

# Norm vs. Criterion Referenced Testing

Norm Referenced	Criterion Referenced
Measures a student's performance in comparison to the performance of a larger group <ul style="list-style-type: none"> <li>• <b>May contain content not yet learned</b></li> <li>• <b>Not aligned to content standards</b></li> </ul>	Measures a student's performance based on mastery of a specific set of standards <ul style="list-style-type: none"> <li>• <b>Questions are aligned to content standards</b></li> <li>• <b>Content is grade level specific</b></li> </ul>
Used to rank test takers to a national sample <ul style="list-style-type: none"> <li>• <b>Sort and rank students on the bell curve</b></li> <li>• <b>Not all students can be proficient</b></li> <li>• <b>Students receive a percentile ranking</b></li> </ul>	Used to demonstrate mastery of skills <ul style="list-style-type: none"> <li>• <b>Scores are reported against cut scores</b></li> <li>• <b>All students can be proficient</b></li> <li>• <b>Students are not compared to others, but to performance on the standards</b></li> </ul>
No state involvement in development	Depending on the vendor, state educators may be heavily involved in the development and review process
Typically multiple choice with little to no writing <ul style="list-style-type: none"> <li>• <b>Writing is limited</b></li> <li>• <b>May not contain written response for math</b></li> </ul>	Contain a mixture of item types <ul style="list-style-type: none"> <li>• <b>Multiple choice, multi-select</b></li> <li>• <b>Writing is included on various levels</b></li> <li>• <b>Open response items for math</b></li> </ul>

## Questions to ask when evaluating a state assessment program:

1. Does the assessment align to the standards teachers are required to teach?
2. Do state educators have input on the development?
3. What data will schools receive back that will make the assessment meaningful?
4. When will schools receive results?
5. What types of questions will be used on the assessment?
6. What depth of knowledge/level of Blooms will be needed by students to answer questions on the assessment?
7. Do the questions vary in complexity so that all learners have the opportunity to demonstrate their knowledge?
8. Are students able to answer questions with the method that makes sense to them?
9. What accommodations will this assessment offer students with disabilities?
10. Does the English Language Arts portion of the test integrate the reading and writing disciplines?
11. Has the assessment been through Peer Review with U.S. Dept. of Ed.?
12. Does the assessment provide a yearly growth score?
13. Does the English Language Arts portion of the test assess student writing in the various modes that will be encountered in college and career, such as research, narrative, and analytical writing?

## Comparison of PARCC/ACT Aspire/NWEA

	PARCC	ACT ASPIRE	NWEA
1) ALIGNED TO COMMON CORE STATE STANDARDS FOR GRADES 3-11	✓	NO	✓
		"DESIGNED TO REPORT ON KEY CONSTRUCT OF THE CCSS"	ALIGNED MAINLY TO COMMON CORE ANCHOR STANDARDS
2) SUMMATIVE ASSESSMENT	✓	✓	✓
			*ADD ON CHARGE
3) FORMATIVE ASSESSMENT	✓	✓	✓
	Diagnostic being developed	*ADD ON CHARGE	
4) MEASUREMENT OF COLLEGE&CAREER READINESS	✓	✓	NO
5) COMPLETE SCORE REPORTS BY GRADE 3-11	✓	✓	✓
6) INCLUDES VARIOUS MODES OF WRITING: NARRATIVE, ANALYSIS, AND RESEARCH	✓	NO	NO
7) MATH	✓	✓	✓
8) STATE EDUCATOR INVOLVEMENT IN DECISIONS	✓	NO	NO
9) TIMED ASSESSMENT	✓	✓	✓
			*Approximate times are given, but students are allowed more if needed
10) COMPUTER ADAPTIVE	NO	NO	✓

