in each category.

PROFILE FOR SUCCESS

Another way students can evaluate whether or not they are on track for college is to compare themselves to high school students who have become successful college students. ACT's "Profile for Success" helps students to compare their estimated ACT Composite score range to those of high school students who later achieved a B grade average or higher at the beginning of their sophomore year in college in different academic majors.

YOUR REPORTED NEEDS

This section identifies self-reported needs for assistance in seven different areas. It can help teachers gain a better understanding of how the student perceives his or her performance and determine whether that perception is realistic. Further, a comparison of the needs assessment with test scores can identify areas in which the student needs support and guidance. Considered together with the information from career and educational plans and the ACT Interest Inventory (UNIACT), these results offer a unique basis on which to begin high school coursework planning.

Your Career Possibilities

Using Your PLAN Results guides students through a series of activities in which they learn how to identify career interests, explore those interests, and make good choices in their remaining high school courses. Students are not asked to make lifelong decisions about careers, but rather to begin or continue the process of exploring future career possibilities. These activities use information from the bottom half of the first page of the Student Score Report, *Using Your PLAN Results*, and **www.planstudent.org** to encourage students to think about and act upon the following areas:

- Career exploration
- Level of preparation required after high school for career/occupational interests
- Identification of special career-related subject areas for attention
- Specific plans regarding high school coursework and schedules

Many 10th-grade students are in the early stages of career development and do not have highly crystallized career (educational and vocational) goals. While some students do report career goals, these goals are often unrealistic. Career plans *develop* and *change* over time; it is common for students reporting career goals to modify their original plans several times as they progress through school. It is often helpful to reassure students that this is natural.

The PLAN student guide *Using Your PLAN Results* is designed to help students to focus on personally relevant career possibilities using their career plans, Interest Inventory (UNIACT) results, and the World-of-Work Map. By examining the career areas in their map regions, students can discover the range of possibilities that are consistent with their interests and plans.

Students can identify and explore specific occupations at **www.planstudent.org**. This site contains information (work tasks, entry requirements, salaries, growth, etc.) on more than 500 occupations. Occupations are organized by career area to facilitate exploration. Students can also access more detailed information about occupations through the ACT DISCOVER® program at **www.act.org/discover**.

Since career plans develop and change over time, it is common for students to find that their current career plans are not in line with their measured interests. Some students may need to be reassured that this is common. Encourage students to consider both career plans and interests as they explore occupations. Although career plans are personally relevant, they are often quite tentative at this age. Thus PLAN uses them to help students explore related occupational options.

CAREER CLUSTERS

A number of high schools and school districts across the country are restructuring their curricula around the ACT career clusters. Career clusters are shown on the periphery of the World-of-Work Map (see page 40). Although career exploration activities at **www.planstudent.org** focus on career areas in World-of-Work Map regions, career exploration can focus instead on career clusters. The connections between ACT career clusters and

career areas are shown in Figure 6. There are from three to seven career areas per career cluster. Although fewer in number and thus broader in scope, career clusters serve the same purpose as career areas. Occupations in clusters are similar to each other with respect to work tasks, purpose of work, and work setting.

ADMINISTRATION & SALES
- A. Employment-Related Services
- B. Marketing & Sales
- C. Management
- D. Regulation & Protection

BUSINESS OPERATIONS
- E. Communications & Records
- F. Financial Transactions
- G. Distribution & Dispatching

TECHNICAL
- H. Transport Operation & Related
- I. Agriculture, Forestry & Related
- J. Computer & Information Specialties
- K. Construction & Maintenance
- L. Crafts & Related
- M. Manufacturing & Processing
- N. Mechanical & Electrical Specialties

SCIENCE & TECHNOLOGY
- O. Engineering & Technologies
- P. Natural Science & Technologies
- Q. Medical Technologies
- R. Medical Diagnosis & Treatment
- S. Social Science

ARTS
- T. Applied Arts (Visual)
- U. Creative & Performing Arts
- V. Applied Arts (Written & Spoken)

SOCIAL SERVICE
- W. Health Care
- X. Education
- Y. Community Services
- Z. Personal Services

Figure 6. ACT Career Areas by Career Cluster

INFORMATION FOR COUNSELORS

As noted earlier, the six interest areas assessed by UNIACT parallel Holland's (1997) six types of interests and occupations. These scores are translated to World-of-Work Map regions to facilitate career exploration. In order to conserve space and "keep it simple," the six UNIACT interest scores are not interpreted on the PLAN Student Score Report. Instead, the six scores, expressed as stanines, are printed near the bottom of side 1 in the box labeled Information for Counselors. These stanine scores range from 1 to 9 with a mean of 5 and a standard deviation of 2 based on a nationally representative sample of 10th-grade students.

In the example shown below in Figure 7, the student's UNIACT stanine scores are as follows (Holland types are shown in parentheses): Realistic (5), Investigative (4), Artistic (3), Social (4), Enterprising (7), and Conventional (6).

Counselors familiar with Holland's occupational types and occupational classification system may want to use these scores to offer a clinical interpretation of the student's interests, and use the student's "3-letter code" (in this example, ECR) to identify specific occupations for exploration.

Information for Counselors	*Scores: R5 I4 A3 S4 E7 C6* *%Like, Indifferent, Dislike: 22—38—40*

Figure 7. Example Counselor Information

INTERPRETING UNIACT ITEM RESPONSE PERCENTAGES

The percentages of like, indifferent, and dislike responses to UNIACT are also provided in the Information for Counselors box. These percentages reflect the student's response style in answering the inventory. A high percentage of like responses will elevate the scale scores and, conversely, a high percentage of dislike responses will lower the scale scores. This information can alert counselors to unusual patterns of UNIACT responses. For example, a student who responds dislike to a very high percentage of items will have an undifferentiated (low or flat) score profile. In some cases, this information will reveal why a student obtained Region 99 results. See Appendix C for more suggestions for interpreting interest inventory results.

ITEM RESPONSES

On side 2 of the Student Report, students will find the correct response to each test item in the PLAN test listed. Next to the correct responses are the student's responses. If the student's response was correct, a "+" is listed; if incorrect, the letter of the response chosen by the student is indicated. If the item was omitted or the student marked more than one answer for the item, a zero ("0") appears. For the English and Mathematics tests a third column indicates the content area to which each item in the tests belongs (u = Usage/Mechanics; r = Rhetorical Skills; a = Pre-Algebra/Algebra; g = Geometry).

This information can help students better understand their performance on each PLAN test. For instance, students might:

- Identify and reexamine the items missed in a test to understand why each item was answered incorrectly.
- Identify those areas in the English and Mathematics tests that were particularly difficult by referring to the subscores.
- Review content areas they found difficult, especially if those constitute a large proportion of the test.

SUGGESTIONS FOR IMPROVING SKILLS

Side 2 of the Student Score Report provides students with descriptions of the skills and knowledge they have most likely already developed and with practical ideas for building their skills and knowledge further.

For each content area on the tests, the report gives descriptions (based on the ACT College Readiness Standards) of what the student most likely knows and is able to do, based on the test scores the student attained.

Similarly, the report offers suggested learning experiences (based on the ideas for progress associated with the College Readiness Standards) that are designed to help students strengthen their skills and understanding in each subject area. These learning experiences also are based on the individual student's test scores.

Students are encouraged, both in the booklet: *Using Your PLAN Results* and on **www.planstudent.org**, to discuss the suggested learning experiences with their teachers, counselors, and parents, in the interest of getting the most out of their courses and reaching the goal of being "college ready."

Some of the ideas for academic improvement offered on the report suggest individual activities, such as editing an essay. Other ideas suggest that students discuss readings and concepts with others. All the ideas offered are intended to stimulate learning in, and further exploration of, the content areas. In discussing the ideas with your students and with parents, you may wish to ask the student which ideas seem best to him or her, or whether the student has alternative ideas to suggest. You might emphasize some ideas over others, propose your own related ideas, or make specific suggestions of readings, activities, and other learning opportunities, based on your personal knowledge of the student.

Coursework Planner

The Coursework Planner in *Using Your PLAN Results* helps students organize the information they need to begin to select courses for next year. This activity leads to general course recommendations and encourages students to seek information from your school on courses required for graduation and courses that will prepare them for college. The activities in the Coursework Planner generate a preliminary list of courses, while helping students see the relationships between course plans and general career plans. Your students may develop a greater sense of responsibility for making educational decisions if information gathered via the Coursework Planner is considered during course scheduling. A sample Coursework Planner and a blank form are provided in Appendix D, pages 46 and 47.

To begin the Planner, students are asked to select two or three preferred Career Areas. These selections flag a list of high school course subject areas related to those career areas. Subsequent steps ask the student to list core courses that will prepare them for college, and listing courses required for high school graduation. The worksheet provides space for students to develop a preliminary set of course plans from these different sources of information. Students are encouraged to seek the help of a counselor or teacher to complete the Planner.

To help students complete the Coursework Planner worksheet, provide them with the following:

- A list of local courses that satisfy college admission requirements
- A list of local courses that satisfy high school graduation requirements
- Any information available about technical or "tech prep" courses offered by your school, and their program requirements

This information will be particularly helpful if the courses are organized into the subject areas shown on the Coursework Planner worksheet.

As they complete the Planner, students should consider their academic strengths and weaknesses. Additionally, students can identify and explore specific occupations at **www.planstudent.org** for information (work tasks, entry requirements, salaries, growth, etc.) on more than 500 occupations. Occupations are organized by career area to facilitate exploration. Students can also access more detailed information about occupations through the ACT DISCOVER program. Check to see if the program is available at your school.

