

**APPENDIX C**  
**TEST DESIGN AND BLUEPRINT SPECIFICATIONS**

## 2022 Grades 3 & 4—ELA

| Common             | Session 1 |           | Session 2 |           | Total     |           |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|
|                    | Number    | Tot Pts   | Number    | Tot Pts   | Number    | Tot Pts   |
| SR1                | 7         | 13        | 17        | 21        | 24        | 34        |
| SR2                | 3         |           | 2         |           | 5         |           |
| CR                 | 0         | 0         | 1         | 3         | 1         | 3         |
| ES                 | 1         | 7         | 0         | 0         | 1         | 7         |
| <b>Total Items</b> | <b>11</b> | <b>20</b> | <b>20</b> | <b>24</b> | <b>31</b> | <b>44</b> |

Item Types: 1 SR1 = MC; 2 SR2 = 2-pt MC or TE, EBSR; 3 CR (hand scored); 7 ES (hand scored)

| Reporting Categories | G3/4        |       |
|----------------------|-------------|-------|
| Reading              | 65%         | +/-5% |
| Language             | 25%         | +/-5% |
| Writing              | 10%         | +/-5% |
| <b>Totals</b>        | <b>100%</b> |       |

## 2022 Grade 5—ELA

| Common             | Session 1 |           | Session 2 |           | Total     |           |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|
|                    | Number    | Tot Pts   | Number    | Tot Pts   | Number    | Tot Pts   |
| SR1                | 9         | 13        | 15        | 21        | 24        | 34        |
| SR2                | 2         |           | 3         |           | 5         |           |
| CR                 | 0         | 0         | 0         | 0         | 0         | 0         |
| ES                 | 1         | 7         | 1         | 7         | 2         | 14        |
| <b>Total Items</b> | <b>12</b> | <b>20</b> | <b>19</b> | <b>28</b> | <b>31</b> | <b>48</b> |

Item Types: 1 SR1 = MC; 2 SR2 = 2-pt MC or TE; 7 ES (hand scored)

| Reporting Categories | G5          |       |
|----------------------|-------------|-------|
| Reading              | 55%         | +/-5% |
| Language             | 25%         | +/-5% |
| Writing              | 20%         | +/-5% |
| <b>Totals</b>        | <b>100%</b> |       |

## 2022 Grades 6–8—ELA

| Common             | Session 1 |         | Session 2 |         | Total  |         |
|--------------------|-----------|---------|-----------|---------|--------|---------|
|                    | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
| SR1                | 9         | 13      | 15        | 21      | 24     | 34      |
| SR2                | 2         |         | 3         |         | 5      |         |
| CR                 | 0         | 0       | 0         | 0       | 0      | 0       |
| ES                 | 1         | 8       | 1         | 8       | 2      | 16      |
| <b>Total Items</b> | 12        | 21      | 19        | 29      | 31     | 50      |

Item Types: 1 SR1 = MC; 2 SR2 = 2-pt MC or TE; 8 ES (hand scored) / For grade 7 session 1, the breakdown was SR1: 11, SR2: 1, ES: 1

| Reporting Categories | G6-8        |       |
|----------------------|-------------|-------|
| Reading              | 55%         | +/-5% |
| Language             | 25%         | +/-5% |
| Writing              | 20%         | +/-5% |
| <b>Totals</b>        | <b>100%</b> |       |

## 2022 Grade 10—ELA

| Common             | Session 1 |         | Session 2 |         | Total  |         |
|--------------------|-----------|---------|-----------|---------|--------|---------|
|                    | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
| SR1                | 9         | 15      | 12        | 20      | 21     | 35      |
| SR2                | 3         | 6       | 4         |         | 7      |         |
| CR                 | 0         | 0       | 0         | 0       | 0      | 0       |
| ES                 | 1         | 8       | 1         | 8       | 2      | 16      |
| <b>Total Items</b> | 13        | 23      | 17        | 28      | 25     | 51      |