## Comparison of Testing Times

	ACT Aspire	NWEA MAPS	PARCC**
Grade 3	230 minutes	540 minutes	585 minutes
Grade 4	230 minutes	540 minutes	600 minutes
Grade 5	230 minutes	540 minutes	600 minutes
Grade 6	240 minutes	540 minutes	650 minutes
Grade 7	240 minutes	540 minutes	650 minutes
Grade 8	245 minutes	540 minutes	650 minutes
Grade 9	250 minutes *	540 minutes	570 minutes
*(EARLY HS)			
Grade 10		540 minutes	570 minutes
Grade 11		540 minutes	570 minutes
Algebra 1		180 minutes	320 minutes
Geometry		180 minutes	320 minutes
Algebra II		180 minutes	330 minutes
<b>CONTENT AREAS</b>	<b>ENGLISH, WRITING, READING, MATH &amp; SCIENCE</b>	<b>READING, LANGUAGE USAGE &amp; MATH</b>	<b>MATH, ELA WITH WRITING AND EXTENDED RESPONSE</b>
		Untimed, but a typical student completes in under 60 minutes /subject area - See more at: <a href="https://www.nwea.org/assessments/map/#sthash.X27Qt7gA.dpuf">https://www.nwea.org/assessments/map/#sthash.X27Qt7gA.dpuf</a>	** All times are based on the 2014-2015 administration. Times for 2015 and beyond will be reduced.

## What does the law require?

### Federal Law – Public Law PL 107-110, the No Child Left Behind Act of 2001

- Assessment that:
  - is aligned with the state’s academic content standards.
  - is given to all students.
  - provides reasonable adaptations and accommodations for students with disabilities.
  - involves multiple up-to-date measures of students academic achievement, including measures that assess higher-order thinking skills and understanding.
  - must pass Peer Review by U.S. Department of Education.

Grade(s)	How often	Subject(s)
3-8	Yearly in each grade	Math and Reading or ELA
9-12	Yearly in at least one grade	Math and Reading or ELA
3-5	Yearly in at least one grade	Science
6-9	Yearly in at least one grade	Science
10-12	Yearly in at least one grade	Science
k-12	Yearly for all ELL students receiving services	English Language Assessment

#### State Law

Grade Level	Assessment	Statutory Requirement
Kindergarten	Kindergarten Screener	A.C.A. § 6-15-404
Grades 1 & 2	Iowa Test of Basic Skills (Norm Referenced) – Math and Reading	A.C.A. § 6-15-404
Grade 8	Explore (ACT college readiness)	A.C.A. § 6-15-441
Grade 10	Plan (ACT college readiness) OR PSAT-District Choice	A.C.A. § 6-15-441
Grades 4 & 8	National Assessment for Educational Progress (NAEP)	A.C.A. § 6-15-404

## Arkansas Required Tests by Grade

Grade	Required Assessment(s)	Approximate Time** (hrs:mins)
<b>K</b>	Kindergarten Screener	00:10
<b>1 &amp; 2</b>	IOWA	2:15
<b>3</b>	PARCC Math and ELA	9:45
<b>4</b>	PARCC Math and ELA	10:00
	NAEP	00:50
<b>5</b>	PARCC Math and ELA	10:00
	Science Benchmark	3:45
<b>6</b>	PARCC Math and ELA	10:50
<b>7</b>	PARCC Math and ELA	10:50
	Science Benchmark	3:45
<b>8</b>	PARCC Math and ELA	10:50
	Explore*	3:00
	NAEP	00:50
<b>9-12</b>	9 <sup>TH</sup> & 10 <sup>TH</sup> PARCC ELA	05:45
	PARCC Algebra 1	05:20
	PARCC Geometry	05:20
	Biology	4:20
	PLAN or PSAT*	2:30
	11 <sup>th</sup> Grade ELA & Algebra 2 (Optional)	11:05

\*Beginning with the 2015-2016 school year districts have the choice to use PARCC ELA & Math at grades 8 and 10 instead of EXPLORE, PLAN or PSAT to meet the requirements of A.C.A. § 6-15-441.

\*\*All times for the PARCC assessment are approximate as schools may end testing once all students are complete. All times will be reduced for the 2015-2016 school year.