Students typically know very little about most occupations and are often surprised by what they learn. Following individual career exploration at **www.planstudent.org** and other resources, students can benefit from group discussions in which they share what they've learned about occupations they've explored.

Counselors should consider whether a student's course plans seem appropriate in light of other PLAN information. Is the student with a high Mathematics Test score and Interest Inventory results in Region 8 (mathematician, chemist, etc.) planning to take upper-level mathematics courses? Is the student with a high English Test score and Interest Inventory results in Region 11 (journalist, editor, etc.) planning to take additional English courses? PLAN facilitates exploration of educational options by helping students identify tentative goals and focusing attention on the steps necessary to achieve them.

PLAN Reports and Data Services

Standard Package

The PLAN Standard Package includes the following reports:

Student Score Report. Two copies for each student will be provided to your school. See Figures 5a and 5b on pages 15–16 for more details about the information provided in this report.

Student Score Labels. Student score labels are self-adhesive labels to be affixed to a student's permanent record. Two copies of each student score label will be provided to your school.

TAYLOR ANN C	123457
NAME OF STUDENT	

PLAN

	ENG	MATH	READ	SCI	COMP	TEST DATE 04/06/2009			
						ENGLISH SUBSCORES		MATH SUBSCORES	
NATIONAL SCORES	27	32	30	32	30	15	13	16	16
SCHOOL %ILE	99	100	99	100	99	U/M	RS	ALG	GEOM

School/District Profile Summary Reports. Every school testing with PLAN will receive a School Profile Summary Report, featuring the following information:

- Comparison of your students' performance with national norm groups' performance
- Detailed presentation of PLAN performance in each of the four test areas and subscore areas
- Breakdown of PLAN performance by gender and racial/ethnic background
- Summary of current career plans, self-reported needs for help, and educational aspirations of your students
- Summary of locally-developed items

Districts ordering PLAN for their schools will also receive a District Profile Summary Report of the above information, with district-wide results based on the aggregated data from all participant schools.

College Readiness Standards Report. ACT now presents the College Readiness Standards Report in a single concise table in the Profile Summary Report. This table summarizes students' score ranges that are in turn linked to the College Readiness Standards, which describe the knowledge and skills those students are likely to have. The data from this report, along with the College Readiness Standards and Benchmarks, can be used to inform local instructional policies. The Standards themselves, and the supporting materials below, can be found at our College Readiness Standards website, **www.act.org/standard**.

- *Connecting College Readiness Standards to the Classroom*, a series of instructional guides for the four content areas, including: (1) understanding and using the College Readiness Standards reports; (2) descriptions of the tests; (3) ACT's College Readiness Standards (what students are likely to be able to do at various score levels); (4) sample test questions by College Readiness Standard; (5) instructional activities that incorporate the College Readiness Standards; and (6) information to assist teachers as they assess, and work to improve, students' readiness for college-level coursework.
- An Administrator's Guide with test descriptions, score interpretation, a curriculum review activity, and discussion of college readiness.
- Curriculum Review Worksheets to help teachers link what they teach to the skills and understandings measured in PLAN.

Early Intervention Rosters. Four lists identifying students from your school under the following categories:

- Do not plan to complete high school or have no post-high school educational plans
- Expressed a need for help in one or more selected areas
- Earned a PLAN Composite Score of 16 or higher, but reported they have no plans to attend college
- Reported that they plan to attend college, but earned a PLAN Composite Score of 15 or lower, or do not plan to take college core coursework

Presentation Packet. Full-page, black-and-white charts displaying aggregated PLAN results presented in the School Profile Summary Report, plus a picture of three-year trends in average PLAN scores.

Student List Report. An alphabetical list of tested students. The PLAN Student List Report has changed for 2009–2010 and will look similar to Figure 8 below.

On the list report, students from the same grade level (as reported on their answer folders) are grouped together. For example, all 9th-grade students are listed alphabetically, then all 10th-grade students, etc. Students who did not indicate a grade are listed at the end of the roster.

PLAN

STUDENT LIST REPORT
Grade:

Sample High School
School Code:

Test Date:
No of Students Listed:
National Norm Group:

STUDENT NAME POST-HS EDUC. PLANS CAREER PREFERENCE	ID NO. SPEC. STATUS CODES ACCOMMODATION CODE	TEST SCORES & NATIONAL %tile								ENGLISH SUBSCORES		MATH SUBSCORES		COMPOSITE SCORE and NATIONAL %tile		ESTIMATED ACT COMPOSITE SCORE RANGE
		ENG	%tile	MATH	%tile	READ	%tile	SCI	%tile	U/M	RS	ALG	GEO	COMP	%tile	

*a The following code is used to denote the Special Status code reported by your school for this student:
- H = Homebound
- S = Special Education
- L = Limited English Proficiency
- F = Free/Reduced Lunch
- ME = Migrant Education
- M = Title 1 Math
- R = Title 1 Reading
- X, Y, Z = Locally defined

*b The Accommodation Code that was reported for this student by your school:
- 1 = Standard print materials with *extended* time limits (no other assistance)
- 2 = Large-print test book with *standard* time limits
- 3 = Large-print test book with *extended* time limits
- 4 = Oral presentation from audio CD with *extended* time limits
- 5 = Oral presentation from reader script with *extended* time limits
- 6 = Braille test book with *extended* time limits
- 7 = Scribe to transfer answers to answer folder with *standard* time limits
- 8 = Scribe to transfer answers to answer folder with *extended* time limits
- 9 = Assistive communication device (e.g., FM audio system) with *extended* time limits
- 0 = Oral presentation from cassette with *extended* time limits

*c The following code is used to denote the student's career choice:
- A = Employment-Related Services
- B = Marketing & Sales
- C = Management
- D = Regulation & Protection
- E = Communications & Records
- F = Financial Transactions
- G = Distribution & Dispatching
- H = Transport Operation & Related
- I = Agriculture, Forestry & Related
- J = Computer & Information Specialties
- K = Construction & Maintenance
- L = Crafts & Related
- M = Manufacturing & Processing
- N = Mechanical & Electrical Specialties
- O = Engineering & Technologies
- P = Natural Science & Technologies
- Q = Medical Technologies (Also see Area W)
- R = Medical Diagnosis & Treatment (Also see Area W)
- S = Social Science
- T = Applied Arts (Visual)
- U = Creative & Performing Arts
- V = Applied Arts (Written & Spoken)
- W = Health Care (Also see Areas Q and R)
- X = Education
- Y = Community Services
- Z = Personal Services

*d Up to three World-of-Work Map Regions are listed here. In counseling students, refer to the individual student's report for more complete information.

*e The following code is used to denote the student's future educational plans:
- A = Not planning to complete high school
- B = No education or other training planned after high school
- C = Job-related training offered through military service
- D = Apprenticeship or other on-the-job training
- E = Career/technical school
- F = 2-year community college or junior college
- G = 4-year college or university
- H = Graduate or professional studies after a 4-year degree (law school, medical school, master's degree, etc.)
- I = Undecided
- J = Other

*f The seven items in the "Needs Assessment" section are denoted by the following numeric codes:
1. Making plans for my education, career, and work after high school
2. Improving my writing skills
3. improving my reading speed or comprehension
4. Improving my study skills
5. Improving my mathematical skills
6. Improving my computer skills
7. Improving my public speaking skills

Figure 8. PLAN Student List Report (with coding key)

Enhanced Reporting Package

The PLAN Enhanced Reporting Package includes all the reports in the Standard Package **plus** the following:

School and District Norms. The Enhanced Reporting Package automatically includes school norms on the Student Score Reports and the Data File CD (see below). When a district orders the PLAN Enhanced Reporting Package, district norms will also be included on the Data File CD; district norms will not appear on Student Score Reports.

School norms—and by extension, aggregate district norms—will be calculated for records submitted under a single School Header. School testing more than one grade must sort their answer documents by grade and submit them to ACT with a completed School Header for each grade.

School norms will be calculated and added to the PLAN data warehouse at the time of scoring, where they will be available for future reprinting of reports.

Research Data File. Files are delivered on CD in both ASCII and CSV formats to provide flexibility for local use. This service provides complete PLAN data on every student tested in your school or district, enabling you to:

- Import relevant PLAN data into your local student database
- Develop a customized PLAN database to address specific issues and concerns
- Extend or expand the analyses offered through other PLAN services
- Develop a multiyear PLAN database for studying trends in your district

Item Response Summary Report. Provides tables describing the item by item performance of your PLAN examinees. Item response results are categorized by test (e.g., English), by subscore (e.g., Usage/Mechanics), and by content area (e.g., Punctuation) and provide comparisons to other students taking the same test form.

Optional Reporting Services

To learn more about these services or to place an order for them, please call ACT Customer Services at 800/553–6244, extension 1029.

Customized Profile Summary Report

Allows you to select the subgroup of students for which the report will be prepared. Customized reports can be useful in examining the performance of specific groups of students. Select subgroups using any information included in the PLAN student record, such as gender, racial/ethnic background, educational plans, or No Child Left Behind categories.

Linkage Reports

ACT has developed linkage reports to assist you in evaluating student academic development and progress as they move through EXPLORE, PLAN and the ACT. These reports are based on a process of matching EXPLORE and PLAN student records and analyzing the changes in student performance between grade 8 or 9 and grade 10. The match process between PLAN and ACT records allows analysis of changes between grade 10 and grade 12. Local changes are compared to those of a reference group of students nationally.

