

APPENDIX Q

ANALYSIS AND REPORTING DECISION RULES

Analysis and Reporting Decision Rules (2017)

Massachusetts Comprehensive Assessment System (MCAS)

This document details rules for analysis and reporting. The final student level data used for analysis and reporting is described in the “Data Processing Specifications.” This document is considered a draft until the Massachusetts Department of Elementary and Secondary Education (ESE) signs off. If there are rules that need to be added or modified after said sign-off, ESE sign-off will be obtained for each such rule.

Table of Contents:

YEAR TO YEAR CHANGE HIGHLIGHTS:	IV
DECISION RULES	5
I. CONTRACT OVERVIEW	5
A. <i>Test Administration(s)</i>	5
B. <i>Deliverables List</i>	6
C. <i>Processing Dependency on Alternate Assessment Data</i>	6
D. <i>High School Sciences (STE)</i>	6
II. INTERNAL DATA SOURCES	7
A. <i>Test Information and Item Banking (iRef)</i>	7
B. <i>School Information (iCore)</i>	8
C. <i>Scoring</i>	10
D. <i>Data Processing (DP)</i>	11
III. EXTERNAL DATA SOURCES	13
A. <i>Breach List</i>	13
B. <i>SIMS</i>	13
C. <i>Student Growth Data</i>	13
D. <i>Grade Span Lookup</i>	13
E. <i>Discrepancy Site</i>	14
F. <i>Alternate Assessment Override</i>	14
IV. DATA RECONCILIATION AUDITS	14
V. STUDENT PARTICIPATION AND REPORTING STATUS	17
A. <i>Basic Definitions</i>	17
B. <i>Participation Status Assignment Hierarchy (by subject)</i>	19
C. <i>Participation Status Summary</i>	21
D. <i>Post-Discrepancy Participation Status Assignment</i>	22
VI. CALCULATIONS	22
A. <i>Rounding Rules</i>	22
B. <i>Psychometric Input</i>	22
i. <i>Item Analysis Interactions Specific for MCAS</i>	22
ii. <i>Item Analysis Student Inclusion/Exclusion (Ex[sub]) & Matrix Files</i>	23
C. <i>Scaling, Equating, and Item Statistics</i>	23
i. <i>Dif Stats Threshold</i>	23
ii. <i>Scaling</i>	24
D. <i>Student Level Calculations</i>	26
i. <i>Calculations by Participation Status Summary</i>	26
ii. <i>StudentID (tblStudemo)</i>	26
iii. <i>Accommodations and Accommodation Footnotes (tblStudemo)</i>	28
iv. <i>Attempt Status (Attempt[sub]) (tblStudemo)</i>	28
v. <i>ParentLetter (tblStudemo)</i>	29

vi.	Reporting First Year LEP Status (rptLEP[sub]) (tblStudemo)	29
vii.	Alt (tblStudemo)	30
viii.	TestStat (tblStudemo)	30
ix.	SpecialEd (tblStudemo)	30
x.	Sims CD (tblStudemo)	30
xi.	rptSciTry (tblStudemo, updated during tblScoredItem)	30
xii.	tblIref (ItemOrder, RepCatCode, Released)	30
xiii.	tblPointsPossible (Reporting Category Points Possible, RepOrder)	31
xiv.	Raw Scores (tblScoredItem)	31
xv.	Points Earned (tblScoredItem)	32
xvi.	Reporting Category Points Earned (tblScoredItem)	32
xvii.	Item Responses (tblScoredItem)	32
xviii.	Current-Year Reporting Results (tblScoredItem)	33
xix.	Aggregation/Accountability Results (tblScoredItem)	34
xx.	Competency: Updating ELA_CD, Mat_CD, and Sci_CD (mfCD in tblScoredItem)	35
xxi.	Graduation Requirement Footnote (CDFootnote) (tblScoredItem)	35
xxii.	Composite Performance Index (CPI) Points (tblScoredItem)	36
xxiii.	NumIn (tblScoredItem for Megafile)	36
xxv.	Student Growth Percentile (GP) (tblScoredItem)	37
xxvi.	Complexity (tblScoredItem)	37
E.	Aggregate Calculations	37
i.	Aggregation Summary	37
ii.	Number and Percent of Students by Achievement Level (tblSummary)	38
iii.	P34 (tblSummary)	38
iv.	Median Student Growth Percentile (tblSummary)	38
v.	State Reporting Category Performance Comparison (tblRepCatSummary)	39
DATA DELIVERABLES SPECIFICATIONS		40
I.	WRITING COMPOSITION IMAGES	40
II.	MEGAFILE(S)	41
A.	Generic Details	41
B.	Early ELA Specifics	42
C.	Math & Science MC Only Specifics	43
D.	Preliminary Release Specifics	43
E.	Post-Discrepancy Final Release Specifics	44
III.	ACCOMMODATION DATA FILE(S)	44
IV.	QUESTIONNAIRE DATA FILE(S)	44
V.	ALT & STANDARD RESULTS DATA FILES	44
VI.	MISSING GRADE SPAN DATA FILE	45
VII.	STATE STUDENT RESULTS DATA FILE	45
VIII.	STUDENT REPORT TRANSLATION COUNTS	45
IX.	DISCREPANCY TABLE	46
X.	DISCREPANCY FILE	46
REPORT DELIVERABLES SPECIFICATIONS		47
I.	STUDENT LABELS	47
II.	STUDENT REPORT	49
APPENDIX		59
A.	rPerfLevel Lookup for MegaFile Codes (PerfLev, Perf2)	43
B.	Historical PerfLevel Translations	44
C.	daDayForm Lookup	45
D.	daReportingCategoriesLookup	45
E.	Non-Standard Accommodation Footnote Text (Student Report)	46
F.	Graduation Requirement Status Footnote Text (Student Report)	46

ADDENDA (POST-APPROVAL EDITS) 47

Year to Year Change Highlights:

Significant changes were made to this document with the addition of Next Gen MCAS testing. Modifications or updates for both next gen and legacy testing and reporting are highlighted within the document for consideration.

Decision Rules

I. Contract Overview

A. Test Administration(s)

Test Subject	Test Grade(s)	Test Type	Mode
ELA (English Language Arts)	10	Legacy	Paper
Mathematics	10	Legacy	Paper
STE Science: Biology, Chemistry, Introductory Physics, or Technology and Engineering	HS: 09, 10	Legacy	Paper
ELA (English Language Arts)	03-08	Next Gen (2.0)	Paper, Online
Mathematics	03-08	Next Gen (2.0)	Paper, Online
Science	05, 08	Legacy	Paper

B. Reporting Test Administration(s)

This section lists all reporting administrations covered by these decision rules.

Admin ID	Release ID	Description	Test Grade(s)	Subject
4	0	Science MC (June)	05,08	Science
	1	Early ELA (June)	10	ELA (English Language Arts)
		ELA MC (June)	03-08	ELA (English Language Arts)
	2	Math (June)	03-08, 10	Mathematics
	3	Standard Setting (July)	03-08	ELA (English Language Arts)
			03-08	Mathematics
	3	Preliminary Reporting (August)	03-08, 10	ELA (English Language Arts)
			03-08, 10	Mathematics
			05, 08	Science
			HS: 09, 10	STE Science: Biology, Chemistry, Introductory Physics, or Technology and Engineering
	4	Post-Discrepancy /Final Reporting (September/Dec)	03-08, 10	ELA (English Language Arts)
			03-08, 10	Mathematics
			05, 08	Science
			HS: 09, 10	STE Science: Biology, Chemistry, Introductory Physics, or Technology and Engineering

C. Deliverables List

Client and internal deliverables for the standard assessment are listed based on reporting test administrations. Specifications for each deliverable are detailed in the Deliverable Specifications section noted next to the deliverable name.

- **Early ELA**
 - Early HS ELA Megafile (detailed in Sec. II.B)
 - Writing Composition Images (detailed in Sec. I)
- **ELA, Math, and Science MC**
 - ELA, Math, and Science MC Megafile (detailed in Sec. II.C)
 - Questionnaire File (detailed in Sec. IV)
- **Standard Setting**
 - Standard Setting Demographics and Test Results (XII)
 - Test Mode Analysis detailed in Sec. XIII)
- **Preliminary Reporting**
 - Preliminary State Megafile (detailed in Sec. II.D)
 - Discrepancy Table (detailed in Sec. IX)
 - Alt and Standard Results (detailed in Sec. V)
 - Missing Grade Span List (detailed in Sec. VI) - file produced as needed
 - New files for Next Gen testing and reporting:
 - Testing Time (detailed in Sec. XI)
 - Item Statistics (detailed in Sec. XIV)
- **Post-Discrepancy Period Reporting**
 - Discrepancy Data File (detailed in Sec. X)
 - Post-Discrepancy State Megafile (detailed in Sec. II.E)
 - State Results File (detailed in Sec. VII)
 - Accommodations File (detailed in Sec. III)
 - **Printed Reports:**
 - Student Results Labels (detailed in Sec. II)
 - Student Reports
 - Legacy HS School Copy and Parent Copy (detailed in Sec. II)
 - Next Gen Versions (In development)
 - Student Report Translation Counts (detailed in Sec. VIII)
 - High School Class Counts (detailed in Sec. XV)

D. Processing Dependency on Alternate Assessment Data

Students may test via the Standard Assessment or the Alternate Assessment for each subject required in their grade. During the Early ELA and ELA/Math/Science MC Releases, students testing via both assessments are processed as-is without reconciliation. For Preliminary Reporting, data from both methods are reconciled. Alternate Assessment results trumps Standard Assessment results; however, during the discrepancy period the ESE may override the Alternate Assessment results on an individual student basis and have their Standard Assessment results reported during Post-Discrepancy reporting.

E. High School Sciences (STE)

High School Science consists of four individual science subjects: Chemistry, Biology, Introductory Physics, and Technology and Engineering. Student level data are based on the

individual science submitted and stored, as well as compiled into overall science determination fields.

II. Internal Data Sources

A. Legacy Test Information and Item Banking (iRef)

i. Test Design

Grade	Subject	Form(s)	Items included in Raw Score	Item Types
10	Ela	00 = common + Matrix forms in grade 10 only M= makeup WP ¹	Common	<i>Grade 10 only:</i> Composition Task (WR) <i>All Grades:</i> Comprehension (MC, OR, SR)
10	Mat	00 = common + Matrix forms in grade 10 only	Common	MC, OR, SA
05, 08	Sci	00 = common + Matrix forms	Common	MC, OR, SA
09, 10	STE Sciences	00 = common + Matrix forms	Common	MC, OR, SA
¹ Form 'M' is the make-up writing prompt. All students are scaled using one set of parameters and therefore considered to be taking the common prompt. dalref only contains the form 00 writing prompt.				

ii. Iref to dalref Translations (Measured Progress)

- IREF data for High School STE Sciences are stored as follows:
 - a. IREF Grade 09 'sci' = Technology and Engineering
 - b. IREF Grade 10 'sci' = Biology
 - c. IREF Grade 11 'sci' = Chemistry
 - d. IREF Grade 12 'sci' = Physics
- Biology is stored in dalref as 'bio' for grade 09 and 10, and again as 'sci' for grade 09 and 10 to support analysis and psychometrics.
- Chemistry, Physics, and Technology and Engineering are each stored in dalref at grade 09 and 10 as 'che', 'phy', and 'tec' respectively.
- Writing prompts are provided without the positional letter to distinguish the scoring dimensions on Form '01' (common prompt) and Form 'M' (make-up prompt).
 - a. The common prompt record is duplicated, and "C" or "T" is added to the position to support processing and analysis of the multiple scoring dimensions.
 - b. Form is set to '00' from '01'.
 - c. Equate is set to '0'. Psychometrics manages pulling equating data.
 - d. Type= 'WP'
 - e. Cat2 = 'CT' and 'CC' respectively.

- iii. **Item Reporting Categories**(*daReportingCategoriesLookup, daSciRepCatCodes, tblIref*)
 - Reporting Categories (2 character abbreviated code and corresponding text) are stored in daReportingCategoriesLookup (see *Appendix D*). Not all categories are tested at each grade, and may vary by year. The sort order listed is a generic order the categories will appear in when they exist.
 - For sciences the reporting category is derived for each item from daiRef.Cat2. The translation to the reporting category code is listed in *Appendix D* and stored in daSciRepCatCodes.
 - For Math and ELA the 2-character reporting category code for each item is provided by PM by Item Number and stored in daReportingCategoriesCrosswalk.
- iv. **Released Items**
 - Released Items are identified in iRef as Released = '1'.

B. Next Gen Test Information and Item Banking (Test Map)

i. Test Design

Grade	Subject	Test Mode	Form(s)	Items included in Raw Score
03-08	ELA	Paper Paper_Braille Online Online_Accom		OP Items
03-08	Mat	Paper Paper_Braille Online Online_Accom		OP Items

Note: Each form contains one of two possible common blocks. The common block items are included in the raw score. In general, paper, paper_braille and online_accom test mode forms contain one common block. The remaining online test mode forms contain the other common block. On occasion, an item is excluded from or can be swapped with another item to create a new common block for scoring (also referred to as a Scale Form).

ii. Test Item QTI Interaction and Analysis Types

Subject	Cardinality	Interaction Type	Test Map Item Type	Analysis Item Type	
ELA	multiple	composite	MX	OR	
		choiceInteraction	MC	OR	
		gapMatchInteraction hottextInteraction matchInteraction	XI	OR	
	single	choiceInteraction	MC	MC	
		extendedTextInteraction	OE	OR	
		hottextInteraction matchInteraction	XI	OR	
		extendedTextInteraction	OE	WP	
	Math	multiple	composite	XI	OR
			customInteraction gapMatchInteraction graphicGapMatchInteraction hotspotInteraction matchInteraction	XI	OR
		record	choiceInteraction	MC	OR
customInteraction			XI	OR	
customInteraction			OE	OR	
single		choiceInteraction	MC	MC	
		customInteraction textEntryInteraction extendedTextInteraction	OE	OR	
		customInteraction gapMatchInteraction hotspotInteraction inlineChoiceInteraction textEntryInteraction	XI	OR	
		textEntryInteraction	GR	OR	

iii. Test Item

- An item consists of one or more student interactions. Items with more than one student interaction are a composite item. A composite item is treated as one item for analysis and reporting.
- Writing prompts are scored on two traits. Each trait score is treated as a separate item for scaling and item statistics. Additionally, the writing sum of the trait scores is included in the megafile and statistics.

C. Item Metadata (Next Gen)

- i. A file for each test contains the item order and item metadata for reporting and analysis. The item order is used to order item scores for student test results data files and student report.
- ii. Data also include flags indicating an item will be released
- iii. Point values for OR and MC items as well as reporting categories are contained in these files.
- iv. Tables contain item type used for Megafile MCPts and ORPts.

D. School Information (iCore)

i. School

- Each school is identified by a unique 8 digit code.
- Each school is assigned a district org type and school org type
- The district associated with the school is defined by a 4 digit district code and district org type.
- District codes stored in iCore will identify updated school org types as provided by the ESE.

ii. School Org Type

- Org Type is based on the official school code. Using the official school code, link to the MCAS org data file (accessed via iCore) and pull the org type (stored in ReportCode2)
- Public Schools as designated as OrgTypeCode = 6 and 13. All others are considered non-public.

