## APPENDIX G DIFFERENTIAL ITEM FUNCTIONING RESULTS

Table G-1. 2016 MCAS: Number of Items Classified as "Low" or "High" DIF, Overall and by Group Favored – ELA

	Grou	p	14	NI	1	Number "Low	,"	1	Number "High	າ"
Grade	Deference	Food	Item Type	Number of Items	Total	Favorii	ng	Total	Favorii	ng
	Reference	Focal	туре	or items	Total	Reference	Focal	Total	Reference	Focal
	Male	Female	MC	36	0	0	0	0	0	0
	Male	remale	OR	5	0	0	0	0	0	0
	No Disability	Disability	MC	36	1	1	0	0	0	0
	No Disability	Disability	OR	5	0	0	0	0	0	0
	Not LEPFLEP	LEPFLEP	MC	36	3	3	0	0	0	0
3	NOT LEFT LEF	LLF1 LLF	OR	5	0	0	0	0	0	0
3	Not Economically Disadvantaged	Economically Disadvantaged	MC	36	0	0	0	0	0	0
	Not Economically Disadvantaged	Economically Disadvantaged	OR	5	0	0	0	0	0	0
		African American	MC	36	1	1	0	0	0	0
	White	American	OR	5	0	0	0	0	0	0
	vviite	Hispanic	MC	36	0	0	0	0	0	0
		Поратис	OR	5	0	0	0	0	0	0
	Male	Female	MC	36	0	0	0	0	0	0
	- Iviaio	1 cmale	OR	4	0	0	0	0	0	0
	o Disability	Disability	MC	36	2	2	0	0	0	0
		Disability	OR	4	0	0	0	0	0	0
	Not LEPFLEP	I EDEI ED	MC	36	6	6	0	0	0	0
4			OR	4	0	0	0	0	0	0
•	Not Economically Disadvantaged	Economically Disadvantaged	MC	36	0	0	0	0	0	0
	The Economicany Dicadvantaged		OR	4	0	0	0	0	0	0
		African American	MC	36	0	0	0	0	0	0
	White		OR	4	0	0	0	0	0	0
		Hispanic	MC	36	2	2	0	0	0	0
			OR	4	0	0	0	0	0	0
	Male	Female	MC	36	1	1	0	1	1	0
			OR	4	0	0	0	0	0	0
5	No Disability	Disability	MC	36	2	2	0	0	0	0
-			OR	4	1	1	0	0	0	0
	Not LEPFLEP	LEPFLEP	MC	36	10	10	0	0	0	0
			OR	4	0	0	0	0	0	0 Intinued

	Group	<u>)                                    </u>	14	Niconal- a :		Number "Low	<i>I</i> "	^	Number "High	<u>ı"                                    </u>
Grade	Reference	Focal	Item	Number of Items	Total	Favori		Total	Favorii	ng
	Reference	Focal	Туре	or items	rotar	Reference	Focal	rotar	Reference	Focal
	Not Economically Disadvantaged	Economically Disadventaged	MC	36	1	1	0	0	0	0
_	Not Economically Disadvantaged	Economically Disadvantaged	OR	4	0	0	0	0	0	0
5		African American	MC	36	2	2	0	0	0	0
5	White	Affican Affiencan	OR	4	0	0	0	0	0	0
	wille	Hispanic	MC	36	0	0	0	0	0	0
		Порапіс	OR	4	0	0	0	0	0	0
	Male	Female	MC	36	3	3	0	1	1	0
_	Wale	i emale	OR	4	1	0	1	0	0	0
	No Disability	Disability	MC	36	1	1	0	0	0	0
_	NO DISABILITY	Disability	OR	4	2	2	0	0	0	0
	Not LEPFLEP	LEPFLEP	MC	36	8	8	0	1	1	0
6 -	NOT LEFT LEF	LLF1 LLF	OR	<u>4</u> 36	0	0	0	0	0	0
	Not Economically Disadvantaged	Economically Disadvantaged	onomically Disadvantaged MC		1	1	0	0	0	0
_	Not Economically Disadvantaged	Economically Disadvantaged	OR	4	0	0	0	0	0	0
	White -	African American	MC	36	1	1	0	1	1	0
			OR	4	0	0	0	0	0	0
		Hispanic	MC	36	3	3	0	0	0	0
		Пізрапіс	OR	4	0	0	0	0	0	0
	Male	Female	MC	36	4	4	0	0	0	0
_	Wale	i emale	OR	4	1	0	1	0	0	0
	No Disability	Disability	MC	36	2	2	0	0	0	0
_	NO DISABILITY	Disability	OR	4	0	0	0	0	0	0
	Not LEPFLEP	LEPFLEP	MC	36	7	7	0	4	4	0
7 -	NOT LET I LET		OR	4	0	0	0	0	0	0
,	Not Economically Disadvantaged	Economically Disadvantaged	MC	36	3	3	0	0	0	0
_	Not Economically Disadvantaged	Economically Disadvantaged	OR	4	0	0	0	0	0	0
		African American	MC	36	5	5	0	0	0	0
	White	AIIICAN AIIICHCAN	OR	4	0	0	0	0	0	0
	vviiito	Hispanic	MC	36	3	3	0	0	0	0
		Ποραιπο	OR	4	0	0	0	0	0	0
8	Male	Female	MC	36	2	2	0	0	0	0
	- Wale	Tomaio	OR	4	2	0	2	0	0	0

