

# Chapter 5: Item Fit

BRT

2020-08-17

## Summary of Findings about Item Fit

Text...

### ELA

#### Grade 3 - Tier 1

Item Label

S\_X2

Df

p-value

RMSEA

E03BV4.1.1b.8

52.10

23

p<.002

0.03

E03BC3.1.1a.7

103.43

22

p<.002

0.06

E03AK1.1.1a.11

10.56

20

0.957

0.00

E03AC3.1.1a.8

62.78

22

p<.002  
0.04  
E03AK1.1.1a.7  
23.95  
24  
0.465  
0.00  
E03BK1.1.2a.5  
58.04  
22  
p<.002  
0.04  
E03AV4.1.1b.4  
15.47  
21  
0.799  
0.00  
E03AK1.1.3a.9  
28.38  
20  
0.101  
0.02  
E03AC2.1.1a.3  
27.89  
24  
0.265  
0.01  
E03AV4.1.1a.8  
23.91  
23  
0.409  
0.01  
E03AV4.1.1a.10  
20.63  
23  
0.604

0.00  
E03AK1.1.3a.4  
33.42  
21  
0.042  
0.02  
E03AV4.1.2a.8  
35.98  
24  
0.055  
0.02  
E03BV4.1.1a.8  
10.97  
21  
0.963  
0.00  
E03AK1.1.1a.10  
23.76  
22  
0.36  
0.01  
E03AK1.1.2a.5  
24.84  
21  
0.254  
0.01  
E03BK1.1.2b.12  
21.21  
19  
0.325  
0.01  
E03BC2.1.2a.5  
60.07  
23  
p<.002  
0.04

E03BC3.1.1a.8  
21.61  
21  
0.422  
0.00  
E03AV4.1.1a.12  
29.77  
22  
0.124  
0.02  
E03AK1.1.2a.4  
20.53  
19  
0.363  
0.01  
E03AV4.1.1b.3  
33.62  
18  
0.014  
0.03  
E03BK1.1.2b.11  
19.49  
18  
0.362  
0.01  
E03BK1.1.2a.6  
41.69  
23  
0.01  
0.03  
E03C1.3.1a.1  
34.11  
18  
0.012  
0.03  
E03C1.2.1a.3

26.80  
19  
0.109  
0.02  
E03C1.1.2a.5  
19.71  
20  
0.476  
0.00  
E03D1.2.1a.1  
23.23  
20  
0.278  
0.01  
E03C1.1.2a.4  
22.89  
20  
0.294  
0.01  
E03D1.1.9a.2  
23.69  
24  
0.48  
0.00

### **Grade 3 - Tier 2**

Item Label  
S\_X2  
Df  
p-value  
RMSEA  
Eo3BV4.1.1b.1  
14.66  
11  
0.199  
0.04  
E03BV4.1.1b.9

10.98  
9  
0.277  
0.03  
E03AK1.1.1a.8  
15.18  
14  
0.366  
0.02  
E03AC3.1.1a.8  
11.30  
11  
0.419  
0.01  
E03AV4.1.2a.9  
27.37  
15  
0.026  
0.06  
E03BK1.1.2a.5  
8.56  
10  
0.575  
0.00  
E03AV4.1.1b.4  
43.83  
9  
p<.002  
0.14  
E03AK1.1.3a.9  
10.18  
8  
0.253  
0.04  
E03AC2.1.1a.4  
13.35

13  
0.421  
0.01  
E03AV4.1.1a.8  
17.93  
12  
0.118  
0.05  
E03AV4.1.1a.10  
62.59  
12  
p<.002  
0.14  
E03AK1.1.1a.9  
14.98  
14  
0.38  
0.02  
E03AV4.1.2a.7  
38.07  
9  
p<.002  
0.13  
E03BV4.1.1a.8  
11.78  
9  
0.226  
0.04  
E03AK1.1.3a.6  
16.87  
11  
0.112  
0.05  
E03AK1.1.2a.5  
11.73  
11

0.384  
0.02  
E03BK1.1.1a.4  
25.04  
14  
0.034  
0.06  
E03BK1.1.2b.7  
35.67  
13  
p<.002  
0.09  
E03BC3.1.1a.8  
14.22  
11  
0.221  
0.04  
E03AV4.1.1a.12  
14.05  
5  
0.015  
0.10  
E03BK1.1.2a.4  
26.44  
14  
0.023  
0.07  
E03BK1.1.2b.9  
7.24  
11  
0.779  
0.00  
E03BK1.1.2b.10  
6.70  
8  
0.569



0.00  
E03BV4.1.1a.6  
9.67  
7  
0.208  
0.04  
E03C1.3.1a.2  
NA  
0  
NA  
NA  
E03C1.1.1a.6  
6.83  
10  
0.742  
0.00  
E03C1.1.2a.5  
2.67  
2  
0.263  
0.04  
E03D1.2.1a.2  
20.42  
11  
0.04  
0.06  
E03C1.1.2a.4  
8.41  
9  
0.494  
0.00  
E03D1.1.9a.4  
9.19  
9  
0.42  
0.01

## Grade 4 - Tier 1

Item Label

S\_X2

Df

p-value

RMSEA

E04BV4.1.1b.13

19.01

21

0.585

0.00

E04AK1.1.1c.4

33.51

20

0.03

0.02

E04AV4.1.1a.8

23.81

19

0.204

0.01

E04AC2.1.1a.1

39.93

20

0.005

0.03

E04AV4.1.1b.3

11.58

20

0.93

0.00

E04BV4.1.1a.4

34.14

24

0.082

0.02

E04AV4.1.1b.4

21.25

22

0.505

0.00

E04AK1.1.2a.7

29.27

20

0.083

0.02

E04AK1.1.1a.7

60.90

22

$p < .002$

0.04

E04AK1.1.1b.3

36.19

22

0.029

0.02

E04BK1.1.1a.8

37.81

22

0.019

0.02

E04BK1.1.1a.6

30.21

21

0.088

0.02

E04AK1.1.1c.3

60.03

24

$p < .002$

0.04

E04AK1.1.1b.4

13.49  
19  
0.812  
0.00  
E04BC3.1.1a.4  
24.98  
20  
0.202  
0.01  
E04BK1.1.1a.5  
51.76  
23  
 $p < .002$   
0.03  
E04AK1.1.2a.8  
27.79  
23  
0.224  
0.01  
E04AK1.1.1a.8  
31.54  
22  
0.086  
0.02  
E04AV4.1.1a.7  
26.09  
24  
0.349  
0.01  
E04AV4.1.1a.6  
25.94  
22  
0.254  
0.01  
E04BV4.1.1b.10  
41.10

24  
0.016  
0.02  
E04BK1.1.2b.2  
20.64  
20  
0.418  
0.00  
E04BK1.1.2a.5  
47.14  
23  
0.002  
0.03  
E04BK1.1.1c.9  
18.65  
20  
0.544  
0.00  
E04C1.1.1a.1  
18.11  
20  
0.58  
0.00  
E04C1.3.1b.4  
22.80  
23  
0.473  
0.00  
E04D1.2.1a.5  
31.91  
23  
0.102  
0.02  
E04D1.1.6a.1  
26.43  
22

0.234  
0.01  
E04D1.2.1a.4  
54.12  
23  
p<.002  
0.03  
E04C1.1.2a.1  
27.18  
22  
0.204  
0.01

## **Grade 4 - Tier 2**

Item Label  
S\_X2  
Df  
p-value  
RMSEA  
E04BV4.1.1b.11  
9.26  
14  
0.81  
0.00  
E04AK1.1.1c.5  
17.89  
14  
0.21  
0.03  
E04AV4.1.1a.10  
17.50  
16  
0.35  
0.02  
E04AC2.1.1a.1  
8.88  
5

0.11  
0.05  
E04BV4.1.1b.9  
11.04  
16  
0.81  
0.00  
E04BV4.1.1a.4  
18.11  
18  
0.45  
0.00  
E04AV4.1.1b.4  
9.19  
13  
0.76  
0.00  
E04AK1.1.2a.7  
1.74  
8  
0.99  
0.00  
E04AK1.1.1a.9  
5.02  
11  
0.93  
0.00  
E04AK1.1.1b.3  
18.87  
11  
0.06  
0.05  
E04BK1.1.1a.8  
17.75  
14  
0.22

0.03  
E04BK1.1.1a.7  
8.51  
10  
0.58  
0.00  
E04AV4.1.1a.9  
27.22  
15  
0.03  
0.06  
E04AK1.1.1b.4  
3.93  
5  
0.56  
0.00  
E04BC3.1.1a.6  
14.62  
16  
0.55  
0.00  
E04BK1.1.1a.5  
18.55  
18  
0.42  
0.01  
E04BK1.1.2b.1  
13.32  
13  
0.42  
0.01  
E04AK1.1.1a.10  
16.85  
13  
0.21  
0.03



E04AV4.1.1a.7  
20.11  
16  
0.22  
0.03  
E04AV4.1.1a.6  
6.93  
12  
0.86  
0.00  
E04BV4.1.1b.12  
24.10  
16  
0.09  
0.04  
E04BK1.1.2b.5  
15.83  
14  
0.32  
0.02  
E04BK1.1.2a.4  
17.28  
15  
0.30  
0.02  
E04BK1.1.1c.8  
19.25  
12  
0.08  
0.05  
E04C1.1.1a.2  
3.08  
7  
0.88  
0.00  
E04C1.3.1b.3

12.52  
14  
0.56  
0.00  
E04D1.2.1a.5  
17.25  
11  
0.10  
0.05  
E04D1.1.6a.2  
12.89  
14  
0.54  
0.00  
E04D1.2.1a.4  
10.13  
13  
0.68  
0.00  
E04C1.1.3a.3  
13.84  
15  
0.54  
0.00

## **Grade 5 - Tier 1**

Item Label  
S\_X2  
Df  
p-value  
RMSEA  
E05AV4.1.1b.7  
26.52  
16  
0.047  
0.03  
E05AC2.1.1b.4

34.05  
21  
0.036  
0.03  
E05AK1.1.1b.7  
24.90  
16  
0.072  
0.02  
E05AK1.1.1a.4  
26.12  
18  
0.097  
0.02  
E05AK1.1.1c.3  
14.21  
17  
0.652  
0.00  
E05AV4.1.1a.5  
34.77  
17  
0.007  
0.03  
E05BC2.1.2a.3  
26.29  
23  
0.287  
0.01  
E05BV4.1.1a.7  
51.22  
23  
p<.002  
0.04  
E05BK1.1.1a.6  
14.81

