## Appendix I

## Differential Item Functioning Results

Table l-1. Number of Items Classified as "Low" or "High" DIF, Overall and by Group Favored - High School Biology

| Group |  | Item Type | Number of Items | Number "Low" |  |  | Number "High" |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Reference | Focal |  |  | Total | Favoring |  | Total | Favoring |  |
|  |  |  |  |  | Reference | Focal |  | Reference | Focal |
| Male | Female | MC | 40 | 3 | 3 | 0 | 0 | 0 | 0 |
|  |  | OR | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| Students without | Students with | MC | 40 | 0 | 0 | 0 | 0 | 0 | 0 |
| Disabilities | Disabilities | OR | 5 | 1 | 1 | 0 | 0 | 0 | 0 |
| Not LEPFLEP | LEPFLEP | MC | 40 | 6 | 4 | 2 | 2 | 2 | 0 |
|  |  | OR | 5 | 2 | 2 | 0 | 0 | 0 | 0 |
| Not Economically | Economically | MC | 40 | 0 | 0 | 0 | 0 | 0 | 0 |
| Disadvantaged | Disadvantaged | OR | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| White | African American | MC | 40 | 2 | 1 | 1 | 0 | 0 | 0 |
|  |  | OR | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Hispanic | MC | 40 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |  | OR | 5 | 0 | 0 | 0 | 0 | 0 | 0 |

Table I-2. Number of Items Classified as "Low" or "High" DIF, Overall and by Group Favored - High School Chemistry

| Group |  | Item Type | Number of Items | Number "Low" |  |  | Number "High" |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Reference | Focal |  |  | Total | Favoring |  | Total | Favoring |  |
|  |  |  |  |  | Reference | Focal |  | Reference | Focal |
| Male | Female | MC | 40 | 12 | 6 | 6 | 4 | 3 | 1 |
|  |  | OR | 5 | 1 | 0 | 1 | 0 | 0 | 0 |
| Students without Disabilities | Students with Disabilities | MC | 40 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |  | OR | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| Not LEPFLEP | LEPFLEP | MC | 40 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |  | OR | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Economically Disadvantaged | Economically Disadvantaged | MC | 40 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |  | OR | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| White | African American | MC | 40 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |  | OR | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Hispanic | MC | 40 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |  | OR | 5 | 0 | 0 | 0 | 0 | 0 | 0 |

Table I-3. Number of Items Classified as "Low" or "High" DIF, Overall and by Group Favored - High School Introductory Physics

| Group |  | Item Type | Number of Items | Number "Low" |  |  | Number "High" |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Reference | Focal |  |  | Total | Favoring |  | Total | Favoring |  |
| Reference | Focal |  |  |  | Reference | Focal |  | Reference | Focal |
| Male | Female | MC | 40 | 6 | 6 | 0 | 0 | 0 | 0 |
|  |  | OR | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| Students without Disabilities | Students with Disabilities | MC | 40 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |  | OR | 5 | 1 | 1 | 0 | 0 | 0 | 0 |
| Not LEPFLEP | LEPFLEP | MC | 40 | 7 | 6 | 1 | 0 | 0 | 0 |
|  |  | OR | 5 | 1 | 1 | 0 | 0 | 0 | 0 |
| Not Economically Disadvantaged | Economically Disadvantaged | MC | 40 | 1 | 1 | 0 | 0 | 0 | 0 |
|  |  | OR | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| White | African American | MC | 40 | 2 | 1 | 1 | 1 | 1 | 0 |
|  |  | OR | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Hispanic | MC | 40 | 2 | 2 | 0 | 0 | 0 | 0 |
|  |  | OR | 5 | 0 | 0 | 0 | 0 | 0 | 0 |

Table I-4. Number of Items Classified as "Low" or "High" DIF, Overall and by Group Favored - High School Technology/Engineering

| Group |  | Item Type | Number of Items | Number "Low" |  |  | Number "High" |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Reference | Focal |  |  | Total | Favoring |  | Total | Favoring |  |
|  |  |  |  |  | Reference | Focal |  | Reference | Focal |
| Male | Female | MC | 40 | 11 | 9 | 2 | 1 | 1 | 0 |
|  |  | OR | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| Students without Disabilities | Students with Disabilities | MC | 40 | 4 | 4 | 0 | 0 | 0 | 0 |
|  |  | OR | 5 | 1 | 1 | 0 | 0 | 0 | 0 |
| Not LEPFLEP | LEPFLEP | MC | 40 | 13 | 6 | 7 | 11 | 9 | 2 |
|  |  | OR | 5 | 2 | 1 | 1 | 0 | 0 | 0 |
| Not Economically Disadvantaged | Economically Disadvantaged | MC | 40 | 3 | 3 | 0 | 0 | 0 | 0 |
|  |  | OR | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| White | African American | MC | 40 | 11 | 7 | 4 | 6 | 5 | 1 |
|  |  | OR | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | Hispanic | MC | 40 | 6 | 4 | 2 | 0 | 0 | 0 |
|  |  | OR | 5 | 0 | 0 | 0 | 0 | 0 | 0 |