	Grou	р	14	Niconalaaa	I	Number "Low	<i>,</i> "	١	Number "High	า"
Grade	Reference	Focal	Item Type	Number of Items	Total	Favorii	ng	Total	Favorii	ng
	Neierence	rocai	Турс	Of Items	TOlai	Reference	Focal	TOtal	Reference	Focal
	No Disability	Disability	MC	36	2	2	0	0	0	0
	No Disability	Disability	OR	4	2	2	0	0	0	0
	Not LEPFLEP	LEPFLEP	MC	36	7	7	0	2	2	0
			OR	4	0	0	0	0	0	0
8	Not Economically Disadvantaged	Economically Disadvantaged	MC	36	2	2	0	0	0	0
O		Leonomicany Disadvantaged	OR	4	0	0	0	0	0	0
		African American	MC	36	6	6	0	0	0	0
	White	- Tilloan 7 illionoan	OR	4	0	0	0	0	0	0
		Hispanic	MC	36	2	2	0	0	0	0
	<b>!</b>	riispariic	OR	4	0	0	0	0	0	0
	Male	Female	MC	36	4	4	0	0	0	0
	- Iviaio	1 diffalo	OR	6	0	0	0	0	0	0
	No Disability	Disability	MC	36	0	0	0	0	0	0
		Dicasiiity	OR	6	0	0	0	0	0	0
	Not LEPFLEP	LEPFLEP	MC	36	14	14	0	3	3	0
10			OR	6	0	0	0	0	0	0
10	Not Economically Disadvantaged	Economically Disadvantaged	MC	36	1	1	0	0	0	0
		20011011110ally 210aavamagea	OR	6	0	0	0	0	0	0
		African American	MC	36	5	5	0	0	0	0
	White		OR	6	0	0	0	0	0	0
	2	Hispanic	MC	36	3	3	0	0	0	0
			OR	6	0	0	0	0	0	0

Table G-2. 2016 MCAS: Number of Items Classified as "Low" or "High" DIF, Overall and by Group Favored – Mathematics

		Group	14	Number -		Number "Low	,,,	Number "High"		
Grade	Reference	Focal	Item Type	Number of Items	Total	Favorir	ng	Total	Favorii	ng
	Kelelelice	госа	Турс	Of Itemis	TOtal	Reference	Focal	TOtal	Reference	Focal
	Male	Female	MC	26	0	0	0	0	0	0
2	Male	remale	OR	10	0	0	0	0	0	0
3	No Dischille	Diaghility	MC	26	1	1	0	0	0	0
	No Disability	Disability	OR	10	1	1	0	0	0	0