E. Legacy and Next Gen PAN

- i. Both systems serve as sources for accommodations, not tested reasons, and voided/invalidated student responses.

F. Legacy Scanned Data

- i. Source for accommodations, absence, change of enrollment status, voided answer booklet

G. Next Gen TestNav v.8

- i. Test administration platform collecting student's item and test information for online testers.
- ii. Paper responses for Next Gen students are scanned and combined with online data from within TestNav and submitted together.

H. Legacy Item Scoring

i. Multiple Choice Scores – Scanning

Valid multiple choice scores are A, B, C, D, blank, and * = multiple responses. All responses except "blank" are considered a response attempt.

ii. Open Response / Short Answer Scores – Scoring

Raw Data Value	Reported Value	Description	Point Value	Response Attempted
0-max pts	Final score	Open Response / Short Answer	0-max	✓
N	0	Not Scorable	0	✓
B		Blank response	0	

iii. Writing Composition Scores – Scoring

- The writing composition is scored on two dimensions:
 - a. Topic Development (CT)
 - b. Conventions (CC)
- Both dimensions are 100% double scored, and both scores are provided to Data Analysis (DA).
- If a dimension receives a scoring code instead of a score both scorer 1 and scorer 2 must agree.
- The final total score for each dimension is the sum of Scorer 1 + Scorer 2, calculated by DA, or the not scorable code.
- The following scores are valid for each individual score:

Raw Data Value	(tblStudemo) WRCode (DA use)	Description	Reported Value	Point Value	Response Attempted
1-6	Null	Writing Composition – Topic Development	Final score	2-12	✓
1-4 (per scorer)	Null	Writing Composition – Conventions	Final score	2-8	✓
A	1	Insufficient Evidence	IE	0	✓
F	2	Language Other than English	LO	0	✓
O	3	Off Topic	OT	0	✓
P	4	Plot Summary	PS	0	✓
I	5	Visible but Incomprehensible	VI	0	✓
B	6	Blank response		0	
N ¹	7	Not Scorable	NS	0	✓

¹ N is not valid during the Preliminary or Post-Discrepancy data releases (Release 3 and 4).

I. Next Gen Item Scoring

i. Multiple Choice Scores (Analysis Item Type = MC)

Valid multiple choice responses are a QTI response identifier. All responses except “blank” are considered a response attempt. If the student’s QTI response matches the QTI key, the student earns 1 point. Human readable response is determined by the order of responses within the QTI response string. For example, a MC item would have “A” as the first possible response, “B” as the second, and so forth.

ii. Single Score Open Response (Analysis Item Type = OR)

A student attempted an item if there is evidence of attempting at least one interaction for the item. The evidence depends on the scoring method for the interaction. An item could have multiple scoring methods.

- If a student earned 1 or more points for the item, the student attempted the item.
- If at least one interaction has a human score and the condition code is not scored BL (blank), the student attempted the item.
- If an interaction does not have a human score and the Response is not blank in the student item data, the student attempted the item.

iii. Select Field Test Items

- Field test items scores are included for reporting if both human-scored and machine-scored. In the event an item was machine-scored but was not human-scored, then the item score is blank.

Raw Data Value	Description	Reported Value	Point Value	Response Attempted
0-Max Possible Points	Student Points Earned	Numeric Score	0-Max Possible Points	✓
B	Blank response		0	

iv. Writing Prompt Trait Score Human Scored (Analysis Item Type = WP)

A student responds to the item once, but it is scored on two separate traits. Each trait is treated as its own item for analysis and reporting. Additionally, the sum of traits is treated as in item score for the student results data. A student attempt the writing prompt if it has a human score and it is not scored BL (blank.)

Raw Data Value	Description	Reported Value	Point Value	Response Attempted
0-Max Possible Points	Student Points Earned	Numeric Score	0-Max Possible Points	✓
BL	Blank response		0	
UN	Unreadable	0	0	✓
NE	Non-English	0	0	✓
OT	Off Topic	0	0	✓
DC	Direct Copy	0	0	✓

J. Student Questionnaire Responses

- Student responses to questionnaire data are provided in the student level view in grades 05 (New for 2016-2017), 08 and 10. These fields begin with a 'Q' and are used in populating the Questionnaire Data File deliverable.

III. External Data Sources

A. Breach List

- i.* Students who are considered a security breach are provided by the ESE in the Breach List. Instructions for processing and reporting each security breach student test are provided.
- ii.* Data Analysis reviews the breach list and adds necessary Amend flag values (> '1') and instructions to the Amend Code Definition Lookup for each distinct scenario on the Breach List.
- iii.* Data Processing applies any necessary changes to the raw student record based on the ESE instructions, and applies the corresponding Amend Flag value from the lookup to the student for Data Analysis processing.

B. Technology Failure List

- i.* The ESE will provide a list of students who could not complete the assessment based on a persistent technology issue with the testing platform. This file will be provided at the same time as the Breach List.
- ii.* These students are processed as with an Amend code (AmendCode=13).
 - If a student has aPerfLevel = 2, 3, or 4, the following information is reported:
 - a.* Student's earned raw score, earned item scores, and earned mfScaledScore. These students will be reported as NTO.
- iii.* If a student does not have a PerfLevel not equal to 2, 3, 4, then the student is reported as "INC" with their raw score and item scores reported. The student's perf2, numin, and assess values will all be blank.

C. SIMS

- i.* Student data are provided by the ESE for reporting use following the SIMS file layout (also provided by the ESE.)
- ii.* SIMS contains various demographic, historical scores, and accountability data field. The data populated depends on the time of the handoff.
- iii.* Multiple handoffs occur during the year
 - October SIMS Handoff – used for validation of PAN data for administration labels
 - March SIMS Handoff – used for releases 0,1, and 2
 - June SIMS Handoff – used for release 3+
- iv.* MP audits some SIMS data based on the current administration, as dictated by rules in this document.
- v.* Occasionally, ESE provides a supplemental file to updates SIMS variables as needed.

D. Legacy Current Year Student Growth Data

- i.* Current year student growth percentiles (and corresponding standard errors) are provided for ELA and Math at the student level from the ESE based on preliminary results.
- ii.* If a student's raw score changed after preliminary reporting, the student current year growth results are suppressed.

E. Grade Span Lookup

- i.* The ESE provides a grade span lookup for all public official schools. It is used to assign "SchType" in the various megafile handoffs.

- ii. Measured Progress will provide the ESE with a list of any public schools that have student's assigned to them that are not included in the lookup, resulting in blank grade span data based on the Preliminary data release.
- iii. All public schools must have a grade span for final post-discrepancy reporting. For earlier releases grade spans may be blank for schools missing from the lookup.

F. Discrepancy Site

- i. Data from preliminary reporting is posted to the discrepancy site for clean up by the field and the department.
- ii. See the Discrepancy Site Requirements for more details on which fields are available for editing at each user level.
- iii. Data Processing re-processes data post-discrepancy to incorporate the updated information and discrepancy resolutions from the ESE for DA for final reporting.
- iv. During final processing all information from the discrepancy site is considered final and is maintained, however, changes to certain fields require additional data audits and/or recalculation of student participation status to ensure consistency. See the Data Reconciliation section for these details.

G. Alternate Assessment Override

- i. Based on preliminary results from the Alt and Standard Results data file, the ESE may identify any students whose Standard Assessment results should be reported instead of their Alternate Assessment results during final reporting (subject specific).
- ii. The ESE will provide this list with the discrepancy resolutions.
- iii. For these students, their Alternate Assessment PartStatus will be set to 'Z' and the Alternate Assessment test information will be ignored.

H. Sprp_sch and Sprp_dis: Exceptions List

- i. The ESE will provide this list to Data Analysis
- ii. Supports the assigning of official student school and district (See Data Reconciliation Audits for details)

I. One School District List (daSingleSchDisLookup)

- i. The ESE will provide this list to Data Analysis
- ii. Supports Aggregate calculations (see Aggregate Calculations for details)

IV. Data Reconciliation Audits

The following cleanup will be performed on student level data prior to analysis once demographic data and reconciled test information are compiled to ensure consistency. Calculations are performed in the order listed below, and audited values are used in each subsequent check and for all analysis, reporting, and deliverables as applicable:

A. Test Grade

Each student can only be reported at one test grade across all assessments. DP reconciles the test grade within an assessment and between Alternate Assessment and General Assessment.

B. Summarize

- i.* If test grade is in 03-08, summarize is defaulted to '1' for all students, regardless of SIMS value.
- ii.* If test grade is '09' summarize is defaulted to '0' for all students, regardless of SIMS value.
- iii.* If test grade is '10':
 - If student grade is \leq '09':
 - a.* If the student submitted both Math and ELA (Alt or Standard), then summarize = '1'.
 - b.* Otherwise, summarize = '0'.
 - If student grade = '10', '11', '12', or 'SP' then summarize is taken from SIMS. If summarize is missing, or if student grade is missing, summarize is defaulted to '0'.
- iv.* The same rules are applied post-discrepancy, except summarize is taken from the updated Discrepancy data instead of SIMS. If summarize is updated during discrepancy reporting the participation status is set to blank to be reassigned.

C. *ELLFirstYear*

- i.* ELLFirstYear is provided in SIMS and will not be audited by Measured Progress.

D. *ELL*

- i.* ELL is provided in SIMS and will be audited by Measured Progress as follows:
If ELLFirstYear = '1' then update existing ELL to '1'.

E. *ELL_formerELL*

- i.* ELL_formerELL is provided in SIMS and will be audited by Measured Progress as follows:
If ELLFirstYear = '1' or ELL = '1' or FormerELL = '1' then update existing ELL_formerELL to '1'.

F. *Official School and Official District Code*

i. **Terminology:**

- Discode = MP Testing Discode from DPRaw (See DP Specifications)
- SchCode = MP Testing SchCode from DPRaw (See DP Specifications)
- SendDiscode = Sending District from SIMS
- SimsDisCode = Official Discode from SIMS
- SimsSchCode = Official SchCode from SIMS
- Testing Orgtype = Testing school (discode+schcode) Org type
- OrgType = SPRP school org type
- Exceptions List is provided to MP by the ESE.
- (*DA Use*): The exceptions list is stored in daTestSitelookup

- ii. Official District (sprp_dis)
 - If the student’s testing discode+schcode is on the Exceptions List (System+School) then the official district is the sprp_dis from the Exceptions List.
 - If the student’s testing orgtype is 6, 13 or 22 then the official district is set to the discode concatenated with four zeroes.
 - Otherwise the official district is the sending district from SIMS (senddiscode) if it exists, concatenated with four zeroes at the end. If senddiscode is blank the official district is set to ‘99999999’.
- iii. Official School (sprp_sch)
 - If the student’s testing school (discode+schcode) is on the Exceptions List (System+School) then the official school is the sprp_sch from the Exceptions List.
 - If a student is from a collaborative school (testing OrgType = 3 or 4) then the official school is = 05XX0000 where XX is the 3rd and 4th digit of the testing district code.
 - If the student’s testing orgtype is 25 or 31 then the official school is the official school code from SIMS (simsDiscode + SimsSchcode). If the simsDiscode and simsSchcode are blank the official school is set to the testing school code (discode+schcode). If the official school from SIMS turns out to be orgtype 22, then use the Exceptions list for official school.
 - Otherwise the official school is the testing school (discode+schcode).
- iv. Setting of Orgtype
 - Orgtype is based on the official school code
 - Using the official school code link to the MCAS org data file (DA use: icore) and pull the org type (DA use: Reportcode2).
 - In the event that an orgtype is not assigned, default orgtype to ‘X’. This is expected due to some SPRP schools not being in the Org data file.
- v. The table below displays possible values for a school’s Orgtype:

Orgtype Code	Description
2	Special Education School
3 or 4	Collaborative
6	Public School
10	MA State Agency
11	Private School
13	Charter School
25	ALT Ed Program
29	Out-of-State School
30	Adult Diploma Site
31	MCAS Test Site
34	SEIS Program

G. YrsInSch and YrsInDis (Preliminary and Final Reporting Releases Only)

- i. If sprp_sch or testing school (discode+schcode) = the official SIMS school code (simsDiscode + simsSchcode) then use YrsInSch value from SIMS. Otherwise set YrsInSch = ‘1’.

- ii. If sprp_dis = SendDiscode+0000 from June SIMS then use the YrsInDis value from SIMS. Otherwise set YrsInDis = '1'.

H. OctEnrol (enrolled in same location since October) (Preliminary and Final Reporting Releases Only)

- i. If sprp_sch or testing school (discode+schcode) = the official SIMS school code from June SIMS (simsDiscode + simsSchcode) then OctEnrol = Oct_off from SIMS. Otherwise set OctEnrol= '0'.

I. ConEnrol (continuously enrolled for 2 years)

- i. Only populated for students in the grade 10 view, otherwise blank.
- ii. If sprp_sch or testing school (discode+schcode) = the official SIMS school code from June SIMS (simsDiscode + simsSchcode) then use con_enr_sch value from SIMS. Otherwise set con_enr_sch = blank.
- iii. If sprp_dis = SendDiscode+0000 from June SIMS then use the con_enr_dis value from SIMS. Otherwise set con_enr_dis = blank.
- iv. ConEnr_sta is taken from SIMS.

J. Historical Scores and Growth for Reporting (Yr1, Yr2, Yr3)

- i. If a student's historical GradeYr3 is not the current test grade minus 1 year, then the Math and ELA scaledscoreYr3 and sgpYr3 are set to blank in tblStudemo.
- ii. If a student's historical GradeYr2 is not the current test grade minus 2 years, then the Math and ELA scaledscoreYr2 and sgpYr2 are set to blank in tblStudemo.
- iii. If a student's historical GradeYr1 is not the current test grade minus 3 years, then the Math and ELA scaledscoreYr1 and sgpYr1 are set to blank in tblStudemo.
- iv. Example: if a student's grade is 08 and gradeYr3 is not 07, scaledscoreYr3 and sgpYr3 are set to blank for Math and ELA. If gradeYr2 is 06, scaledscoreYr2 and sgpYr2 are reported.

K. SciTry_Prev (previous science subject tested)

- i. If High_sPerf is not blank or SciNTL = '1', then SciTry_Prev should be populated in SIMS. If it is missing it will be defaulted to Biology (SciTry_Prev = '1').

V. Student Participation and Reporting Status

A. Basic Definitions

The following criteria are defined for use during the participation status assignment hierarchy. Students may meet the criteria for multiple definitions, but during the hierarchy are assigned a single final participation status.

i. Standard Test Attemptedness (by subject)

- A student is considered to have **met attemptedness** if they have a response attempt for at least one common item in each test session.
 - a.** The writing prompt is considered a session within the ELA test (grade 10 only) and an attempt must be present for a student to have met attemptedness in ELA.
- A student is considered to have **partially attempted** if they have a response attempt to at least one common item, but they do not have a common item attempted in every session (has at least 1 session with no common items attempted).

