**Appendix A.** **Examples of items contained on the SIT-N (top) and SMT-N (bottom)**

|  |  |  |
| --- | --- | --- |
| sneedish | grushable | ploomory |
| trabless | mirlette | meckose |
| mippist | gampic | bracken |
| snaditis | blorkian | slenny |

|  |
| --- |
| **Spooch.**Which one means something like “full of spooch”?A.             SpoochableB.             SpoochenC.             SpoochishD.             Spoochful |
| **Weaf.**Which one means something like “the study of weaf”?A.             WeafogyB.             WeaferC.             WeafantD.             Weafory |

**Appendix B.** **Target suffixes used in the SIT-N and SMT-N**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Suffix type | Suffix | Family size | Frequency | Length |
|  | -y | 2486 | 3870233 | 1 |
|  | -ish | 252 | 161977 | 3 |
|  | -less | 368 | 158354 | 4 |
|  | -ine | 30 | 18081 | 3 |
|  | -ous | 9 | 2108 | 3 |
|  | -ive | 580 | 1037354 | 3 |
| Adjectives | -ful | 343 | 429561 | 3 |
|  | -ate | 937 | 2569118 | 3 |
|  | -able | 872 | 1227992 | 4 |
|  | -ar | 129 | 533962 | 2 |
|  | -ose | 13 | 2108 | 3 |
|  | -en | 204 | 655590 | 2 |
|  | -ic\* | 1014 | 1472797 | 2 |
|  | -ile\* | 10 | 5460 | 3 |
| Mean |  | 517.64 | 867478.21 | 2.8 |
| *SD* |  | 668.40 | 1135040.68 | 0.8 |
|  |  |  |  |  |
|  | -ity | 580 | 1647588 | 3 |
|  | -ist | 462 | 382916 | 3 |
|  | -ment | 288 | 1423689 | 4 |
|  | -itis | 16 | 5021 | 4 |
|  | -er | 2274 | 4569119 | 2 |
| Nominals | -ian | 174 | 394113 | 3 |
|  | -ory | 356 | 725186 | 3 |
|  | -ant | 464 | 1534593 | 3 |
|  | -ette | 14 | 6920 | 4 |
|  | -ogy | 1 | 80 | 3 |
|  | -ism | 271 | 218200 | 3 |
|  | -let | 14 | 9586 | 3 |
|  | -ness\* | 1243 | 181553 | 4 |
|  | -ance\* | 323 | 977837 | 4 |
| Mean |  | 462.86 | 862600.07 | 3.3 |
| *SD* |  | 613.96 | 1222258.43 | 0.6 |

*Note.* Suffixes marked with an asterisk were the ones removed from the SMT-N. Adjectival and nominal suffixes were matched on family size, frequency, and length; *t*(26) = 0.23, *p* = 0.82, *t*(26) = 0.01, *p* = 0.99, *t*(24) = -1.86, *p* = 0.08.

**Appendix C.** **Accuracy scores for the SIT-N for each suffix type by grade level**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | *Suffix* | *Grade 3**(N=103)* | *Grade 5**(N=120)* | *Grade 8**(N=86)* |
|  | -ile | 39% | 77% | 83% |
|  | -ine | 42% | 72% | 83% |
|  | -ose | 42% | 72% | 79% |
|  | -ous | 45% | 87% | 87% |
|  | -able | 45% | 76% | 89% |
|  | -less | 52% | 85% | 91% |
| Adjectives | -ive | 52% | 85% | 89% |
|  | -ic | 53% | 66% | 70% |
|  | -ish | 54% | 86% | 87% |
|  | -ate | 55% | 78% | 73% |
|  | -y | 64% | 65% | 53% |
|  | -ar | 78% | 81% | 89% |
|  | -en | 80% | 85% | 92% |
|  | -ful | 83% | 96% | 99% |
|  |  |  |  |  |
|  | -itis | 18% | 45% | 59% |
|  | -ette | 24% | 49% | 63% |
|  | -ance | 29% | 62% | 73% |
|  | -ity | 30% | 59% | 76% |
|  | -ogy | 30% | 54% | 74% |
|  | -ory | 34% | 65% | 74% |
|  | -ment | 35% | 66% | 76% |
| Nominals | -ian | 39% | 75% | 78% |
|  | -ness | 45% | 81% | 94% |
|  | -let | 51% | 85% | 90% |
|  | -ism | 51% | 84% | 90% |
|  | -ist | 54% | 78% | 74% |
|  | -ant | 60% | 86% | 87% |
|  | -er | 86% | 76% | 69% |