	Grou	p	14.0	NI. mar Ir a :	1	Number "Low	,,,		Number "High	า"
Grade	Reference	Focal	Item Type	Number of Items	Total	Favorir	ng	Total	Favorii	ng
	Reference	Focal	туре	or items	rotar	Reference	Focal	rotar	Reference	Focal
	Not LEDELED	LEPFLEP	MC	26	4	4	0	0	0	0
	Not LEPFLEP	LEPFLEP	OR	10	2	2	0	0	0	0
	Not Economically Disadvantaged	Economically Disadvantaged	MC	26	1	1	0	0	0	0
3	Not Economically Disadvantaged	Economically Disadvantaged	OR	10	0	0	0	0	0	0
3		African American	MC	26	4	3	1	0	0	0
	White	American	OR	10	2	2	0	0	0	0
	vville	Hispanic	MC	26	1	1	0	0	0	0
		Пізрапіс	OR	10	0	0	0	0	0	0
	Male	Female	MC	32	3	3	0	0	0	0
		i emale	OR	10	0	0	0	0	0	0
	No Disability	Disability	MC	32	0	0	0	0	0	0
	No Disability	Disability	OR	10 32	2	2	0	0	0	0
	Not LEPFLEP	LEPFLEP	MC MC		2	2	0	0	0	0
4			OR	10	1	1	0	0	0	0
7	Not Economically Disadvantaged	Economically Disadvantaged	MC	32	1	1	0	0	0	0
		Leonomically Disadvantaged	OR	10	0	0	0	0	0	0
		African American	MC	32	2	2	0	0	0	0
	White	Amedian	OR	10	0	0	0	0	0	0
	wine	Hispanic	MC	32	1	1	0	0	0	0
		Порапіс	OR	10	0	0	0	0	0	0
	Male	Female	MC	32	4	4	0	0	0	0
		i emale	OR	10	1	0	1	0	0	0
	No Disability	Disability	MC	32	1	1	0	0	0	0
	110 Disability	Disability	OR	10	1	1	0	0	0	0
	Not LEPFLEP	LEPFLEP	MC	32	2	0	2	0	0	0
5			OR	10	0	0	0	0	0	0
J	Not Economically Disadvantaged	Economically Disadvantaged	MC	32	0	0	0	0	0	0
		Economically Disadvantaged	OR	10	0	0	0	0	0	0
		African American	MC	32	0	0	0	0	0	0
	White	Amount Amonoan	OR	10	1	1	0	0	0	0
	vvinco	Hispanic	MC	32	2	1	1	0	0	0
			OR	10	0	0	0	0	0	0
									CO	ntinue

	Grou	p	140	NI. mada a c	1	Number "Low	<i>'</i> "	1	Number "High	า"
Grade	Reference	Focal	Item	Number of Items	Total	Favorii	ng	Total	Favorii	ng
	Reference	Focal	Туре	or items	rotar	Reference	Focal	Total	Reference	Focal
	Male	Female	MC	32	3	3	0	0	0	0
	Maie	remale	OR	10	2	1	1	0	0	0
	No Disability	Disability	MC	32	1	1	0	0	0	0
	No Disability	Disability	OR	10	0	0	0	0	0	0
	Not LEPFLEP	LEPFLEP	MC	32	4	3	1	0	0	0
6			OR	10	0	0	0	0	0	0
O	Not Economically Disadvantaged	Economically Disadvantaged	MC	32	0	0	0	0	0	0
	Not Economically Disadvantaged	Economically Disadvantaged	OR	10	0	0	0	0	0	0
		African American	MC	32	3	3	0	0	0	0
	White	American	OR	10	0	0	0	0	0	0
	vviite	Hispanic	MC	32	0	0	0	0	0	0
		Порапіс	OR	10	0	0	0	0	0	0
	Male	Female	MC	32	4	3	1	0	0	0
	iviale	i emale	OR	10	0	0	0	0	0	0
	No Disability	Disability	MC	32	0	0	0	0	0	0
	140 Disability	Disability	OR	10	1	1	0	0	0	0
	Not LEPFLEP	LEPFLEP	MC	32	4	3	1	0	0	0
7	NOT LET I LET		OR	10	1	1	0	0	0	0
,	Not Economically Disadvantaged	Economically Disadvantaged	MC	32	0	0	0	0	0	0
	Not Economically Disadvantaged	Leonomically Disadvantaged	OR	10	0	0	0	0	0	0
		African American	MC	32	3	3	0	0	0	0
	White	American	OR	10	0	0	0	0	0	0
	vviite	Hispanic	MC	32	0	0	0	0	0	0
		Порапіс	OR	10	0	0	0	0	0	0
	Male	Female	MC	32	2	2	0	0	0	0
	Iviale	i emale	OR	10	2	1	1	0	0	0
	No Disability	Disability	MC	32	0	0	0	0	0	0
8	No Disability	Disability	OR	10	1	1	0	0	0	0
O	Not LEPFLEP	LEPFLEP	MC	32	0	0	0	1	1	0
	HOULET I LEI		OR	10	0	0	0	0	0	0
	Not Economically Disadvantaged	Economically Disadvantaged	MC	32	0	0	0	0	0	0
	Not Economically Disadvantaged	Leonomically Disadvantaged	OR	10	0	0	0	0	0	0
									CO	ntinued

