

MISSOURI STATE BOARD OF EDUCATION AGENDA ITEM:		December 2014	
CONSIDERATION TO APPROVE THE INITIAL MISSOURI QUALIFYING SCORES FOR THE MISSOURI CONTENT ASSESSMENTS			
STATUTORY AUTHORITY: Sections 161.092, 168.011, 168.021, 168.071, 168.081, 168.400, 168.405, and 168.409, RSMo		<input type="checkbox"/> Consent Item	<input checked="" type="checkbox"/> Action Item
<p>DEPARTMENT GOAL NO. 3:</p> <p>Missouri will prepare, develop, and support effective educators.</p> <p>SUMMARY:</p> <p>The Missouri Content Assessments are part of the Missouri Educator Gateway Assessments (MEGA) by measuring candidates' content knowledge. The Missouri Content Assessments are a new series of exit examinations that must be passed by perspective teachers, counselors, librarians, principals and superintendents. The new content assessments also address the need to meet the requirements of <i>No Child Left Behind – Highly Qualified Teachers (HQT)</i>.</p> <p>Beginning on September 2, 2014, the Missouri Content Assessments replaced the Praxis II Series of content tests. As of October 26, seven hundred and thirty-nine (739) content assessments have been administered.</p> <p>The Missouri Content Assessments are aligned to the areas of Missouri Certification. The Missouri Certification areas and the Missouri Content Assessments are listed in the supporting materials.</p> <p>The Department's recommendation for setting the initial Missouri Qualifying Score for each of the assessments is based upon the results from the Item Validation and Standard Setting Panels; impact data gathered from the first two months of testing; and the recommendations of the Missouri Advisory Council for the Certification of Educators (MACCE) and the Missouri Advisory Committee for Educator Preparation (MABEP).</p> <p>It is requested that the Board take action to approve the initial Missouri Qualifying Scores for the Missouri Content Assessments.</p> <p>PRESENTER(S):</p> <p>Paul Katnik, Assistant Commissioner, and Gale "Hap" Hairston, Director, Educator Preparation, Office of Educator Quality will assist with the presentation and discussion of this agenda item. Marty Karlin, Vice President of Assessment Services Pearson will be available to address questions.</p>			

RECOMMENDATION:

The Department recommends that the State Board of Education set the qualifying score for Missouri's 56 Content Assessments at the panel based cut-score. By August 2015, the Department further recommends that the Board revisit these qualifying scores after the Department has reviewed all available impact data and submitted a report.

Missouri Department of Elementary and Secondary Assessments
Missouri Content Assessments by Evaluation Systems group of Pearson
Recommendations Missouri Qualifying Scores for 2014-2015 Academic Year

Test Code	Missouri Content Assessments (Number of Tests Since 09/02/2014)	Number of Questions	Raw Score Recommendations				
			-2 SEM*	-1 SEM*	PBC*	+1 SEM*	+2 SEM*
Early Childhood Education – Grades B-3							
064	Early Childhood Education (32)	80	47	52	56	60	64
Elementary Education – Grades 1-6							
007	English Language Arts (70)	32	15	18	20	23	26
008	Mathematics (66)	32	14	16	19	22	25
009	Science (64)	32	13	16	19	22	25
010	Social Studies (65)	32	14	17	19	22	25
Middle School Education – Grades 5-9							
011	English (23)	80	43	47	52	56	60
012	Mathematics (30)	80	40	45	49	54	58
013	Science (15)	80	37	42	46	50	55
014	Social Science (16)	80	40	44	49	53	57
Secondary Education – Grades 9-12							
015	Agriculture (2)	80	35	40	44	49	53
016	Biology (9)	80	44	48	53	57	61
017	Business (3)	80	43	48	52	56	60
018	Chemistry (0)	80	39	44	48	53	57
019	Earth Science (0)	80	39	44	48	52	57
020	English (9)	80	43	47	52	56	60
021	General Science (5)	80	39	43	48	52	57
022	Marketing (1)	80	40	44	48	53	57
023	Mathematics (15)	80	45	49	54	58	62
024	Physics (2)	80	48	53	57	61	65
Secondary Education – Grades 9-12							
031	Speech & Theater (2)	80	42	47	51	55	60
046	Technology & Engineering (0)	80	45	49	54	58	62