**Appendix D.** **Accuracy scores for the SMT-N for each suffix type by grade level**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | *Suffix* | *Grade 3**(N=103)* | *Grade 5**(N=120)* | *Grade 8**(N=86)* |
|  | -ose | 15% | 28% | 21% |
|  | -ive | 16% | 26% | 22% |
|  | -ous | 28% | 59% | 63% |
|  | -ate | 28% | 28% | 38% |
|  | -ine | 31% | 37% | 26% |
| Adjectives | -en | 32% | 46% | 37% |
|  | -ar | 36% | 63% | 38% |
|  | -ish | 46% | 69% | 79% |
|  | -y | 47% | 52% | 52% |
|  | -able | 49% | 73% | 78% |
|  | -less | 80% | 90% | 93% |
|  | -ful | 80% | 90% | 90% |
|  |  |  |  |  |
|  | -ette | 27% | 50% | 62% |
|  | -ant | 29% | 43% | 62% |
|  | -ory | 29% | 43% | 62% |
|  | -ity | 30% | 30% | 40% |
|  | -itis | 34% | 56% | 62% |
|  | -ogy | 35% | 50% | 69% |
| Nominals | -let | 38% | 46% | 60% |
|  | -ian | 41% | 53% | 55% |
|  | -ism | 42% | 53% | 78% |
|  | -ist | 47% | 61% | 83% |
|  | -ment | 51% | 51% | 63% |
|  | -er | 63% | 81% | 81% |

**Appendix E. Model comparisons for the SIT-N task**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Fixed effects | Random effects |  | Model fit |  | LRT against the nested model |
| Participant | Item |  | AIC | BIC | LL |  | Comparison | *df* | χ2 |
| Model 0 (Null) | - | intercept | intercept |  | 16929.3 | 16952.6 | -8461.7 |  | – | – | – |
| Model 1 | WR + Voc | intercept | intercept |  | 16909.8 | 16948.6 | -8449.9 |  | M0 vs. M1 | 2 | 23.58\*\*\* |
| Model 2 | WR + Voc + Grade + Suffix\_type | intercept | intercept |  | 16780.0 | 16842.0 | -8382.0 |  | M1 vs. M2 | 3 | 135.79\*\*\* |
| Model 3 | WR + Voc + Grade + Suffix type + Grade:Suffix\_type | intercept | intercept |  | 16773.1 | 16850.6 | -8376.5 |  | M2 vs. M3 | 2 | 10.91\*\* |
| Model 4 | WR + Voc + Grade + Suffix type + Grade:Suffix\_type | intercept, Suffix\_type | intercept |  | 16727.0 | 16820.1 | -8351.5 |  | M3 vs. M4 | 2 | 50.09\*\*\* |
| Model 5 | WR + Voc + Grade + Suffix type + Grade:Suffix\_type | intercept | intercept, Grade |  | 16454.9 | 16571.2 | -8212.4 |  | M3 vs. M5 | 5 | 328.21\*\*\* |
| Model 6 | WR + Voc + Grade + Suffix type + Grade:Suffix\_type | intercept, Suffix\_type | intercept, Grade |  | 16398.1 | 16530.0 | -8182.1 |  | M5 vs. M6 | 2 | 60.72\*\*\* |

*Note.* The analysis code for the models are available https://osf.io/wx2q9/?view\_only=e27f169880c640d6929b96dc28555687 (link anonymized for blind review). LRT = likelihood ratio test; WR = word reading; Voc = vocabulary; LL = log-likelihood.

\*\**p* < .01, \*\*\**p* < .001.