### **Why does Arkansas give a Criterion Referenced Test?**

Prior to ACTAAP (Arkansas Comprehensive Testing, Assessment, and Accountability Program) and NCLB (No Child Left Behind Act of 2001) Arkansas had Content Standards at grade levels K-4, 5-8, and 9-12. Other CRT (Criterion Referenced Testing) projects were a part of the Nineties such as the Portfolio Pilot Project Assessing Mathematics and Literacy for about 5 to 6 districts. The first Statewide Criterion Referenced Testing took place with the Minimum Performance Testing, the High School Exit Exam, and then ACTAAP began in 1998 with grade 4 Reading, Writing and Mathematics that was designed to align with the Arkansas's Curriculum Frameworks. This included Multiple Choice Items, Open-Response Items, and Writing Prompts. Grade 8 Criterion Referenced testing followed in the Spring of 1999, with field testing for Grade 6, End of Course for Algebra I and Geometry and end of level Grade 11 Literacy which began in 2000. Others have followed as dictated by federal and state laws. NCLB also required the Alternate Assessments for Students with Significant Disabilities and Limited English Proficiency. According to NCLB (2001), each state had to develop challenging Academic Standards, Academic Assessments, and Accountability for at least mathematics, reading or language arts, and science (beginning in the 2005-2006 school year), which would include the same knowledge, skills, and levels of achievement expected of all children.

- A. Challenging academic content standards in academic subjects that—
  - I. specify what children are expected to know and be able to do;
  - II. contain coherent and rigorous content; and
  - III. encourage the teaching of advanced skills; and
- B. Challenging student academic achievement standards that—
  - I. are aligned with the State's academic content standards;
  - II. describe 2 levels of high achievement (proficient and advanced) that determine how well children are mastering the material in the State academic content standards; and
  - III. describe a third level of achievement (basic) to provide complete information about the progress of the lower-achieving children toward mastering the proficient and advanced levels of achievement.
- C. Accountability State Plan that shall demonstrate a single statewide accountability system that will be effective in ensuring that all local educational agencies, public elementary schools, and public secondary schools make adequate yearly progress. Each State accountability system shall—
  - I. be based on Academic Standards and Academic Assessments;
  - II. be used for all public elementary and secondary schools or local educational agencies;
  - III. include sanctions and rewards the State will use to hold local educational agencies, public elementary schools and secondary schools accountable for student achievement and for ensuring they make adequate yearly progress—which is defined by the state in a manner that applies to the same high standards of academic achievement to all public elementary school and secondary school students. The plan—
    - a. Is statistically valid and reliable;
    - b. Results in continuous and substantial academic improvement for all students;
    - c. Measures the progress of public elementary schools, secondary schools and local educational agencies and the State based primarily on the academic assessments;
    - d. Includes separate measurable annual objectives for continuous and substantial improvement of economically disadvantaged, students from major racial and ethnic groups, students with disabilities, and students with Limited English proficiency.

Arkansas's Legislature followed federal law with ACT 1467 of 2003, also known as the Omnibus Act and ACT 35 of 2<sup>nd</sup> extraordinary session of 2003. These laws were changed to include the Augmented Benchmark which included CRT and NRT items.

## Timeline for Statewide Criterion Referenced Testing in Arkansas

Year of Operation	Description of CRT Given to AR Students	Who Participated
1981-1994	Minimum Performance Test-Reading, Math, Science, Social Studies (Grades 3,6,8) Must Pass	All Districts
1993-1995	Pilot CRT Portfolio Mathematics & Literacy (K-12)	6 School Districts
1992-1994	Writing Project	All districts
1995-1999	State Exit Exam	All districts
1997-1998	4 <sup>th</sup> grade (Literacy and Math) CRT Benchmark Operational Test	All districts
1999-2000	4 <sup>th</sup> , 8 <sup>th</sup> grade (Literacy and Math) CRT Benchmark Operational Test	All districts
1999-2000	Field Test 6 <sup>th</sup> (Literacy and Math)grade CRT Benchmark, End of Course Algebra, End of Course Geometry, Grade 11 End of Level Literacy Exam, Alternate Portfolio Assessment (AAPA IEP and LEP)	All districts
2001-2005	Operational Tests (Literacy and Math) Grades 4, 6, 8 CRT Benchmark, End of Course (Algebra and Geometry), Grade 11 Literacy, AAPA (IEP & LEP)	All districts
2004-2005	CRT Operational Tests added for grades 3, 5, 7 (Math and Literacy) AAPA (IEP) grades 3,5,7	All districts
2006-2007	Operational Tests (Literacy and Math) Grades 3-8, End of Course (Algebra and Geometry), Grade 11 Literacy, AAPA (IEP)	All districts
2006-2007	Operational Tests added for Science for grades 5 and 7 and for AAPA (IEP) grades 5 and 7	All districts
2007-2008	End of Course for Biology Exam added and for AAPA Grade 10 Science	All districts
2008-2014	Operational <u>Augmented</u> CRTs (Literacy and Math) Grades 3-8, Science Grades 5 & 7, End of Course (Algebra, Geometry and Biology), Grade 11 Literacy, AAPA for all grades/subjects (IEP)	All districts