- All other students are considered to have **not attempted**.
- ii. **Not Tested Indicators (by subject)**
The following Not Tested reasons may be bubbled on the student's answer booklet or collected from PAN.
- Absent (ignored)
 - Medically Excused Absent (MED)
- iii. **Transfer**
- The transfer bubbles (Added and Removed) on the SRB are ignored.
 - If Active_Test \neq '1' the student is considered a transfer student.
- iv. **Tested Alternate Assessment (by subject)**
- For the purpose of determining student participation status, students in the Alternate Assessment data with the following participations statuses are considered Alternate Assessment during preliminary and final reporting:
 - a. Alt PartStatus = 'A': Tested Alternate Assessment.
 - b. Alt PartStatus = 'C': Tested Alternate Assessment Accountable Retester.
 - c. Alt PartStatus = 'W': Tested Alternate Assessment Not-Accountable Retester.
 - d. Alt PartStatus = 'N': Breach Alternate Assessment (Alt Amend Code = '26').
 - If a student is listed in the Alternate Assessment Override, the Alternate Assessment Amend Code is set to suppress the Alternate Assessment results and set the Alt PartStatus to 'Z'. This allows for the Standard Assessment results to be reported.
- v. **Void (by subject)**
- Students whose only answer booklet (or from data provided in PAN) has been voided (Void[sub] = '1') are considered Void. Booklets that remain void post-discrepancy are suppressed along with all corresponding data.
 - For grades 05 and 08 Science the void indicator is VoidMat because Math and Science share a single answer document.
- vi. **Prior Results (by subject)**
Prior results currently only apply to HS Science.
- **No Prior Results**
Students with a blank High_sPerf and sciNTL \neq '1' from SIMS are considered to not have prior results.
 - **Previously Passed**
Students with a High_sPerf from SIMS in ('A', 'P', 'NI',,, 'A_A', 'P_A', or 'NIA') are considered to have previously passed the subject, regardless of sciNTL value.
 - **Previously Failed**
Students with a High_sPerf from SIMS in ('F', 'PRG', 'EMG', 'AWR', and 'INP') are considered to have previously failed the subject.
 - **Previously First Year LEP**
 - a. Students with SciNTL = '1' from SIMS are considered to have previously participated in science as a First Year LEP student.
 - If High_sPerf is not a Previously Passed status and SciNTL = '1', the student is considered Previously Failed.

B. Participation Status Assignment Hierarchy (by subject)

- i. **Breach List** (Amend Flag > '1' assign participation status per standard hierarchy, all rules are then trumped by specific breach instructions)
- ii. **Void**
 - (Preliminary Partstatus = 'H')
 - Data from booklets that remain void post-discrepancy are suppressed from final reporting.
- iii. **Multiple Answer Booklets** (Amend='1')
 - (Preliminary PartStatus='I').
 - (Final PartStatus='N').
- iv. **Summarize = '1' or TestGrade = '09':**
 - Tested Alternate Assessment - the student's participation status is taken from the Alternate Assessment Data:
 - a. **Breach Alternate Assessment** (PartStatus = 'N').
 - b. **Tested Alternate Assessment** (PartStatus = 'A').
 - c. **Tested Alternate Assessment Accountable Retester** (PartStatus = 'C')
 - Without prior results:
 - a. If the student *meets attemptedness* then: **Tested** (PartStatus = 'Z').
 - b. If the student partially attempted or did not attempt:
 - If subject = 'ELA' and First Year LEP then: **Not Tested LEP** (PartStatus='F').
 - Otherwise if the student is a Transfer student then: **Not Tested Transfer** (PartStatus='D').
 - Otherwise if MED then: **Not Tested Medically Excused** (PartStatus='G').
 - Otherwise: **Did Not Test** (Partstatus='J') (this applies to grades 05 and 08, ela/mat only)
 - Otherwise: **Not Tested Absent** (PartStatus='E').
 - Previously Failed:
 - a. If the student *meets attemptedness* then: **Tested Accountable Retest** (PartStatus='Y').
 - b. If the student *partially attempted or did not attempt* then: **Not Tested Accountable Retest** (PartStatus='L').
 - Previously Passed:
 - a. (Preliminary processing only) If the student *meets attemptedness or partially attempted* then: **Ineligible Accountable Retest, Previously Passed** (PartStatus='P').
 - b. If the student *did not attempt* (or during final processing: if the student *did not attempt, partially attempted or meets attemptedness*) then: **Previously Passed** (PartStatus = 'K').

- v. **Summarize = '0'** (regardless of any prior test results):
- Tested Alternate Assessment then the student's participation status is taken from the Alternate Assessment data: **Tested Not Accountable Alternate Assessment** (PartStatus = 'W') or **Breach Alternate Assessment** (PartStatus = 'N').
 - Otherwise, if the student *meets attemptedness* then: **Tested Not Accountable (Retest)** (PartStatus = 'R').
 - Otherwise, if the student *partially attempted* then: **Partially Tested Not Accountable (Retest)** (PartStatus = 'B').
 - Otherwise if the student *did not attempt* then: **Not Tested Not Accountable (Retest)** (PartStatus = 'J').

C. Participation Status Summary

Summarize	Prior Results	Description	Part Status	Test Stat*	Discrepancy Site	
					Code	Text
n/a	n/a	Breach	<i>Breach Instructions are applied at the student level regardless of participation status and are identified by Amend > '1'</i>			
		Void (Preliminary Only)	H	NTO	VAB	Void Answer Booklet
		Multiple Answer Documents (Security Breach)	I	NTO	DUP	Multiple Answer Booklets
		Preliminary		NTO	n/a	n/a
		Final	N	NTO	n/a	n/a
Invalidated (Only assigned via Breach List)	N	NTO	INV	Invalidated		
1 (or Grade=09)	n/a	Tested Accountable Alternate Assessment	A	T*	ALT	Tested Alternate Assessment
		Tested	Z	T*	STD	Tested Standard
		Not Tested (/Partially Tested) – LEP (ELA Only)	F	NTL	LEP	Not Tested First Year LEP
		Not Tested (/Partially Tested) - Transfer	D	NTO	TRN	Transferred
		Not Tested (/Partially Tested) – Medically Excused Absent	G	NTM	MED	Medically Excused
		Not Tested (/Partially Tested) - Absent	E	NTA	ABS	Absent
	Incomplete	S	NTO	INC	Incomplete	
	Prev. Failed	Tested Alternate Assessment Accountable Retest	C	TR*	ALR	Retested Alternate Assessment
	Prev. Failed	Tested Accountable Retest	Y	TR*	RET	Retested
	Prev. Failed	Previously Failed (Not Tested /Partially Tested Accountable Retest)	L	NTO*	PRF	Previously Failed
Prev. Passed	Ineligible Accountable Retest – Previously Passed & Retested (Preliminary Only- final see K)	P	NTO*	PPR	Previously Passed & Retested	
Prev. Passed	Previously Passed	K	NTO*	PAS	Previously Passed	
0	Any	Tested Not Accountable Alternate Assessment (Retest)	W	TR*	ALN	Retested Alternate Assessment Not Aggregated
		Tested Not Accountable (Retest)	R	TR*	REN	Retested Not Aggregated
		Partially Tested Not Accountable (Retest)	B	NTO	INC	Incomplete
		Not Tested Not Accountable (Retest)	J	NTO	DNT	Did Not Test

* Student results achieved while First-year LEP, or students currently First-year LEP (see rptLEPFirst calculation) are reported with TestStat = "NTL" in place of listed TestStat (all subjects). See Calculations by Participation Status Summary Table for more details.

D. Post-Discrepancy Participation Status Assignment

- i. DA only “recalculates” participation statuses for students with a blank participation status during post-discrepancy processing. All other participation statuses are maintained as they are provided from the discrepancy data.
- ii. DP will reset participation statuses to blank prior to final processing for the following discrepancy events so DA will recalculate a new status:
 - Student test grade is changed.
 - Summarize is changed (not applicable in unchanged grades 03-08, 09).
 - First year LEP status is changed.
 - Test is still void (entire book is suppressed).
 - Tests are added or removed for a student.
 - Prior results (*high_xPerf*, *sciNTL*) are changed for a student.
 - Amend codes are updated.

VI. Calculations

A. Rounding Rules

Calculation	Rounded (to the nearest)
Student Counts	Whole Number
Percentages	Whole Number
Median Growth Percentile	Whole Number

B. Psychometric Input

i. *Item Analysis Interactions Specific for MCAS*

- Below are MCAS-specific conditions programmed within the standard Item Analysis System (DAMS). Any changes to the handling of these cases need to be vetted against this system to ensure accurate scoring and item calculations.
- ***Multi-Day Testing (High School ELA and Math):***
 - a. High School ELA and Math tests are administered over a two-day period. As a result, students are assigned a Day 1 Form for the first day, and a Day 2 form for the second day. Both forms are provided in the views.
 - b. The IA dataset stores both forms individually as *[sub]form1* and *[sub]Form2*. Resulting scored data contains the concatenation of the two forms creating the unique total form (4 characters) for each student.
 - c. The table *daDayForm* holds the first item position on the 2nd day form to support the Item Analysis program. See *Appendix C*.
- ***Legacy Writing Prompts***
 - a. If the contract nickname begins with “MCAS” and the subject is “ELA” and the total possible points is 8 or higher ($PVMax \geq 8$) then student scores of ‘0’ will be reset to blank in the matrix files for psychometrics.
 - b. This does not impact student scores or output scored datasets, but removes the response from the psychometric data for equating and scaling, as required.
 - c. This requirement only applies to the writing prompts. In the future, if any non-writing prompt items meet the conditions above the handling of these items for the matrix file will need to be discussed.

ii. Item Analysis Student Inclusion/Exclusion (Ex[sub]) & Matrix Files

- Only first time accountable test takers that are not first-year LEP (Partstatus = 'Z' and rptLEP[sub]) are included for item analysis and psychometric equating files (Ex[sub] = '0').
- All other students are excluded (Ex[sub] = '1').
- For High School Science (STE's) if an included student does not attempt at least one of the first 10 items (common or matrix/field-test) they are excluded (Exsci = '1').
- For High School STE in addition to the rules outlined above, students with stugrade in ('11','12') are excluded.
- DA Processing for High School Sciences (STE's):
 - a.** IA datasets are created for each individual STE subject for all hand offs.
 - b.** Psychometric Equating Hand-off:
 - Data Processing provides one Grade 10 view with all High School Science testers. Grade 09 students are identified via Stugrade = '09' for partstatus assignment.
 - c.** Scoring and Reporting Hand-off (Release 3 and 4):
 - Grade 09 and 10 are processed in separate views and IA datasets.
 - d.** Item Stats (Release 4):
 - Grade 09 and 10 data are in separate views but combined into one Grade 10 IA dataset for each STE subjects.

C. Scaling, Equating, and Item Statistics

i. Dif Stats Threshold

- 07 Math:
 - a.** 90 for nonLEPFLEP vs. LEPFLEP
 - b.** 100 for all other combinations
- 08 Math:
 - a.** 75 for nonLEPFLEP vs. LEPFLEP
 - b.** 100 for all other combinations
- All other 03-08 Grades/Subjects
 - a.** 100 for all combinations
- HS Sciences (09 and 10 combined):
 - a.** 50 for all combinations.
- HS ELA and Math
 - a.** 50 for nonLEPFLEP vs, LEPFLEP
 - b.** 100 for all other combinations

ii. Legacy Scaling

- Scaling is done using a lookup table provided by psychometrics and the student’s overall raw score (by subject).
- The scaled score lookup achievable scaled scores are always even numbers and are between 200 and 280 every year.
- Psychometrics provides the High School Science lookup for Grade 09 and 10 in each subject. The grade 09 lookups are identical to the grade 10 lookups.

iii. Next Gen Scaling

- Scaling is completed using a lookup table provided by Psychometrics. Scales are based on student’s test mode, scaleform, and raw scores.

iv. Next Gen State RepCat Scores

v. Achievement Level Coding

- The MCAS Standard Assessment has four possible achievement levels, assigned to students using the raw to scale score lookup provided by psychometrics.
- Needs Improvement (Standard PerfLevel = ‘2’) or higher is considered “Passing” for the Standard Assessment.
- Alternate Assessment achievement levels are translated to their corresponding standard assessment achievement level prior to computing any aggregate calculations that include alternate assessment achievement level results as shown below:

MCAS Achievement Level	MCAS Description	MCAS Alt Achievement Level	MCAS Alt Description
1	03-08: Warning (W) HS: Failing (F) Not Meeting Expectations (NM)	7	Incomplete (INC)
		8	Awareness (AWR)
		9	Emerging (EMG)
		10	Progressing (PRG)
2	Needs Improvement (NI)	11	Needs Improvement (NIA)
	Partially Meeting Expectations (PM)	14*	Partially Meeting Expectations-Alt (PM_A)
3	Proficient (P)	12	Proficient (P_A)
	Meeting Expectations (M)	15*	Meeting Expectations-Alt (M_A)
4	Advanced (A)	13	Advanced (A_A)

	Exceeding Expectations (E)	16*	Exceeding Expectations-Alt (E_A)
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* Used only for grade 03-08, ELA and math.