Matching of records is facilitated primarily by the use of local student ID numbers or Social Security numbers. Attention to this aspect of your EXPLORE and PLAN administrations will ensure your eligibility for these reports and maximize the benefit your school or district can receive from your linkage reports.

Order forms for eligible schools are mailed in early spring for EXPLORE/PLAN and mid-fall for PLAN/ACT. For questions regarding eligibility, please call PLAN Customer Services at 800/553-6244, extension 1029.

Administering PLAN at Your School

PLAN Test Materials

Test Booklets

PLAN uses a new test form each year. Be certain that you do not administer test forms remaining from previous years. **These forms cannot be scored.**

Each school purchasing PLAN is responsible for the security of test booklets and other materials. These materials should be stored in a locked room or cabinet and access should be limited to the test supervisor or school administrator. Test booklets should be given to the room supervisors personally rather than left in an unattended testing room. Current test booklets should be stored after test administration and returned to students with their score reports.

Other Test Materials

The following materials are supplied by ACT when you order the PLAN Standard Package or Enhanced Reporting Package:

- *Test Supervisor's Manual*—general information for school administrators and counselors about the PLAN program, interpretation of reports, optional reporting services and planning your test administration
- *Room Supervisor's Manual*—one per 20 students testing
- *Why Take PLAN?*—pretest information for students and parents
- *Instructions for Completing Your Answer Folder*—one per student testing
- Answer folders—one per student testing
- Return envelope(s)—pre-addressed to PLAN Scoring Services
- PLAN School Header—two per site
- PLAN school posters—Two large and several small full-color posters for placing on school bulletin boards to announce test date and other specifics of administration
- Let's Go to College Poster—one per site

Why Take PLAN? and *Using Your PLAN Results* are available in Spanish for parents whose primary language is Spanish. (Download from **www.act.org/plan** under Materials for Educators.)

PLAN Technical Manual

The PLAN Technical Manual, detailing technical specifications and reliability and validity data for the PLAN tests, is available at **www.act.org/plan/pdf/PlanTechnicalManual.pdf.**

Accommodated Testing Materials

Students with physical or learning disabilities who cannot complete the PLAN tests in the standard time limits using the standard test materials may be tested under accommodated conditions and/or using accommodated testing materials available from ACT.

ACT offers PLAN test forms in Braille and 18-point large-print, on audio CD or audiocassette tapes (test form 29B only), and as reader's scripts. Large-print answer sheets are also available for motor- or vision-impaired students to mark test item responses. Ordering information is available by calling PLAN Customer Services at 1-800/553-6244, extension 1029.

Options to Consider *Before* Administration

PLAN offers a number of administration options to enhance your assessment results. ACT recommends that you discuss these options with your school or district administration, assessment staff, and faculty well in advance of your PLAN testing.

1-Day or 2-Day Administration

If the entire PLAN program is administered in one day, the Student Information and other noncognitive components of the test must be administered first, followed by the four academic tests (English, Mathematics, Reading, and Science).

Because of the time required to complete the noncognitive portions of PLAN, some schools prefer to administer PLAN over a two-day period. In this case, the noncognitive portions of must be administered on Day 1, and the academic tests on Day 2. If your schedule allows, this option may increase the students' focus and minimize testing fatigue. However, care must be taken to ensure that students have the correct answer folder on Day 2. **In no case should the cognitive portion of PLAN be administered prior to the noncognitive portion.** Doing so increases the risk of students filling in random bubbles on the test sections if they did not complete a section of the test or otherwise making extraneous marks that can affect scoring.

Choosing a Testing Option

Prior to the test day, determine which administration option will be used to present instructions for the student information section. Remember that these sections should be administered **prior** to the tests and will take approximately 60–75 minutes. You and your staff may select either of the following options for the administration:

- **Option 1:** Test supervisor reads all directions aloud to the students as they follow along with their copies of *Instructions for Completing Your Answer Folder*.
- **Option 2:** Students read most of the directions themselves from their copies of *Instructions for Completing Your Answer Folder*.

Pre-ID Labels

PLAN offers Student pre-ID Labels to help schools and districts save administration time and ensure accuracy in student demographic information. To place your order, you may download the pre-ID order form and template at **www.act.org/education/order/preid**. Please contact Customer Services at 800/553-6244, extension 1029, if you have questions regarding this process. Please allow at least three weeks for processing and delivery of your pre-ID label order. The labels must be applied to page 1 of the PLAN answer folder prior to your test day, as directed in the instructions that will be provided with your labels.

Use of Student ID/Social Security Numbers

ACT recommends the use of Student ID numbers and Social Security numbers (SSN) on the PLAN answer folder in order to provide positive identification of student test records as well as longitudinal analyses of EXPLORE, PLAN, and/or ACT results that require the matching of individual student records. These matches can be most readily accomplished through either your local Student ID numbers or SSN. These numbers are **not** reported on any EOS files (see page 10).

Optional Sort Codes—Block M

Three-digit Optional Sort Codes may be used if you wish to receive Student Score Reports sorted by classroom, teacher, or other grouping. If you use sort codes, you must prepare directions to be read to the students, instructing them to enter the appropriate code in block M of the answer folder. On the PLAN School Header, also complete block H, "Do you want student reports in sort code order?" Reports **will not** be prepared by sort code unless you respond "Yes" in block H. Customized Profile Summary Reports may also be ordered by sort code. There is an additional fee for these reports.

Pre-ID Users Only: If you wish to use sort codes and you are using pre-ID labels, **you must include sort codes in your pre-ID file.** This eliminates the need for students to grid this data in Section M of their answer folder. The sort code data in the pre-ID file overrules any grid data in this field.

Supplemental Local Items—Block V

Block V on the PLAN answer folder allows collection of student responses to as many as 12 supplemental items developed by your school or district. Questions for this section might cover topics such as the number of hours spent studying, watching television, or working each day or week; interest in vocational/technical courses, or student opinions about various aspects of the school environment. Questions must be designed for students to select only one response per item. Your PLAN Profile Summary Report will include a table summarizing student responses by item number and response option. Responses are also included in student records ordered on CD.

If your school/district chooses to develop and administer supplemental items, each room supervisor should have sufficient copies of the items to distribute to students during administration of the Student Information sections.

Testing Students From Other Schools

If you include students from other schools in your PLAN test administration, ACT recommends that you be prepared to provide these students with the correct ACT school code number for their respective schools to be entered in block **L** of the PLAN answer folder. If students from your school are taking PLAN at another school, be sure to provide them with your correct school code. This will assure that PLAN results are issued to the correct school.

If you are administering PLAN jointly with another school, it is extremely important that you submit completed answer folders **separately** for each school in order for results to be recorded for and issued to the correct school. Prepare a School Header for each school and each grade tested within the school, mailing each school's answer folders in separate envelopes. All students should indicate on page 1 of the PLAN answer folder that they are testing at their own school. The school identified on each School Header is responsible for payment of PLAN scoring fees for all answer folders submitted under that header.

Testing Home-Schooled Students

If you are testing any home-schooled students, instruct them to choose "NO" in block **K** and to enter 979-999 as their high school code in block **L**. Their PLAN reports will be mailed directly to the school where the student tested. The answer folder(s) should be submitted with those of your own students. When these procedures are followed, home-schooled students will not be included in PLAN results for your school. However, your school **is responsible** for collecting and paying testing fees due to ACT.

Testing Students Through a Postsecondary Outreach or Other Special Program

If you are administering PLAN to students from one or more high schools as part of a college outreach or other special program, and you want to receive all PLAN reports, students should respond "Yes" to block **K** and omit block **L** when completing the student background information on the PLAN answer folder. Complete a School Header with your outreach program's PLAN code and the name that appears on your packing list. All reports will then be returned to the institution/program identified on the School Header.

If students respond "No" to block **K** and provide a valid high school code number in block **L**, their reports will be issued to that high school rather than to the institution/program identified on the School Header.

Testing Other than 10th-Grade Students

Examinees below 10th grade, who test August through January, will receive Fall 10th-Grade Norms. Those who test February through June will receive Spring 10th-Grade Norms. Examinees in 11th grade or above will receive Fall 11th-Grade Norms.

Testing Students With Disabilities and Special Accommodations

Students with physical or learning disabilities who cannot complete the PLAN tests in the standard time limits, using standard test materials, may be tested under accommodated conditions and/or using accommodated testing materials available from ACT. All non-test portions of the PLAN program can be completed with the assistance of a reader or marker in an untimed setting.

Recommended Eligibility Requirements for Accommodated Testing

Administration of PLAN with accommodations is entirely at the discretion of school personnel. However, ACT recommends accommodated administrations of PLAN only for students with **current documented disabilities** who have been **professionally diagnosed** as physically or learning disabled such that they cannot test under standard conditions. Students best served by the use of a testing accommodation are those for whom the accommodation would minimize the impact of the student's disability when it is not relevant to the primary focus of the assessment, thus giving a more accurate picture of the student's ability. To be considered current, the diagnosis should have been made or reconfirmed within the last three years. An Individual Education Plan (IEP) or 504 plan on file at the school within the last three school years is generally acceptable evidence of reconfirmation. It is not necessary to have PLAN testing accommodations approved by ACT. Students' answer folders must be marked appropriately in the Accommodations section at the top of page 4 of the answer document to show the primary accommodation given.

Accommodated testing may be administered at a time mutually convenient for the student and test supervisor, as close as possible to the date on which PLAN is administered to other students. Students receiving extended time, any type of assistance from a reader or marker, should be tested individually, each in a separate room. In contrast, examinees using an audiocassette or audio CD may test as a group provided they all use individual earphones and can control the progress of their own cassette or audio CD players. Tests should be administered at the school, not in the supervisor's home or other location, unless the student is currently confined to the home or is receiving homebound instruction. Parents should not administer the tests to their own children.