## State Educator Committee Meeting Descriptions

One of the strengths of a state developed criterion referenced assessment is the level of educator input in the design process. Below you will find descriptions of all committees that AR educators have been a part of during the development of the PARCC and Benchmark assessments.

<b>Committee Meeting</b>	<b>Description</b>
<b>State Text Review Committee (In-Person &amp; Virtual)</b>	Participants review and edit passages independently through electronic display of passages, particularly multi-media passages, and then the grade level groups discuss content and bias concerns.
<b>State Content Item Review Committee (In-Person &amp; Virtual)</b>	Committees review and edit test items for adherence to the Common Core State Standards, the PARCC foundational documents, basic Universal Design principles, PARCC Accessibility Guidelines, selected metadata fields, and the PARCC Style Guide.
<b>State Bias and Sensitivity Item Committee (In-Person &amp; Virtual)</b>	Educators and community members are asked to review items and tasks to confirm the absence of bias or sensitivity issues that would interfere with a student’s ability to accomplish his or her best performance. The objective is to provide items and tasks that do not unfairly advantage or disadvantage one student or group over another. Once the State Content Item Review Team approves items, they will be prepared for external bias and sensitivity review.
<b>Editorial Review Committee (In-Person)</b>	Prior to each editorial review meeting Pearson will work with the Partnership Manager to select up to 10 percent of the items and tasks for this review. The PARCC editorial review committee participants will do their review in Pearson’s item bank system. As with the other reviews, the committee members will view the items as the student would, and be able to vote and record their comments in the system.
<b>Data Review Committee (In-Person)</b>	Educators are asked to participate in the Data Review Meeting to evaluate item-level statistics from field-tested items on the operational assessment. Participants make decisions about whether items should move forward to the operational assessments, or be revised and field-tested again.
<b>Test Construction Committee (In-Person)</b>	Educators and bias members are asked to participate in the Test Construction Meeting to build operational core forms to meet PARCC assessment blueprints for the PBA and EOY components of the summative assessment that are scheduled to be administered during the school year.



# PBA Paper Schedule

March				
Monday	Tuesday	Wednesday	Thursday	Friday
9	10	11	12	13
Grades 3-8 ELA Unit 1	Grades 3-8 ELA Unit 2 & 3 Make Up	Grades 3-8 Math Unit 1 & 2 and Algebra 1 Unit 1 & 2 and Make Up	Geometry Unit 1& 2 and Make Up	Make Up
16	17	18	19	20
Grades 9-11 ELA Unit 1 and Make Up	Grades 9-11* ELA Unit 2 & 3 and Make Up	Algebra 2* Unit 1 & 2 and Make Up	Make Up	Make Up

## EOY Paper Based

April				May
Monday	Tuesday	Wednesday	Thursday	Friday
27	28	29	30	1
		Grades 3 - 5 ELA Unit 1 and Grades 6-8 ELA Unit 1&2	Grades 3-8 Math Unit 1&2 and Algebra 1 Unit 1&2 Make Up	Make Up
4	5	6	7	8
Make Up	Grade 9-11* ELA Unit 1& 2 Make Up	Geometry Unit 1 & 2 Make Up	Algebra 2* Unit 1&2 Make Up	Make Up

\* Algebra 2 and ELA grade 11 are optional.