D. Student Level Calculations

i. Calculations by Participation Status Summary

Summarize	Prior Results	Description	Part Stat	rptLEP[sub] ¹	Test Stat	Current Year Reporting Results					Aggregation and Accountability Results								
						Raw Scores	Item Scores	rScaled Score (MP Reports)	Achievement Level (rPerfLevel, mfPerfLev)	mfScaledScore	Achievement Level (Perf2/mfPerf2)	CPI / Numin	Assess ²						
														('---' indicates data are blank)					
		Breach	Breach Instructions are applied at the student level regardless of participation status and are identified by Amend > '1'																
		Void (Preliminary Only)	H	any	NTO	earned	earned	---	VAB	---	---	---	0 ³						
		Multiple Answer Documents (Security Breach) :																	
		Preliminary	I	any	NTO	earned	earned	---	DUP	---	---	---	---						
		Final	N	any	NTO	---	---	---	INV	---	---	---	---						
1 (or Grade=09*)		Tested Alternate Assessment	A	0	T	---	---	---	earned (Alt)	---	earned (Alt)	✓	1						
	1			NTL	---						---	---	---						
		Tested	Z	0	T	earned	earned	earned	earned	earned	earned	earned	✓	1					
				1	NTL										Pass: earned Else: ---	Pass: earned Else: LEP	Pass: earned Else: ---	---	---
		Not Tested /Partially Tested – LEP (ELA Only)	F	1	NTL	Earned ?		HS Pass: earned Else: --- ?	HS Pass: earned Else: LEP	HS Pass: earned Else: TRN	HS Pass: earned Else: --- ?	---	---	1					
		Not Tested /Partially Tested - Transfer	D	0 (M/S 1)	NTO							---	---	---	---	---	---	---	---
		Not Tested /Partially Tested – Medically Excused Absent	G	0 (M/S 1)	NTM							---	---	---	---	---	---	---	0
		Not Tested /Partially Tested - Absent	E	0 (M/S 1)	NTA							---	---	---	---	---	---	---	0
	F	Tested Alternate Assessment Accountable Retest	C	0	TR	---	---	---	earned (Alt)	---	highest (Alt)	✓	1						
				1	NTL						---	---	---	---					
F	Tested Accountable Retest	Y	0	TR	earned	earned	earned	earned	highest	highest	✓	1							

Summarize	Prior Results	Description	Part Stat	rptLEP[sub] ¹	Test Stat	Current Year Reporting Results					Aggregation and Accountability Results				
						(‘---’ indicates data are blank)									
						Raw Scores	Item Scores	rScaled Score (MP Reports)	Achievement Level (rPerfLevel, mfPerfLev)	mfScaledScore	Achievement Level (Perf2/mfPerf2)	CPI / Numin	Assess ²		
				1	NTL			Pass: earned Else: ---	Pass: earned Else: LEP	Pass: highest Else: ---	---	---	1		
F	Previously Failed (Not Tested /Partially Tested Accountable Retest)	L	0	NTO	Pass: earned Else: ---	Pass: earned Else: ---	Pass: earned Else: ---	Pass: earned Else: PRF	highest	highest	✓	1			
			1	NTL				Pass: earned Else: LEP	Pass: highest Else: ---	---	---	1			
P	Ineligible Accountable Retest – Previously Passed & Retested (Preliminary Only)	P	0	NTO	earned	earned	---	INE	prior	prior	✓	1			
			1	NTL					prior	---	---	1			
P	Previously Passed	K	0	NTO	---	---	---	PAS	prior	prior	✓	1			
			1	NTL					prior	---	---	1			
O	Tested Not Accountable Alternate Assessment (Retest)	W	0	TR	---	---	---	earned (Alt)	---	---	---	---			
			1	NTL											
	Tested Not Accountable (Retest)	R	0	TR	earned	earned	earned	earned	earned	---	---	---			
			1	NTL			Pass: earned Else: ---	Pass: earned Else: LEP	Pass: earned Else: ---	---	---	---			
Partially Tested Not Accountable (Retest)	B	any	NTO	earned	earned	Pass: earned Else: ---	Pass: earned Else: INC	Pass: earned Else: ---	---	---	---				
Not Tested Not Accountable (Retest)	J	any	NTO	---	---	---	DNT	---	---	---	---				

¹ rptLEP is LEPFirst for all grades/subjects/participation statuses that do not have prior results. It is a calculated combination of LEPFirst and prior LEP First status for Accountable partstatuses with prior results. See calculations section for details.

² Assess exceptions for ELA: there is an additional condition of participation on the Access test. See calculation specifics for details.

³ If Summarize = 1 then Assess = 0. If Summarize = 0 then Assess is blank.

*Grade = 09 students are assigned participation statuses as if Summarize = ‘1’. Perf2, CPI, Numin, and Assess are populated for calculations but set to blank in the Megafile deliverable.

Note: “(M/S 1)” indicates that rptLEP[sub] may also be ‘1’ in Math and Science for the listed participation statuses.

ii. StudentID

- StudentID = rptStudentID from DPRaw (verified SASID).
- For non-demonstration students, if StudentID does not begin with '10' it was generated by DP for linking purposes, and will be set to blank for reporting.

iii. Legacy Accommodations and Accommodation Footnotes (tblStudemo)

- If a student did not attempt any items in a subject the corresponding raw accommodation indicators (from DPRaw) are *ignored* during the determination of accommodations and footnotes for reporting. Otherwise, if a student attempts at least one item in a subject the corresponding raw accommodation indicators are evaluated:
 - a. For ELA Comprehension accommodations (ElaAccom:), all ELA items (common, matrix, field-test) except for the writing prompts are considered in determining if items were attempted.
 - b. For ELA Composition accommodations (CompAccom:), only the writing prompts are considered in determining if items were attempted.
 - c. For Math accommodation (MatAccom:) all items (common, matrix, and field-test) are considered.
 - d. All of the underlying accommodation fields in DPRaw are maintained as provided, regardless of student attempt status.
- Standard Accommodations:
 - a. Accom_l = '1' if the student received any accommodations in ELA Reading Comprehension, otherwise set it to blank.
 - b. Accom_c = '1' if the student received any accommodations in ELA Composition, otherwise set it to blank.
 - c. Accom_m = '1' if the student received any accommodations in Math, otherwise set it to blank.
 - d. Accom_s = '1' if the student receive any accommodations in Science, otherwise set it to blank.
- Non-Standard ELA Accommodation (MP: elaNSAFooter):
 - a. If Accom07 = '02' (Human Read-Aloud) or Accom13 = 'Y' then Accom_ReadAloud='1' and elaNSAFooter = '1'.
 - b. If Accom09 = '01' or '02' the Accom_Scribe = '1'.
 - Note: Footnotes not printed currently for students receiving this accommodation.
 - c. Otherwise elaNSAFooter = '0'.
- Non-Standard Math Accommodation (MP: matNSAFooter):
 - a. if Accom12 = 'Y' or '1' then Accom_Calculator='1' and matNSAFooter = '4'.
 - b. Otherwise matNSAFooter = '0'.
- For Non-Standard Accommodation Student Report text based on elaNSAFooter and matNSAFooter see table *Non-Standard Accommodation Footer Text (Student Report)*.

iv. Next Gen Accommodations

- Accommodation data are received and processed similar to legacy testing with the following exceptions:
 - a.** Standard Accommodations
 - In addition to Accom_m (Math), Accom_s (Science), a student receiving an accommodation in ELA will have Accom_e='1', otherwise it will be set to blank
 - b.** Non-Standard Accommodations
 - Stored in tblStuInfo
 - For Non-Standard Accommodation Student Report text based on elaNSAFooter and matNSAFooter, where applicable. See table *Non-Standard Accommodation Footer Text (Student Report)*.
- v. **Attempt Status (Attempt[sub]) (tblStuDemo)**
 - Attempt[sub] indicates if a student fully meets attemptedness, partially attempted, or did not attempt the subject, based on the definition of attemptedness in section V.A.i
 - Calculated for all participation statuses, values:
 - a.** 'F' = Fully Meets Attemptedness
 - b.** 'P' = Partial Attempt
 - c.** 'N' = No Attempt
 - d.** Blank = subject is not assessed at the grade.
- vi. **ParentLetter**
 - The Parent Letter flag is set to '0' to indicate that a student should not receive a Parent/Guardian Report or Student Results Label in the following cases:
 - a.** If a student is classified as Tested Alternate Assessment (PartStatus in 'A','C','W') in all required subjects for their grade then ParentLetter = '0'.
 - Class Pack Identifiers (Measured Progress) for printing the School and Parent version of the Parent/Guardian Report as we as the Student Results Labels are produced for all students with ParentLetter = '1'.
- vii. **Reporting First Year LEP Status (rptLEP[sub])**
 - RptLEP is determined for each subject based on current year partstatus, test attemptedness, First Year LEP status, and Prior First Year LEP Status (where applicable) in order to determine if a student's results should be considered achieved while under First-Year LEP status or as currently First-year LEP. This takes into consideration the prior status of the student when prior results are eligible for accountability (currently only allowed in Science).
 - For all participation statuses that are considered Not Accountable rptLEP[sub] = LEPPrior.
 - Otherwise if the student is considered Accountable then:
 - a.** If the student has prior results:
 - If the student meets attemptedness this year (Attempt[sub] = 'F') then: rptLEP[sub] = LEPPrior.

- If the student partially attempts or does not attempt this year (Attempt[*sub*] = 'P' or 'N') then:
 - rptLEP[*sub*] = '1' if either LEPFirst = '1' or [*sub*]NTL = '1'.
 - Otherwise rptLEP[*sub*] = '0'.
 - b.** If the student does not have prior results then rptLEP[*sub*] = LEPFirst.
- viii. **Alt** (*tblStudemo*)
 - [*e/m/s*]Alt is set to '1' if a student is considered Tested or Retested Alternate Assessment (accountable or not accountable; PartStatus in 'A','C','W'). Otherwise it is set to '0'.
- ix. **TestStat** (*tblStudemo*)
 - [*e/m/s*]TestStat is populated based on the student's participation status, rptLEP status, and possible breach codes for the subject. It is not dependent on scores. See the Participation Status Summary table for values.
- x. **SpecialEd** (*tblStudemo*)
 - If a student is considered Tested or Retested Alternate Assessment (accountable or not accountable) in any subject (eAlt, mAlt, or sAlt = '1') then SpecialEd = '1'. Otherwise it is taken from Sped_off in SIMS. If it is blank it is defaulted to '0'.
- xi. **Sims CD** (*tblStudemo*)
 - The latest CD value from SIMS for Math, ELA, and Science is stored for each student as-is, without any additional formatting as SIMS_[*sub*]CD.
- xii. **rptSciTry** (*tblStudemo, updated during tblScoredItem*)
 - SciTry is provided by Data Processing. For students that Previously Failed the SciTry will reflect the current-year science subject submitted and any submitted items will be scored.
 - DA will set SciTry to the Alt SciTry value for Alternate Assessment science students (SciPartstatus in ('A','C','W', Alt 'N')).
 - rptSciTry is then set to SciTry for *tblStudemo* and item analysis.
 - During *tblScoredItem* processing if it is determined that a student's prior science results should be reported (instead of the current test), rptSciTry will be updated to reflect the prior science subject and any item responses from the current test will be blanked.
- xiii. **Legacy tblref** (*ItemOrder, RepCatCode, Released*)
 - The released item order is the order in which items appear in the ESE's Released Item Document, stored in *tblref.ItemOrder*.
 - a.** Includes common, non-flawed items only.
 - b.** Items are ordered such that released items appear first, in order of test position, followed by unreleased items in order of test position.
 - c.** Writing prompts are stored as WPCC and WPCT. WPCT appears as the first released item, followed by WPCC, then all items in ELA on the student report.
 - d.** Item responses in *tblScoredItem* are stored according to *ItemOrder*, not position.

- Released = dalref.Released (where '1' = released item, '0' = unreleased item).
 - RepCatCode is the 2-character reporting category code for each item:
 - a. Assigned by Item Number for Math and ELA using daReportingCategoriesCrosswalk.
 - b. Assigned by dalref.Cat2 for Science using daSciRepCatCodes.
- xiv. **Legacy tblPointsPossible** (*Reporting Category Points Possible, RepOrder*)
- Common, non-flawed items (from tblIref) are summarized by reporting category and at the total test level in tblPointsPossible by grade, subject, and reporder.
 - a. Points = the total points possible in each reporting category by grade and subject and reporting category.
 - b. RepOrder = the reporting category order.
 - The unique list of existing reporting categories in a grade and subject are ordered by the generic sort order from daReportCategoryLookup, and re-numbered from 1-max number of reporting categories.
 - The total test is set as RepOrder = 0.
 - c. RepCatCode is the 2-character reporting category code, and RepCatText is the associated text. For RepOrder = '0' RepCatCode = '00', and RepCatText = 'Total'.
- xv. **Next Gen daPointsPossible**
- Table of points a student can earn on common, non-flawed items (based on item metadata tables) summarized by grade, subject, scaleform, and testmode
- xvi. **Raw Scores** (*tblScoredItem*)
- Writing Composition Task Total Dimension Scores
 - a. WPCT is the total raw score for the Topic Development dimension of the writing composition task is Scorer1 CT + Scorer2 CT.
 - b. WPCC is the total raw score for the Conventions dimension of the writing composition task is Scorer1 CC + Scorer2 CC.
 - c. If a student does not receive reported item scores the total composition scores are set to blank.
 - d. WPCT and WPCC scores are formatted as numeric scores (no leading zero), not scorable codes are set to 0, and blank responses are set to blank to support the Student Report and calculations.
 - e. mfWPCT and mfWPCC are WPCC and WPCT reformatted to support the megafire. Scores are always 2-digits (with leading zero if necessary), 2-digit not scorable codes are reported, and blank responses are blank.
 - Overall Raw Score
 - a. The student's overall raw score is the sum of scores for all scaling items, including the writing composition task total scores (if applicable).

- b. If a student has a partstatus that does not receive reported raw scores or if the student did not attempt any items (Attempt[sub]='N') then the raw score is set to blank after all subsequent calculations are complete.

xvii. **Legacy Points Earned (tblScoredItem)**

- MCpts = number of common multiple choice points earned in the test for the given subject.
- ORpts = number of common open response, short answer, and short response points earned in the test for the given subject (in ELA this includes the writing composition scores).
- If a student does not receive reported raw scores these calculations are set to blank.

xviii. **Next Gen Points Earned (tblStulItem)**

- MCpts are based on common, scaling multiple choice or selected response items with point values stored in item metadata tables.
- ORpts are based on non-MC or involving open-response and text entries. Item point totals are calculated based on item metadata tables.
- If a student does not receive reported raw scores these calculations are set to blank.

xix. **Legacy Reporting Category Points Earned (tblScoredItem)**

- The total points earned and the percent of possible points earned by the student are calculated by reporting category and stored in nRepCatx and pRepCatx where x is the RepOrder from tblPointsPossible.
- Calculations include all common items. Writing Composition scores are included in their respective RepOrder calculations in ELA.
- If a student does not receive reported raw scores the number of points earned and the percent of possible points earned are set to blank

xx. **Legacy Item Responses (tblScoredItem)**

- If a student has a participation status that does not receive reported item scores, or does not receive item scores because of attempt status, pass requirements or rptLEP conditions, all item responses will be blanked out (NULL) after raw score calculations are complete.
- Otherwise, re-formatted and re-ordered (by released item order) responses to all common items are reported and stored in tblScoredItem to support the student report and megafile deliverables (excluding the State File, which includes all items):
 - a. Released Writing Prompts: see the Writing Prompt Total Score calculations.
 - b. Released and unreleased OR items: the item score or not scorable code is reported. Responses of 'B' (blank) are set to NULL.
 - c. Released MC items: the plus-data from daPlusData is stored, where a "+" indicates a correct response and an alpha character (A,B,C,D,*) indicates an incorrect response choice.
 - d. Unreleased MC items: the plus-data from daPlusData is stored after re-formatting such that a "+" indicates a correct response, and "-" indicates a masked incorrect response choice (multiple responses ("*") remain unmasked).

xxi. **Next Gen Item Responses (tblStulItem)**

- Students with a participation status that does not receive reported item scores and those who do not receive item scores due to test attempt status, passing status, or rptLEP conditions will have scores blanked out (NULL) after raw scores have been calculated, if applicable.
- Otherwise, re-formatted and re-ordered responses to all common items are reported and stored in *tblStuitem* to support the student report and megafire deliverables (excluding the State File, which includes all items):
 - a. Released Writing Prompts: see the Writing Prompt Total Score calculations.
 - b. OR and MC items: the item score or not scorable code is reported. Responses of 'B' (blank) are set to NULL.

xxii. **Current-Year Reporting Results** (*tblScoredItem*)

- Information stored in ScaledScore, Perflevel, rScaledScore, and rPerflevel are based on current year test results only. See the **Calculations by Participation Status Summary** table for details.
- **ScaledScore**
 - a. Current-year scaled score results that are eligible to earn a current year scaled score. Conditions based on pass/fail, rptLEP or breach codes are not applied. This is an internal MP field that is not directly reported.
 - b. Blank for alternate assessment students and students not eligible to receive a scaled score based solely on participation status.
- **PerfLevel**
 - a. Earned current-year achievement level based on scaledscore (1-4). Conditions based on pass/fail, rptLEP, or breach codes are not applied.
 - b. For Alternate Assessment students the un-translated PerfLevel from the Alternate Assessment data table StuPL is stored (7-16).
 - c. If the student does not receive an achievement level based solely on partstatus PerfLevel is blank.
 - d. Valid Values: numeric achievement levels (1-4, 7-16) or blank. Internal MP field that is not directly reported.
- **rScaledScore** (*MP reporting – labels and student report*)
 - a. rScaledScore is the current year earned scaled score for MP reporting purposes.
 - b. rScaledScore = ScaledScore, with suppression based on pass/fail status, rptLEP, or breach codes applied from the participation status summary table.
- **rPerfLevel** (*MP reporting – labels and student report, mfPerfLev*)
 - a. rPerfLevel is the current year achievement level or partstatus code for MP reporting purposes.
 - b. rPerfLevel = Perflevel, modified based on pass/fail status, rptLEP, or breach codes for reporting as follows:

- If perflevel = '1' and rptLEP[*sub*] = '1' and the student has a partstatus that receives the text "LEP" in place of a non-passing achievement level then rPerfLevel = 'F'. This is applied by subject for all subjects.
 - Otherwise if grade is in 03-08 and perflevel = '1' then rPerfLevel = '6'.
 - Otherwise if perflevel is blank then rPerflevel = partstatus.
 - If a student has a breach code then rPerfLevel is assigned per the breach instructions to override any other standard rules.
- c.** Valid values: numeric achievement levels (1-4, 6, 7-16) and partstatus codes.
- d.** For Next Gen reporting, rPerfLevel codes are assigned via tblPerfLevelLookup table.