*PBC (Panel-Based Cutscore); SEM (Standard Error of Measurement)

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Test Code	Missouri Content Assessments (Number of Tests Since 09/02/2014)	Number of Questions	Raw Score Recommendations				
			-2 SEM*	-1 SEM*	PBC*	+1 SEM*	+2 SEM*
	Unified Science						
032	Biology (1)	32	14	16	19	22	25
033	Chemistry (2)	32	14	16	19	22	25
034	Earth Science (0)	32	15	18	21	23	26
035	Physics (0)	32	15	18	21	23	26
	Social Science						
025	United States History (10)	32	15	17	20	23	26
026	World History (9)	32	14	17	20	22	25
027	Economics (9)	32	13	16	18	21	24
028	Geography (9)	32	15	17	20	23	26
029	Political Science (9)	32	15	18	20	23	26
030	Behavioral Sciences (9)	32	12	15	18	21	23
Grades K-12							
036	Art (9)	80	45	49	53	58	62
038	Family & Consumer Sciences (3)	80	44	49	53	57	61
041	Health (6)	80	46	50	54	58	62
043	Music: Instrumental & Vocal (26)	80	39	43	48	52	57
044	Physical Education (18)	80	43	47	52	56	60
042	Library Media Specialist (8)	80	51	55	59	63	66
	World Languages						
037	Chinese – Mandarin (0)	64	47	50	53	56	59
039	French (4)	64	36	40	44	47	51
040	German (0)	64	37	40	44	48	51
045	Spanish (16)	64	28	32	36	40	44
Special Education – Grades K-12							
047	Blind & Low Vision (1)	80	45	49	54	58	62

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Test Code	Missouri Content Assessments (Number of Tests Since 09/02/2014)	Number of Questions	Raw Score Recommendations				
			-2 SEM*	-1 SEM*	PBC*	+1 SEM*	+2 SEM*
048	Deaf & Hard of Hearing (0)	80	44	48	53	57	61
049	Early Childhood Special Education (16)	80	48	52	56	61	65
050	Mild/Moderate Cross Categorical (16)	80	45	50	54	58	62
051	Severely Developmentally Disabled (0)	80	45	49	53	58	62
MM-Middle/Secondary Grades 5-12							
052	English Language Arts (3)	32	14	17	20	23	26
053	Mathematics (4)	32	13	16	18	21	24
054	Science (2)	32	13	16	19	22	25
055	Social Science (2)	32	15	18	21	24	26
Student Services – Grades K-12							
056	Counselor (19)	80	48	52	56	61	65
057	School Psychologist (1)	80	41	45	50	54	58
School Administration – Grades K-12							
058	Building-Level Administrator (22)	64	34	38	42	45	49
059	Superintendent (51)	64	33	36	40	44	48
Professional Knowledge							
062	Middle School – Grades 5-9 (11)	80	40	45	49	53	58
063	Secondary – Grades 9-12 (3)	80	42	47	51	55	60

*PBC (Panel-Based Cutscore); SEM (Standard Error of Measurement)