20  
0.787  
0.00  
E05BV4.1.2a.6  
20.90  
19  
0.342  
0.01  
E05BK1.1.1b.9  
19.36  
20  
0.499  
0.00  
E05AK1.1.2b.1  
32.74  
20  
0.036  
0.03  
E05AK1.1.2a.1  
21.30  
21  
0.441  
0.00  
E05AV4.1.2a.7  
12.09  
20  
0.913  
0.00  
E05AV4.1.1a.7  
16.71  
20  
0.672  
0.00  
E05AV4.1.2a.10  
39.93  
21

0.008  
0.03  
E05BK1.1.1b.10  
22.08  
21  
0.395  
0.01  
E05BV4.1.1a.8  
26.27  
22  
0.24  
0.01  
E05BK1.1.1c.4  
153.82  
23  
 $p < .002$   
0.08  
E05AC2.1.1a.7  
18.85  
21  
0.595  
0.00  
E05BK1.1.1a.7  
15.34  
17  
0.571  
0.00  
E05BK1.1.2b.7  
23.13  
23  
0.453  
0.00  
E05BV4.1.1c.3  
35.57  
22  
0.034

0.03  
E05AK1.1.1a.6  
40.46  
20  
0.004  
0.03  
EO5C1.3.5a.3  
20.25  
22  
0.567  
0.00  
E05D1.1.6a.1  
20.76  
20  
0.411  
0.01  
E05CC1.2.3a.1  
30.87  
23  
0.126  
0.02  
E05C1.1.1a.1  
31.85  
22  
0.08  
0.02  
E05C1.2.2a.3  
17.24  
20  
0.637  
0.00  
E05CC1.3.2a.1  
19.25  
19  
0.441  
0.00

## Grade 5 - Tier 2

Item Label

S\_X2

Df

p-value

RMSEA

E05AV4.1.1b.6

20.04

18

0.331

0.01

E05AC2.1.1a.8

17.87

14

0.213

0.02

E05AC2.1.1b.5

25.94

18

0.101

0.03

E05AK1.1.1a.4

13.86

15

0.537

0.00

E05AK1.1.1c.4

14.70

18

0.683

0.00

E05AV4.1.1a.5

11.21

12

0.511

0.00

E05BC2.1.2a.3

17.76

17

0.404

0.01

E05BV4.1.1a.7

18.55

15

0.235

0.02

E05BK1.1.1a.8

15.21

14

0.364

0.01

E05BV4.1.2a.6

11.24

15

0.735

0.00

E05BK1.1.1b.9

14.73

16

0.544

0.00

E05AK1.1.2b.2

21.95

18

0.234

0.02

E05AK1.1.2a.2

15.42

16

0.494

0.00

E05AV4.1.2a.7



12.81  
16  
0.687  
0.00  
E05AC2.1.1a.9  
22.42  
16  
0.13  
0.03  
E05AV4.1.2a.10  
13.56  
20  
0.852  
0.00  
E05BK1.1.1b.11  
22.68  
18  
0.203  
0.02  
E05BV4.1.1a.9  
10.60  
16  
0.834  
0.00  
E05BK1.1.1c.4  
21.70  
19  
0.299  
0.02  
E05AC2.1.1a.7  
12.19  
12  
0.43  
0.01  
E05BK1.1.1a.9  
19.55

17  
0.298  
0.02  
E05BK1.1.2b.9  
49.42  
21  
 $p < .002$   
0.05  
E05BV4.1.1c.4  
11.34  
18  
0.879  
0.00  
E05AV4.1.2a.9  
18.43  
17  
0.362  
0.01  
E05C1.3.5a.2  
18.17  
18  
0.445  
0.00  
E05D1.1.6a.2  
14.57  
16  
0.556  
0.00  
E05CC1.2.3a.1  
20.43  
17  
0.253  
0.02  
E05C1.1.1a.2  
17.27  
19

0.572  
0.00  
E05C1.2.2a.3  
20.25  
18  
0.319  
0.02  
E05CC1.3.2a.2  
25.21  
18  
0.119  
0.03

## **Grade 6 - Tier 1**

Item Label  
S\_X2  
Df  
p-value  
RMSEA  
E06AV4.1.1b.7  
28.51  
22  
0.159  
0.02  
E06BK1.1.1a.5  
25.58  
21  
0.223  
0.02  
E06BK1.1.1b.6  
34.95  
24  
0.069  
0.02  
E06BK1.1.2a.5  
33.76  
21

0.038  
0.03  
E06BV4.1.1a.4  
19.18  
19  
0.446  
0.00  
E06BK1.1.1a.4  
36.13  
24  
0.053  
0.02  
E06AV4.1.2a.3  
50.00  
24  
p<.002  
0.04  
E06AK1.1.1b.7  
123.94  
24  
p<.002  
0.07  
E06AK1.1.1a.6  
30.27  
19  
0.048  
0.03  
E06AV4.1.2a.4  
21.68  
21  
0.418  
0.01  
E06AK1.1.1b.8  
20.28  
19  
0.378

0.01  
E06AC2.1.1a.1  
20.91  
19  
0.342  
0.01  
E06BV4.1.1b.4  
20.39  
22  
0.559  
0.00  
E06BV4.1.1b.5  
86.39  
24  
p<.002  
0.05  
E06BK1.1.1b.5  
27.83  
17  
0.047  
0.03  
E06AK1.1.2b.4  
25.45  
19  
0.146  
0.02  
E06AK1.1.1c.3  
24.83  
21  
0.255  
0.01  
E06AK1.1.1a.7  
13.49  
21  
0.891  
0.00

E06AK1.1.2a.4

21.49

21

0.429

0.00

E06AV4.1.1b.6

55.52

24

$p < .002$

0.04

E06BC2.1.1a.7

23.85

22

0.355

0.01

E06BC3.1.1b.4

27.79

19

0.087

0.02

E06BV4.1.2a.4

21.45

22

0.493

0.00

E06BK1.1.2a.6

29.29

20

0.082

0.02

E06C1.3.5a.1

37.93

23

0.026

0.03

E06C1.2.2a.3

47.49  
23  
0.002  
0.03  
E06C1.1.1a.1  
22.03  
21  
0.398  
0.01  
E06C1.2.4a.4  
22.00  
20  
0.34  
0.01  
E06C1.3.1a.3  
31.04  
23  
0.122  
0.02  
E06D1.1.6a.5  
14.79  
22  
0.871  
0.00

## **Grade 6 - Tier 2**

Item Label  
S\_X2  
Df  
p-value  
RMSEA  
E06AV4.1.1b.8  
24.58  
19  
0.17  
0.02  
E06BK1.1.1a.6

27.09  
19  
0.10  
0.03  
E06BK1.1.1b.8  
9.34  
16  
0.90  
0.00  
E06BK1.1.2a.5  
13.68  
17  
0.69  
0.00  
E06BV4.1.1a.5  
11.03  
14  
0.68  
0.00  
E06BK1.1.1a.4  
22.26  
18  
0.22  
0.02  
E06AV4.1.2a.3  
17.10  
18  
0.52  
0.00  
E06AK1.1.1b.7  
14.86  
17  
0.61  
0.00  
E06AK1.1.1a.8  
33.23



19  
0.02  
0.04  
E06AV4.1.2a.4  
18.50  
17  
0.36  
0.01  
E06AK1.1.1b.8  
23.78  
16  
0.09  
0.03  
E06AC2.1.1a.3  
9.91  
17  
0.91  
0.00  
E06BV4.1.1b.6  
34.16  
20  
0.03  
0.04  
E06BV4.1.1b.5  
13.57  
19  
0.81  
0.00  
E06BK1.1.1b.7  
20.18  
17  
0.26  
0.02  
E06AK1.1.2b.4  
11.80  
15

0.69  
0.00  
E06AK1.1.1c.4  
20.30  
15  
0.16  
0.03  
E06AK1.1.1a.9  
20.92  
16  
0.18  
0.02  
E06AK1.1.2a.4  
13.52  
15  
0.56  
0.00  
E06AV4.1.1b.6  
5.30  
11  
0.92  
0.00  
E06BC2.1.1a.8  
20.96  
15  
0.14  
0.03  
E06BC3.1.1b.5  
17.55  
16  
0.35  
0.01  
E06BV4.1.2a.5  
18.68  
15  
0.23

0.02  
E06BK1.1.2a.7  
13.80  
16  
0.61  
0.00  
E06C1.3.5a.2  
29.76  
18  
0.04  
0.03  
E06C1.2.2a.4  
17.81  
16  
0.34  
0.01  
E06C1.1.1a.1  
22.48  
15  
0.10  
0.03  
E06C1.2.4a.5  
29.19  
17  
0.03  
0.04  
E06C1.3.1a.3  
20.08  
18  
0.33  
0.01  
E06D1.1.6a.6  
10.17  
17  
0.90  
0.00

## Grade 7 - Tier 1

Item Label

S\_X2

Df

p-value

RMSEA

E07AK1.1.1b.8

35.10

16

0.004

0.04

E07AV4.1.1a.8

23.90

21

0.298

0.01

E07AK1.1.2b.4

33.48

23

0.073

0.02

E07AV4.1.2a.6

22.57

21

0.368

0.01

E07AV4.1.1b.1

20.63

20

0.419

0.01

E07AK1.1.2b.3

40.23

19

0.003

0.04

E07AK1.1.1c.3

384.76

26

$p < .002$

0.13

E07AK1.1.2a.6

30.54

22

0.106

0.02

E07AK1.1.1a.7

30.46

21

0.083

0.02

E07BC3.1.1a.5

41.32

23

0.011

0.03

E07BC3.1.1b.4

26.32

23

0.286

0.01

E07BV4.1.2a.7

29.42

21

0.104

0.02

E07BV4.1.1a.7

48.46

20

$p < .002$

0.04

E07BK1.1.1a.7

9.81  
18  
0.938  
0.00  
E07BK1.1.1b.7  
32.02  
23  
0.1  
0.02  
E07BV4.1.1b.5  
14.32  
18  
0.708  
0.00  
E07BV4.1.1a.5  
29.60  
22  
0.129  
0.02  
E07AV4.1.1a.6  
13.71  
15  
0.547  
0.00  
E07AK1.1.1a.6  
79.42  
20  
p<.002  
0.06  
E07AK1.1.1b.6  
24.91  
22  
0.302  
0.01  
E07BK1.1.1c.1  
33.54