- **mfPerfLev** (megafile: [e/m/s]PerfLev)

- a.** Formatted rPerfLevel (current year reporting results) to contain either the student's achievement level abbreviated text (Standard or Alt), or 3-character participation status code for all students (e.g. 'P' or 'P_A' or 'LEP' or 'TRN').

xxiii. Aggregation/Accountability Results (tblScoredItem)

*Aggregation and Accountability Results combine prior and current results, where applicable. See the **Calculations by Participation Status Summary** table for details.*

- **mfScaledScore** (megafile: [e/m/s]scaleds)

- a.** For Accountable or Grade 09 students mfScaledScore is populated with either the current year scaled score, or prior scaled score as applicable for accountability. For Not-Accountable students mfScaledScore is populated with current year results as applicable.
- b.** mfScaledScore is populated as follows for Accountable students (or Grade 09):
 - mfScaledScore = rScaledScore for First Time Testers and First Time Testers that did not meet attemptedness (ABS, MED, TRN, LEP).
 - mfScaledScore = Highest between rScaledScore and the prior highest ScaledScore ([*sub*]ScaledScore from DPRaw) for Accountable Retest Students.
 - mfScaledScore = Prior highest scaled score for Previously Passed students ([*sub*]ScaledScore) from DPRaw).
 - Note: if [*sub*]ScaledScore is blank for the above scenario, the student passed via appeals and an accurate scaled score may not be available. mfScaledScore is left blank.
 - Otherwise mfScaledScore is blank.
- c.** If rptLEP = '1' and the student's mfScaledScore (as determined above) is considered Failing, then mfScaledScore is set to blank.
- d.** mfScaledScore = rScaledScore for Not-Accountable students.

- **Perf2** (MP aggregate calculations)

- a.** Populated with the achievement level for MP aggregate calculations and to support the megafile Perf2 using current year and prior results as applicable.
- b.** Perf2 is blank for all students with rptLep[*sub*] = '1'.

- c. Otherwise Perf2 is populated as follows for Accountable or Grade 09 students:
 - Perf2 = rPerfLevel for First Time Testers (1-4, '6' is translated to '1').
 - Perf2 is blank for First Time Testers that did not meet attemptedness (ABS, MED, TRN, LEP).
 - Perf2 = Highest achievement level between rPerfLevel and High_xPerf for Accountable Retesters (science only).
 - Perf2 = Highest prior achievement level (High_sPerf) for Previously Passed students.
 - Perf2 = Translated Alternate Assessment Perf2 for students Tested Alternate Assessment or Accountable Retested Alternate Assessment. Translation is done from Alternate Assessment Achievement Levels of 7-16 to Standard Achievement Levels 1-4.
- d. Otherwise perf2 is blank. Perf2 is blank for all Not-Accountable students except for grade 09 (available for grade 09 specific MP aggregations).
- **mfPerf2** (*megafile: [e/m/s]Perf2*)
 - a. Perf2 formatted to contain the student's achievement level abbreviated text (using Standard Assessment text only, e.g. 'P' or 'A'). Blank if Perf2 is blank.
 - b. mfPerf2 is set to blank for grade 09 students in the megafile export.

xxiv. **Competency: Updating ELA_CD, Mat_CD, and Sci_CD** (*mfCD in tblScoredItem*)

- These variables represent whether or not a student has met the testing graduation requirement for the subject, combining prior CD information from SIMS with the current test results.
- The updated mfCD fields begin with the prior CD value from SIMS (studemo SIMS_*[sub]*CD) for all students, regardless of participation status on this year's test. The prior value may be blank for students that have not previously tested in a subject.
- The mfCD fields are then updated using current year scaled score results (rscaledscore) if and only if the CD value increases, otherwise the prior value is retained:
- For legacy Math and ELA:
 - a. If scaled score is ≥ 220 and scaled score is ≤ 238 then CD = '1'.
 - b. Otherwise if scaled score ≥ 240 then CD = '2'.
 - c. Otherwise CD is '0'.
- For Science:
 - a. If scaled score ≥ 220 then CD = '1'.
 - b. Otherwise CD is '0'.
- For students tested via the Alternate Assessment (Partstatus in 'A', 'C', or 'W') the CD field is taken from the current-year updated CD field in the alternate assessment data (tblStuPL.mfCD) and is not re-calculated.

xxv. **Graduation Requirement Footnote (CDFootnote)** (*tblScoredItem*)

- The graduation requirement footnote is for High School students and indicates if a student has met, previously met, or still needs to meet the testing requirements for graduation.

- Using the previous CD value from SIMS (tblstudeMO.SIMS_[sub]CD) and the updated CD value incorporating current test results (tblScoredItem.mfCD) for each subject:
 - If SIMS_[sub]CD is '1' or '2' then CDFootnote = '4' (Already Met).
 - Otherwise:
 - If mfCD = '0' then CDFootnote = '1' (Not Met).
 - If subject is ELA or Math:
 - and mfCD = '1' then CDFootnote = '2' (Met but requires proficiency plan).
 - And mfCD = '2' then CDFootnote = '3' (Met.)
 - If subject is Science and mfCD = '1' then CDFootnote = '3' (Met).
- For Student Report text see Appendix F.

xxvi. **Legacy Composite Performance Index (CPI) Points (tblScoredItem)**

- CPI Points are assigned based on results used for Aggregations and Accountability.
- For students whose accountability results are from the Standard MCAS Assessment:
 - CPI points are assigned based on their Accountability Scaled Score (mfScaledScore) per the following table:

Test	mfScaledScore Range	CPI Points
Standard MCAS	240-280	100
	230-238	75
	220-228	50
	210-218	25
	200-208	0

- If PartStatus is in ('K','P') and mfscaledscore is missing:
 - If mfperf2 is "NI" (Standard Assessment) set CPI = 50 to indicate the student passed via appeals.
 - Otherwise, mfPerf2 is from a prior year Alternate Assessment. CPI points are set per the following table in tblScoredItem:

Test	Alt Perf2:	CPI Points
Alternate Assessment (Only when re-assigning based on prior-year Alt Results for Accountability)	A_A	100
	P_A	
	PRG	
	EMG	75
	NIA	
	AWR	
	INP	25

- For Accountable Alternate Assessment students (Tested Alt or Accountable Retested Alt) CPI points are taken from the Alternate Assessment data (daStuCPI.CPI).

xxvii. **Next Gen Composite Performance Index (CPI) Points (tblScoredItem)**

- Not calculated in 2016-2017

xxviii. **NumIn** (*tblScoredItem for Megafile*)

- See the calculations by participation status summary for a list of statuses that receive CPI points and numin = '1'. Otherwise it is '0'.

xxix. **Assess** (*tblScoredItem for Megafile*):

- The subject specific Assess field is populated to indicate whether or not Accountable students have met the participation requirement this year based on the Calculations by Participation Status Summary table.
- Exception for ELA only, when Assess = '1': If LEP_off = '1' and ACCESS_Part = '0' then Assess = '0'.
- Fields are prefixed with *e/m/s* in the megafile.

xxx. **Legacy Student Growth Percentile (GP)** (*tblScoredItem*)

- Student growth percentiles (and standard error range) are reported for accountable first-time test takers that are not considered First Year LEP (PartStatus = 'Z' and LEPFirst[*sub*] = '0').
- For all other students, GP is blank.
- Growth is provided by the ESE for students in Math and Reading, grade 10.
- After the discrepancy period, any student with changes to their preliminary raw score, perf2, partstatus, or StudentID will have growth data suppressed.

xxxi. **Complexity**(*tblScoredItem*)

- Complexity is populated with the student's alternate assessment composite complexity score (tblStuPL.Composite) for all students Tested or Retested (accountable or not-accountable) Alternate Assessment.
- Complexity is blank for Release 1 and 2 since Alt results are not incorporated.

E. Aggregate Calculations

i. **Aggregation Summary**

These rules are applied to all aggregate calculations. Any additional rules specific to a particular calculation will be listed under the rules for the calculation.

- All reporting levels (sch/dis/sta): Only students eligible for accountability (Summarize = '1') are included in aggregate calculations, with the exception of Grade 09 specific calculations.
- Incomplete (INC) students are not included in any aggregations, even if their Summarize =1.
- Students are aggregated to their official school (sprp_sch) and official district (sprp_dis), unless their sprp_dis is in daSingleSchDisLookup , in which case they are aggregated to the school associated with their sprp_dis and inclusion rules are dictated by the district (school and district calculations must match).
- Students with an SPRP Orgtype of 6 or 13 are used for school-level aggregations.
- For district aggregations, if sprp_dis = '99999999' then delete.
- Exclusions based on OctEnrol are not applied to one-school district school or district level calculations.

ii. **Number and Percent of Students by Achievement Level**

- Calculated by grade and subject at the school, district, and state level.
- Legacy grade 09 and 10 HS Science: all individual science subjects are aggregated together by grade as “sci”.
- Calculations are performed using Perf2. All students with a non-blank Perf2 are eligible to be included in the calculations, including Alternate Assessment students (Achievement Levels are already translated to Standard-Assessment Achievement Level codes in Perf2).
- The following exclusions are applied to the pool of eligible students:
 - a. Next Gen - Grade 05, 08 (SCI), 03-10 Math and ELA:
 - Students with OctEnrol ≠ '1' are excluded at the school level, unless they are in a one-school district.
 - b. Legacy - Grade 10 Science (HS STE's):
 - Students with ConEnr_Sch ≠ '1' are excluded at the school level, unless they are in a one-school district, in which case students with ConEnr_Dis ≠ '1' are excluded.
 - Students with ConEnr_Dis ≠ '1' are excluded at the district level (as well as at the school level for one-school districts).
 - Students with ConEnr_Sta ≠ '1' are excluded at the state level.
- N = the total number of students included in the calculation of the number of students at each achievement level (n1-n4), and is the denominator for the calculation of the percent of students at each achievement level (p1-p4).
- **Minimum N-Requirement:** if N < 10 for a school or district results are calculated but suppressed from reports.

iii. **P34 (tblSummary)**

- This is the sum of the percent of students in the Proficient Achievement Level (p3) and the students in the Advanced Achievement Level (p4) in each school, district, or state as calculated above in *Number and Percent of Students by Achievement Level*.
- **Minimum N-Requirement:** if N < 10 for a school or district results are calculated but suppressed from reports.

iv. **Legacy Median Student Growth Percentile (tblSummary)**

- The Median Growth Percentile (*median*) is calculated at the school, district and state level in Math and ELA for grade 10.
- The number of students with growth included in the calculation is stored in *MedianIncluded*.
- All students with tblScoredItem.GP populated are eligible to be included in the calculations.
- The following exclusions are applied to the pool of eligible students:
 - a. Students with OctEnrol ≠ '1' are excluded at the school and district level, unless they are at a one-school district.
- State Median growth is defaulted 50 (after computing *MedianIncluded* at the state level) for Math and ELA, all grades.
- Median and MedianIncluded are null for grades/subjects without growth data.

- **Minimum N-Requirement:** if $N < 20$ for a school or district results are calculated but suppressed from reports.
- v. **Legacy State Reporting Category Performance Comparison** (*tblRepCatSummary*)
- The average number of points earned (nPoints) and the percent of total possible points earned (pPoints) by students at the “*low end of the Proficient level*” is calculated for each reporting category at the state level, stacked by subject and reporter.
 - Standard assessment students with partstatus = ‘Z’ and a scaledscore = ‘240’ are included.
- vi. **Next Gen Test Mode (Paper vs. Online) Calculations** (*tblRepCatSummary*)
- In addition to the summarizing rules above, TestMode will be an additional level for summarizing and reporting aggregate results at the state level. This only applies to ELA and Math aggregations for reporting categories and is not used for aggregating scaled scores, achievement levels, or SGPs.
 - Test form calculations and Student Report reporting categories
 - For ELA and Math content area aggregations, the pool of students used must be no less than 200. If there are less than 200 students at the 500 level, increment the scaled score by one point up to 505 until a minimum n of 200 students is reached, only considering students within the same test mode and scaleform.
 - For any mode at a grade/content level that does not reach the 200-student threshold within the scaled score range of 500-505, the student’s report will not include the average points for the reporting categories.
 - Data displaying averages in the scaled score table should include data from the full population, and not separated out by test mode.

Data Deliverables Specifications

I. Grade 10 Writing Composition Images

One pdf with results and an image of the student's submitted writing composition (or typed response) is posted to the website for viewing by the school, district, and state administrators for each student Tested in ELA with a writing composition. See the Holder Table Specifications for website details.