Item Types: 1 SR1 = MC; 2 SR2 = 2-pt MC or TE; 8 ES (hand scored)

| Reporting Categories | G10         |       |
|----------------------|-------------|-------|
| Reading              | 55%         | +/-5% |
| Language             | 25%         | +/-5% |
| Writing              | 20%         | +/-5% |
| <b>Totals</b>        | <b>100%</b> |       |

## 2022 Grade 3—Mathematics

| Common                                       | Session 1 |         | Session 2 |         | Total  |         |
|--|-----------|---------|-----------|---------|--------|---------|
|  | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
| MS1  | 18        | 18      | 18        | 18      | 36     | 36      |
| HS3  | 2         | 6       | 2         | 6       | 4      | 12      |
| <b>Total Items</b>                           | 20        | 24      | 20        | 24      | 40     | 48      |
| Matrix (Equating and/or Field Test) per form | Session 1 |         | Session 2 |         | Total  |         |
|  | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
| <b>Total Items</b>                           | 2         | 2       | 2         | 4       | 4      | 6       |
| Total Student Experience                     | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
|  | 22        | 26      | 22        | 28      | 44     | 54      |

|             | Max Points | Scored |       |
|-------------|------------|--------|-------|
| Item Types: | 1          | MS1    | SA/SR |
|             | 3          | HS3    | CR    |

| Reporting Category |                                 | G3       |        |
|--------------------|---------------------------------|----------|--------|
|                    |                                 | Percents | Points |
| OA                 | Operations & Algebraic Thinking | 30%      | 14–15  |
| NBT                | Number & Operations in Base Ten | 15%      | 7–8    |
| NF                 | Number & Operations-Fractions   | 20%      | 9–10   |
| MD                 | Measurement & Data              | 25%      | 12     |
| G                  | Geometry                        | 10%      | 4–5    |

## 2022 Grade 4–5—Mathematics

| Common                                       | Session 1 |         | Session 2 |         | Total  |         |
|--|-----------|---------|-----------|---------|--------|---------|
|  | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
| MS1  | 17        | 17      | 17        | 17      | 34     | 34      |
| MS2  | 1         | 2       | 1         | 2       | 2      | 4       |
| HS4  | 2         | 8       | 2         | 8       | 4      | 16      |
| Total Items                                  | 20        | 27      | 20        | 27      | 40     | 54      |
| Matrix (Equating and/or Field Test) per form | Session 1 |         | Session 2 |         | Total  |         |
|  | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
| Total Items                                  | 2         | 2–3     | 2         | 5–6     | 4      | 7–8     |
| Total Student Experience                     | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
|  | 22        | 29–30   | 22        | 32–33   | 44     | 61–62   |

|             | Max Points | Scored |       |
|-------------|------------|--------|-------|
| Item Types: | 1          | MS1    | SA/SR |
|             | 2          | MS2    | SA/SR |
|             | 4          | HS4    | CR    |

| Reporting Category |                                 | G4       |        | G5       |        |
|--------------------|---------------------------------|----------|--------|----------|--------|
|                    |                                 | Percents | Points | Percents | Points |
| OA                 | Operations & Algebraic Thinking | 20%      | 10–11  | 15%      | 8      |
| NBT                | Number & Operations in Base Ten | 20%      | 10–11  | 30%      | 16     |
| NF                 | Number & Operations-Fractions   | 30%      | 16     | 25%      | 13–14  |
| MD                 | Measurement & Data              | 20%      | 10–11  | 20%      | 10–11  |
| G                  | Geometry                        | 10%      | 5–6    | 10%      | 5–6    |