21  
0.041  
0.03  
E07BK1.1.2b.1  
65.15  
20  
p<.002  
0.05  
E07BK1.1.1a.5  
38.98  
16  
p<.002  
0.04  
E07BK1.1.1b.5  
35.32  
23  
0.048  
0.03  
E07C1.3.5a.1  
45.51  
21  
p<.002  
0.04  
E07C1.2.2a.3  
20.95  
22  
0.524  
0.00  
E07C1.1.1a.2  
18.88  
21  
0.593  
0.00  
E07C1.3.3a.5  
31.46  
21

0.066  
0.03  
E07C1.2.1a.1  
18.41  
22  
0.682  
0.00  
E07C1.1.5a.1  
30.72  
22  
0.102  
0.02

## **Grade 7 - Tier 2**

Item Label  
S\_X2  
Df  
p-value  
RMSEA  
E07AK1.1.1b.9  
47.45  
21  
p<.002  
0.04  
E07AV4.1.1a.9  
131.92  
20  
p<.002  
0.09  
E07AK1.1.2b.5  
15.20  
18  
0.648  
0.00  
E07AV4.1.2a.6  
21.49  
18



0.256  
0.02  
E07AV4.1.1b.2  
26.76  
20  
0.142  
0.02  
E07AK1.1.2b.3  
19.27  
17  
0.313  
0.01  
E07AK1.1.1c.3  
19.56  
18  
0.358  
0.01  
E07AK1.1.2a.6  
34.88  
18  
0.01  
0.04  
E07AK1.1.1a.8  
143.83  
20  
p<.002  
0.09  
E07BC3.1.1a.5  
10.67  
16  
0.83  
0.00  
E07BC3.1.1b.4  
17.57  
19  
0.551

0.00  
E07BV4.1.2a.8  
34.70  
15  
0.003  
0.04  
E07BV4.1.1a.8  
10.78  
16  
0.823  
0.00  
E07BK1.1.1a.7  
27.71  
18  
0.067  
0.03  
E07BK1.1.1b.8  
5.21  
14  
0.983  
0.00  
E07BV4.1.1b.5  
11.46  
14  
0.649  
0.00  
E07BV4.1.1a.6  
23.17  
18  
0.184  
0.02  
E07AV4.1.1a.7  
35.70  
18  
0.008  
0.04

E07AK1.1.1a.6

22.73

17

0.158

0.02

E07AK1.1.1b.6

9.57

18

0.945

0.00

E07BK1.1.1c.2

12.49

17

0.769

0.00

E07BK1.1.2b.2

24.15

16

0.086

0.03

E07BK1.1.1a.6

27.94

18

0.063

0.03

E07BK1.1.1b.6

18.07

17

0.385

0.01

E07C1.3.5a.2

16.69

19

0.611

0.00

E07C1.2.2a.4

18.85
19
0.466
0.00
E07C1.1.1a.2
17.94
19
0.526
0.00
E07C1.3.3a.6
25.49
18
0.112
0.02
E07C1.2.1a.1
31.84
19
0.033
0.03
E07C1.1.5a.2
20.42
18
0.31
0.01

## Grade 8 - Tier 1

Item Label
S_X2
Df
p-value
RMSEA
E08BK1.1.1b.3
28.92
19
0.067
0.03
E08BV4.1.1a.9

20.42  
19  
0.37  
0.01  
E08BV4.1.1b.4  
21.46  
21  
0.431  
0.01  
E08BK1.1.1a.7  
28.95  
17  
0.035  
0.03  
E08BK1.1.2b.3  
36.67  
18  
0.006  
0.04  
E08BK1.1.1b.4  
36.70  
17  
0.004  
0.04  
E08AK1.1.1b.5  
13.15  
17  
0.726  
0.00  
E08AV4.1.2a.7  
36.22  
24  
0.052  
0.03  
E08AV4.1.1a.7  
24.07

19  
0.193  
0.02  
E08AK1.1.2b.4  
15.11  
19  
0.716  
0.00  
E08AC2.1.1a.7  
31.01  
22  
0.096  
0.02  
E08AV4.1.1a.5  
28.66  
18  
0.053  
0.03  
E08BC2.1.1a.7  
31.65  
24  
0.136  
0.02  
E08AV4.1.1b.6  
20.69  
22  
0.54  
0.00  
E08AK1.1.1a.5  
23.36  
21  
0.325  
0.01  
E08AK1.1.1a.6  
20.47  
19

0.367  
0.01  
E08AK1.1.1b.7  
27.88  
21  
0.143  
0.02  
E08AK1.1.1c.3  
39.00  
21  
0.01  
0.04  
E08AK1.1.2b.5  
34.39  
22  
0.045  
0.03  
E08BK1.1.2a.7  
112.96  
20  
 $p < .002$   
0.08  
E08BC3.1.1a.4  
21.02  
21  
0.458  
0.00  
E08BK1.1.1a.9  
23.26  
15  
0.079  
0.03  
E08BV4.1.1a.6  
36.75  
24  
0.046

0.03  
E08BV4.1.2a.2  
28.94  
19  
0.067  
0.03  
E08C1.1.2a.5  
21.62  
18  
0.249  
0.02  
E08C1.1.5a.2  
21.06  
20  
0.394  
0.01  
E08C1.3.1a.4  
26.19  
17  
0.071  
0.03  
E08C1.3.3a.3  
37.59  
22  
0.02  
0.03  
E08C1.2.1a.1  
18.15  
19  
0.512  
0.00  
E08C1.2.6a.3  
22.17  
21  
0.39  
0.01



## Grade 8 - Tier 2

Item Label

S\_X2

Df

p-value

RMSEA

E08BK1.1.1b.6

37.49

19

0.01

0.04

E08BV4.1.1a.7

9.66

18

0.94

0.00

E08BV4.1.1b.5

24.49

14

0.04

0.03

E08BK1.1.1a.7

12.84

10

0.23

0.02

E08BK1.1.2b.4

31.62

18

0.02

0.03

E08BK1.1.1b.4

18.07

9

0.03

0.04

E08AK1.1.1b.5

13.08

13

0.44

0.00

E08AV4.1.2a.7

42.44

20

0.00

0.04

E08AV4.1.1a.6

28.24

19

0.08

0.03

E08AK1.1.2b.4

24.39

16

0.08

0.03

E08AC2.1.1a.7

19.42

16

0.25

0.02

E08AV4.1.1b.5

19.10

14

0.16

0.02

E08BC2.1.1a.8

11.17

18

0.89

0.00

E08AV4.1.1b.6

20.04  
19  
0.39  
0.01  
E08AK1.1.1a.7  
11.49  
16  
0.78  
0.00  
E08AK1.1.1a.6  
23.88  
18  
0.16  
0.02  
E08AK1.1.1b.6  
30.27  
17  
0.02  
0.03  
E08AK1.1.1c.4  
10.54  
15  
0.78  
0.00  
E08AK1.1.2b.5  
14.41  
17  
0.64  
0.00  
E08BK1.1.2a.7  
18.74  
18  
0.41  
0.01  
E08BC3.1.1a.5  
12.86

15  
0.61  
0.00  
E08BV4.1.1a.8  
12.94  
18  
0.80  
0.00  
E08BK1.1.1a.10  
10.24  
20  
0.96  
0.00  
E08BV4.1.2a.3  
29.17  
18  
0.05  
0.03  
E08C1.1.2a.6  
16.43  
16  
0.42  
0.01  
E08C1.1.5a.3  
11.22  
16  
0.80  
0.00  
E08C1.3.1a.4  
19.46  
16  
0.25  
0.02  
E08C1.3.3a.4  
27.90  
17

0.05  
0.03  
E08C1.2.1a.1  
18.26  
16  
0.31  
0.01  
E08C1.2.6a.4  
19.96  
18  
0.34  
0.01

## **Grade 11 - Tier 1**

Item Label  
S\_X2  
Df  
p-value  
RMSEA  
CC1.2.1112Kb.5  
15.18  
20  
0.77  
0.00  
CC1.2.1112La.4  
37.75  
20  
0.01  
0.04  
CC1.2.1112Ka.4  
19.40  
21  
0.56  
0.00  
CC1.3.1112Bb.3  
23.82  
21

0.30  
0.01  
CC1.3.1112Ba.6  
33.18  
21  
0.04  
0.03  
CC1.3.1112Bc.1  
17.90  
17  
0.40  
0.01  
CC1.2.1112Ea.3  
18.31  
19  
0.50  
0.00  
CC1.2.1112Ka.5  
30.35  
21  
0.09  
0.03  
CC1.3.1112Ia.3  
23.53  
22  
0.37  
0.01  
CC1.3.1112Ba.4  
14.64  
19  
0.74  
0.00  
CC1.3.1112Ab.4  
14.31  
18  
0.71

0.00  
CC1.2.1112Ba.5  
22.91  
21  
0.35  
0.01  
CC1.2.1112Ca.1  
23.61  
23  
0.43  
0.01  
CC1.2.1112Ba.4  
41.15  
20  
0.00  
0.04  
CC1.2.1112Da.1  
23.02  
20  
0.29  
0.02  
CC1.2.1112Ab.5  
13.78  
20  
0.84  
0.00  
CC1.3.1112Ja.5  
11.38  
18  
0.88  
0.00  
CC1.3.1112Ja.6  
24.95  
20  
0.20  
0.02

CC1.2.1112Ja.4

28.73

23

0.19

0.02

CC1.3.1112Ia.4

16.40

19

0.63

0.00

CC1.3.1112Fa.8

30.71

20

0.06

0.03

CC1.2.1112Ba.6

27.20

16

0.04

0.04

CC1.2.1112Ea.4

19.97

19

0.40

0.01

CC1.2.1112Bb.8

28.60

21

0.12

0.03

CC1.4.1112Ba.4

26.89

20

0.14

0.02

CC1.4.1112Ka.1



18.36  
 20  
 0.56  
 0.00  
 CC1.4.1112Ca.3  
 25.69  
 21  
 0.22  
 0.02  
 CC1.4.1112Ma.1  
 9.30  
 18  
 0.95  
 0.00  
 CC1.4.1112Da.2  
 15.66  
 21  
 0.79  
 0.00  
 CC1.4.1112Ha.3  
 14.41  
 21  
 0.85  
 0.00