A. Calculations and Details

- i.* The table `wcilmgVwrFinalDistrict` is populated by DA to support the web views of the student composition images and scores.
 - PDFs are available for all students included in this table. Students excluded from this table will not have an image available. Inclusion Rules:
 - a. Only students with a writing composition `bookletnumber` are included (`bookletnumberWri` ≠ blank).
 - b. Students classified as INV (N), DUP (I, N), VAB (H), INC (B) or DNT (J) are excluded.
 - Calculations:
 - a. Score = sum of `mfWPCC` and `mfWPCT` from `tblScoredItem`, formatted to always contain 2-digits. If the student received a Not Scorable code instead of dimension scores, or if the dimension scores are blank, Score = "00".
 - b. WPCC and WPCT = `mfWPCC` and `mfWPCT` from `tblScoredItem`, respectively. Blank responses are formatted to "BL".
 - c. `Bookletnumber` = `tblStudememo.BookletNumberWri`
 - d. Grade = test grade
 - e. `SpecialEd` and `Plan504` are combined to create IEP504. If either `tblStudememo.SpecialEd` or `tblStudememo.Plan504` = '1' then IEP504 = '1'. Otherwise IEP504 = '0'.
 - f. If IEP504 = '0' then `RegularEd` = '1'. Otherwise `RegularEd` = '0'.
 - g. `tblStudememo.LEP` is renamed ELL.
 - h. If `ELL`, `FLEP`, `Ever_ELL`, or `Titlel` are null then default to '0'.
 - i. If `Ethnic` or `Gender` are null then default to 'X'.
- ii.* If a student is included in `wcilmgVwrFinalDistrict` but does not have a writing composition image available, a generic pdf is created displaying their available score information.
- iii.* Specifications are available for internal processing in the Writing `CompositionTableLayout.xlsx` document.

II. MegaFile(s)

A. Generic Details

- i.* Megafile deliverables are posted by grade to the FTP site for the state and contain data for all processed students.
- ii.* All MegaFile deliverables follow the most recent layout: MCAS 2016-17 File Layout_spring test.xlsx.
- iii.* Test-result based fields that are not applicable to particular deliveries are left blank. SIMS based fields are populated for all releases, where available.
- iv.* Amend
 - If a student receive an amend code for the General or Alternate Assessment, then the amend field will contain the first letter of that test (e.g., A value of “EM” indicates the student received an amend code in ELA and Math).
- v.* DataChanged
 - DataChanged indicates if a student’s record has changed since a prior release of the file. It is defaulted to ‘0’ for all students, and then incrementally updated for each data revision to the latest revision number in which a change occurred. Prior values are maintained through each revision.
 - The Early ELA and Math and Science MC contain incomplete results for students and should not be considered when setting datachanged for the Preliminary Data Release.
 - Students whose record changes during the discrepancy period are flagged as datachanged = ‘1’ (first full revision) in the post-discrepancy reporting file (release 4).
 - Any additional reruns of post-discrepancy data will have changes flagged incrementally.
 - The file *DataChangedVariables.xlsx* indicates which fields are included in determining datachanged. eSGP and mSGP are excluded from the determination in Release 4 (post-discrepancy) when comparing to Release 3 (pre-discrepancy) because growth is not populated until Release 4. These fields are included in all subsequent runs after Release 4.
- vi.* Commas are suppressed from school and district names, and student names.
- vii.* See Measured Progress document *SIMS Mapping.xlsx* for a crosswalk of Measured Progress calculated fields and renamed SIMS fields in DPRaw to their respective Megafile fields that are not specifically listed below, indicating that no additional formatting is required from the source table.
- viii.* *[e/m/s]Alt* = *tblStudemo.[e/m/s]Alt*. If Alt = ‘0’ then set to blank.
- ix.* *LEPFirst* = *tblStudemo.LEPFirst*. If LEPFirst = ‘0’ then set to blank.
- x.* For the following Accommodation variables, if the accommodation equals ‘0’, then set to blank: *Accom_readaloud*, *accom_scribe*, *accom_calculator*.
- xi.* *[e/m/s]ScaledS* = *tblScoredItem.mfscaldscore*. This is the combined current year and prior year official scaled score results for students included in aggregations and accountability.
- xii.* *[e/m/s]Perflev* = *tblScoredItem.mfPerfLev*. This is the formatted current year achievement level or code.

- xiii. [e/m/s]Perf2 = tblScoredItem.mfPerf2. This is the formatted combined current and prior year achievement level results for accountability and aggregations. Set to blank for Grade = '09'.
- xiv. [e/m/s]_CD = tblScoredItem.mfCD. This is updated with current-year results.
- xv. [e/m/s]SGP = tblScoredItem.GP by subject. This is the reported current-year student growth percentile.
- xvi. WPwptopdev = mfWPCT; wpcomconv = mfWPCC from tblScoredItem.
- xvii. Item scores and raw scores are printed as they are stored in tblScoredItem in their respective fields without any additional formatting.
- xviii. Historical grades, scaled scores, and growth percentiles by year are populated from the audited values in tblStudemo, where scores have been blanked when grades are not in the expected sequence.
 - If a historical scaled score is '0' it is set to blank.
 - If a historical growth percentile is '0' it is set to blank.
- xix. If Grade = '09' then the following accountability fields are set to blank:
 - sPerf2
 - sCPI
 - sNumin
 - sAssess
 (Grade 09 test results are not included in ESE aggregate calculations until their accountability year)

B. HS Early ELA Specifics

- i. File Name:MCASYYYY_ELAXX.dat
Where YYYY = 4-digit test year (e.g. 2013), XX = 2-digit file grade.
- ii. Files are produced for grades 03-08 and 10.
- iii. DataChanged = '0' for all students. If there is a rerun of the Early ELA file datachanged will be set based on comparison to the prior Early ELA file and incremented for each rerun. Values will not impact datachanged values in any other files.
- iv. MCASRowID
The mcasrowid is a 15 digit alpha-numeric field created in the following manner:
 - 2 digits = administration year (ie: 16 for the 2016 test)
 - 2 digits = grade (03-08 or HS (09 and 10 tests))
 - 1 digit = test (2 = ELA)
 - 10 digits = bookletnumber (derived by DP from the student's SASID or submitted answer document)
- v. The following ELA specific fields are not populated:
 - eAlt
 - eComplexity
 - enumin
 - eassess
 - esgp
- vi. elaCD = tblScoredItem.mfCD and is considered a preliminary updated competency determination.

- vii. All math and science test based fields (fields from tblScoreItem) are blank. Math and science SIMS fields are populated with available data (DPRaw, tblStudemo sources for ReleaseID = 1).

C. ELA, Math, and Science MC Only Specifics

i. Files:

- For math, file name "MCASYYYY_MCMathXX.dat" where YYYY = 4-digit test year (e.g. 2013), XX = 2-digit file grade.
 - a. Produced for Grades 03-08 and 10.
- For Science, file name "MCASYYYY_MCSciXX.dat" where YYYY = 4-digit test year (e.g. 2013), XX = 2-digit file grade.
 - a. Produced for Grades 05 and 08.

- ii. DataChanged = '0' for all students. If there is a rerun of the Math/Science MC Only files datachanged will be set based on comparison to the prior Math/Science MC Only files and incremented for each rerun. Values will not impact datachanged values in any other files.

iii. MCASRowID

The mcasrowid is a 15 digit alpha-numeric field created in the following manner:

- 2 digits = administration year (ie: 16 for the 2016 test)
- 2 digits = grade (03-08 or HS (09 and 10 tests))
- 1 digit = test (3 = Math/Science)
- 10 digits = bookletnumber (derived by DP from the student's SASID or submitted answer document)

iv. The following Math/Science related fields are not populated:

- (m/s)Alt
- (m/s)Complexity
- (m/s)Scaleds
- (m/s)Perf2
- (m/s)numin
- (m/s)assess
- (m/s)sgp
- (m/s)_cd

- v. All Test-based ELA specific fields will be left blank. ELA specific SIMS fields are populated with available data (from DPRaw, tblStudemo for releaseID = 2).

D. Preliminary Release Specifics

i. File Name:MCASYYYY_XX.dat

Where YYYY = 4-digit test year (e.g. 2013), XX = 2-digit file grade.

- ii. Files are produced for grades 03-08, and HS (includes test grade 09 and 10 data).

- iii. DataChanged = '0' for all students. DataChanged values from the Early ELA and Math/Science Released of the megafile are not maintained.

iv. MCASRowID

The mcasrowid is a 15 digit alpha-numeric field created in the following manner:

- 2 digits = administration year (ie: 16 for the 2016 test)
- 2 digits = file grade (03-08 or HS)
- 1 digit = test (1 = Standard)

- 10 digits = bookletnumber (derived by DP from the student's SASID or submitted answer document)
- v. All SIMS and test-based data for all applicable fields are populated per standard decision rules.

E. Post-Discrepancy Final Release Specifics

- i. File Name: MCASYYYY_XX.dat
Where YYYY = 4-digit test year (e.g. 2013), XX = 2-digit test grade.
- ii. Files are produced for grades 03-08 and HS (includes test grade 09 and 10 data).
- iii. DataChanged is taken from the Preliminary Release file. If a student record is new or was modified during the discrepancy period, datachanged is set to '1'. For any subsequent updates the datachanged flag will be maintained and incremented as necessary.
- iv. MCASRowID

The mcasrowid is a 15 digit alpha-numeric field created in the following manner:

- 2 digits = administration year (ie: 16 for the 2016 test)
- 2 digits = file grade (03-08 or HS)
- 1 digit = test (1 = Standard)
- 10 digits = bookletnumber (derived by DP from the student's SASID or submitted answer document)
- v. All SIMS and test-based data for all applicable fields are populated per standard decision rules.

III. Accommodation Data File(s)

- A. File Name: [sub]Accom.csv
- B. One file is produced by subject including all students in all grades and posted to the FTP.
- C. The file contains grade (tested grade), UniqueID, sprp_dis, sprp_sch, testschoolcode, sasid, IEP, Plane504, smode, and the subject-specific accommodations (renamed per the ESE naming conventions found in the State File Layout) from DPRaw.

IV. Questionnaire Data File(s)

- A. File Name: Questionnaire Data GrXX.csv where XX = 2-digit grade
- B. Layout: MCAS[4-digit year]Questionnairelayout.xlsx
- C. Files are produced for Grades 05, 08, and 10 and posted to the FTP.
- D. All students are included regardless of responses to questionnaire items, listed by Bookletnumber and SASID (StudentID).
- E. Questionnaire responses are taken as-is from DPRaw.

V. Alt & Standard Results Data Files

- A. One file is produced including students in all grades that took both the Alternate Assessment and Standard Assessment in the same subject. This file provides score and achievement level information for the ESE to determine if any students should have their Standard Assessment results override their Alternate Assessment results. This file is posted to the FTP.

VI. Missing Grade Span Data File

- A. File will list all public sprp_sch codes that are in the Preliminary data (release 3) that are not listed in the Grade Span Lookup provided by the ESE.
- B. This file is only produced if needed and will be posted to the FTP. The ESE will provide an updated Grade Span lookup prior to final reporting to ensure all official schools have an associated grade span.
- C. Public scores are coded as OrgTypeCode = 6.

VII. State Student Results Data File

- A. File Name: MCASYYYY_XX.dat
 Layout Name: 'MCAS Spring YYYY State File Layout.xls'
 Where YYYY = 4-digit test year (e.g. 2013), XX = 2-digit test grade.
- B. Files are produced for grades 03-08 and HS (includes test grade 09 and 10 data).
- C. Student data source:
 - i. DaPlusData for Science test and HS data
 - ii. For grades 3-8, student's earned scores are included
 - iii. Items are in test position order, including matrix and field-test items. Blank open response items ('B') are reformatted to blank.
 - iv. For High School Science, if a student's rptSciTry is different from the daPlusData subject, the responses are set to blank, form is set to "00", and the subject is updated to reflect the rptSciTry subject.
- D. Except for the variables listed above, all other variables (including datachanged) in the state file layout are pulled from the following sources without any additional formatting based on the following hierarchy:
 - i. Current megafile data.
 - ii. Current tblstude demo data.
 - iii. Current Dpraw data.

VIII. Student Report Translation Counts

- A. File Name: MCASYYYY Interp Lang Counts.xls
- B. One file is produced by listing all schools and districts receiving student reports with a count of the number of students in each language:

DPRaw. FirstLanguage	Language	iCore Shipping Form
135	Arabic	01
001	Cape Verdean	02
002		
200	Chinese	03
520		
225	Haitian Creole	04
430	Khmer	05

445	Korean	06
006	Portuguese	07
665	Russian	08
007	Spanish	09
825	Vietnamese	10

- C. Guides are provided in the 03-08, 10 report format, or grade 09 report format. Grade 03-08 and 10 students receive the 2-3 subject report templates are counted together for the 03-08, 10 counts. Grade 09 students and Grade 10 students receiving science-only reports are counted together for the Grade 09 template. The same list will apply to both General and Alternate assessments.
- D. Data are based on a frequency distribution of first languages reported in the SIMs extract

IX. Discrepancy Table

- A. Table Name: tblDiscrepancy
- B. Layout: MCASYYYYDiscrepancy.xls
- C. Contains reporting data for all students processed during preliminary reporting.
- D. Sources:
 - i. Data are taken from tblStudemmo after audits when applicable.
 - ii. Otherwise they are taken from DPRaw.
 - iii. EditDiscode = discode, EditSchCode = Schcode.

X. Discrepancy File

- A. File Name: tblDiscrepancy
- B. Layout: MCASYYYYDiscrepancy.xls
- C. Contains all data from tblDiscrepancy after the discrepancy period has closed with the edits from the field, ESE users, and MP users. Only students that had an update made are included (Edit = 'U', DESEflag = 1, or MPflag = 1, or DESEReviewed = 1).

XI. Testing Times

- A. Filenames : MANEXTGEN1617TestingTime_Passageltem.dat and MANEXTGEN1617TestingTime_Section.dat
- B. Layout: MANextGen1617TestingTimeLayout.xlsx
- C. Contains the total number of seconds each student spent on each questions, time spend reading each passage for math and ELA for MCAS 2.0. An additional file contains the time each student spends within a section of the assessment
- D. Sources:
 - i. Datafile received from Pearson

XII. Standard Setting Demographic File

- A. Filename: [sub][grade]demographics.csv
- B. Layout: StdSettingDemographicsLayout.xlsx

- C. Files containing sparse data matrices provided to Pearson for online students only. Additionally, a crosswalk was created to match Pearson UINs with MP's psychometric item numbers

XIII. Test Mode Analysis

- A. Filename: All[YY].csv, M[YY].csv, O[YY].csv, and P[YY].csv
- B. File originating from ESE was merged with grade and subject information as well as demographic, accommodation, scale form, and raw scores. Two handoffs are involved with this deliverable. The first, containing mostly demographic and test mode variables and included students who took MCAS or PARCC (online or paper) in 2016. The second file contains the all the variables from the first handoff in addition to the ELA and Math MCAS raw scores for 2017.
- C. Sources:
 - i. File provided by ESE containing SASIDs were appended with additional demographic, testing, and scoring variables

XIV. Item Statistics

- A. Data Analysis will provide item statistics to Psychometric. The initial handoff involves statistics for equating and key verification. Once the test has been administered, the IRT values will be added to the item's statistics.

XV. High School Class of 20YY Counts

- A. Filename: MCAS1617LetterCounts.xlsx
- B. Layout: No formal layout. File contains Discode, SchCode, and nStudents.
- C. This spreadsheet contains the counts of the grade 10 students tested at each school

Report Deliverables Specifications

I. Student Labels

A. Definitions

The following terms will be used to describe certain formats/behavior:

- i. Suppress – if grade = '10' and summarize = '0' then do the following:
 - If the student returned a HS Science booklet and both Math and ELA booklets were not returned (BookletNumberSci is not NULL and BookletNumberELA is NULL and BookletNumberMat is NULL) then Suppress = 1.
 - Otherwise, Suppress = 2.
 - Next Gen Online suppression rules

- a. If a student does not receives a student report, then no label is printed for the student
- b. If all tested subjects for the student are under the Alternate Assessment, then students will not receive a label or student report.