Accommodated Testing Options

Students with visual impairment or blindness may use a large-print (18 point) or Braille test form, have the test read to them, have assistance in marking their responses, use a large-print response worksheet, and/or receive extended time. A reader's script, audiocassette, and audio CD tests are available from ACT.

A Reader's Script may be used ONLY to read test questions in a SEPARATE ROOM for the ONE STUDENT to whom it is assigned. (If exact English signing of test questions has been authorized by ACT, the same restriction applies.)

Use of this script for group testing is NOT allowed. If the script is read (or signed) to more than one student in the same room, scores for all these students will be cancelled automatically and their test fees will not be refunded.

Students with hearing impairments whose hearing loss has caused a reading disability may be considered for extended time. An interpreter may assist with the pre-test information and instructions but not the test items. A copy of the verbal instructions to students can be provided for the student to read.

Students with learning disabilities may be eligible for extended time and/or a reader, audiocassette or audio CD, per examinee, each with their own headphones and recording machine, consistent with testing accommodations currently provided at the school.

Students with motor disabilities that affect their ability to mark the answer sheet may be eligible for extended time, use of large-print materials or a reader, or assistance in marking responses.

For students who use a large-print response worksheet, item responses must be carefully transferred by school personnel to a standard PLAN answer folder for scoring. ACT is **not** responsible for scoring a large-print worksheet or transferring responses to a standard answer sheet.

Marking Accommodations Codes on the Answer Folder

Room supervisors will find instructions in the *Room Supervisor's Manual* for marking appropriate codes on the PLAN answer folder for students testing with an accommodation. If, as test supervisor, you will be filling in the accommodation codes, please refer to page 29 of the *Room Supervisor's Manual*.

Ordering Special-Format Test Materials

ACT offers test books in Braille and large-print (18-point), on audio CD or audiocassette, and as reader scripts. Large-print response worksheets are also available for students with motor or vision impairments to mark item responses for PLAN. Order accommodated testing materials by calling ACT at 800/553-6244, extension 1029.

Scheduling Testing Sessions

ACT recommends that all four PLAN tests be administered in one session, consistent with the administration model used in the national norming study. Expect approximately 3 1/2 hours total administration time. If desired, the noncognitive sections may be completed on a day prior to the tests.

Total for Noncognitive Sections	60–75 minutes
Test Section:	
English	30 minutes
Mathematics	40 minutes
Break	5 minutes
Reading	20 minutes
Science	25 minutes
General Administration	15 minutes (approximate)
Total for Test Section	135 minutes

The tests should be administered in the order presented in the test booklet (same as listed above), allowing the exact number of minutes for each test.

Although ACT recommends that all four tests be administered in one session, it may be necessary for you to administer the tests in more than one session. In such cases, begin each session with the instructions on page 14 of the *Room Supervisor's Manual* (changing the test number as appropriate), then proceed to the directions pertaining to the test being administered. All sessions should be ended using the directions on page 28 of the *Room Supervisor's Manual*.

Make-Up Testing

Make-up test sessions for students who are absent or become ill during scheduled sessions should be administered in accordance with the standard test administration procedures described in this manual. Return all answer folders to the ACT scoring center at the same time to assure that your School Profile Summary Report is complete.

Selecting and Training Testing Staff

A room supervisor is needed in each testing room to read directions and monitor students. If test rooms are likely to have more than 25 students, additional personnel should be assigned to assist the room supervisor. **Be sure that all personnel who will assist with testing are familiar with the contents of the *Room Supervisor's Manual*.**

Before the test day, all testing personnel should read all of the instructions very carefully, particularly those enclosed in the shaded boxes. ACT recommends that you conduct a briefing session for all testing staff to discuss the testing guidelines and local options that have been selected. An outline is provided on page 49.

Selecting Testing Rooms

Select testing rooms that offer adequate writing surfaces, uncrowded seating, good lighting, comfortable temperatures, a quiet atmosphere, and freedom from distraction. Students should all face the same direction during testing. In general, classrooms are more likely to provide such conditions than auditoriums or cafeterias.

Writing surfaces should be large enough to accommodate the test booklet and answer sheet side-by-side. Students should not be distracted by inadequate writing surfaces. Lap boards are not recommended.

Preparing Students for the Test Day

Prior to the test day, distribute copies of *Why Take PLAN?* and instruct students to bring the following, as you determine appropriate:

- Student ID number (to be used for positive identification of their record)
- Two No. 2 pencils with erasers (no ink or mechanical pencils)
- A calculator with the four basic functions plus square root function (schools may provide calculators for all students)
- A watch to pace themselves (optional)

Pre-Test Activities to Be Completed by the Test Supervisor

The test supervisor must provide the continuity and administrative uniformity necessary to ensure that the students at your school are tested under the same conditions as at other schools and to ensure the security of the examinations. The supervisor's specific responsibilities are to:

- Check all materials shipped from ACT and report any discrepancy between the packing list and contents of the shipment. Make sure you have School Headers containing a bar code label with your school identified on it. Call PLAN Customer Services at 800/553-6244, extension 1029, to report any discrepancies in materials.
- Secure test materials.
- Read and thoroughly understand the policies, procedures, and instructions in this manual and in *Room Supervisor's Manual*.
- Select and train qualified staff.
- Select and reserve testing rooms.
- Plan seating arrangements.
- Assemble additional materials to be available in each test room:
  - ~ pencil sharpener in each test room
  - ~ supply of No. 2 pencils
  - ~ supply of calculators for the Mathematics Test if you want to provide these for students
- Count materials for each room, being sure to record the number of test books assigned to each room.
- Prepare testing rooms.
- Provide roster of students assigned to each test room and provide instructions for marking the roster (optional).

Post-Test Activities to Be Completed by the Test Supervisor

Check PLAN Answer Folders

Test Form

Flip through the answer folders to make sure that each student has marked and gridded the correct test form code in the block at the top of page 4. This will ensure that the answer folders are scored against the correct PLAN test form.

Clarity of Markings

Did students fill the answer ovals with dark pencil markings? If not, darken the student markings. Room supervisors should be reminded to observe students during the test session to see that students are making appropriate marks.

Accommodations Codes

If a student received an accommodation, mark the appropriate circle in the Accommodations box at the top of page 4 of the answer folder. Refer to page 29 of *Room Supervisor's Manual*.

Code definitions are as follows:

1 = Standard print materials with *extended* time limits (no other assistance)
2 = Large-print test book with *standard* time limits
3 = Large-print test book with *extended* time limits
4 = Oral presentation from audio CD with *extended* time limits
5 = Oral presentation from reader's script with *extended* time limits
6 = Braille test book with *extended* time limits
7 = Scribe to transfer answers to answer folder with *standard* time limits
8 = Scribe to transfer answers to answer folder with *extended* time limits
9 = Assistive communication device (e.g., FM audio system) with *extended* time limits
10 = Oral presentation from cassette with *extended* time limits

Scoring Codes

Individual tests may be voided by gridding the appropriate oval under Scoring Codes at the top of the back page of the answer folder (illustrated in Figure 9)—E to void English, M to void Mathematics, R to void Reading, and S to void Science. If it is determined that an entire answer folder should not be scored, mark the document VOID and **retain the voided answer folder** in the student's file or your testing files to verify the reason the student is not receiving a score report. **Do not return** the voided answer folder to ACT. The student should always be informed if a test or answer folder is voided, and an entry should be made on the Testing Irregularity Report.

Special Status Codes

ACT offers this mechanism for identifying records of students with particular characteristics for Title I or other subgroup analysis. Due to potential sensitivity of some characteristics, ACT highly recommends that you or another school administrator mark this information in the shaded box at the top of page 4 of the answer folder **after** students have finished testing.

The assigned designation of each of these Special Status Codes is as follows:

HB	Homebound	M	Title I Math
SE	Special Education	R	Title I Reading
LEP	Limited English Proficiency	X	Locally designated
FL	Free or reduced lunch	Y	Locally designated
ME	Migrant Education Program	Z	Locally designated

Special status codes are reported on the List Report and in the Electronic Student Data File.

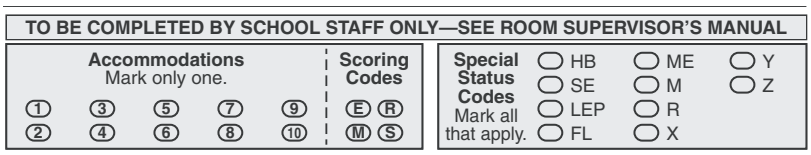

Figure 9. Accommodation Codes, Scoring Codes, and Special Status Codes in PLAN Answer Folder

Voiding Answer Folders

If the room supervisor recommends that some or all of the test not be scored, you may void an individual test by marking the "Scoring Codes" below the Accommodations Codes at the top of page 4 of the answer folder. Mark "E" to void the English Test, "M" to void the Mathematics Test, "R" to void the Reading Test, or "S" to void the Science Test.

***WARNING!* If scoring codes are marked, the corresponding test will NOT be scored! Please be sure the scoring codes are marked only if you want one or more tests to be voided.**

Completing Your School Header

Your responses to blocks C and D will determine the appropriate national norm group for your reports.