## 2022 Grade 6—Mathematics

| Common                                       | Session 1 |         | Session 2 |         | Total  |         |
|--|-----------|---------|-----------|---------|--------|---------|
|  | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
| MS1  | 17        | 17      | 17        | 17      | 34     | 34      |
| MS2  | 1         | 2       | 1         | 2       | 2      | 4       |
| HS4  | 2         | 8       | 2         | 8       | 4      | 16      |
| Total Items                                  | 20        | 27      | 20        | 27      | 40     | 54      |
| Matrix (Equating and/or Field Test) per form | Session 1 |         | Session 2 |         | Total  |         |
|  | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
| Total Items                                  | 2         | 2–3     | 2         | 5–6     | 4      | 7–8     |
| Total Student Experience                     | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
|  | 22        | 29–30   | 22        | 32–33   | 44     | 61–62   |

|             | Max Points | Scored |       |
|-------------|------------|--------|-------|
| Item Types: | 1          | MS1    | SA/SR |
|             | 2          | MS2    | SA/SR |
|             | 4          | HS4    | CR    |

| Reporting Category |                                     | G6       |        |
|--------------------|-------------------------------------|----------|--------|
|                    |                                     | Percents | Points |
| G                  | Geometry                            | 15%      | 8      |
| RP                 | Ratios & Proportional Relationships | 20%      | 10–11  |
| NS                 | The Number System                   | 20%      | 10–11  |
| EE                 | Expressions & Equations             | 30%      | 16     |
| SP                 | Statistics & Probability            | 15%      | 8      |

## 2022 Grade 7—Mathematics

| Common                                       | Session 1 |         | Session 2 |         | Total  |         |
|--|-----------|---------|-----------|---------|--------|---------|
|  | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
| MS1  | 17        | 17      | 17        | 17      | 34     | 34      |
| MS2  | 1         | 2       | 1         | 2       | 2      | 4       |
| HS4  | 2         | 8       | 2         | 8       | 4      | 16      |
| <b>Total Items</b>                           | 20        | 27      | 20        | 27      | 40     | 54      |
| Matrix (Equating and/or Field Test) per form | Session 1 |         | Session 2 |         | Total  |         |
|  | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
| <b>Total Items</b>                           | 3         | 6–7     | 3         | 6–7     | 6      | 12–14   |
| Total Student Experience                     | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
|  | 23        | 33–34   | 23        | 33–34   | 46     | 66–68   |

|             | Max Points | Scored |       |
|-------------|------------|--------|-------|
| Item Types: | 1          | MS1    | SA/SR |
|             | 2          | MS2    | SA/SR |
|             | 4          | HS4    | CR    |

| Reporting Category |                                     | G7       |        |
|--------------------|-------------------------------------|----------|--------|
|                    |                                     | Percents | Points |
| G                  | Geometry                            | 15%      | 8      |
| RP                 | Ratios & Proportional Relationships | 20%      | 10–11  |
| NS                 | The Number System                   | 20%      | 10–11  |
| EE                 | Expressions & Equations             | 25%      | 13–14  |
| SP                 | Statistics & Probability            | 20%      | 10–11  |

## 2022 Grade 8—Mathematics

| Common                                       | Session 1 |         | Session 2 |         | Total  |         |
|--|-----------|---------|-----------|---------|--------|---------|
|  | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
| MS1  | 17        | 17      | 17        | 17      | 34     | 34      |
| MS2  | 1         | 2       | 1         | 2       | 2      | 4       |
| HS4  | 2         | 8       | 2         | 8       | 4      | 16      |
| <b>Total Items</b>                           | 20        | 27      | 20        | 27      | 40     | 54      |
| Matrix (Equating and/or Field Test) per form | Session 1 |         | Session 2 |         | Total  |         |
|  | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
| <b>Total Items</b>                           | 3         | 6–7     | 3         | 6–7     | 6      | 12–14   |
| Total Student Experience                     | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
|  | 23        | 33–34   | 23        | 33–34   | 46     | 66–68   |

|             | Max Points | Scored |       |
|-------------|------------|--------|-------|
| Item Types: | 1          | MS1    | SA/SR |
|             | 2          | MS2    | SA/SR |
|             | 4          | HS4    | OR    |

| Reporting Category |   | G8       |        |
|--------------------|---|----------|--------|
|                    |   | Percents | Points |
| G                  | Geometry                                      | 30%      | 16     |
| F                  | Functions                                     | 20%      | 10–11  |
| NSEE               | The Number System and Expressions & Equations | 40%      | 21–22  |
| SP                 | Statistics & Probability                      | 10%      | 5–6    |