## Grade 11 - Tier 2

Item Label  
 S\_X2  
 Df  
 p-value  
 RMSEA  
 CC1.2.1112Kb.6  
 13.27  
 16  
 0.65  
 0.00  
 CC1.2.1112La.5

16.46  
17  
0.49  
0.00  
CC1.2.1112Ka.7  
9.50  
15  
0.85  
0.00  
CC1.3.1112Bb.3  
17.95  
14  
0.21  
0.03  
CC1.3.1112Ba.5  
9.56  
16  
0.89  
0.00  
CC1.3.1112Bc.1  
16.81  
14  
0.27  
0.02  
CC1.2.1112Ea.3  
12.21  
16  
0.73  
0.00  
CC1.2.1112Ka.5  
15.81  
17  
0.54  
0.00  
CC1.3.1112Ia.5  
34.40

18  
0.01  
0.04  
CC1.3.1112Ba.4  
26.38  
18  
0.09  
0.03  
CC1.3.1112Ab.4  
8.28  
12  
0.76  
0.00  
CC1.2.1112Ba.7  
17.36  
16  
0.36  
0.01  
CC1.2.1112Ca.2  
17.14  
18  
0.51  
0.00  
CC1.2.1112Ba.4  
26.11  
17  
0.07  
0.03  
CC1.2.1112Da.2  
22.46  
14  
0.07  
0.04  
CC1.2.1112Ab.5  
17.35  
16

0.36  
0.01  
CC1.3.1112Ja.7  
9.87  
12  
0.63  
0.00  
CC1.3.1112Ja.8  
15.56  
16  
0.48  
0.00  
CC1.2.1112Ja.4  
22.67  
18  
0.20  
0.02  
CC1.3.1112Ia.4  
26.29  
17  
0.07  
0.03  
CC1.3.1112Fa.9  
26.39  
18  
0.09  
0.03  
CC1.2.Ba.1  
5.74  
12  
0.93  
0.00  
CC1.2.1112Ea.5  
33.91  
17  
0.01

0.05  
CC1.2.1112Bb.9  
13.10  
17  
0.73  
0.00  
CC1.4.1112Ba.5  
26.61  
16  
0.05  
0.04  
CC1.4.1112Ka.2  
8.69  
15  
0.89  
0.00  
CC1.4.1112Ca.3  
26.15  
17  
0.07  
0.03  
CC1.4.1112Ma.2  
9.93  
17  
0.91  
0.00  
CC1.4.1112Da.2  
9.57  
17  
0.92  
0.00  
CC1.4.1112Ha.4  
12.71  
16  
0.69  
0.00

# Math

## Grade 3 - Tier 1

Item Label

S\_X2

Df

p-value

RMSEA

M03AT1.1.2a.10

31.41

19

0.036

0.02

M03DM121a\_2019.3

49.81

21

p<.002

0.04

M03BO3.1.5b.1

24.43

20

0.224

0.01

M03AT1.1.2a.12

35.06

19

0.014

0.03

M03CG111a.2020.1.1

16.56

18

0.554

0.00

M03AT1.1.4a.8

60.58

24

p<.002

0.04  
M03DM1.3.1a.4  
31.94  
23  
0.101  
0.02  
M03DM2.1.1a.12  
20.09  
20  
0.452  
0.00  
M03AT111a\_2019.1  
17.23  
21  
0.697  
0.00  
M03AF111a\_2019.2  
27.46  
20  
0.123  
0.02  
M03AT1.1.2b.4  
41.08  
22  
0.008  
0.03  
M03BO315\_2019.1  
40.96  
20  
0.004  
0.03  
M03DM1.3.1a.7  
34.39  
20  
0.024  
0.03

M03DM1.3.1a.8  
20.16  
18  
0.324  
0.01  
M03AT1.1.4a.4  
54.54  
24  
 $p < .002$   
0.03  
M03DM1.2.3a.5  
28.18  
23  
0.209  
0.01  
M03AT1.1.4a.6  
29.48  
24  
0.203  
0.01  
M03DM2.1.1a.11  
19.08  
20  
0.517  
0.00  
M03CG111a\_2019.3  
29.22  
17  
0.033  
0.03  
M03DM1.1.1a.8  
25.69  
23  
0.316  
0.01  
M03AF111a\_2019.4



42.50  
22  
0.005  
0.03  
M03BO1.1.1a.3  
41.17  
24  
0.016  
0.03  
M03CG1.1.3a.3  
34.17  
23  
0.063  
0.02  
M03DM1.2.1a.1  
28.36  
22  
0.164  
0.02  
M03AT1.1.1a.4  
27.50  
21  
0.155  
0.02  
M03DM1.1.1a.1  
37.41  
21  
0.015  
0.03  
M03DM1.1.1a.2  
14.82  
22  
0.87  
0.00  
M03AT1.1.1a.5  
34.94

21  
0.029  
0.02  
M03DM3.1.2a.1  
29.02  
19  
0.066  
0.02  
M03AF1.1.1a.3  
32.33  
22  
0.072  
0.02

### **Grade 3 - Tier 2**

Item Label  
S\_X2  
Df  
p-value  
RMSEA  
M03AF1.1.1a.1  
12.35  
9  
0.19  
0.04  
M03DM121a\_2019.3  
15.44  
10  
0.12  
0.05  
M03BO3.1.5b.1  
6.75  
8  
0.56  
0.00  
M03AF1.1.1a.2  
14.99

13  
0.31  
0.03  
M03CG1.1.1a.4  
3.35  
4  
0.50  
0.00  
M03AT1.1.4a.8  
14.36  
9  
0.11  
0.06  
M03DM1.3.1a.4  
18.15  
12  
0.11  
0.05  
M03DM1.3.1a.6  
5.16  
9  
0.82  
0.00  
M03AT1.1.1a.6  
9.80  
10  
0.46  
0.00  
M03AF111a\_2019.2  
13.31  
8  
0.10  
0.06  
M03AT1.1.2b.4  
8.37  
10

0.59  
0.00  
M03BO3.1.5b.3  
8.54  
4  
0.07  
0.08  
M03DM1.2.1a.5  
5.13  
2  
0.08  
0.09  
M03DM3.1.2a.2  
9.38  
7  
0.23  
0.04  
M03AT1.1.4a.4  
12.24  
10  
0.27  
0.03  
M03DM4.1.1a.1  
17.31  
13  
0.18  
0.04  
M03AT1.1.4a.6  
13.14  
10  
0.22  
0.04  
M03DM2.1.1a.11  
14.12  
12  
0.29

0.03  
M03CG1.1.3a.1  
13.32  
8  
0.10  
0.06  
M03DM1.1.1a.8  
17.82  
10  
0.06  
0.06  
M03AF1.1.1a.5  
24.10  
13  
0.03  
0.07  
M03BO1.1.1a.4  
11.75  
11  
0.38  
0.02  
M03CG1.1.1a.2  
5.82  
4  
0.21  
0.05  
M03DM2.1.1a.3  
7.44  
7  
0.38  
0.02  
M03AF1.1.1a.6  
8.87  
12  
0.71  
0.00

M03DM1.2.1a.7

22.35

11

0.02

0.07

M03DM1.1.1a.2

20.39

11

0.04

0.07

M03AT1.1.1a.5

4.57

5

0.47

0.00

M03BO3.1.1a.4

12.81

9

0.17

0.05

M03AT1.1.2b.1

8.36

9

0.50

0.00

## **Grade 4 - Tier 1**

Item Label

S\_X2

Df

p-value

RMSEA

M04AT1.1.3a.5

44.02

21

0.002

0.03

M04DM2.1.2a.4  
35.47  
19  
0.012  
0.03  
M04BO1.1.3a.1  
19.59  
18  
0.357  
0.01  
M04AT2.1.1a.14  
27.47  
19  
0.094  
0.02  
M04CG1.1.2a.3  
32.63  
21  
0.05  
0.02  
M04AT1.1.3a.2  
24.54  
18  
0.138  
0.02  
M04BO1.1.3a.4  
41.86  
22  
0.007  
0.03  
M04AT113a\_2019.2  
54.65  
19  
p<.002  
0.04  
M04AF1.1.2a.9

37.23  
21  
0.016  
0.03  
M04AT2.1.2a.7  
14.81  
16  
0.539  
0.00  
M04DM1.1.1a.2  
16.09  
21  
0.765  
0.00  
M04BO2.1.1a.7  
40.14  
19  
0.003  
0.03  
M04DM1.1.1a.1  
15.66  
20  
0.737  
0.00  
M04BO1.1.3a.3  
28.70  
18  
0.052  
0.02  
M04BO113a\_2019.1  
21.39  
19  
0.316  
0.01  
M04DM113a\_2019.2  
41.70



23  
0.01  
0.03  
M04AF1.1.2a.7  
54.44  
22  
 $p < .002$   
0.04  
M04DM212a\_2019.1  
26.40  
19  
0.119  
0.02  
M04CG1.1.2a.4  
24.59  
18  
0.137  
0.02  
M04BO3.1.1a.7  
13.80  
17  
0.681  
0.00  
M04AF1.1.1a.1  
19.63  
21  
0.545  
0.00  
M04BO311a\_2019.3  
14.16  
17  
0.656  
0.00  
M04CG1.1.2a.1  
16.83  
17

0.466  
0.00  
M04DM1.1.1a.6  
27.33  
22  
0.199  
0.01  
M04AT1.1.1a.2  
27.87  
21  
0.144  
0.02  
M04AT2.1.1a.8  
22.43  
20  
0.318  
0.01  
M04AF2.1.2a.3  
18.34  
20  
0.565  
0.00  
M04DM1.1.3a.6  
20.13  
19  
0.387  
0.01  
M04AT1.1.1a.1  
38.73  
20  
0.007  
0.03  
M04AF2.1.1a.1  
27.35  
21  
0.16