To facilitate timely and accurate reporting of your PLAN results, it is essential that you fill out your School Header carefully. Two School Headers are enclosed in your Test Supervisor's Packet, in the event you are testing students in more than one grade. **DO NOT** separate documents by Site Headers if the intention is for all documents to be scored together. **One** header should be used in such a case, even if multiple packages are sent in. (One Site Header per scoring event.) If you need additional forms, please photocopy the school header. If you can't locate a header to copy, please call PLAN Customer Services at 800/553-6244, extension 1029.

The School Header should identify the school where tested students are enrolled. Figure 10 below will assist you in completing your header(s). Please contact PLAN Customer Services if you have questions about completing your School Header. (See Figure 11 on page 35.) (NOTE: Institutional Site Code listed on your Pack Slip is the same as your ACT High School Code.)

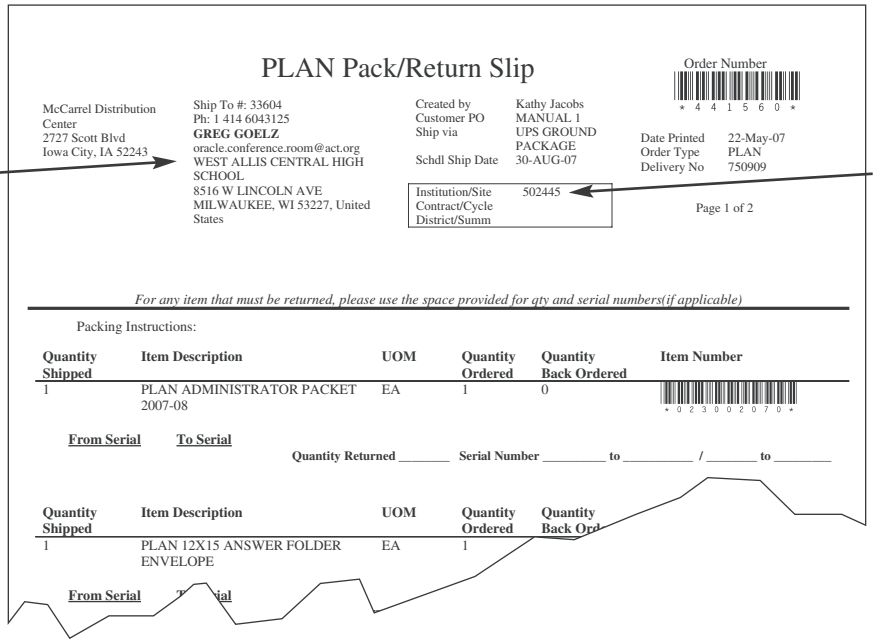

Figure 10. Materials Packing List

PLAN®

2009-10 School Header

PLAN Scoring Service, 2727 Scott Blvd., P.O. Box 4026, Iowa City, IA 52243–4026

INSTRUCTIONS

Use a soft lead No. 2 pencil only. Enter the information requested and fill in the appropriate ovals below each box. DO NOT use any type of ink or mechanical pencil. Erase any errors completely. Place this completed form on the top of your answer folders and return in your first return envelope. Refer to your PLAN *Test Supervisor's Manual* for detailed instructions for returning materials for scoring. **NOTE: Answer folders must be received at ACT by June 15, 2010, to ensure processing.**

A HIGH SCHOOL NAME AND ADDRESS

High School Name

City State ZIP Code

Test Supervisor's Name (Please Print)

e-mail Address

Daytime Telephone Number

B ACT HIGH SCHOOL CODE

C TEST DATE

Month: Jan., Feb., March, April, May, June, July, Aug., Sept., Oct., Nov., Dec.

Day / Year

D GRADE TESTED (Mark only one.)

8th/below
9th
10th
11th
12th/other

E CONTRACT/ CYCLE CODE

F RESERVED FOR FUTURE USE.

G QUANTITY OF ANSWER FOLDERS TO BE SCORED WITH THIS HEADER

H DO YOU WANT STUDENT REPORTS IN SORT CODE ORDER?

Yes
No

FOR OFFICE USE ONLY (DO NOT MARK.)

IM-174992-305:654321 I.C. 023 024 100 Printed in U.S.A.

SAMPLE

Block A—High School Name and Address. Provide the complete name of your high school along with the city, state, and ZIP code. In addition, please provide the name, e-mail address, and telephone number of the Test Supervisor.

Block B—ACT High School Code. Enter the high school's 6-digit ACT code. Check to see that the ovals gridded match your school's code exactly.

Block C—Test Date. Enter the month, day, and year of the date that you administered the four academic tests.

Block D—Grade Tested. Mark only one GRADE TESTED for the answer folders accompanying this header. **If more than one grade was tested, complete a School Header for each grade and place it on top of the appropriate answer folders.**

Block E—Contract/Cycle Code. Record your 3-digit Contract/Cycle Code. See your packing list for the appropriate code.

Block F—Reserved for Future Use.

Block G—Quantity of Answer Folders To Be Scored with This Header. Enter the total quantity of answer folders submitted with this header (even if in multiple packages).

Block H—Do You Want Student Reports in Sort Code Order? Indicate whether your school used sort codes on Block M of the student answer folders or on Pre-ID labels. This block must be completed if you want ACT to sort reports by sort code.

Using Your PLAN Results is available in Spanish for parents whose primary language is Spanish. Copies of the Spanish translation may be downloaded at www.act.org/plan under **Materials for Educators.**

Figure 11. PLAN School Header

Returning Answer Folders for Scoring

ACT recommends that all answer folders (standard, make-up, and accommodated testing) be returned together to ACT immediately after your last testing session. ACT will attempt to score all answer documents returned to us. Although a pre-addressed mailing envelope is provided, **ACT highly recommends returning answer folders by a traceable method so that you can track their safe delivery to ACT.**

If your Testing Irregularity Reports include any defective test materials or challenges of test items, include the report in your first envelope of answer folders, keeping a copy for your records. Please do not include other Testing Irregularity Reports with your answer folders.

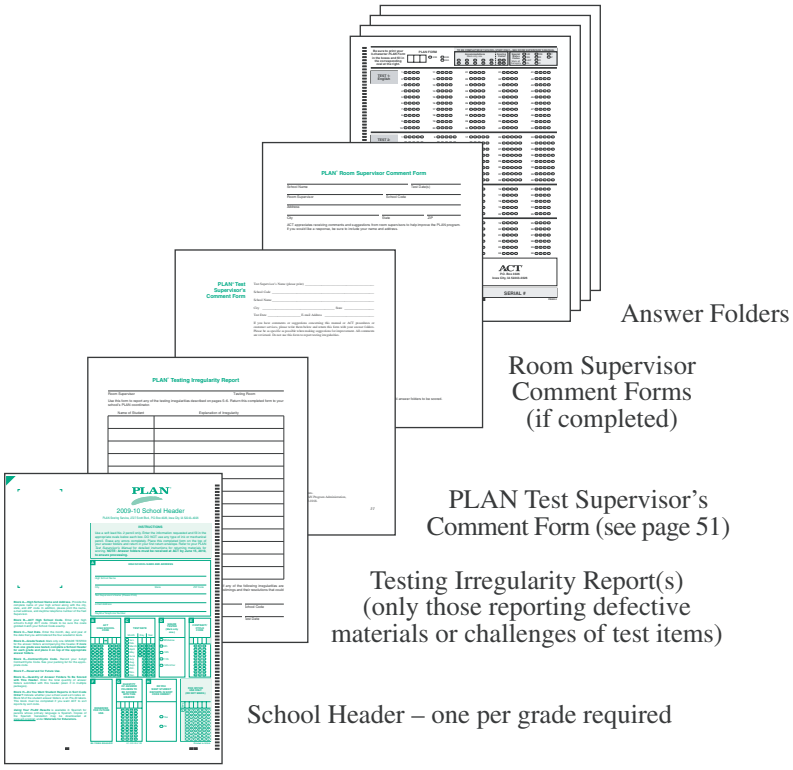

Figure 12. Packaging PLAN Answer Folders for Scoring

As shown in Figure 12, place your School Header on top of your stack of answer folders in your first envelope. Testing Irregularity Reports, Test Supervisor and Room Supervisor Comment Forms should be placed immediately below the School Header. If you have tested more than one grade, stack answer folders from each grade separately, **completing a School Header for each grade and marking the appropriate circle in block D**. The grade on the header determines the national norm group to be used on your reports. If no grade is marked or if more than one grade is marked on the same form, ACT will report national Fall 10th-Grade Norms.

If you are submitting a large number of answer folders for scoring, you may wish to place your envelopes in a single carton to assure that all materials arrive at the ACT scoring center together.

PLAN SCORING SERVICE
2727 SCOTT BLVD.
P.O. BOX 4026
IOWA CITY, IA 52243-4026

If you are shipping or mailing more than one parcel, number the box(es) or envelopes in sequence—for example, 1 of x, 2 of x, etc., where x is the total number of parcels.

Use the pre-addressed mailing envelope(s) provided with your PLAN order or use the address shown to the left

Multiple-School Districts

If your district is administering PLAN in two or more schools, answer folders from all schools should be submitted for scoring at the same time in a single shipment. Be sure that School Headers are placed on top of the appropriate answer folders to ensure accurate reporting of results.

Scoring and Reporting Deadlines

JUNE 15, 2010

PLAN 2009–10 answer folders must arrive at ACT by **June 15, 2010**, in order to be scored.

Students whose answer folders are scored through December will be available for the PLAN Educational Opportunity Service (EOS) in January 2010. Students whose answer folders are scored after December 2009, and before May 2010, will be available for PLAN EOS in May 2010.

Disposition of Other Testing Materials

Keep voided answer folders for your records or destroy them. DO NOT RETURN VOIDED ANSWER FOLDERS TO ACT. Destroy unused answer folders, as they cannot be used next year.