These students are not required to test and will have certain aggregation displays suppressed from their reports. The two Suppress values are used to identify which report template to use when reporting the student.

- ii. Data listed as being taken “from SIMS” are taken from tblStudemo for legacy data and tblStuInfo for Next Gen data after any necessary audits are complete. If the student does not link to SIMS the data are blank.

B. Templates

There are three different label templates that differ depending on the number of subjects reported for the tested grade:

- i. One subject – grade 09, grade 10 where Suppress = 1.
- ii. Two subjects – grades 03, 04, 06, 07
- iii. Three subjects – grades 05, 08, 10 where Suppress ≠ 1.

C. Label Displays

- i. Student Name (Section1a) –
 - Presented as: *FName MI. LName* (with a period after the middle initial when the middle initial is not blank). Examples: JOHN T. SMITH or JENNY JONES
 - This section requires special formatting when one or more of the names are missing:
 - a. If Lname is blank and Fname is blank, then section = “BLANK NAME”
 - b. If Lname is blank and Fname is not blank, then section = “Fname BLANK”
 - c. If Lname is not blank and Fname is blank then section = “BLANK Lname”
- ii. Grade
 - If grade='10' and summarize = 0 and StuGrade <> 'SP' then use the use StuGrade from SIMS.
 - Otherwise use the Test Grade and remove any leading zeroes.
- iii. SASID – Student ID from SIMS, no special formatting applied.
- iv. School Name, School Code, and District Name – School and District names and School Code from iCore based on testing school (discode,schcode). No special formatting applied.
- v. Birth Date – DOB from SIMS, no special formatting applied. Stored in tblStudemo.DOB. Must be equal to 10 characters in length (MM/DD/YYYY).
- vi. Test Date: “Spring 20YY” where 20YY = test year, e.g. 2013.
- vii. Subject Title (Section1i, Section1l, Section1o) – Formatted with the following values:
 - If subject = 'ela' then 'English Language Arts'
 - If subject = 'mat' then 'Mathematics'
 - If subject = 'sci' then and grade is 05 or 08 then 'Science and Technology/Eng'

- Otherwise if subject = 'sci' and grade is 09 or 10 (HS STE's) then:
 - a. If rptSciTry = '1' then 'Biology'
 - b. If rptSciTry = '2' then 'Chemistry'
 - c. If rptSciTry = '3' then 'Introductory Physics'
 - d. If rptSciTry = '4' then 'Technology/Engineering'
- viii. Scaled Score – student earned scaled score stored as rScaledScore in tblScoredItem. If a student did not earn a scaled score for a tested subject (rScaledScore is NULL) the display is formatted as “---”.
- ix. Achievement level (Section1k, Section1n, Section1q) – contains either the achievement level text or the not-tested statement stored in tblPerfLevelLookup (see *Appendix A- Description*). This is set using the student's rPerfLevel from tblScoredItem. This is always populated if the subject existed at the tested grade.

II. Legacy HS Student Report

The following sections discuss the formatting of the various displays presented on the legacy high school student report. All calculations and aggregation rules can be found in earlier sections of this document. Please note that all details mentioned below cover reporting of tested students as outlined in Test Administration Table found on Page iv. These sections will refer to the following schema notation files when necessary for providing information for specific report templates:

MCAS1617StudentReportSchemaNotation05.pdf (templates for test grades 05, 08)

MCAS1617StudentReportSchemaNotation09.pdf (templates for test grades 09, 10)

A. Definitions

The following terms will be used to describe certain formats/behavior:

- i. NoScience – Student tested in grade 09 or 10 and either did not return a HS science booklet (BookletNumberSci is NULL) or the student is not expected to participate in the HS science test (PartStatusSci is in 'A','C','W','K','L','P'). These students will have certain science displays suppressed from their reports.
- ii. Suppress – if grade = '10' and summarize = '0' then do the following:
 - If the student returned a HS Science booklet and both Math and ELA booklets were not returned (BookletnumberSci is not NULL and BookletNumberELA is NULL and BookletNumberMat is NULL) then Suppress = 1.
 - Otherwise, Suppress = 2.

These students are not required to test and will have certain aggregation displays suppressed from their reports. The two Suppress values are used to identify which report template to use when reporting the student.

- iii. Data listed as being taken “from SIMS” are taken from tblStudemo, after any necessary audits are complete. If the student does not link to SIMS the data are blank.

B. Cover Page

- i. Title (Section1a) – “Spring 20YY MCAS Tests” where 20YY = test year, e.g. 2014.

- ii. Student Name – Presented as: *LName, FName MI.* (with a period after the middle initial when the middle initial is not blank). Examples: SMITH, JOHN T. or JONES, JENNY

This section requires special formatting when one or more of the names is missing:

- If Lname is blank and FName is blank, then section = “BLANK NAME”
- If Lname is blank and FName is not blank, then section = “BLANK, FName”
- If Lname is not blank and FName is blank then section = “Lname, BLANK”

- iii. SASID – Student ID from SIMS, no special formatting applied.
- iv. School Name and District Name – School and District names from iCore based on testing school. No special formatting applied.
- v. Grade
- If grade='10' and summarize = 0 and StuGrade <> 'SP' then use the use StuGrade from SIMS.
 - Othersiwe use the Test Grade and remove any leading zeroes.
- vi. DOB – DOB from SIMS, no special formatting. Must be equal to 10 characters in length (MM/DD/YYYY).

C. Reporting Category Display

- i. Subject (Section6a) – Formatted with the following values:
- If subject = 'ela' then 'English Language Arts'
 - If subject = 'mat' then 'Mathematics'
 - If subject = 'sci' then and grade is 05 or 08 then 'Science and Technology/Engineering'
 - Otherwise if subject = 'sci' and grade is 09 or 10 (HS STE's) then:
 - a. If rptSciTry = '1' then 'Biology'
 - b. If rptSciTry = '2' then 'Chemistry'
 - c. If rptSciTry = '3' then 'Introductory Physics'
 - d. If rptSciTry = '4' then 'Technology/Engineering'
- ii. Order of the Grids
- 1 = ELA
 - 2 = Mathematics
 - 3 = Science (includes grade05/08 and HS sciences)
- iii. Reporting category text and two-character codes (Section6b and Section6c) – refer to daReportingCategoriesLookup for the approved text and codes (see *Appendix D*).
- iv. Reporting category results and state comparisons are displayed only for students who are Tested (TestStat = 1).
- v. Points earned by your child (Section6f) – nRepCatX variables from tblScoredItem, no special formatting where X= the Reporting category RepOrder in tblPointsPossible.
- vi. Possible Points (Section6g) – Points variable from tblPointsPossible, no special formatting.
- vii. Percent of points earned by your child (Section6d) – pRepCatX variables from tblScoredItem. If the pRepCat variable is not blank, then place % symbol immediately after the number. Example: 15%.

- viii. Percent of points earned by minimally proficient kids (Section6e) – pPoints variable from tblRepCatSummary. Place % symbol immediately after the number. Example: 15%.
 - This data is always displayed when the grid is displayed, regardless of whether or not the individual student has earned reporting category points.
 - For HS STE’s join to tblRepCatSummary based on the subject associated with the student’s rptSciTry (if a student’s rptSciTry = ‘2’ then pPoints summarizing minimally proficient students in Chemistry is displayed).
- ix. Students identified as NoScience do not receive the science grid portion of the display.
- x. Students identified as Suppress do not have this display on the report (all subjects).

D. Released Item Display

i. *Subject Title* (Section7a) – Formatted with the following values:

- If subject = ‘ela’ then ‘English Language Arts’
- If subject = ‘mat’ then ‘Mathematics’
- If subject = ‘sci’ and grade is 05 or 08 then ‘Science and Technology/Engineering’
- Otherwise if subject = ‘sci’ and grade is 09 or 10 (HS STE’s) then:
 - a. If rptSciTry = ‘1’ then ‘Biology’
 - b. If rptSciTry = ‘2’ then ‘Chemistry’
 - c. If rptSciTry = ‘3’ then ‘Introductory Physics’
 - d. If rptSciTry = ‘4’ then ‘Technology/Engineering’

ii. *Order of the Grids*

- 1 = ELA
- 2 = Mathematics
- 3 = Science (includes grade05/08 and HS sciences)

iii. *Order of rows within each grid*

The following definitions are used to both describe what appears and also what is printed in Section7b.

- 1 = “Question Number” – this is the released item order number.
- 2 = “Reporting Category” – this is the two-character reporting category code.
- 3 = “Your Child’s Score” - this is the response provided by the student.

iv. *Order of items*

- For tests without writing, the items are ordered from left to right in released item order
- For tests with writing, the two writing prompt scores are presented first followed by the rest of the test items in released item order: WPCT, WPCC, followed by all other items.
- Item responses in tblScoredItem are already ordered by released item order.

v. *Formatting of Student Responses*

- Formatting of the items for the Student Report is mostly completed in tblScoredItem, with the following additions:

- a. If the student correctly responded a '+' is stored in tblScoredItem for all MC items and "SA" math items. This is translated to a 'P' in the reporting data so that a check mark is displayed.
- b. Incorrect MC and "SA" math items are already formatted to display the student's incorrect response option.
- c. Otherwise for all other open response and all PARCC items the points earned by the student from tblScoredItem is presented along with the possible points for the item separated by a "/". Examples: 2/4 or 7/12.
- vi. Students identified as NoScience do not have the science grid portion of the display.
- vii. Item responses are blanked out in tblScoredItem for students that should not receive reported item responses in the display

E. Student Achievement Level and Scaled Score Statements (inside, section2)

- i. Test Grade reference (Section1b) – "Your child's 2015 grade *Section1b* achievement levels and scores"

The Section1b refers to the grade of the test taken. This Section1b reference does not appear on the grade 09 test or on the reports for kids identified as Suppress (1 or 2).

When it appears, Section1b is equal to the test grade with leading zeros removed.

- ii. Achievement level (Section2a, Section2g, Section2n) – contains either the achievement level text or the not-tested statement stored in tblPerfLevelLookup (see *Appendix A- Description*). This is set using the rPerfLevel variable from tblScoredItem.
- iii. Score (Section2c, Section2i, Section2p) – contains the reported scaled score, the rScaledScore variable from tblScoredItem.
- iv. For HS students where Attempt ne F, scaledscores are displayed if earning a passing raw score ("Needs Improvement" or higher)
- v. State results will only include students who fully attempted.
- vi. Growth Percentile (Section2e, Section2k) – contains the student growth percentile as provided by the ESE and stored in tblScoredItem.
- vii. Graduation requirement footnotes (Section2b, Section2h) – contains the text from tblCDFootnoteLookup associated with the CDFootnote variable in tblScoredItem.
- viii. Growth Percentile footnotes (Section2f, Section2l)
 - GP = student growth percentile from tblScoredItem.
 - ELA: "Your child's [Current year, e.g 2016] MCAS English Language Arts score is higher than the scores of GP% of the students in the state who received similar MCAS English Language Arts scores in prior years."
 - Math: "Your child's [Current year, e.g 2016] MCAS Mathematics score is higher than the scores of GP% of the students in the state who received similar MCAS Mathematics scores in prior years."

- ix. For Non-Standard Accommodation Student Report text based on elaNSAFooter and matNSAFooter see table *Non-Standard Accommodation Footer Text (Student Report)*.

F. Scaled Score / Achievement Level Bar Graph Display

- i. Current year scaled scores
- Use rScaledScore from tblScoredItem
 - Contains standard error bar (lowScaledScore and highScaledScore from tblScoredItem)
- ii. Historical scaled scores
- Use scaled scores from SIMS for ELA and Math stored in tblStuDemo as [subject]scaledscore1 and [subject]scaledscore2 and [subject]scaledscore3 (1 = 2013, 2 = 2013, 3 = 2014), where [subject] = ela or mat.
 - No standard error is reported.
 - Science does not have a bar graph to show prior year scores in addition to the current score.
 - Grades 03 and 09 do not have historical scores.
 - Grade 04 reports only one year (2014) of historical scores.
 - Grade 10 reports will display years of 2015, 2014, and 2013
- iii. Historical score footnote
- If a historical score is missing, an * is placed to the right of the year label for the missing score and the following footnote appears below the display:

*Score not available

G. Achievement Level Comparison Table

- i. Your child column – a check mark is placed in the row associated with the earned achievement level based on the data stored in the rPerfLevel column in tblScoredItem.
- Students who participated through the Alternate assessment are included in the row where they are counted for aggregations.
 - Students who did not earn an achievement level on this year's test do not receive a checkmark.
- ii. School/District columns – the school and district achievement level percentages from tblSummary based on the student's official school and district (sprp_sch and sprp_dis respectively).
- iii. State column – the state achievement level percentages from tblSummary.
- iv. Percentages are formatted with a % directly after the number. Example: 15%
- v. Display is not shown on reports for students identified as Suppress = 1 or 2.
- vi. If the display is shown, the school, district, and state data are displayed regardless of whether or not the student earned an achievement level.

H. Student Growth Percentile Display

- i. Your Child – presents the student’s growth percentile
 - GP from tblScoredItem is used to mark the location of the circle with score.
 - lowGP and highGP from tblScoredItem are used to draw a standard error bar behind the student score circle.
- ii. School/District – Median value from tblSummary for school/district based on official school and district (sprp_sch and sprp_dis).
- iii. School/District Medians are displayed regardless of whether or not the student has a growth percentile displayed

III. Next Gen Student Report

The following sections discuss the formatting and displays presented on the Next Gen P/G Student Report. All calculations and aggregation rules can be found in earlier sections of this document. These sections will refer to the following schema notation files when necessary for providing information for specific report templates:

MANextGen1617StudentReportSchemaNotation.pdf (templates for 03-08 ELA and Math, 05 and 08 Science)

A. Definitions

The following terms will be used to describe certain formats/behavior:

- i. Data listed as being taken “from SIMS” are taken from tblStuInfo, after any necessary audits are complete. If the student does not link to SIMS the data are blank.
- ii. Tested v. Not tested – Students who fully attempt are considered tested. Otherwise, students who are partially or did not attempt the test are considered “Not Tested.” These two distinctions have separate impacts on information displayed on the student’s report as explained below.
- iii. Suppression - If all tested subjects for the student are under the Alternate Assessment, then students will not receive a student report or label.
- iv. Test mode – Displayed is which mode of test the student used
 - “Paper-based test” or “Computer-based test”
 - If a student is not-tested, then test mode will be blank on the student’s report.