0.02

## Grade 4 - Tier 2

Item Label

S\_X2

Df

p-value

RMSEA

M04AT2.1.2a.12

14.28

11

0.218

0.03

M04DM2.1.2a.4

12.73

7

0.079

0.06

M04BO1.1.3a.1

7.33

8

0.502

0.00

M04AF2.1.2a.1

14.84

12

0.25

0.03

M04CG1.1.2a.2

4.72

4

0.317

0.03

M04AT1.1.3a.2

9.42

1

0.002

0.17  
M04BO1.1.3a.4  
11.76  
13  
0.548  
0.00  
M04AT1.1.3a.3  
6.17  
12  
0.907  
0.00  
M04AT212a\_2019.2  
25.90  
15  
0.039  
0.05  
M04AT2.1.2a.7  
6.13  
4  
0.19  
0.04  
M04DM1.1.1a.2  
17.27  
12  
0.14  
0.04  
M04BO211a\_2019.1  
15.18  
12  
0.232  
0.03  
M04DM113a\_2019.1  
14.45  
12  
0.273  
0.03

M04BO1.1.3a.10  
11.02  
11  
0.442  
0.00  
M04BO113a\_2019.1  
11.09  
9  
0.269  
0.03  
M04DM111a\_2019.3  
36.27  
15  
0.002  
0.07  
M04AF1.1.2a.7  
18.18  
13  
0.151  
0.04  
M04DM212a\_2019.1  
4.65  
10  
0.913  
0.00  
M04CG1.1.2a.6  
40.45  
9  
p<.002  
0.11  
M04BO3.1.1a.7  
12.37  
5  
0.03  
0.07  
M04AT2.1.2a.1

13.07  
12  
0.364  
0.02  
M04BO113a\_2019.3  
20.68  
11  
0.037  
0.06  
M04CG112a\_2019.4  
24.15  
13  
0.03  
0.06  
M04AF1.1.2a.2  
12.90  
10  
0.229  
0.03  
M04AT2.1.2a.13  
11.10  
11  
0.435  
0.01  
M04DM1.1.3a.1  
6.74  
11  
0.82  
0.00  
M04AF2.1.2a.3  
18.52  
12  
0.101  
0.04  
M04DM1.1.3a.6  
10.80

10  
0.373  
0.02  
M04AF1.1.2a.1  
19.14  
9  
0.024  
0.06  
M04AT2.1.2a.4  
8.75  
13  
0.792  
0.00

## Grade 5 - Tier 1

Item Label  
S\_X2  
Df  
p-value  
RMSEA  
M05AT111a\_2019.1  
16.02  
15  
0.381  
0.01  
M05AT1.1.4a.12  
47.93  
19  
p<.002  
0.04  
M05BO2.1.1b.7  
21.35  
20  
0.377  
0.01  
M05AT2.1.1a.4  
31.05

17  
0.02  
0.03  
M05CG2.1.1a.11  
32.13  
17  
0.014  
0.03  
M05AF1.1.1a.3  
16.38  
20  
0.693  
0.00  
M05BO2.1.1a.9  
50.49  
21  
p<.002  
0.04  
M05AF111a\_\_2019.3  
31.85  
21  
0.061  
0.02  
M05AF2.1.2a.7  
23.92  
20  
0.246  
0.01  
M05AT2.1.1a.2  
49.57  
20  
p<.002  
0.04  
M05AT2.1.1a.11  
33.48  
21



0.041  
0.03  
M05AT1.1.5a.3  
21.61  
22  
0.484  
0.00  
M05AT2.1.3a.9  
20.63  
22  
0.543  
0.00  
M05DM3.1.2a.9  
26.05  
18  
0.099  
0.02  
M05AT1.1.2a.3  
22.57  
19  
0.257  
0.01  
M05CG1.1.2a.4  
33.45  
20  
0.03  
0.03  
M05AF1.1.1a.14  
37.01  
21  
0.017  
0.03  
M05DM2.1.2a.7  
24.20  
17  
0.114

0.02  
M05AT2.1.1a.6  
23.98  
18  
0.156  
0.02  
M05AT2.1.2a.7  
40.81  
20  
0.004  
0.03  
M05DM2.1.2a.3  
24.09  
17  
0.117  
0.02  
M05BO2.1.1a.1  
19.89  
18  
0.339  
0.01  
M05CG2.1.1a.7  
11.71  
15  
0.701  
0.00  
M05DM1.1.1a.7  
32.47  
17  
0.013  
0.03  
M05BO2.1.1a.2  
20.51  
19  
0.364  
0.01

M05AT2.1.2a.1
25.87
20
0.17
0.02
M05AT212a_2019.4
30.32
21
0.086
0.02
M05CG211a_2019.1
36.20
18
0.007
0.03
M05AT1.1.1a.7
37.24
19
0.007
0.03
M05AT2.1.1a.13
7.82
17
0.97
0.00

## Grade 5 - Tier 2

Item Label
S_X2
Df
p-value
RMSEA
M05AT1.1.1a.2
32.14
16
0.01
0.05

M05AT1.1.4a.12

19.85

16

0.227

0.02

M05BO2.1.1b.7

18.29

16

0.307

0.02

M05AT1.1.2a.4

12.78

15

0.619

0.00

M05AF1.1.1a.13

23.26

16

0.107

0.03

M05AF1.1.1a.3

19.13

16

0.262

0.02

M05BO2.1.1a.9

18.98

16

0.27

0.02

M05DM1.1.1a.9

13.27

17

0.718

0.00

M05AT1.1.4a.13

34.85  
16  
0.004  
0.05  
M05AT2.1.1a.2  
20.24  
14  
0.123  
0.03  
M05AT2.1.1a.11  
16.83  
16  
0.397  
0.01  
M05AT2.1.2a.6  
31.49  
16  
0.012  
0.05  
M05DM2.1.2a.8  
14.91  
15  
0.458  
0.00  
M05CG1.1.1a.3  
23.38  
15  
0.076  
0.04  
M05AT1.1.2a.3  
15.44  
12  
0.218  
0.03  
M05AF1.1.1a.11  
31.31

17  
0.018  
0.04  
M05AF1.1.1a.14  
21.92  
17  
0.188  
0.03  
M05DM2.1.2a.7  
18.61  
14  
0.18  
0.03  
M05BO2.1.1a.12  
21.21  
19  
0.326  
0.02  
M05AT2.1.2a.7  
18.31  
17  
0.369  
0.01  
M05AT2.1.1a.12  
19.09  
16  
0.264  
0.02  
M05BO2.1.1a.11  
16.98  
15  
0.32  
0.02  
M05CG2.1.1a.13  
19.19  
14

0.158  
0.03  
M05DM3.1.2a.7  
38.70  
16  
p<.002  
0.06  
M05CG1.1.1a.8  
10.85  
12  
0.542  
0.00  
M05AT1.1.5a.7  
19.38  
18  
0.369  
0.01  
M05AT212a\_2019.4  
13.28  
17  
0.717  
0.00  
M05CG211a\_2019.1  
12.95  
16  
0.676  
0.00  
M05BO2.1.1a.10  
32.34  
12  
p<.002  
0.06  
M05CG1.1.1a.1  
13.66  
10  
0.189

0.03

## Grade 6 - Tier 1

Item Label

S\_X2

Df

p-value

RMSEA

M06AN2.1.1a.16

43.78

20

0.002

0.04

M06AR1.1.2a.9

45.76

21

p<.002

0.04

M06BE2.1.2a.3

35.66

20

0.017

0.03

M06An323a\_2019.1

31.38

20

0.05

0.03

M06CG115a\_2019.2

19.83

21

0.532

0.00

M06AN3.1.3a.6

30.75

21

0.078



0.02  
M06BE2.1.2a.11  
27.98  
19  
0.084  
0.02  
M06AR1.1.5a.4  
12.18  
18  
0.838  
0.00  
M06AN3.1.3a.8  
18.53  
15  
0.236  
0.02  
M06AR1.1.5a.7  
23.24  
20  
0.277  
0.01  
M06AN221a\_2019.2  
33.56  
21  
0.04  
0.03  
M06AN211a\_2019.7  
21.50  
22  
0.49  
0.00  
M06AN2.2.1a.8  
19.72  
17  
0.289  
0.01

M06DS112a\_2019.2

39.57

23

0.017

0.03

M06AN313a\_2019.3

32.27

16

0.009

0.04

M06DS1.1.2a.m.1

22.30

22

0.442

0.00

M06AR112a\_2019.5

15.94

17

0.528

0.00

M06DS112a\_2019.1

69.58

18

$p < .002$

0.06

M06AR112a\_2019.2

15.60

16

0.482

0.00

M06AN2.1.1a.14

28.95

21

0.115

0.02

M06CG115a\_2019.1

10.22  
20  
0.964  
0.00  
M06BE2.1.2a.2  
21.75  
20  
0.354  
0.01  
M06CG111am\_2019.1  
11.58  
15  
0.71  
0.00  
M06DS1.1.2a.10  
24.96  
21  
0.249  
0.01  
M06AN313a\_2019.4  
23.37  
12  
0.025  
0.03  
M06AN323a\_2019.4  
22.13  
21  
0.392  
0.01  
M06AN313a\_2019.5  
23.38  
21  
0.324  
0.01  
M06CG1.1.1a.m.1  
55.64

18  
p<.002  
0.05  
M06BE2.1.2a.10  
30.32  
17  
0.024  
0.03  
M06AN323a\_2019.2  
68.28  
21  
p<.002  
0.05

## Grade 6 - Tier 2

Item Label  
S\_X2  
Df  
p-value  
RMSEA  
M06AN211a\_2019.1  
11.38  
14  
0.656  
0.00  
M06AR1.1.2a.9  
22.26  
15  
0.101  
0.03  
M06BE2.1.2a.3  
23.21  
15  
0.08  
0.03  
M06AR1.1.2a.8  
14.81

13  
0.319  
0.02  
M06CG1.1.1a.m.2  
19.38  
15  
0.197  
0.02  
M06AN3.1.3a.6  
18.38  
14  
0.19  
0.03  
M06BE2.1.2a.11  
26.03  
13  
0.017  
0.04  
M06AR112a\_2019.1  
124.43  
14  
p<.002  
0.12  
M06AN3.1.3a.7  
33.25  
17  
0.01  
0.04  
M06AR1.1.5a.7  
18.11  
14  
0.202  
0.02  
M06AN221a\_2019.2  
18.69  
15