	Grou	р	14	NI	1	Number "Low	<i>(</i> "	1	Number "High	າ"
Grade	Deference	Facal	Item	Number of Items	Total	Favorii	ng	Total	Favorii	ng
	Reference	Focal	Type	or items	Total	Reference	Focal	Total	Reference	Focal
		African American	MC	32	2	2	0	0	0	0
8	White	Amcan American	OR	10	1	1	0	0	0	0
0	vvriite	Hispanic	MC	32	0	0	0	0	0	0
		піѕрапіс	OR	10	0	0	0	0	0	0
	Male	Female	MC	32	3	2	1	0	0	0
	iviale	remale	OR	10	0	0	0	0	0	0
	No Disability	Disability	MC	32	0	0	0	0	0	0
	NO DISABIlity	Disability	OR	10	0	0	0	0	0	0
	Not LEPFLEP	LEPFLEP	MC	32	6	4	2	1	1	0
10	NOT LEFFLEF	LEFFLEF	OR	10	1	1	0	0	0	0
10	Not Foonamically Disadventaged	Economically Disadventeged	MC	32	0	0	0	0	0	0
	Not Economically Disadvantaged	Economically Disadvantaged	OR	10	0	0	0	0	0	0
		African American	MC	32	1	1	0	0	0	0
	White	AIIICAII AIIIEIICAII	OR	10	1_	0	1	0	0	0
	vviille	Hispanic	MC	32	2	2	0	0	0	0
		Порапіс	OR	10	0	0	0	0	0	0

Table G-3. 2016 MCAS: Number of Items Classified as "Low" or "High" DIF, Overall and by Group Favored – STE

	Grou	р	14	Niconalana		Number "Low	,"	1	Number "High	า"
Grade	Reference	Focal	Item Type	Number of Items	Total	Favorii	ng	Total	Favorii	ng
	Reference	Focai	Турс	Of Items	TOlai	Reference	Focal	TOlai	Reference	Focal
	Male	Female	МС	38	2	2	0	0	0	0
	Iviale	remale	OR	4	0	0	0	1	0	1
	No Disability	Disability		38	0	0	0	0	0	0
	No Disability	Disability	OR	4	1	1	0	0	0	0
5	Not LEPFLEP	LEPFLEP	MC	38	3	3	0	0	0	0
3	NOT LEFFLEF	LEFFLEF	OR	4	0	0	0	0	0	0
	Not Economically Disadvantaged	Economically Disadvantaged	MC	38	0	0	0	0	0	0
	Not Economically Disadvantaged	Economically Disadvantaged	OR	4	0	0	0	0	0	0
	White	African American	MC	38	5	5	0	0	0	0
	vviile	Amendan	OR	4	0	0	0	0	0	0

	Grou	p	14	Nimakaa	1	Number "Low	<i>,</i> "	1	Number "High	า"
Grade	Reference	Focal	Item Type	Number of Items	Total	Favorii	ng	Total	Favorii	ng
	Reference	Focal	туре	OI ILEITIS	TOlai	Reference	Focal	TOlai	Reference	Focal
5	White	Hispanic	MC	38	4	4	0	0	0	0
	Wille	riispanic	OR	4	0	0	0	0	0	0
	Male	Female	MC	38	3	2	1	3	3	0
	Iviale	remale	OR	4	1	0	1	0	0	0
	No Disability	Disability	MC	38	2	2	0	0	0	0
		Disability	OR	4	2	2	0	1	1	0
	Not LEPFLEP	LEPFLEP	MC	38	3	3	0	1	1	0
8	NOT LEFFLEF	LEFFLEF	OR	4	1	1	0	0	0	0
0	Not Economically Disadvantaged	Economically Disadvantaged	MC	38	0	0	0	0	0	0
	Not Economically Disadvantaged	Economically Disadvantaged	OR	4	0	0	0	0	0	0
		African American	MC	38	4	4	0	0	0	0
	White	Amendan	OR	4	1	1	0	0	0	0
	VVIIILE	Hispanic	MC	38	3	3	0	0	0	0
		Пізрапіс	OR	4	0	0	0	0	0	0

Table G-4. 2016 MCAS: Number of Items Classified as "Low" or "High" DIF, Overall and by Group Favored – High School Biology

Grou	Group				Number "Low	,",	1	Number "High	า"
Reference	Focal	Item Type	Number of Items	Total	Favorii	ng	Total	Favorii	ng
Reference	Focal	туре	OI ILEITIS	TOlai	Reference	Focal	TOlai	Reference	Focal
Male	Female	MC	40	2	1	1	0	0	0
Wale	remale	OR	5	0	0	0	0	0	0
No Disability	Disability	MC	40	0	0	0	0	0	0
NO DISABility	Disability	OR	5	1	1	0	0	0	0
Not LEPFLEP	LEPFLEP	MC	40	3	2	1	0	0	0
NOT LEFFLEF	LEFFLEF	OR	5	1	1	0	0	0	0
Not Economically Disadvantaged	Economically Disadvantaged	MC	40	0	0	0	0	0	0
Not Economically Disadvantaged	Economically Disadvantaged	OR	5	0	0	0	0	0	0
	African American	MC	40	1	1	0	0	0	0
White	Amenican	OR	5	0	0	0	0	0	0
vviille	Highenia	MC	40	0	0	0	0	0	0
	Hispanic	OR	5	0	0	0	0	0	0