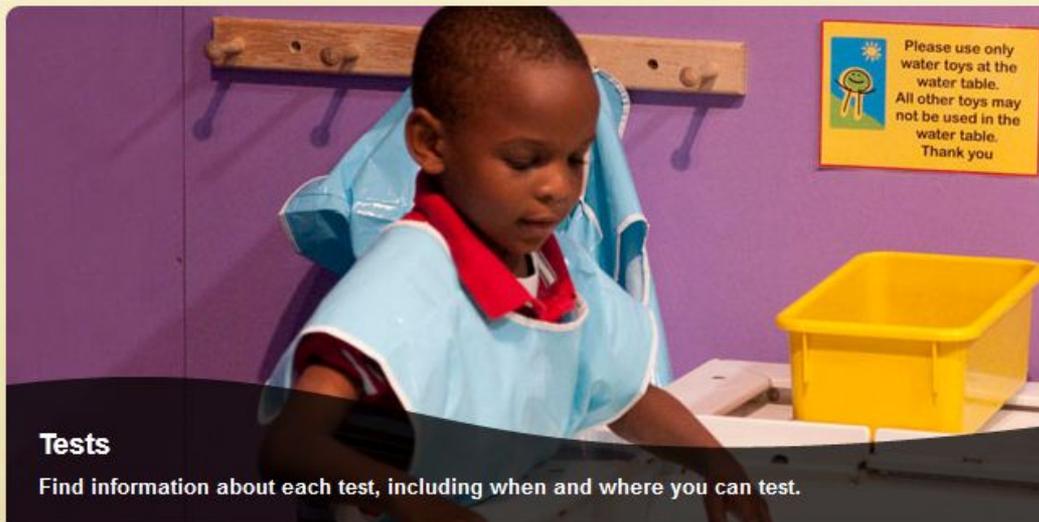
Missouri Educator Gateway Assessments



Action to Approve the Initial Missouri Qualifying Scores for the Missouri Content Assessments

Overview of Presentation:

- Review of Standard Setting Process
- Standard Setting Results
- Operational Data Review



Tests

Find information about each test, including when and where you can test.

Important Announcements

- Sep 17** Registration for the [MoGEA](#) and [Paraprofessional](#) tests is now open.
- Sep 3** Registration for the [Missouri Educator Profile \(MEP\)](#) is now open.
- Jul 31** Preparation materials now available [Read more](#).

Returning visitors: sign in to access your account.

[Sign In Now](#)

Prospective Candidates

Quick links to program essentials to start you on your way:

- [What tests do I need to take?](#)
- [Test dates and sites](#)
- [Preparation materials](#)
- [Alternative testing arrangements](#)
- [Testing policies](#)

Returning Visitors

Quick links for candidates who have already registered to test:

- [View/change registrations](#)
- [The day of the test](#)
- [View scores and testing history](#)
- [Get help finding information](#)

www.mo.nesinc.com

Preparation Materials



- [Find prep materials for your test](#)
- [Take an online practice test](#)
- [View a test preparation video](#)

www.mo.nesinc.com



Setting Standards on a Criterion-Referenced Test

- Performance level expected of a new teacher entering a classroom in Missouri
- Performance is compared to the standard
- Examinees are not compared to other examinees, as in norm-referenced tests

Expected Performance Judgments

Standard setting panelists estimated the expected performance of “individuals who are just at the level of knowledge and skills required to perform effectively in this field in Missouri schools.”

Outcome of Standard Setting Conference

- The median of the standard-setting panelists' item-by-item ratings are summed to produce an estimate of the total test performance
- This value is referred to as the “panel-based cutscore” (PBC)
- Computed for each test separately

Today's Discussion

- Consider results of Standard Setting Conferences
- Consider performance of candidates who have tested so far (for tests with a sufficient number of examinees)

Considerations for Standard Setting

- Purpose of the test:
 - Assess content knowledge needed to receive Missouri certification
- Policy changes
 - Missouri's "Top 10 by 20" Initiative
 - Increased rigor
- Assessment changes
 - Replacement of Praxis II tests
 - Test materials customized for Missouri

Considerations for Standard Setting

- Statistical Measurement Issues
- Two types of measurement error
 - False Positive: Examinee passes who should fail
 - False Negative: Examinee fails who should pass
- Striking a proper balance

Considerations for Standard Setting

- Consequences of False Positives
 - Candidate admitted who may perform poorly in the classroom
 - Candidate still must meet numerous other criteria – program requirements, advisor evaluations, other assessments, job interviews, etc.

Considerations for Standard Setting

- Consequences of False Negatives
 - May exclude talented candidates with potential to succeed
 - Failing candidates can retake test

Considerations for Standard Setting

- Adjust cutscores by using the Standard Error of Measurement (SEM)
- Accepted method of taking inherent measurement error and other considerations into account
- Raise panel-based cutscore by 1 or 2 SEMs to minimize false positives
- Lower panel-based cutscore by 1 or 2 SEMs to minimize false negatives

Operational Results: Overview

- Of 56 operational tests, seven were taken by at least 30 candidates
- Data from candidates who tested from September 2, 2014 through October 16, 2014
- Analyses include first attempts only



Operational Results: Considerations

- Initial results can serve as a guideline, but may or may not predict long-term results
- Candidate preparation may improve in the future
- Initial sample of candidates may not be typical of future population