Used test booklets should be stored and returned to students with their PLAN score reports. Each student should receive the booklet he/she used for testing.

Unused test booklets may be discarded at the end of the year. Test forms are scored by ACT only during the school year in which they are distributed.

All other materials (*Instructions for Completing Your Answer Folder,* unused answer folders, etc.) should be destroyed. You may wish to keep your test room rosters or sign-up sheets until you are certain that score reports for all students tested have been received.

References

ACT. (2007). *PLAN technical manual*. Iowa City, IA: Author.

ACT. (2007). *ACT National Curriculum Survey 2005–2006.* Iowa City, IA: Author.

Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Odessa, FL: Psychological Assessment Resources.

ACT. (2009). *The ACT Interest Inventory technical manual*. Available from www.act.org/research/researchers/techmanuals.html.

APPENDIX A

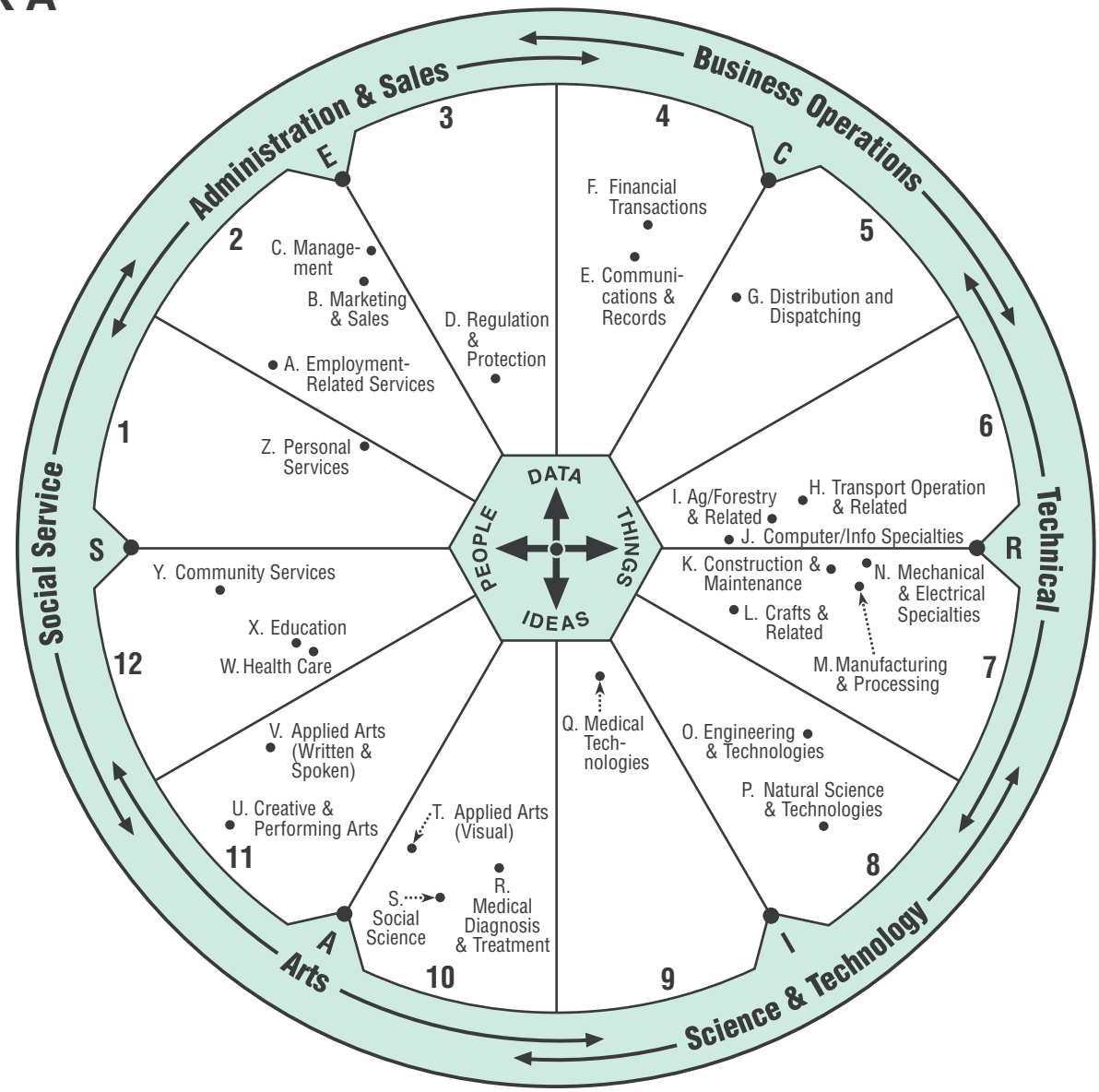

Figure 13. World-of-Work Map

The location of a career area on the Map shows how much it involves working with DATA, IDEAS, PEOPLE, and THINGS. Although each career area is shown as a single point, the occupations in a career area vary in their locations. Most occupations, however, are located near the point shown for the career area.

DATA/IDEAS DIMENSION	THINGS/PEOPLE DIMENSION
Data (facts, records, files, numbers). "Data activities" involve *impersonal processes* such as recording, verifying, transmitting, and organizing facts or data representing goods and services. Purchasing agents, accountants, and air traffic controllers work *mainly* with data.	**Things** (machines, mechanisms, materials, tools, physical and biological processes). "Things activities" involve *non-personal processes* such as producing, transporting, servicing, and repairing. Bricklayers, farmers, and engineers work *mainly* with things.
Ideas (abstractions, theories, knowledge, insights). "Ideas activities" involve *intrapersonal processes* such as discovering, interpreting, and creating new ways of expressing something—for example, with words, equations, or music. Scientists, musicians, and philosophers work *mainly* with ideas.	**People** (no alternative terms). "People activities" involve *interpersonal processes* such as helping, informing, servicing, persuading, entertaining, motivating, and directing—in general, producing a change in human behavior. Teachers, salespersons, and nurses work *mainly* with people.

All occupations involve some work with data, ideas, things, and people. The examples listed above were chosen with an emphasis on the primary purpose or focus of the job activities. For example, a scientist may work with data, but the primary purpose is *not* to produce or handle data, rather it is to create or apply scientific knowledge. Likewise, an accountant may work with ideas, but the ultimate goal is *not* to create ideas, rather it is to organize, record, and verify data in a systematic manner.

Figure 14. Definitions of the Data/Ideas and Things/People Work Task Dimensions

WORLD-OF-WORK STRUCTURE

Because there are so many occupations—more than 800 are listed in the U.S. Department of Labor's O*NET Occupational Information Network—ACT has developed a system of grouping occupations that makes career exploration easier for the student. The ACT occupational groups, called "career areas," are based on each occupation's mix of the four basic work tasks: working with data, ideas, people, and things (see Figure 14 above). The World-of-Work Map (see Figure 13 on page 40) is a concise way to organize these concepts.

Occupations with similar work tasks, work purpose, and work setting are grouped into the same career area. The Map shows locations of career areas in terms of their involvement with data, ideas, people, and things. The types of abilities required by occupations in a given career area are generally similar, although ability levels may differ. Typical occupations in each of the 26 career areas are shown in the Career Area List found on side 1 of the Student Score Report (see Figure 5a on page 15).

Side 1 of the Student Score Report also shows the Map itself. The Map was designed to serve two functions. First, it provides a simple yet comprehensive overview of a work world that comprises thousands of different occupations. Second, it helps students identify occupations congruent with their interests.

A student's normed scores can be represented as a location on the World-of-Work Map (ACT, 2009). To encourage breadth in career exploration, the location is translated into World-of-Work Map "regions."

Students are encouraged to continue their career exploration at **www.planstudent.org**. This site contains information about work tasks, entry requirements, etc., on over 500 occupations, all organized by career area.

WORLD-OF-WORK MAP REGIONS

The procedure for determining the shaded map regions from a student's interest scores on six scales is described in ACT (2009). Briefly stated, this procedure uses the rank of a student's three highest interest scores (sometimes called a "three-letter code" or "Holland code") to determine the student's map region. Thus, a student who scores highest on the Science and Technology Scale, followed by the Technical Scale and Arts Scale, would be referred to region 8 and the two adjacent regions (7 and 9). Ideas and Things work tasks predominate in these regions.

When diverse interest scales are tied for highest, students may be referred to nonadjacent map regions. For example, a student scoring highest on both Social Service and Technical and next highest on Administration and Sales would be referred to regions 1 and 6, indicating a preference for People and Things work tasks with some degree of Data involvement.

Reminder: The World-of-Work Map summarizes information on more than 800 occupations, which is both a strength and a weakness. The Map is intended to help students in the early stages of career exploration, not to provide a detailed scientific statement. Although care has been taken to make the Map's 26 career areas as homogeneous as possible, there is scatter among the occupations in each career area. Thus, the Map presents an overview of the major regions, landmarks, and work-task climates of the work world.

APPENDIX B

Comparing PLAN Results to EXPLORE Results

If your PLAN-tested students took EXPLORE as eighth or ninth graders, it can be helpful to look at the change in Composite score between the two tests. EXPLORE Student Reports include an estimated PLAN Composite score range based on the EXPLORE Composite score achieved. By looking back at the EXPLORE Composite score and the estimated PLAN Composite score range predicted, students can see whether they have achieved within the expected range, fallen below expectations, or exceeded expectations. Discussions can follow about the intervening coursework, effort put forth in those courses, etc., leading to future course plans. Tables are provided at **www.act.org/explore/norms**.