0.228  
0.02  
M06AN211a\_2019.5  
27.51  
14  
0.017  
0.04  
M06AN323a\_2019.5  
47.14  
17  
p<.002  
0.06  
M06DS1.1.2am.9  
21.80  
15  
0.113  
0.03  
M06AN313a\_2019.3  
2.41  
10  
0.992  
0.00  
M06DS1.1.2a.12  
22.67  
15  
0.091  
0.03  
M06AR112a\_2019.5  
6.80  
13  
0.912  
0.00  
M06DS112a\_2019.1  
21.52  
15  
0.121

0.03  
M06AR1.1.5a.8  
23.33  
14  
0.055  
0.04  
M06AN2.1.1a.14  
9.74  
15  
0.836  
0.00  
M06CG115a\_2019.3  
22.32  
17  
0.173  
0.03  
M06BE212a\_2019.1  
20.49  
11  
0.039  
0.04  
M06CG1.1.1a.10  
14.09  
15  
0.518  
0.00  
M06DS1.1.2a.11  
69.00  
16  
p<.002  
0.08  
M06AN2.1.1a.15  
14.67  
16  
0.549  
0.00

M06AR115a\_2019.1

12.47

13

0.489

0.00

M06AN313a\_2019.5

13.13

16

0.663

0.00

M06CG1.1.1a.m.1

19.98

15

0.173

0.03

M06BE2.1.2a.9

17.97

14

0.208

0.02

M06AN323a\_2019.3

15.02

14

0.377

0.01

## **Grade 7 - Tier 1**

Item Label

S\_X2

Df

p-value

RMSEA

M07AN111a\_2019.2

22.04

17

0.183

0.02



M07CG114a\_2019.1  
 68.76  
 23  
 $p < .002$   
 0.05  
 M07BE2.3.1a.9  
 28.28  
 17  
 0.042  
 0.03  
 M07AN111a\_2019.1  
 25.16  
 20  
 0.196  
 0.02  
 M07AR111a\_2019.1  
 20.89  
 20  
 0.404  
 0.01  
 M07CG222a\_2019.2  
 25.54  
 18  
 0.111  
 0.02  
 M07CG111a\_2019.2  
 19.91  
 16  
 0.224  
 0.02  
 M07AN1112a\_2019.1  
 20.96  
 22  
 0.523  
 0.00  
 M07AR1.1.6a.6

28.55  
17  
0.039  
0.03  
M07AN111a\_2019.4  
71.06  
21  
p<.002  
0.06  
M07AN111a\_2019.13  
30.01  
20  
0.07  
0.03  
M07BE221a\_2019.1  
35.27  
16  
0.004  
0.04  
M07DS211b\_2019.1  
52.30  
22  
p<.002  
0.04  
M07AN1.1.1a\_2019\_T1.1  
31.30  
17  
0.018  
0.03  
M07CG111a\_2019.3  
19.39  
14  
0.151  
0.02  
M07CG1.1.2a.1  
22.95

21  
0.346  
0.01  
M07AR1.1.6a.5  
28.31  
16  
0.029  
0.03  
M07DS211b\_2019.2  
54.48  
20  
p<.002  
0.05  
M07CG1.1.4a.7  
112.28  
21  
p<.002  
0.07  
M07AN1.1.1a.19  
18.95  
20  
0.525  
0.00  
M07AN111a\_2019.5  
20.79  
17  
0.236  
0.02  
M07BE2.2.1a.2  
26.74  
19  
0.111  
0.02  
M07AR115a\_2019.2  
28.01  
21

0.14  
0.02  
M07AN111a\_2019.7  
89.20  
22  
p<.002  
0.06  
M07AR116a\_2019.1  
33.27  
17  
0.01  
0.04  
M07AN1.1.1a.3  
17.73  
20  
0.605  
0.00  
M07AN1.1.1a.13  
22.82  
16  
0.119  
0.02  
M07DS211b\_2019.4  
35.69  
20  
0.017  
0.03  
M07AN1.1.1a.17  
22.90  
18  
0.195  
0.02  
M07AR1.1.1a.1  
31.25  
21  
0.07

0.03

## **Grade 7 - Tier 2**

Item Label

S\_X2

Df

p-value

RMSEA

M07AR1.1.6a.7

22.70

16

0.122

0.03

M07CG114a\_2019.1

49.03

19

p<.002

0.05

M07BE2.3.1a.9

10.96

10

0.36

0.01

M07AN111a\_2019.3

33.20

18

0.016

0.04

M07CG1.1.4a.8

25.63

19

0.141

0.02

M07CG222a\_2019.2

12.91

17

0.742

0.00  
M07CG111a\_2019.2  
23.13  
16  
0.11  
0.03  
M07AN111a\_2019.6  
16.50  
14  
0.284  
0.02  
M07AR116a\_2019.2  
20.51  
16  
0.198  
0.02  
M07AN111a\_2019.4  
26.88  
17  
0.06  
0.03  
M07AN111a\_2019.13  
15.57  
16  
0.483  
0.00  
M07BE231a\_2019.2  
20.53  
19  
0.363  
0.01  
M07DS2.1.1a.3  
34.17  
18  
0.012  
0.04

M07AN1.1.1a.5  
 29.98  
 15  
 0.012  
 0.04  
 M07CG111a\_2019.3  
 24.04  
 14  
 0.045  
 0.03  
 M07BE2.2.1a.4  
 21.80  
 17  
 0.192  
 0.02  
 M07AR1.1.6a.5  
 5.64  
 12  
 0.933  
 0.00  
 M07DS211b\_2019.2  
 70.71  
 17  
 $p < .002$   
 0.07  
 M07CG1.1.2a.4  
 19.52  
 18  
 0.36  
 0.01  
 M07AN1.1.1a.19  
 24.15  
 19  
 0.191  
 0.02  
 M07AR111a\_2019.4

18.71  
16  
0.284  
0.02  
M07BE2.2.1a.1  
14.22  
18  
0.714  
0.00  
M07CG1.1.1a.1  
13.34  
15  
0.576  
0.00  
M07CG1.1.4a.1  
18.88  
16  
0.275  
0.02  
M07AN1.1.1a.6  
10.14  
15  
0.811  
0.00  
M07AN111a\_2019.12  
15.42  
16  
0.494  
0.00  
M07AN1.1.1a.13  
20.44  
14  
0.117  
0.03  
M07DS211b\_2019.4  
17.18



16  
0.374  
0.01  
M07AN111a\_2019.7  
15.15  
14  
0.368  
0.01  
M07AR115a\_2019.1  
22.11  
17  
0.18  
0.02

## **Grade 8 - Tier 1**

Item Label  
S\_X2  
Df  
p-value  
RMSEA  
M08AN1.1.2a.1  
23.64  
13  
0.035  
0.04  
M08CG1.1.2a.3  
19.73  
14  
0.139  
0.03  
M08BE1.1.2a.8  
44.85  
19  
p<.002  
0.05  
M08AN1.1.5a.2  
35.90

18  
0.007  
0.04  
M08CG1.1.1a.1  
41.35  
16  
p<.002  
0.05  
M08CG1.1.1a.6  
12.92  
19  
0.843  
0.00  
M08BF2.1.1a.22  
179.37  
19  
p<.002  
0.12  
M08BE2.1.3a.1  
20.83  
18  
0.288  
0.02  
M08BE2.1.1a.1  
27.20  
16  
0.039  
0.03  
M08BE1.1.2a.1  
16.41  
18  
0.564  
0.00  
M08AN1.1.2a.7  
22.38  
15

0.098  
0.03  
M08BF2.1.1a.1  
31.55  
19  
0.035  
0.03  
M08DS112a\_\_2019.1  
19.99  
19  
0.395  
0.01  
M08AN1.1.2a.4  
20.20  
15  
0.164  
0.02  
M08BE1.1.2a.2  
20.34  
16  
0.205  
0.02  
M08DS1.2.1a.1  
24.60  
15  
0.056  
0.03  
M08BE3.1.2a.5  
21.47  
20  
0.37  
0.01  
M08DS1.1.2a.3  
13.93  
18  
0.734

0.00  
M08CG3.1.1a.2  
34.23  
20  
0.025  
0.03  
M08BF2.1.1a.3  
16.15  
16  
0.443  
0.00  
M08BE2.1.1a.3  
35.27  
20  
0.019  
0.04  
M08BE213a.1  
22.08  
19  
0.28  
0.02  
M08CG1.1.1a.7  
39.94  
18  
0.002  
0.04  
M08DS112a\_2019.3  
36.28  
20  
0.014  
0.04  
M08BF2.1.1a.15  
32.22  
20  
0.041  
0.03

M08BF211a.1
20.37
15
0.158
0.02
M08AN1.1.2a.6
26.82
18
0.082
0.03
M08DS121a__2019.2
35.39
18
0.008
0.04
M08BE2.1.3a.2
19.68
16
0.235
0.02
M08BE3.1.2a.4
20.17
19
0.384
0.01

## Grade 8 - Tier 2

Item Label
S_X2
Df
p-value
RMSEA
M08AN1.1.5a.4
12.33
16
0.72
0.00

M08CG1.1.2a.3

35.41

15

0.00

0.05

M08BE1.1.2a.8

10.98

16

0.81

0.00

M08AN1.1.2a.21

22.54

13

0.05

0.03

M08CG311a\_2019.2

12.75

15

0.62

0.00

M08CG1.1.1a.6

17.07

14

0.25

0.02

M08BF2.1.1a.22

13.29

10

0.21

0.02

M08BE3.1.1a.3

22.07

16

0.14

0.02

M08BF2.1.1a.6

22.30  
13  
0.05  
0.03  
M08BE1.1.2a.1  
19.50  
16  
0.24  
0.02  
M08AN1.1.2a.7  
16.15  
12  
0.18  
0.02  
M08BE2.1.1a.4  
19.42  
16  
0.25  
0.02  
M08DS1.1.2a.4  
15.78  
17  
0.54  
0.00  
M08AN1.1.5a.6  
25.06  
15  
0.05  
0.03  
M08BE1.1.2a.2  
16.37  
13  
0.23  
0.02  
M08DS112a\_2019.2  
30.07