Missouri Educator Gateway Assessments

Summary

Subtest	Examinees	PBC +2 SEM	PBC +1 SEM	PBC	PBC -1 SEM	PBC -2 SEM
007 English Language Arts	70	16%	39%	57%	73%	91%
008 Mathematics	66	23%	42%	68%	82%	89%
009 Science	64	19%	36%	58%	75%	91%
010 Social Studies	65	22%	35%	52%	65%	82%
Elem Education: All	63	6%	21%	33%	49%	73%
012 Middle School Math	30	10%	20%	30%	30%	43%
064 Early Childhood	32	31%	56%	72%	81%	94%
059 Superintendent	51	31%	53%	67%	78%	80%

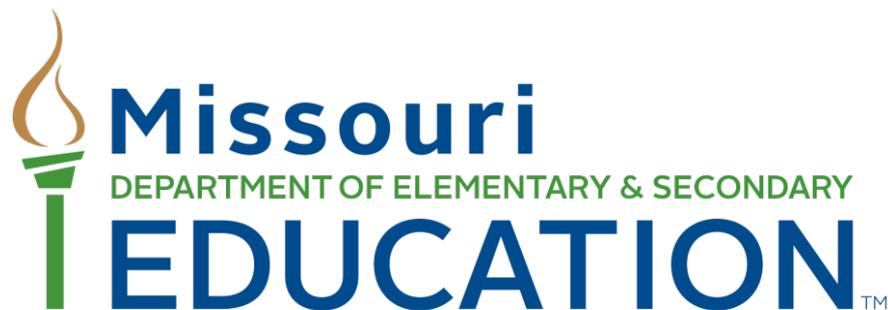


Questions?

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**Missouri Educator Gateway Assessments
Missouri Content Assessments
By Individual Certification Areas, Test Codes, and Titles
December 4, 2014**

Early Childhood – Birth-Grade 3 & Elementary – Grades 1-6	
Certification Areas	Test Codes & Titles
Early Childhood Education	#064 Early Childhood Education
Elementary Education <i>Must pass all four (4) subtests to be eligible for certification in Elementary Education</i>	Elementary Education Multi-Content** – All Four (4) Subtests
	#007 English/Language Arts Subtest
	#008 Mathematics Subtest
	#009 Science Subtest
Elementary Mathematics Specialist	#010 Social Studies Subtest
Elementary Mathematics Specialist	#012 Middle School Education: Mathematics
Middle School Education – Grades 5-9	
Language Arts	#011 Middle School Education: Language Arts
Mathematics	#012 Middle School Education: Mathematics
Science	#013 Middle School Education: Science
Social Science	#014 Middle School Education: Social Science
Secondary Education – Grades 9-12	
Agriculture	#015 Agriculture
Biology	#016 Biology
Business	#017 Business
Chemistry	#018 Chemistry
Earth Science	#019 Earth Science
English	#020 English
General Science	#021 General Science
Marketing	#022 Marketing
Mathematics	#023 Mathematics
Physics	#024 Physics
Social Science <i>Must pass all six (6) subtests to be eligible for certification in Social Science</i>	Social Science Multi-Content** – All Six (6) Subtests
	#025 Social Science: United States History Subtest
	#026 Social Science: World History Subtest
	#027 Social Science: Economics Subtest
	#028 Social Science: Geography Subtest
	#029 Social Science: Political Science Subtest
#030 Social Science: Behavioral Science Subtest	
Speech & Theatre	#031 Speech & Theater
Technology & Engineering	#046 Technology & Engineering
Unified Science – Biology <i>Must pass #016 Biology and all three (3) Unified Science tests to be eligible for certification in Unified Science – Biology</i>	#016 Biology** – plus all three (3) tests listed below:
	#033 Unified Science: Chemistry
	#034 Unified Science: Earth Science
	#035 Unified Science: Physics