## 2022 Grade 10—Mathematics

| Common                                       | Session 1 |         | Session 2 |         | Total  |         |
|--|-----------|---------|-----------|---------|--------|---------|
|  | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
| MS1  | 16        | 16      | 16        | 16      | 32     | 32      |
| MS2  | 3         | 6       | 3         | 6       | 6      | 12      |
| HS4-OR                                       | 2         | 8       | 2         | 8       | 4      | 16      |
| Total Items                                  | 21        | 30      | 21        | 30      | 42     | 60      |
| Matrix (Equating and/or Field Test) per form | Session 1 |         | Session 2 |         | Total  |         |
|  | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
| Total Items                                  | 6         | 10      | 6         | 10      | 12     | 20      |
| Total Student Experience                     | Number    | Tot Pts | Number    | Tot Pts | Number | Tot Pts |
|  | 27        | 40      | 27        | 40      | 54     | 80      |

|             | Max Points | Scored |       |
|-------------|------------|--------|-------|
| Item Types: | 1          | MS1    | SA/SR |
|             | 2          | MS2    | SA/SR |
|             | 4          | HS4    | CR    |

| Reporting Categories |                          | G10      |        |
|----------------------|--------------------------|----------|--------|
|                      |                          | Percents | Points |
| NQ                   | Number & Quantity        | 15%      | 9      |
| AF                   | Algebra & Functions      | 35%      | 21     |
| G                    | Geometry                 | 35%      | 21     |
| SP                   | Statistics & Probability | 15%      | 9      |

**2022 Grades 5 & 8—STE**

|                                 | Session 1   |                     | Session 2              |                          |           | Total           |                          |           |           |
|---------------------------------|---|---------------------|------------------------|--------------------------|-----------|-----------------|--------------------------|-----------|-----------|
|                                 | Quantity  | Total points        | Quantity               | Total points             | Quantity  | Total points    |                          |           |           |
| <b>Common</b>                   | <b>Module (stimulus)</b>                            | 1                   | 0                      | <b>Module (stimulus)</b> | 1         | 0               | <b>Module (stimulus)</b> | 2         | 0         |
|                                 | MS1   | 3                   | 3                      | MS1                      | 3         | 3               | MS1                      | 6         | 6         |
|                                 | HS3   | 1                   | 3                      | HS3                      | 1         | 3               | HS3                      | 2         | 6         |
|                                 | <b>Discrete</b>                                     |                     | <b>Discrete</b>        |                          |           | <b>Discrete</b> |                          |           |           |
|                                 | MS1   | 12                  | 12                     | MS1                      | 14        | 14              | MS1                      | 26        | 26        |
|                                 | MS2   | 2                   | 4                      | MS2                      | 1         | 2               | MS2                      | 3         | 6         |
|                                 | HS2   | 1                   | 2                      | HS2                      | 1         | 2               | HS2                      | 2         | 4         |
|                                 | HS3   | 1                   | 3                      | HS3                      | 1         | 3               | HS3                      | 2         | 6         |
|                                 | <b>Total Items</b>                                  | <b>20</b>           | <b>27</b>              | <b>Total Items</b>       | <b>21</b> | <b>27</b>       | <b>Total Items</b>       | <b>41</b> | <b>54</b> |
|                                 | <b>Matrix (Equating and/or Field Test) per form</b> | <b>Session 1</b>    |                        | <b>Session 2</b>         |           |                 |                          |           |           |
| <b>Number of Items</b>          |   | <b>Total points</b> | <b>Number of Items</b> | <b>Total points</b>      |           |                 |                          |           |           |
|                                 | <b>Total</b>  | 4                   | 6                      | <b>Total</b>             | 3         | 4               |                          |           |           |
| <b>Total Student Experience</b> | <b>Number of Items</b>                              |                     | <b>Number of Items</b> |                          |           |                 |                          |           |           |
|                                 | <b>Session 1</b>                                    | 24                  | 33                     | <b>Session 2</b>         | 24        | 31              | <b>Total Items</b>       | 48        | 64        |