B. Cover Page

- i. Title (Section1a) – “Spring 20YY MCAS Tests Parent Guardian Report” where 20YY = test year, e.g. 2016.
- ii. Student Name – Presented as proper case based on *LName*, *FName MI*. (with a period after the middle initial when the middle initial is not blank). Examples: SMITH, JOHN T. or JONES, JENNY
 - This section requires special formatting when one or more of the names is missing:
 - a. If Lname is blank and Fname is blank, then section = “Blank Name”
 - b. If Lname is blank and Fname is not blank, then section = “Blank, Fname”
 - c. If Lname is not blank and Fname is blank then section = “Lname, Blank”

- iii. SASID – Student ID from SIMS, no special formatting applied.
- iv. School Name and District Name – School and District names from iCore based on testing school. No special formatting applied.
- v. Grade – Student’s tested grade will be used for all 03-08 reports
- vi. DOB – DOB from SIMS, no special formatting. Must be equal to 10 characters in length (MM/DD/YYYY).

C. Reporting Category Display

- i. Subject (Sections 2a, 5a, and 8a) – Formatted with the following values:
 - If subject = ‘ela’ then ‘English Language Arts’
 - If subject = ‘mat’ then ‘Mathematics’
 - If subject = ‘sci’ and grade is 05 or 08 then ‘Science and Technology/Engineering’
- ii. Order of the Grids
 - The inner pages of the report display ELA on the left side of the page and Math on the right side of the page.
 - If grade is 05 or 08, then Science results are displayed on the back page
- iii. Reporting category text, two-character codes, and report display ordering – refer to daRepCatTextLookup for the approved text and codes (see Appendix for possible values).
- iv. Reporting categories are sorted alphabetically for math and science. ELA order to be “Reading”, “Writing”, “Language”.
- v. Reporting category results and state comparisons are displayed only for students who are Tested (TestStat = ‘T’). State results include only students who are Tested (TestStat = ‘T’).
- vi. Points earned by your child – RawScore variables from tblStuRepCatPoints, no special formatting with RepCatID indicating the Reporting category RepOrder in daPointsPossible.
- vii. Possible Points (Section6g) – Points variable from daPointsPossible, no special formatting.
- viii. Percent of points earned by your child (Section6d) – pRawScore variables from tblStuRepCatPoints, no special formatting with RepCatID indicating the Reporting category RepOrder in daPointsPossible. Values are then concatenated with the % symbol immediately after the number. Example: 15%.
- ix. “Percent of points earned by” and “Average number of points earned by” comparisons
 - For ELA and Math, the comparison is “Average number of points earned by Meeting Expectation students who scored close to 500”
 - a. Prior to calculation, the pool of students used must be no less than 200. If there are less than 200 students at the 500 level, increment the scaled score by one point up to 505 until a minimum n of 200 students is reached, only considering students within the same test mode and scaleform.
 - b. For any mode at a grade/content level that does not reach the 200-student threshold within the scaled score range of 500-505, the student’s report will not include the average points for the reporting categories.
 - c. Data displaying averages in the scaled score table should include data from the full population, and not separated out by test mode.

- d. For students who are scored using a non-standard scaleform, the reporting category for which the reduced number of points is associated, display “N/A”.
- For STE’s, the text reads “Percent of Possible Points Earned by Students Who Performed At the Low End of the *Proficient* Level”
 - a. Data pulled from tblrepcatsummary.points where replevel = 'sta' joined on subject and grade. Place % symbol immediately after the number. Example: 15%.
 - b. The average number of points earned (nPoints) and the percent of total possible points earned (pPoints) by students at the “low end of the Proficient level” is calculated for each reporting category at the state level, stacked by subject and reporter.
 - c. Standard assessment students with partstatus = ‘Z’ and a scaledscore = ‘240’ are included.

D. Released Item Display

- i. *Subject Title* and *Subject Ordering* follow the same rules as above.
- ii. Order of rows within each grid

The following definitions are used to both describe what appears and also what is printed in item tables.

- 1 = “Question Number” – this is the released item order number.
- 2 = “Reporting Category” – this is the two-character reporting category code. This is displayed for STE students only
- 3 = “Your Child’s Score” - this is the response provided by the student.

iii. Order of items

- Items are ordered from left to right in order specified in daltemMetadata
- Item responses in tblStulItem are already ordered by released item order.

iv. Formatting of Student Responses

- Formatting of the items for the Student Report is completed in tblStulItem
 - a. STE data will include the following
 - Check marks for correct answers
 - The letter answer displayed if a student answered incorrectly
 - An asterisk for more than one answer provided
 - A dash if a student incorrectly answered an unreleased item
 - Open response items are displayed with the number of points earned out of the total possible points (Ex. 3/4 or 0/1).
 - b. ELA and Math data are displayed as the number of points earned out the total points possible (Ex. 1/1 or 0/3).
 - c. If a student did not answer an item, that cell will be blank.

E. Student Achievement Level and Scaled Score Statements

- i. Test Grade reference – “Your Child’s Overall Results in Grade [GG]” (where grade = student’s tested grade)

- ii. Achievement level (Section2b/5b/8b) – contains either the achievement level text or the not-tested statement stored in tblPerfLevelLookup (see *Appendix A- Description*). This is set using the rPerfLevel variable from tblStuTest.
- iii. Score (Section2c/5c/8c) – contains the reported scaled score, the rScaledScore variable from tblStuTest.
- iv. First-year ELL students
 - Students who are not Tested (TestStat =0) do not receive scaled scores
 - Otherwise, if TestStat = 1:
 - a. Scaled scores printed for ELA and Math if earned Achievement Level is PM or above.
 - b. Scaled scores printed for STE students earning an achievement level of NI or above.
- v. State results will only include students who fully attempted.
- v. For Non-Standard Accommodation Student Report text based on elNSAFootnote and matNSAFootnote see table *Non-Standard Accommodation Footnote Text (Student Report)*.

F. Scaled score/ Achievement Level Bar Graph Display

- i. Current year scaled scores
 - Use rScaledScore from tblStuTest
 - Contains standard error bar (lowScaledScore and highScaledScore from tblStuItem)
 - a. For the error band range for Science, Graph3d is the distance between the low and high scaled scores (e.g., tblStuTest.highscaledscore-tblStuTest.lowscaledscore where subject = 'sci')
- ii. Science reporting mirrors the structure of legacy report using vertical graphs whereas ELA and Math use a modified bar displaying the scaled score range horizontally.
- iii. ELA and Math sections display the student’s scaled score with a triangle and error bar indicating likely scores should the student take the assessment multiple times. Each cut point within the graph and value displayed below the colored bars is the cut point between the corresponding achievement levels.

G. Achievement Level Comparison Table

- i. This appears for the Science section only for current reporting year.
- ii. Your child column – a check mark is placed in the row associated with the earned achievement level based on the data stored in the Perf2 column in tblStuItem.
 - Students who participated through the Alternate assessment are included in the row where they are counted for aggregations.
 - Students who did not earn an achievement level on this year’s test do not receive a checkmark.
- iii. School/District columns – the school and district achievement level percentages from tblSummary based on the student’s official school and district (sprp_sch and sprp_dis respectively).

- iv. State column – the state achievement level percentages from tblSummary.
- v. Percentages are formatted with a % directly after the number. Example: 15%
- vi. If the display is shown, the school, district, and state data are displayed regardless of whether or not the student earned an achievement level.

H. Student Growth Percentile Display (Not applicable in current reporting year)\

Addendum

I. HS Science Aggregation Calculations

A. Below is the inclusion rule that was applied to HS student test records during the current reporting year. Note that “^=” indicates “not equal to”.

- i. IF ((Subject='mat' AND AttemptMat^='F') OR (Subject='ela' AND AttemptEla^='F') OR (Subject NOT IN ('mat','ela') AND AttemptSci^='F')) THEN DELETE

Appendix

A. Legacy and Next Gen PerfLevel Lookup for MegaFile Codes (*PerfLev, Perf2*)

For reformatting *tblScoredItem rPerfLevel* to *mfPerfLevel* and *Perf2* to *mfPerf2*.

Legacy Reporting		
Achievement Level or Part Flag	Mega File Code	Description
1	F	Failing
2	NI	Needs Improvement
3	P	Proficient
4	A	Advanced
6	W	Warning
7	INP	Incomplete Portfolio
8	AWR	Awareness
9	EMG	Emerging
10	PRG	Progressing
11	NIA	Needs Improvement-Alt
12	P_A	Proficient-Alt
13	A_A	Advanced-Alt
B	INC	Incomplete
D	TRN	Transferred
E	ABS	Absent
F	LEP	First-year LEP
G	MED	Absent—Medically Documented
H	VAB	Void
I	DUP	Invalidated
J	DNT	Did Not Test
K	PAS	Previously Passed
P	PPR	Previously Passed & Retested
L	PRF	Previously Failed
N	INV	Invalidated
Q	PRC	Participated in PARCC

Next Gen Reporting				
Grades	Subject(s)	Achievement Level or Participation Flag	Megafile Code	Description
05, 08	sci	1	W	Warning
03-08	ela, mat		NM	Not Meeting Expectations
05, 08	sci	2	NI	Needs Improvement
03-08	ela, mat		PM	Partially Meeting Expectations
05, 08	sci	3	P	Proficient
03-08	ela, mat		M	Meeting Expectations
05, 08	sci	4	A	Advanced
03-08	ela, mat		E	Exceeding Expectations
05, 08	sci	7	INP	Incomplete Portfolio
03-08	ela, mat		INP	
05, 08	sci	8	AWR	Awareness
03-08	ela, mat		AWR	
05, 08	sci	9	EMG	Emerging
03-08	ela, mat		EMG	
05, 08	sci	10	PRG	Progressing
03-08	ela, mat		PRG	
05, 08	sci	11	NIA	Needs Improvement-Alt
05, 08	sci		P_A	Proficient-Alt
05, 08	sci	13	A_A	Advanced-Alt
03-08	ela, mat	14	PM_A	Partially Meeting Expectations-Alt
03-08	ela, mat	15	M_A	Meeting Expectations-Alt
03-08	ela, mat	16	E_A	Exceeding Expectations-Alt
03-08	ela, mat, sci	A	1-4 (Ach. Level)	Tested Accountable Alternate MCAS
03-08	ela, mat, sci	B	INC	Incomplete
03-08	ela, mat, sci	D	TRN	Transferred
03-08	ela, mat, sci	E	ABS	Absent
03-08	ela, mat, sci	F	LEP	First-year LEP
03-08	ela, mat, sci	G	MED	Absent—Medically Documented
03-08	ela, mat, sci	H	VAB	Void - preliminary only
03-08	ela, mat, sci	I	DUP	Invalidated - preliminary only
03-08	ela, mat, sci	N	INV	Invalidated/Breach/ (H & I set N for Final)
03-08	ela, mat, sci	S	INC	Incomplete
03-08	ela, mat, sci	Z	1-4 (Ach. Level)	Standard MCAS

B. Historical PerfLevel Translations

If the following achievement levels are provided in SIMS for a student they are translated to currently-reported achievement levels:

SIMS PerfLevel	Description	Code	PerfLevel	PerfLevel Description
A_M	Advanced Mastery	A	4	Advanced
P_M	Proficient Mastery	P	3	Proficient
NIM	Needs Improvement Mastery	NI	2	Needs Improvement
F_M	Failing Mastery	F	1	Failing
P+	Above Proficient	A	4	Advanced

C. daDayForm Lookup

This table lists the first item position on the second day of testing:

Grade	Subject	Day2FirstItem
10	ela	38
10	mat	27

D. Legacy daReportingCategoriesLookup

This table lists the possible item reporting categories by subject. The actual reporting categories that exist may vary by grade and year. The provided sort order is the generic hierarchy of appearance when a reporting category exists for a grade:

Subject	Generic Sort Order	dalref. Cat2	Item Display Code:	Student Report Text:
			(RepCatCode)	(RepCatText)
ela	1		LA	Language
	2		LT	Reading
	3		CT	Composition Topic Development
	4		CC	Composition Standard English Conventions
mat	1		OA	Operations & Algebraic Thinking
	2		NT	Number & Operations in Base Ten
	3		NF	Number & Operations-Fractions
	4		MD	Measurement and Data
	5		RP	Ratios & Proportional Relationships
	6		NS	The Number System
	7		EE	Expressions & Equations
	8		FN	Functions
	9		NQ	Number & Quantity
	10		AF	Algebra & Functions
	11		GE	Geometry
	12		SP	Statistics & Probability
sci	1	1	ES	Earth and Space Science
	2	2	LS	Life Science
	3	3	PS	Physical Sciences
	4	4	TE	Technology/Engineering
bio	1	1	BC	Biochemistry and Cell Biology
	2	2	GE	Genetics
	3	3	AP	Anatomy and Physiology
	4	4	EV	Evolution and Biodiversity
	5	5	EC	Ecology
che	1	1	TH	Properties of Matter and Thermochemistry
	2	2	AS	Atomic Structure and Periodicity
	3	3	BR	Bonding and Reactions
	4	4	SO	Solutions, Equilibrium, and Acid-Base Theory
phy	1	1	MF	Motion and Forces
	2	2	HT	Heat and Heat Transfer
	3	3	WV	Waves and Radiation

	4	4	EM	Electromagnetism
tec	1	1	ED	Engineering Design
	2	2	CM	Construction and Manufacturing
	3	3	FL	Fluid and Thermal Systems
	4	4	EL	Electrical and Communication Systems

E. MCAS 2.0 daReportingCategoryLookup (Draft)

This table lists the updated item reporting categories by subject. The actual reporting categories that exist do vary by grade and possibly year. These categories are sorted alphabetically and do not necessarily reflect position or sort order within a grade.

Subject	Grade	RepCat Sort Order	Student Report Text: (RepCatText)
ela	03-08	1	Reading
		2	Writing
		3	Language
mat	03-05	1	Geometry
		2	Measurement & Data
		3	Number & Operations in Base Ten
		4	Number & Operations-Fractions
		5	Operations & Algebraic Thinking
	06-08	1	Expressions and Equations
		2	Geometry
		3	Ratios and Proportional Relationships
		4	Statistics and Probability
		5	The Number System
sci	03-08	1	Earth and Space Science
		2	Life Science
		3	Physical Science
		4	Technology/Engineering

F. Non-Standard Accommodation Footnote Text (Student Report):

NSAFooter ID	Non-Standard Accommodation	Text
1	Accom_ReadAloud: elaAccom07 = '02' (Human Read-Aloud) or Accom13 = 'Y' (Text-to-Speech)	Grades 3-8: Information provided by the school indicates your child used a special access accommodation (the ELA test was read aloud to your child) as required by his or her IEP or 504 plan. Not applicable for Grade 10.

4	Accom_Calculator (matAccom12 = 'Y' or '1')	<p>Grades 3-8: Information provided by the school indicates your child received a special access accommodation (your child used a calculator for the non-calculator session of the Mathematics test) as required by his or her IEP or 504 plan.</p> <p>Grade 10: Information provided by the school indicates your child received a nonstandard accommodation (your child used a calculator for the non-calculator session of the Mathematics test) as required by his or her IEP or 504 plan.</p>
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G. Graduation Requirement Status Footnote Text (Student Report):

tblScoredItem. CDFootnote	Text
1	Your child has not met the MCAS graduation requirement in this subject.
2	Your child has met the MCAS testing requirement in this subject for graduation, but requires an Educational Proficiency Plan.
3	Your child has met the MCAS graduation requirement in this subject.
4	Your child has already met the MCAS graduation requirement in this subject.