18  
0.04  
0.03  
M08BE3.1.2a.5  
15.47  
15  
0.42  
0.01  
M08DS1.1.2a.3  
18.00  
16  
0.32  
0.01  
M08CG1.1.2a.6  
26.21  
17  
0.07  
0.03  
M08BF2.1.1a.3  
12.53  
13  
0.48  
0.00  
M08BE1.1.2a.4  
15.46  
14  
0.35  
0.01  
M08BF211a\_2019.4  
17.32  
17  
0.43  
0.00  
M08CG311a\_2019.3  
13.20  
16



0.66  
0.00  
M08CG1.1.1a.2  
16.35  
10  
0.09  
0.03  
M08BE1.1.2a.15  
14.97  
11  
0.18  
0.02  
M08BE3.1.2a.12  
22.78  
16  
0.12  
0.03  
M08AN1.1.2a.6  
15.72  
15  
0.40  
0.01  
M08DS121a\_\_2019.2  
11.65  
16  
0.77  
0.00  
M08BE312a\_\_2019.1  
13.81  
16  
0.61  
0.00  
M08BE1.1.2a.18  
10.96  
13  
0.61

0.00

## Grade 11 - Tier 1

Item Label

S\_X2

Df

p-value

RMSEA

CC.2.4.HSB5a.5

16.47

12

0.171

0.03

CC.2.2.HSD1a.9

31.15

17

0.019

0.04

CC.2.3.HSA13a.12

28.93

11

0.002

0.05

CC.2.3.HSA13a.13

18.72

13

0.132

0.03

CC.2.2.HSC5b.6

11.30

16

0.79

0.00

CC.2.1.HSF4a.1

50.31

17

p<.002

0.06  
CC.2.2.HSC5a.9  
26.30  
17  
0.069  
0.03  
CC.2.4.HSB7a.12  
22.04  
17  
0.183  
0.02  
CC.2.2.HSC3a.3  
9.94  
15  
0.824  
0.00  
CC24HSB5a\_2019M.3  
76.18  
18  
p<.002  
0.08  
CC.2.3.HSA13a.14  
10.50  
14  
0.725  
0.00  
CC.2.4.HSB2a.7  
17.75  
18  
0.472  
0.00  
CC.2.2.HSD1a.12  
16.39  
16  
0.426  
0.01

CC.2.2.HSD8a.6  
18.75  
17  
0.343  
0.01  
CC.2.2.HSC1a.12  
17.91  
14  
0.211  
0.02  
CC.2.1.HSF4a.2  
15.71  
16  
0.473  
0.00  
CC.2.2.HSD1a.16  
28.08  
16  
0.031  
0.04  
CC.2.1.HSF2a.13  
20.52  
16  
0.198  
0.02  
CC.2.2.HSC5a.10  
21.37  
14  
0.092  
0.03  
CC.2.1.HSF2a.21  
12.32  
11  
0.34  
0.01  
CC22HSD1a\_2019M.2

19.27  
16  
0.255  
0.02  
CC.2.2.HSC1a.13  
20.70  
14  
0.11  
0.03  
CC.2.2.HSC5b.7  
28.14  
16  
0.03  
0.04  
CC.2.2.HSD1a.13  
22.76  
13  
0.045  
0.04  
CC.2.2.HSD9a.10  
22.44  
17  
0.168  
0.02  
CC.2.2.HSD9a.12  
29.66  
17  
0.029  
0.04  
CC.2.4.HSB2a.9  
23.55  
17  
0.132  
0.03  
CC.2.2.HSD8a.7  
28.54

18  
0.054  
0.03  
CC24HSB2a\_2019M.4  
20.37  
17  
0.256  
0.02  
CC.2.2.HSD8a.5  
35.40  
16  
0.004  
0.05

## **Grade 11 - Tier 2**

Item Label  
S\_X2  
Df  
p-value  
RMSEA  
CC.2.4.HSB5a.6  
14.77  
13  
0.322  
0.02  
CC.2.2.HSD1a.9  
14.48  
13  
0.341  
0.02  
CC.2.3.HSA13a.12  
17.32  
8  
0.027  
0.05  
CC23HSA13a\_2019.1  
NA

NA  
NA  
NA  
CC.2.3.HSA13a.15  
NA  
0  
NA  
NA  
CC.2.1.HSF4a.1  
1.02  
3  
0.796  
0.00  
CC.2.2.HSC5a.9  
8.78  
15  
0.889  
0.00  
CC24HSB7a\_2019M.1  
23.89  
11  
0.013  
0.05  
CC.2.2.HSC3a.4  
33.13  
11  
p<.002  
0.07  
CC24HSB5a\_2019M.3  
19.70  
14  
0.14  
0.03  
CC.2.3.HSA13a.14  
19.89  
13

0.098  
0.04  
CC24HSB2a\_2019M.3  
18.16  
13  
0.151  
0.03  
CC.2.2.HSD9a.13  
17.16  
16  
0.375  
0.01  
CC22HSD9a\_2019M.3  
23.95  
14  
0.046  
0.04  
CC.2.2.HSC1a.12  
5.48  
9  
0.791  
0.00  
CC.2.1.HSF2a.16  
15.02  
12  
0.24  
0.02  
CC.2.2.HSD1a.16  
21.19  
14  
0.097  
0.04  
CC.2.1.HSF2a.13  
5.91  
12  
0.92



0.00  
CC.2.2.HSC1a.15  
8.97  
11  
0.625  
0.00  
CC.2.1.HSF2a.21  
10.92  
10  
0.364  
0.01  
CC.2.1.HSF4a.8  
12.22  
10  
0.271  
0.02  
CC.2.2.HSC1a.14  
7.60  
11  
0.749  
0.00  
CC.2.2.HSC5a.11  
21.17  
14  
0.097  
0.04  
CC22HSD1a\_2019M.3  
14.74  
13  
0.324  
0.02  
CC24HSB3a\_2019M.2  
12.64  
14  
0.555  
0.00

CC.2.2.HSD1a.6

5.82

14

0.971

0.00

CC.2.4.HSB2a.9

13.41

13

0.417

0.01

CC.2.2.HSD8a.7

17.39

13

0.182

0.03

CC.2.2.HSD1a.14

10.58

15

0.782

0.00

CC.2.4.HSB3a.5

12.26

12

0.425

0.01

## Science

### Grade 4 - Tier 1

Item Label

S\_\_X2

Df

p-value

RMSEA

S4.B.1.1.4.7

20.26

13

0.089  
0.03  
S4.D.1.2.1.3  
15.78  
13  
0.261  
0.02  
S4.C.1.1.2.7  
17.37  
13  
0.183  
0.03  
S4.D.2.1.2a.2  
15.59  
13  
0.272  
0.02  
S4.B.2.1.1.3  
16.88  
16  
0.393  
0.01  
S4.A.2.2.1.3  
27.19  
16  
0.039  
0.04  
S4.A.2.2.1.4  
40.68  
16  
p<.002  
0.06  
S4.B.2.1.1.4  
22.27  
13  
0.051

0.04  
S4.D.2.1.2.4  
22.03  
11  
0.024  
0.05  
S4.B.1.1.4.4  
82.36  
14  
p<.002  
0.10  
S4.D.1.2.1.4  
39.42  
14  
p<.002  
0.06  
S4.C.1.1.2.9  
19.66  
12  
0.074  
0.04  
S4.B.3.1.1.5  
27.55  
17  
0.05  
0.04  
S4.B.1.1.5a.1  
19.39  
12  
0.079  
0.04  
S4.A.2.1.4.5  
9.34  
13  
0.747  
0.00

S4.B.2.1.1.5  
24.57  
10  
0.006  
0.06  
S4.D.2.1.2.5  
35.88  
12  
p<.002  
0.06  
S4.B.3.1.1.11  
23.06  
13  
0.041  
0.04  
S4.D.1.2.2a.3  
35.25  
16  
0.004  
0.05  
S4.A.3.1.1.3  
19.57  
14  
0.144  
0.03  
S4.D.1.1.1.5  
34.63  
16  
0.004  
0.05  
S4.B.3.3.5.9  
23.43  
12  
0.024  
0.04  
S4.C.1.1.1a.2

22.76  
11  
0.019  
0.05  
S4.A.1.1.2a.2  
20.18  
16  
0.212  
0.02  
S4.B.3.1.1.7  
29.22  
15  
0.015  
0.04  
S4.B.1.1.3.3  
65.74  
15  
p<.002  
0.08  
S4.C.3.1.3.3  
18.03  
13  
0.156  
0.03  
S4.A.2.1.4.10  
11.72  
13  
0.551  
0.00  
S4.A.3.3.2.3  
13.83  
13  
0.386  
0.01  
S4.C.3.1.3.4  
23.72

16

0.096

0.03

## Grade 4 - Tier 2

Item Label

S\_X2

Df

p-value

RMSEA

S4.B.1.1.4.7

14.34

9

0.111

0.03

S4.D.1.2.1.3

10.82

6

0.094

0.03

S4.C.1.1.2.7

11.19

10

0.343

0.01

S4.D.2.1.2a.2

8.95

8

0.346

0.01

S4.B.2.1.1.3

11.21

9

0.261

0.02

S4.A.2.2.1.3

18.33

11  
0.074  
0.03  
S4.A.2.2.1.4  
120.42  
13  
p<.002  
0.10  
S4.B.2.1.1.4  
13.05  
9  
0.161  
0.02  
S4.D.2.1.2.4  
6.67  
4  
0.154  
0.03  
S4.B.1.1.4.4  
31.24  
13  
0.003  
0.04  
S4.D.1.2.1.4  
28.63  
11  
0.003  
0.04  
S4.C.1.1.2.9  
14.21  
10  
0.163  
0.02  
S4.B.3.1.1.8  
13.41  
8



0.098  
0.03  
S4.B.1.1.5.a.3  
30.84  
13  
0.004  
0.04  
S4.A.2.1.4.5  
18.85  
11  
0.064  
0.03  
S4.B.2.1.1.6  
13.59  
12  
0.328  
0.01  
S4.D.2.1.2a.3  
11.26  
11  
0.422  
0.00  
S4.B.3.1.1.11  
17.24  
7  
0.016  
0.04  
S4.D.1.2.2.3  
253.80  
13  
p<.002  
0.15  
S4.A.3.1.1.6  
20.53  
10  
0.025