Item types: machine scored 1 or 2 points (MS1 or MS2); human scored 3 or 4 points (HS3 or HS4). A module is a stimulus with three MS1, one MS2 (or 2 additional MS1) and one HS3, totaling 6 points.

| Code | Reporting Category      | Grade 5 |        | Grade 8 |        |
|------|-------------------------|---------|--------|---------|--------|
|      |                         | %       | Points | %       | Points |
| ES   | Earth and Space Science | 26      | 14     | 25      | 13–14  |
| LS   | Life Science            | 26      | 14     | 25      | 13–14  |
| PS   | Physical Science        | 26      | 14     | 25      | 13–14  |
| TE   | Technology/Engineering  | 2       | 12     | 25      | 13–14  |

| Code | Practice Category                 |
|------|-----------------------------------|
| A    | Investigations and Questioning    |
| B    | Mathematics and Data              |
| C    | Evidence, Reasoning, and Modeling |

## 2022 Biology—STE

|                          | Session 1                                    |              | Session 2       |                    |           | Total        |                    |           |           |  |
|--------------------------|--|--------------|-----------------|--------------------|-----------|--------------|--------------------|-----------|-----------|--|
|                          | Quantity                                     | Total points | Quantity        | Total points       | Quantity  | Total points |                    |           |           |  |
| Common                   | Module (stimulus)                            | 1            | 0               | Module (stimulus)  | 1         | 0            | Module (stimulus)  | 2         | 0         |  |
|                          | MS1  | 3            | 3               | MS1                | 3         | 3            | MS1                | 6         | 6         |  |
|                          | MS2 (or 2 MS1)                               | 1            | 2               | MS2 (or 2 MS1)     | 1         | 2            | MS2 (or 2 MS1)     | 2         | 4         |  |
|                          | HS3  | 1            | 3               | HS3                | 1         | 3            | HS3                | 2         | 6         |  |
|                          | Discrete                                     |              |                 | Discrete           |           |              | Discrete           |           |           |  |
|                          | MS1  | 13           | 13              | MS1                | 13        | 13           | MS1                | 26        | 26        |  |
|                          | MS2  | 1            | 2               | MS2                | 2         | 4            | MS2                | 3         | 6         |  |
|                          | HS4  | 2            | 8               | HS4                | 1         | 4            | HS4                | 3         | 12        |  |
|                          | <b>Total Items</b>                           | <b>21</b>    | <b>31</b>       | <b>Total Items</b> | <b>21</b> | <b>29</b>    | <b>Total Items</b> | <b>42</b> | <b>60</b> |  |
|                          | Matrix (Equating and/or Field Test) per form | Session 1    |                 | Session 2          |           |              |                    |           |           |  |
| Number of Items          |  | Total points | Number of Items | Total points       |           |              |                    |           |           |  |
|                          | <b>Total</b>                                 | 8            | 12              | <b>Total</b>       | 8         | 12           |                    |           |           |  |
| Total Student Experience | Number of Items                              |              | Number of Items |                    |           | Number       |                    |           |           |  |
|                          | <b>Session 1</b>                             | 29           | 43              | <b>Session 2</b>   | 29        | 41           | <b>Total Items</b> | 58        | 84        |  |

Item types: machine scored 1 or 2 points (MS1 or MS2); human scored 3 or 4 points (HS3 or HS4). A module is a stimulus with three MS1, one MS2 (or 2 additional MS1) and one HS3, totaling 8 points.