Secondary Education – Grades 9-12	
Certification Areas	Test Codes & Titles
Unified Science – Chemistry <i>Must pass #032 Chemistry and all three (3) Unified Science tests to be eligible for certification in Unified Science – Chemistry</i>	#018 Chemistry** – plus all three (3) tests listed below:
	#032 Unified Science: Biology
	#034 Unified Science: Earth Science
	#035 Unified Science: Physics
Unified Science – Earth Science <i>Must pass #019 Earth Science and all three (3) Unified Science tests to be eligible for certification in Unified Science – Earth Science</i>	#019 Earth Science** – plus all three (3) tests listed below:
	#032 Unified Science: Biology
	#033 Unified Science: Chemistry
	#035 Unified Science: Physics
Unified Science – Physics <i>Must pass #024 Physics and all three (3) Unified Science test to be eligible for certification in Unified Science – Physics</i>	#024 Physics** – plus all three (3) tests listed below:
	#032 Unified Science: Biology
	#033 Unified Science: Chemistry
	#034 Unified Science: Earth Science
Grades K-12	
Art	#036 Art
Chinese (Mandarin)	#037 World Languages: Chinese – Mandarin
Family & Consumer Sciences	#038 Family & Consumer Sciences
French	#039 World Languages: French
German	#040 World Languages: German
Health	#041 Health
Library Media Specialist	#042 Library Media Specialist
Music: Instrumental & Vocal	#043 Music: Instrumental & Vocal
Physical Education	#044 Physical Education
Spanish	#045 World Languages: Spanish
Special Education	
Early Childhood Birth-Grade 3	#049 Early Childhood Special Education
Blind & Low Vision Grades K-12	#047 Blind & Low Vision
Deaf & Hard of Hearing Grades K-12	#048 Deaf & Hard of Hearing
Severely Developmentally Disabled Grades K-12	#051 Severely Developmentally Disabled
Candidates MUST Choose One of Three Options Listed Below for Mild-Moderate Certification	
Elementary Option Mild-Moderate Cross-Categorical Grades K-12 <i>Must pass #050 Mild-Moderate and all four (4) subtests for Elementary Education to be eligible for certification</i>	Elementary Option -- #050 Mild-Moderate Cross-Categorical – plus all four (4) subtests included in the Elementary Multi-Content Assessment
	Elementary Multi-Content** – all four (4) subtests
	#007 English/Language Arts Subtest
	#008 Mathematics Subtest
	#009 Science Subtest
	#010 Social Studies Subtest

Special Education -- Continued	
Certification Areas	Test Codes and Titles
Middle/Secondary Option Mild-Moderate Cross-Categorical Grades K-12 <i>Must pass #050 Mild-Moderate and all four (4) subtests for Middle/Secondary Education to be eligible for certification Middle/Secondary Option</i>	Middle/Secondary Option – #050 Mild-Moderate Cross-Categorical – plus the Multi-Content Assessment for Middle/Secondary
	Middle/Secondary Multi-Content** -- All four (4) subtests
	#052 English/Language Arts Subtest
	#053 Mathematics Subtest
	#054 Science Subtest
	#055 Social Science
Specific Content Middle/Secondary Option Mild-Moderate Cross-Categorical Grades K-12 Must pass #050 Mild-Moderate and one or more of the eleven (11) major content assessments or all six (6) of the Social Science Multi-Content Subtests.	Specific Middle/Secondary Option – #050 Mild-Moderate Cross-Categorical plus one (1) or more of the specific content areas listed below:
	#011 Middle School Education: Language Arts
	#012 Middle School Education: Mathematics
	#013 Middle School Education: Science
	#014 Middle School Education: Social Science
	#016 Biology, #018 Chemistry, #19 Earth Science, #021 Physics, and/or #024 General Science
	#020 English
	#023 Mathematics
	Social Science Multi-Content** – All Six (6) Subtests
Student Services	
Certification Areas	Test Titles
Counselor – Grades K-8 Counselor – Grades 7-12	#056 Counselor
School Psychologist Grades K-12	#057 School Psychologist
School & District Leadership	
Building Level Administrator Principal – Grades K-8 Principal – Grades 7-12 Career Education Director Grades 9-12 Special Education Administrator Grades K-12	#058 Building Level Administrator
Superintendent Grades K-12	#059 Superintendent
Professional Knowledge for Temporary Authorization Certification & Certification Areas Without a Test	
Middle School – Grades 5-9	#062 Professional Knowledge: Middle School
	Appropriate Content Assessment(s) for Certification Area
Secondary – Grades 9-12	#063 Professional Knowledge
	Appropriate Content Assessment(s) for Certification Area