APPENDIX C

Interpreting Interest Inventory Results

As noted in the Noncognitive Components section of this manual, PLAN Interest Inventory results are reported as six scores paralleling the six interest types proposed in Holland's theory of careers. Scores are converted to World-of-Work Map regions for ease of student use. Two issues in the interpretation of interest inventory results are addressed below. First, some students may not receive map regions. Second, some counselors may want to provide students with a clinical interpretation of their score profiles.

Why Some Students Do Not Have Map Regions

BASED ON THEIR INTERESTS: REGION 99

There are two reasons why some students will not have World-of-Work Map regions, reported on their Student Score Report.

- First, when a student does not complete enough items for scoring, no interest results are shown on the Map.
- Second, when a student's six-score interest profile is undifferentiated ("flat") or very inconsistent, "Region 99" is shaded on the World-of-Work Map. Region 99 indicates that the student's scores do not show a clear pattern, and no direction (regions) can be suggested for exploration at this time. In these cases counselors have alternatives to help students explore career possibilities.

Some students may obtain a flat profile because they have had a limited range of work-related experiences. Counselors may be able to help such students by suggesting how they can obtain experiences involving data, ideas, people, and things work-related activities.

PROFILE AND THE INTEREST INVENTORY SCORES

Counselors can also use the PLAN Interest Inventory Score Profile as a means to visually inspect the student's interest scores. The score profile includes directions for profiling the six scores. (Photocopy the profile sheet as needed.) The profiling procedure is illustrated in Figure 15. The visual profile can be used to form a clinical interpretation of the Interest Inventory results, drawing on the counselor's professional training and experience.

Clinical judgments should be formed in the context of other information about the student (e.g., work-related experiences, plans, and abilities). When interpreting a profile, counselors are urged to keep in mind that no test or inventory provides perfectly reliable scores.

INTEREST PROFILE CHART

CAREER CLUSTERS	YOUR STANINE SCORES	LOWER THIRD			MIDDLE THIRD			UPPER THIRD		
		1	2	3	4	5	6	7	8	9
TECHNICAL (R)	3			X						
SCIENCE & TECHNOLOGY (I)	4				X					
ARTS (A)	5					X				
SOCIAL SERVICE (S)	4				X					
ADMINISTRATION & SALES (E)	7							X		
BUSINESS OPERATIONS (C)	6						X			

Figure 15. Example of a Completed Interest Inventory Score Profile

PLAN® Interest Inventory Score Profile

Name _____ Date _____

(To be completed by a counselor or career advisor)

1. Find the six interest inventory stanine scores in the Information for Counselors box on side 1 of the PLAN Score Report. Enter them in the column titled "Stanine Scores" in the profile below.

2. Draw the interest profile by placing an X in each stanine column (1–9) in which the score falls. Then, connect the Xs.

The stanine profile shows the strengths of the student's interests in the six clusters. The box at the bottom of this sheet contains descriptions of the six clusters.

INTEREST PROFILE CHART										
CAREER CLUSTERS	STANINE SCORES	LOWER THIRD			MIDDLE THIRD			UPPER THIRD		
		1	2	3	4	5	6	7	8	9
TECHNICAL (R)										
SCIENCE & TECHNOLOGY (I)										
ARTS (A)										
SOCIAL SERVICE (S)										
ADMINISTRATION & SALES (E)										
BUSINESS OPERATIONS (C)										

CAREER CLUSTER (and Holland Type)	**PERSONS WITH SUCH INTEREST MAY LIKE TO:**	**MAP REGIONS TO CONSIDER**
Technical (R—Realistic)	Use, repair, design tools, equipment, materials, etc.; raise crops or animals for market.	6 and 7
Science & Technology (I—Investigative)	Learn about scientific facts and principles through reading, discussion, research.	8 and 9
Arts (A—Artistic)	Express thoughts or feelings through painting, writing, designing, music, drama, etc.; go to art museums, concerts, plays; read novels, poetry, etc.	10 and 11
Social Service (S—Social)	Help, inform, or serve others through teaching, counseling, human services, work, etc.; learn about social issues.	12 and 1
Administration & Sales (E—Enterprising)	Persuade, motivate, lead, direct others—as in business management or sales.	2 and 3
Business Operations (C—Conventional)	Develop and/or follow orderly steps for conducting business; maintain accurate files, records, accounts, etc.	4 and 5

This form may be reproduced as needed.

ACT®

APPENDIX D

Coursework Planner for Grade ___

Provided to students in *Using Your PLAN Results*.

Subjects	Courses
Core Courses	
English/Language Arts (for example: Writing, Literature, Journalism, Poetry)	
Mathematics (for example: General Math, Algebra I, Algebra II, Business Math, Calculus, Geometry, Statistics, Trigonometry)	
Social Studies/Sciences (for example: History, Geography, Government, Economics, Psychology)	
Science (for example: General Science, Biology, Chemistry, Earth Science, Physics)	
General Courses	
Health and Fitness (for example: First Aid, Health, Physical Education)	
Foreign Languages (for example: French, German, Spanish)	
Arts (for example: Art Appreciation, Dance, Drawing, Graphic Arts, Painting, Photography)	
Music (for example: Band, Chorus, Music Appreciation, Orchestra)	
Communications (for example: Drama, Speech)	
Specialized Courses	
Agriculture (for example: Agribusiness, Animal Husbandry, Landscaping, Horticulture)	
Business & Computers (for example: General Business, Bookkeeping, Computer Literacy, Computer Science, Keyboarding, Office Practices, Sales & Marketing)	
Family & Consumer Sciences (for example: General Family and Consumer Science, Child Care, Clothing, Foods, Interior Design)	
Industrial Arts & Technologies (for example: Automotive Technology, Construction Technology, Cosmetology, Drafting, Electronic/Mechanical Technology, Allied Health Technology, Metal Technology, Wood Technology)	

This may be reproduced as needed

Example Coursework Planner for Grade 11

Note: If courses will differ per term, be sure to indicate this on the planner.

Subjects	Courses
Core Courses	
English/Language Arts (for example: Writing, Literature, Journalism, Poetry)	Honors English III (Semester 1 & 2) Journalism (Semester 2)
Mathematics (for example: General Math, Algebra I, Algebra II, Business Math, Calculus, Geometry, Statistics, Trigonometry)	Trigonometry (Semester 1) Statistics (Semester 2)
Social Studies/Sciences (for example: History, Geography, Government, Economics, Psychology)	U.S. History II (Semester 1 & 2)
Science (for example: General Science, Biology, Chemistry, Earth Science, Physics)	Chemistry (Semester 1 & 2)
General Courses	
Health and Fitness (for example: First Aid, Health, Physical Education)	
Foreign Languages (for example: French, German, Spanish)	Spanish III (Semester 1 & 2)
Arts (for example: Art Appreciation, Dance, Drawing, Graphic Arts, Painting, Photography)	
Music (for example: Band, Chorus, Music Appreciation, Orchestra)	Chorus (Semester 1 & 2)
Communications (for example: Drama, Speech)	
Specialized Courses	
Agriculture (for example: Agribusiness, Animal Husbandry, Landscaping, Horticulture)	
Business & Computers (for example: General Business, Bookkeeping, Computer Literacy, Computer Science, Keyboarding, Office Practices, Sales & Marketing)	Accounting I (Semester 1)
Family & Consumer Sciences (for example: General Family and Consumer Science, Child Care, Clothing, Foods, Interior Design)	
Industrial Arts & Technologies (for example: Automotive Technology, Construction Technology, Cosmetology, Drafting, Electronic/Mechanical Technology, Allied Health Technology, Metal Technology, Wood Technology)	

APPENDIX E

Local Courses to Be Reported on PLAN® Course/Grade Information

Student Name _____

Courses Listed on PLAN Answer Folder (page 3)	Corresponding Local Course Names	Term Length: 1/2 or 1 year	Grade Earned
ENGLISH			
English taken in grade 9			
English taken in grade 10			
English taken in grade 11			
English taken in grade 12			
Other English courses			
MATHEMATICS			
Algebra 1			
Geometry			
Algebra 2			
Trigonometry			
Pre-Calculus			
Other advanced math courses			
College Prep Integrated Math—grade 9			
College Prep Integrated Math—grade 10			
College Prep Integrated Math—grade 11			
College Prep Integrated Math—grade 12			
SOCIAL STUDIES			
U.S. History (American History)			
World History			
Government/Civics			
World Cultures/Global Studies			
Economics			
Psychology			
Sociology			
Other social studies courses			
NATURAL SCIENCES			
Physical/Earth/General Science			
Biology Year 1			
Biology Year 2			
Chemistry Year 1			
Chemistry Year 2			
Physics			
Anatomy/Physiology			
Other science courses			

(Downloadable in Microsoft Word at **www.act.org/plan** under Materials for Educators)

APPENDIX F

Suggested Training Session Outline

1. Security of Test Materials

A) Describe how the materials will be distributed to the test rooms, and how room supervisors are to count.

B) Room supervisors are to count test booklets when they receive them from the test supervisor and again before examinees are dismissed.

C) Staff members should never leave a test room unattended.

2. Pre-Test Activities

A) Determine whether room supervisors are to follow Option 1 (reading aloud all applicable instructions) or Option 2 (reading aloud only selected instructions).

B) Discuss when the pre-ID label will be affixed to the answer folder, special instructions to be distributed to students, and how the folders are to be distributed.

C) Discuss when and where students will complete the non-test portions of the answer folder. This should be done during a school-supervised session, preferably before the test day.