| <b>Code</b> | <b>Reporting Category</b> | <b>%</b> | <b>Points</b> |
|-------------|---------------------------|----------|---------------|
| <b>MO</b>   | Molecules to Organisms    | 35       | 21            |
| <b>HE</b>   | Heredity                  | 25       | 15            |
| <b>EV</b>   | Evolution                 | 20       | 12            |
| <b>EC</b>   | Ecology                   | 20       | 12            |

| <b>Code</b> | <b>Practice Category</b>          |
|-------------|-----------------------------------|
| <b>A</b>    | Investigations and Questioning    |
| <b>B</b>    | Mathematics and Data              |
| <b>C</b>    | Evidence, Reasoning, and Modeling |

## 2022 Introductory Physics—STE

|                          | Session 1                                    |              | Session 2       |                    | Total        |              |                    |              |                    |
|--------------------------|--|--------------|-----------------|--------------------|--------------|--------------|--------------------|--------------|--------------------|
|                          | Quantity                                     | Total points | Quantity        | Total points       | Quantity     | Total points |                    |              |                    |
| Common                   | Module (stimulus)                            | 1            | 0               | Module (stimulus)  | 1            | 0            | Module (stimulus)  | 2            | 0                  |
|                          | MS1  | 3            | 3               | MS1                | 3            | 3            | MS1                | 6            | 6                  |
|                          | MS2 (or 2 MS1)                               | 1            | 2               | MS2 (or 2 MS1)     | 1            | 2            | MS2 (or 2 MS1)     | 2            | 4                  |
|                          | HS3  | 1            | 3               | HS3                | 1            | 3            | HS3                | 2            | 6                  |
|                          | Discrete                                     |              | Discrete        |                    | Discrete     |              |                    |              |                    |
|                          | MS1  | 13           | 13              | MS1                | 13           | 13           | MS1                | 26           | 26                 |
|                          | MS2  | 1            | 2               | MS2                | 2            | 4            | MS2                | 3            | 6                  |
|                          | HS4  | 2            | 8               | HS4                | 1            | 4            | HS4                | 3            | 12                 |
|                          | <b>Total Items</b>                           | <b>21</b>    | <b>31</b>       | <b>Total Items</b> | <b>21</b>    | <b>29</b>    | <b>Total Items</b> | <b>42</b>    | <b>60</b>          |
|                          | Matrix (Equating and/or Field Test) per form | Session 1    |                 | Session 2          |              |              |                    |              |                    |
| Number of Items          |  | Total points | Number of Items | Total points       |              |              |                    |              |                    |
|                          | <b>Total</b>                                 | <b>8</b>     | <b>12</b>       | <b>Total</b>       | <b>8</b>     | <b>12</b>    |                    |              |                    |
| Total Student Experience | Number of Items                              |              | Number of Items |                    | Total points |              | Number             | Total points |                    |
|                          | Session 1                                    | 29           | 43              | Session 2          | 29           | 41           |                    |              | <b>Total Items</b> |

Item types: machine scored 1 or 2 points (MS1 or MS2); human scored 3 or 4 points (HS3 or HS4). A module is a stimulus with three MS1, one MS2 (or 2 additional MS1) and one HS3, totaling 8 points.

| <b>Code</b> | <b>Reporting Category</b>        | <b>%</b> | <b>Points</b> |
|-------------|----------------------------------|----------|---------------|
| <b>MF</b>   | Motion, Forces, and Interactions | 50       | 30            |
| <b>EN</b>   | Energy                           | 30       | 18            |
| <b>WA</b>   | Waves                            | 20       | 12            |

| <b>Code</b> | <b>Practice Category</b>          |
|-------------|-----------------------------------|
| <b>A</b>    | Investigations and Questioning    |
| <b>B</b>    | Mathematics and Data              |
| <b>C</b>    | Evidence, Reasoning, and Modeling |

**Quantitative**

35–50% of the test (by points) should be quantitative (21–30 points).