Table G-5. 2016 MCAS: Number of Items Classified as "Low" or "High" DIF, Overall and by Group Favored – High School Chemistry

Grou	14	NI		Number "Low	,"	1	Number "High	1"	
Reference	Focal	Item Type	Number of Items	Total	Favorii	ng	Total	Favorii	ng
Reference	Focal	Турс	Of Items	TOlai	Reference	Focal	TOtal	Reference	Focal
Male	Female	MC	40	11	9	2	1	1	0
Wale	Terriale	OR	5	1	0	1	0	0	0
No Disability	Disability	MC	40	0	0	0	0	0	0
NO DISABility		OR	5	0	0	0	0	0	0
Not LEPFLEP	LEPFLEP	MC	40	15	11	4	8	5	3
NOI LEPPLEP		OR	5	2	1	1	1	1	0
Not Faceparically Disadvantaged	Faces misselly Disadvantaged	MC	40	8	6	2	0	0	0
Not Economically Disadvantaged	Economically Disadvantaged	OR	5	0	0	0	0	0	0
	African American	MC	40	8	4	4	8	5	3
Mhito	African American	OR	5	1	1	0	0	0	0
White	Hispanic	MC	40	15	9	6	7	4	3
		OR	5	0	0	0	0	0	0

Table G-6. 2016 MCAS: Number of Items Classified as "Low" or "High" DIF, Overall and by Group Favored – High School Introductory Physics

Grou	Group			ı	Number "Low	,"	1	Number "High"	
Reference	Focal	Item Type	Number of Items	Total	Favorii	ng	Total	Favorii	ng
Reference	Focal	Турс	Of Items	TOtal	Reference	Focal	TOlai	Reference	Focal
Male	Female	MC	40	1	1	0	0	0	0
Male	remale	OR	5	0	0	0	0	0	0
No Disability	Disability	MC	40	1	1	0	0	0	0
NO DISABility	Disability	OR	5	0	0	0	0	0	0
Not LEPFLEP	LEPFLEP	MC	40	7	6	1	0	0	0
NOT LEFFLEF	LEPFLEP	OR	5	1	1	0	0	0	0
Not Economically Disadvantaged	Economically Disadvantaged	MC	40	0	0	0	0	0	0
Not Economically Disadvantaged	Economically Disadvantaged	OR	5	0	0	0	0	0	0
	African American	MC	40	2	2	0	0	0	0
White	Amcan American	OR	5	0	0	0	0	0	0
vvinte	Hispania	MC	40	2	2	0	0	0	0
	Hisnanic	OR	5	0	0	0	0	0	0

Table G-7. 2016 MCAS: Number of Items Classified as "Low" or "High" DIF, Overall and by Group Favored – High School Technology/Engineering

, ,				0, 0				
Group		NIl	Number "Low"			Number "High"		
Focal	Type	of Items	Total	Favoring		Total	Favoring	
				Reference	Focal	TOlai -	Reference	Focal
Male Female	MC	40	7	4	3	0	0	0
	OR	5	0	0	0	0	0	0
No Disability Disability	MC	40	5	5	0	0	0	0
	OR	5	0	0	0	0	0	0
Not LEPFLEP LEPFLEP	MC	40	7	6	1	2	0	2
	OR	5	2	2	0	0	0	0
Not Economically Disadvantaged	MC	40	1	1	0	0	0	0
	OR	5	0	0	0	0	0	0
White African American  Hispanic	MC	40	9	5	4	1	1	0
	OR	5	0	0	0	0	0	0
	MC	40	4	4	0	0	0	0
	OR	5	1	1	0	0	0	0
	Focal  Female  Disability  LEPFLEP  Economically Disadvantaged  African American	Female  Female  Disability  LEPFLEP  Economically Disadvantaged  African American  MC  OR  MC  OR	Type   Item   Number   Type   of Items	Type   Item   Number   Type   Of Items   Total	Total   Total   Favoring   Reference	Total   Focal   Total   Favoring   Reference   Focal   Focal   Female   MC   40   7   4   3   3   3   4   3   4   4   0	Total   Total   Favoring   Reference   Focal   Total   Favoring   Reference   Focal   Total   Favoring   Reference   Focal   Total   Reference   Focal   Reference   Reference   Focal   Referen	Type