D) Stress the importance of ensuring that all students fill in the ovals, not just the boxes. This is especially important in the name and address blocks if pre-ID labels are not used.

E) Discuss the use of sort codes and how these will be delivered to students.

F) Determine how and when supplemental local items will be distributed.

G) Stress the value of having students complete the High School Course/Grade Information section, and what resources (such as transcripts or the local course chart on page 48 of this manual) will be provided to assist students.

H) Explain the purpose of the special status and scoring codes and how/why they will be completed after testing by the test supervisor.

I) Discuss procedures for collecting answer folders following the non-test portion to facilitate redistribution at the time tests are administered.

J) Review a sample roster of students and explain how it is to be used in test rooms.

3. Test Day

A) Discuss when and where staff members are to report on the test day.

B) Encourage staff members to wear soft-soled shoes. They should avoid crinkly clothing, noisy jewelry, coins in pockets, or other items that may distract students.

C) Room supervisors are not to wait for examinees who arrive late.

D) No one may be admitted to the testing room once the timed tests have begun. Determine how to handle late arrivals.

E) Verbal instructions for the tests must be read verbatim.

F) Answer folders and test booklets should not be distributed prior to admitting examinees.

G) Accurate timing of each test is critical. Room supervisors must record the start, five-minute warning and stop times in the manuals. Discuss the consequences of a mistimed section.

H) Staff members must not read (other than the *Room Supervisor's Manual*), correct papers or do anything not related to administering the test. They must not eat, drink, or smoke in the test room. Their attention should be focused on the students.

I) Conversations must be quiet and kept to a minimum. Even whispered conversations can be distracting to students while testing.

J) Calculators should be checked at the beginning of the Mathematics Test to ensure they meet ACT standards. Review permitted and prohibited calculators in the *Room Supervisor's Manual*.

K) During the test, staff members should walk quietly around the room, be available to respond to students' questions, assist in the case of illness, replace defective test booklets or answer folders, and check that examinees are working from the correct section of the test booklet and marking their answers on the proper section of their answer folders.

L) Discuss how to handle the short break between Tests 2 and 3. Review what to do if an examinee does not return after the break. Also discuss procedures for leaving during the test to go to the rest room.

M) Discuss what actions to take if staff members observe prohibited behavior. Review plans for dismissing students (e.g., where they are to be sent, how to maintain vigilance in the test room, documenting actions taken).

N) Discuss what actions to take in the case of a group irregularity (e.g., a power outage) or in case of an emergency.

O) Discuss potential individual irregularities and actions to take.

P) Review the Testing Irregularity Report.

4. After the Test

A) Room supervisors must verify the count of used and unused test booklets, then return test materials and reports to the test supervisor.

B) Room supervisors or the PLAN test supervisor should review answer folders to be sure students have correctly gridded their identifying and demographic information.

APPENDIX G

Procedures Checklist

This checklist for the administration of PLAN is provided for your convenience. It does not replace the administrative procedures in this *PLAN Test Supervisor's Manual* or *Room Supervisor's Manual*.

Pre-Test Activities

- ☐ Display PLAN posters.
- ☐ Read this PLAN *Test Supervisor's Manual* carefully.
- ☐ Distribute copies of *Why Take PLAN*.
- ☐ Post sign-up sheets (if student sign-up is required).
- ☐ Order pre-ID labels online at **www.act.org/education/order/preid**.
- ☐ Notify ACT if more materials are required.
- ☐ Read the PLAN *Room Supervisor's Manual* carefully.

Preparation for Testing

- ☐ Reserve test rooms (preferably classrooms).
- ☐ Plan seating arrangements.
- ☐ Make provisions for left-handed examinees.
- ☐ Open and check test materials upon receipt.
- ☐ Store test materials securely until test day.
- ☐ Announce to students the day/time of testing, the location of the testing room(s), and what to bring on test day.
- ☐ Assemble materials to be provided by your school.
- ☐ Select and train testing staff. Provide the PLAN *Room Supervisor's Manual* to all testing staff before the test day. ACT recommends that you hold a briefing session if you are using two or more testing staff. See page 49.
- ☐ Determine the following and inform testing staff: (see pages 28–29)
  When will the non-test sections be administered?
  Which option will be used for administering non-test sections?
  Will sort codes be used?
  Will supplemental local items be administered?
- ☐ If administering PLAN in two sessions, collect the answer folders after the non-test sections are completed and store them securely until they are redistributed on test day.
- ☐ Count out test materials by testing room. Ensure that test books are stored securely until they are distributed directly to room supervisors on test day.

Test Day

- ☐ Verify that testing rooms are properly arranged.
- ☐ Distribute test materials to testing staff.
- ☐ Direct students to seats; do not allow them to select their seats.

Administration

- ☐ Distribute answer folders and instructions to students.
- ☐ Hand each examinee a test booklet.
- ☐ Verify that the number of test booklets distributed and the number remaining equal the number of booklets assigned to the room.
- ☐ Administer tests in proper sequence.
- ☐ Write the **Start/Stop times** and **5-minutes-remaining time** in the manual for each test.
- ☐ Time each test exactly.
- ☐ Check calculators before the Mathematics Test.
- ☐ Monitor test room throughout the test session.
- ☐ Do not leave testing room unattended at any time.
- ☐ Collect answer folders first, then test booklets.
- ☐ Review answer folders to be sure critical fields are gridded correctly.
- ☐ Verify counts of test materials before students are dismissed.

Wrap-Up After Testing

- ☐ Document irregularities and accommodated testing administrations.
- ☐ Schedule and administer make-up testing as necessary.
- ☐ Store used test booklets so they can be returned with score reports to the students who used them.
- ☐ Destroy unused answer folders.
- ☐ Complete a School Header for each grade tested; check gridding of school code and cycle code for accuracy; return with completed answer folders.
- ☐ Code Accommodations, Scoring Codes, and Special Status Codes sections on the top of page 4 of the answer folder (see page 33).
- ☐ Make a copy of any Testing Irregularity Reports that involve defective materials or challenged test items; return these reports with completed answer folders.
- ☐ Keep file copies of all forms and reports mailed to ACT with answer folders.

PLAN® Test Supervisor's Comment Form

Test Supervisor's Name (please print) _____

School Code _____

School Name _____

City _____ State _____

Test Date _____ E-mail Address _____

If you have comments or suggestions concerning this manual or ACT procedures or customer services, please write them below and return this form with your answer folders. Please be as specific as possible when making suggestions for improvement. All comments are reviewed. Do not use this form to report testing irregularities.

Return this form only if you have comments.
Include with answer folder or mail to PLAN Program Administration,
ACT, P.O. Box 168, Iowa City, IA 52243-0168.

PLAN Customer Services

For information about ordering PLAN materials, administering the PLAN program, or PLAN reporting services, **contact ACT Customer Services at 800/553-6244, extension 1029**.

ACT maintains a staff of consultants in offices throughout the country who can advise educators on local uses of PLAN data. For information about how PLAN can be used in your school or district, contact ACT Educational Services at the ACT national office or the ACT office serving your area.

ACT Offices

ACT National Office

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319/337-1000

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Aurora, CO 80014-3507
303/337-3273
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512/345-1949
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Midwest Region

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Lincolnshire, IL 60069-9498
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Fax 847/634-1074
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Fax 517/327-0772

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Fax 614/470-9830

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Fax 518/869-7392

Southeast Region

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404/231-1952
Fax 404/231-5945

1315 E. Lafayette Street, Suite A
Tallahassee, FL 32301-4757
850/878-2729
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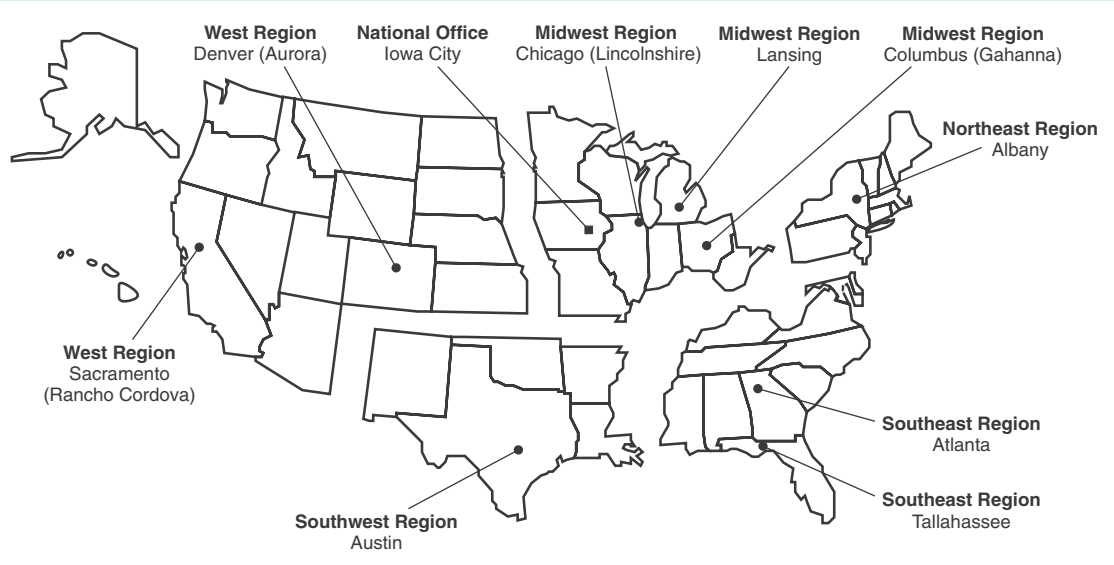

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