0.04  
S4.D.1.1.1.5  
14.40  
13  
0.346  
0.01  
S4.B.3.3.5.6  
21.77  
11  
0.026  
0.03  
S4.C.1.1.1a.3  
12.49  
9  
0.187  
0.02  
S4.A.1.1.2a.3  
37.67  
13  
p<.002  
0.05  
S4.B.3.1.1.7  
19.68  
13  
0.103  
0.03  
S4.B.1.1.3.4  
20.35  
13  
0.087  
0.03  
S4.C.3.1.3.5  
12.78  
10  
0.236  
0.02

S4.A.2.1.4.10

22.15

11

0.023

0.04

S4.A.3.3.2.4

9.28

8

0.319

0.01

S4.C.3.1.3.4

39.10

13

$p < .002$

0.05

## Grade 8 - Tier 1

Item Label

S\_X2

Df

p-value

RMSEA

S8.B.3.2.1.4

8.08

11

0.706

0.00

S8.D.1.1.2.6

38.17

13

$p < .002$

0.07

S8.C.2.2.3.4

11.57

15

0.711

0.00

S8.C.1.1.2.5  
25.70  
12  
0.012  
0.06  
S8.B.3.1.1.4  
16.94  
12  
0.152  
0.03  
S8.A.3.1.5b.3  
23.64  
12  
0.023  
0.05  
S8.A.3.1.5b.2  
49.98  
15  
 $p < .002$   
0.08  
S8.B.3.2.1.8  
13.86  
10  
0.18  
0.03  
S8.C.1.1.2.6  
17.98  
12  
0.116  
0.04  
S8.B.3.1.1.5  
31.47  
12  
0.002  
0.07  
S8.D.1.1.2.5

16.91  
11  
0.111  
0.04  
S8.C.2.2.3.6  
9.26  
14  
0.814  
0.00  
S8.B.3.1.1.6  
18.87  
12  
0.092  
0.04  
S8.B.2.1.1.5  
13.55  
12  
0.33  
0.02  
S8.A.2.1.1a.6  
17.41  
12  
0.135  
0.04  
S8.B.1.1.3.7  
8.72  
9  
0.464  
0.00  
S8.D.1.2.1.5  
30.91  
14  
0.006  
0.06  
S8.B.1.1.3.11  
16.48

10  
0.087  
0.04  
S8.D.1.3.1.4  
16.62  
12  
0.164  
0.03  
S8.A.1.3.2.4  
11.73  
10  
0.303  
0.02  
S8.D.1.1.2.8  
16.95  
12  
0.152  
0.03  
S8.B.3.3.3.1  
11.02  
11  
0.442  
0.00  
S8.C.1.1.2.7  
17.06  
9  
0.048  
0.05  
S8.A.2.1.1a.10  
23.26  
10  
0.01  
0.06  
S8.B.1.1.3.5  
28.47  
11

0.003  
0.07  
S8.A.3.3.2.3  
8.93  
11  
0.628  
0.00  
S8.A.2.2.3.3  
10.04  
12  
0.612  
0.00  
S8.A.2.1.1a.5  
22.05  
10  
0.015  
0.06  
S8.A.2.2.1.3  
13.59  
12  
0.328  
0.02  
S8.D.1.1.2.7  
23.66  
12  
0.023  
0.05

## Grade 8 - Tier 2

Item Label

S\_X2

Df

p-value

RMSEA

S8.B.3.2.1.4

9.03

9

0.434  
0.00  
S8.D.1.1.2.6  
32.56  
11  
 $p < .002$   
0.05  
S8.C.2.2.3.4  
67.87  
16  
 $p < .002$   
0.06  
S8.C.1.1.2.5  
8.76  
11  
0.644  
0.00  
S8.B.3.1.1.4  
17.42  
12  
0.135  
0.02  
S8.A.3.1.5b.3  
23.71  
13  
0.034  
0.03  
S8.A.3.1.5b.2  
16.84  
12  
0.156  
0.02  
S8.B.3.2.1.8  
8.61  
6  
0.197



0.02  
S8.C.1.1.2.6  
14.18  
11  
0.223  
0.02  
S8.B.3.1.1.5  
32.12  
12  
p<.002  
0.04  
S8.D.1.1.2.5  
19.38  
10  
0.036  
0.03  
S8.C.2.2.3.6  
215.16  
15  
p<.002  
0.12  
S8.B.3.1.1.7  
14.84  
11  
0.19  
0.02  
S8.B.2.1.1.7  
15.00  
7  
0.036  
0.04  
S8.A.2.1.1a.6  
19.78  
11  
0.048  
0.03

S8.B.1.1.3.8

10.73

8

0.218

0.02

S8.D.1.2.1.4

14.62

10

0.146

0.02

S8.B.1.1.3.11

18.26

10

0.051

0.03

S8.D.1.3.1.5

16.33

11

0.129

0.02

S8.A.1.3.2.8

9.46

12

0.663

0.00

S8.D.1.1.2.8

7.95

13

0.847

0.00

S8.B.3.3.3.2

21.54

11

0.028

0.03

S8.C.1.1.2.8

15.05  
11  
0.18  
0.02  
S8.A.2.1.1a.8  
11.10  
10  
0.35  
0.01  
S8.B.1.1.3.5  
62.27  
6  
 $p < .002$   
0.10  
S8.A.3.3.2.4  
21.32  
11  
0.03  
0.03  
S8.A.2.2.3.4  
15.03  
12  
0.24  
0.02  
S8.A.2.1.1a.5  
21.60  
9  
0.01  
0.04  
S8.A.2.2.1.6  
111.45  
12  
 $p < .002$   
0.10  
S8.D.1.1.2.7  
15.37

12

0.222

0.02

## **Grade 11 - Tier 1**

Item Label

S\_X2

Df

p-value

RMSEA

S11.B.3.1.4b.9

37.03

8

p<.002

0.12

S11.D.2.1.4.5

16.38

11

0.128

0.04

S11.C.3.1.3.5

15.86

11

0.146

0.04

S11.D.1.1.3.4

14.37

12

0.277

0.03

S11.A.3.1.2.6

32.91

14

0.003

0.07

S11.A.3.3.3.6

26.20

11  
0.006  
0.07  
S11.A.3.3.3.7  
20.48  
11  
0.039  
0.06  
S11.A.3.1.2.7  
28.32  
11  
0.003  
0.08  
S11.D.1.1.3.5  
9.31  
11  
0.594  
0.00  
S11.B.3.1.4b.11  
32.81  
9  
p<.002  
0.10  
S11.D.2.1.4.6  
13.81  
11  
0.244  
0.03  
S11.C.3.1.3.6  
11.84  
11  
0.376  
0.02  
S11.B.3.2.3.6  
13.90  
11

0.239  
0.03  
S11.B.3.1.3.4  
21.37  
10  
0.019  
0.07  
S11.A.2.1.3.6  
26.37  
9  
0.002  
0.09  
S11.B.3.1.4a.2  
53.10  
12  
p<.002  
0.12  
S11.D.1.2.2.3  
24.65  
14  
0.038  
0.05  
S11.B.1.1.2.6  
18.68  
8  
0.017  
0.07  
S11.A.2.1.3.5  
12.08  
12  
0.439  
0.00  
S11.A.2.1.1.5  
20.83  
10  
0.022

0.06  
S11.D.1.2.2.5  
16.88  
9  
0.051  
0.06  
S11.A.3.1.2.8  
9.43  
10  
0.491  
0.00  
S11.C.3.1.3.7  
8.17  
11  
0.698  
0.00  
S11.A.1.3.2.3  
18.68  
15  
0.228  
0.03  
S11.C.3.1.1.6  
21.34  
11  
0.03  
0.06  
S11.B.1.1.2.7  
15.57  
12  
0.212  
0.03  
S11.C.2.2.3.3  
13.44  
14  
0.493  
0.00

S11.A.3.3.3.8

18.10

12

0.113

0.04

S11.A.3.3.3.9

18.23

12

0.109

0.04

S11.C.1.1.1.4

20.30

12

0.062

0.05

## **Grade 11 - Tier 2**

Item Label

S\_X2

Df

p-value

RMSEA

S11.B.3.1.4b.9

11.60

10

0.313

0.01

S11.D.2.1.4.5

13.06

12

0.365

0.01

S11.C.3.1.3.5

27.16

11

0.004

0.05



S11.D.1.1.3.4

6.34

8

0.609

0.00

S11.A.3.1.2.6

13.60

13

0.403

0.01

S11.A.3.3.3.6

25.05

12

0.015

0.04

S11.A.3.3.3.7

12.65

11

0.317

0.01

S11.A.3.1.2.7

38.84

12

$p < .002$

0.06

S11.D.1.1.3.5

17.67

12

0.126

0.03

S11.B.3.1.4b.11

33.05

10

$p < .002$

0.06

S11.D.2.1.4.6

7.82  
10  
0.646  
0.00  
S11.C.3.1.3.6  
38.43  
12  
p<.002  
0.06  
S11.B.3.2.3.4  
16.99  
11  
0.108  
0.03  
S11.B.3.1.3.5  
25.62  
10  
0.004  
0.05  
S11.A.2.1.3.6  
12.45  
12  
0.41  
0.01  
S11.B.3.1.4a.3  
15.99  
11  
0.142  
0.03  
S11.D.1.2.2.7  
7.53  
10  
0.675  
0.00  
S11.B.1.1.2.6  
NA

0  
NA  
NA  
S11.A.2.1.3.7  
23.78  
14  
0.049  
0.03  
S11.A.2.1.1.6  
6.53  
7  
0.48  
0.00  
S11.D.1.2.2.5  
16.94  
10  
0.076  
0.03  
S11.A.3.1.2.11  
14.23  
11  
0.221  
0.02  
S11.C.3.1.3.8  
16.97  
11  
0.109  
0.03  
S11.A.1.3.2.4  
20.29  
11  
0.041  
0.04  
S11.C.3.1.1.6  
8.87  
11

0.634  
0.00  
S11.B.1.1.2.8  
24.14  
13  
0.03  
0.04  
S11.C.2.2.3.4  
9.41  
10  
0.494  
0.00  
S11.A.3.3.3.8  
8.07  
11  
0.707  
0.00  
S11.A.3.3.3.10  
6.99  
12  
0.858  
0.00  
S11.C.1.1.1.4  
10.82  
10  
0.372  
0.01