**Appendix F. Model comparisons for the SMT-N task**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Fixed effects | Random effects |  | Model fit |  | LRT against the nested model |
| Participant | Item |  | AIC | BIC | LL |  | Comparison | *df* | χ2 |
| Model 0 (Null) | - | intercept | intercept |  | 9040.9 | 9061.7 | -4517.5 |  | – | – | – |
| Model 1 | WR + Voc | intercept | intercept |  | 8983.3 | 9017.9 | -4486.7 |  | M0 vs. M1 | 2 | 61.61\*\*\* |
| Model 2 | WR + Voc + Grade + Suffix\_type | intercept | intercept |  | 8887.8 | 8943.1 | -4435.9 |  | M1 vs. M2 | 3 | 101.52\*\*\* |
| Model 3 | WR + Voc + Grade + Suffix type + Grade:Suffix\_type | intercept | intercept |  | 8859.1 | 8928.2 | -4419.5 |  | M2 vs. M3 | 2 | 32.73\*\*\* |
| Model 4 | WR + Voc + Grade + Suffix type + Grade:Suffix\_type | intercept, Suffix\_type | intercept |  | 8844.2 | 8927.2 | -4410.1 |  | M3 vs. M4 | 2 | 18.87\*\*\* |
| Model 5 | WR + Voc + Grade + Suffix type + Grade:Suffix\_type | intercept | intercept, Grade |  | 8842.6 | 8946.3 | -4406.3 |  | M3 vs. M5 | 5 | 26.45\*\*\* |
| Model 6 | WR + Voc + Grade + Suffix type + Grade:Suffix\_type | intercept, Suffix\_type | intercept, Grade |  | 8827.8 | 8945.3 | -4396.9 |  | M5 vs. M6 | 2 | 18.83\*\*\* |

*Note.* The analysis code for the models are available https://osf.io/wx2q9/?view\_only=e27f169880c640d6929b96dc28555687 (link anonymized for blind review). WR = word reading; Voc = vocabulary; LL = log-likelihood.

\*\**p* < .01, \*\*\**p* < .001.

**Appendix G.** **SIT-N and SMT-N item frequency scores by type and Key Stage taken from** **Dawson et al. (2023)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Suffix type | Suffix | Stage 1 (ages 5-7) | Stage 2 (ages 7-11) | Stage 3 (ages 11-14) | Dif. Between Stages 1 and 2 | Dif. Between Stages 2 and 3 |
|  | -able | 13804 | 16400 | 18897 | 2596 | 2497 |
|  | -ar | 7823 | 10157 | 9954 | 2334 | -203 |
|  | -ful | 33171 | 24772 | 17252 | -8399 | -7520 |
| Adjectives | -ic | 7893 | 12647 | 13279 | 4754 | 632 |
|  | -ine | 1634 | 1532 | 2161 | -102 | 629 |
|  | -ous | 16551 | 18230 | 17316 | 1679 | -914 |
|  | -ish | 5424 | 7451 | 9215 | 2027 | 1764 |
|  | -ive | 5494 | 9581 | 11510 | 4087 | 1929 |
|  | -less | 4555 | 6038 | 5266 | 1483 | -772 |
|  | Mean | 10705.44 | 11867.56 | 11650 | 1162.11 | -217.56 |
|  | *SD* | 9616.80 | 7041.16 | 5681.99 | 3857.09 | 2988.73 |
|  |  |  |  |  |  |  |
|  | -ant | 22566 | 31984 | 34003 | 9418 | 2019 |
|  | -ette | 209 | 266 | 1080 | 57 | 814 |
|  | -ism | 104 | 1371 | 1188 | 1267 | -183 |
| Nominals | -itis | 0 | 48 | 320 | 48 | 272 |
|  | -ity | 11300 | 20795 | 28163 | 9495 | 7368 |
|  | -ory | 11127 | 16176 | 16495 | 5049 | 319 |
|  | -ness | 9318 | 15234 | 16933 | 5916 | 1699 |
|  | -ment | 11022 | 18850 | 22369 | 7828 | 3519 |
|  | -let | 70 | 986 | 1188 | 916 | 202 |
|  | Mean | 7301.78 | 11745.56 | 13526.56 | 4443.78 | 1781.00 |
|  | *SD* | 7820.25 | 11542.15 | 13066.77 | 3958.35 | 2397.88 |

*Note.* Negative numbers show a decrease in frequency between stage comparisons.