

**Appendix A : Master Information Chart**

Highlighted rows : Subjects disqualified from research sample

0 : Failed criterion

Subjects were sorted according to Graded Word Spelling Test scores and then systematically marked off into four groups within their grades.

| Parent's requested results of project | Sample Number | Number of subjects in Grade 5 |   | Grade | Male / Female | Permission granted | Spelling Difficulty        |                                  |              |                     | English schooling for last 2 years | No WP experience | Absence of specific difficulties |                           |                          |               | Qualifying for sample group | Sample group number |
|---------------------------------------|---------------|-------------------------------|---|-------|---------------|--------------------|----------------------------|----------------------------------|--------------|---------------------|------------------------------------|------------------|----------------------------------|---------------------------|--------------------------|---------------|-----------------------------|---------------------|
|                                       |               |                               |   |       |               |                    | Graded Spelling Test Score | Age at Graded Word Spelling Test | Spelling age | Spelling difficulty |                                    |                  | Functional hearing               | No attention difficulties | Functional mouse control |               |                             |                     |
|                                       |               |                               |   |       |               |                    |                            |                                  |              |                     |                                    |                  |                                  |                           | Mouse tracking speed     | Mouse control |                             |                     |
|                                       |               |                               |   |       |               |                    |                            |                                  |              |                     |                                    |                  |                                  |                           |                          |               |                             |                     |
|                                       | 16            | 1                             | 4 | Boy   | 1             | 5                  | 10-11                      | 06-01                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 58                       | 1             | 1                           | 1                   |
|                                       | 18            | 1                             | 4 | Boy   | 1             | 7                  | 12-00                      | 06-04                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 55                       | 1             | 1                           | 2                   |
|                                       | 11            | 1                             | 4 | Girl  | 1             | 9                  | 11-11                      | 06-07                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 54                       | 1             | 1                           | 3                   |
|                                       | 17            | 1                             | 4 | Boy   | 1             | 9                  | 11-00                      | 06-07                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 40                       | 1             | 1                           | 4                   |
|                                       | 5             | 1                             | 4 | Boy   | 1             | 11                 | 11-04                      | 06-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 38                       | 1             | 1                           | 1                   |
|                                       | 27            | 1                             | 4 | Boy   | 1             | 11                 | 10-05                      | 06-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 60                       | 1             | 1                           | 2                   |
|                                       | 8             | 1                             | 4 | Girl  | 1             | 12                 | 12-06                      | 07-00                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 61                       | 1             | 1                           | 3                   |
|                                       | 21            | 1                             | 4 | Boy   | 1             | 12                 | 11-03                      | 07-00                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 42                       | 1             | 1                           | 4                   |
|                                       | 28            | 1                             | 4 | Girl  | 1             | 12                 | 11-08                      | 07-00                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 56                       | 1             | 1                           | 1                   |
|                                       | 12            | 1                             | 4 | Boy   | 1             | 13                 | 10-02                      | 07-01                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 62                       | 1             | 1                           | 2                   |
|                                       | 2             | 1                             | 4 | Boy   | 1             | 14                 | 11-02                      | 07-03                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 57                       | 1             | 1                           | 3                   |
|                                       | 22            | 1                             | 4 | Boy   | 1             | 14                 | 10-06                      | 07-03                            | 1            | 1                   | 1                                  | 1                | 0                                | 50                        | 1                        | 0             |                             |                     |
|                                       | 24            | 1                             | 4 | Girl  | 1             | 14                 | 10-11                      | 07-03                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 53                       | 1             | 1                           | 4                   |
|                                       | 23            | 1                             | 4 | Boy   | 1             | 15                 | 11-05                      | 07-05                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 51                       | 1             | 1                           | 1                   |
|                                       | 10            | 1                             | 4 | Boy   | 1             | 16                 | 10-06                      | 07-07                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 64                       | 1             | 1                           | 2                   |
|                                       | 15            | 1                             | 4 | Boy   | 1             | 16                 | 09-03                      | 07-07                            | 1            | 1                   | 1                                  | 1                | 0                                | 70                        | 1                        | 0             |                             |                     |
|                                       | 6             | 1                             | 4 | Boy   | 1             | 17                 | 10-06                      | 07-08                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 51                       | 1             | 1                           | 3                   |
|                                       | 19            | 1                             | 4 | Boy   | 1             | 17                 | 11-04                      | 07-08                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 41                       | 1             | 1                           | 4                   |
|                                       | 20            | 1                             | 4 | Girl  | 1             | 19                 | 11-04                      | 08-00                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 43                       | 1             | 1                           | 1                   |
|                                       | 7             | 1                             | 4 | Boy   | 1             | 21                 | 10-00                      | 08-04                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 51                       | 1             | 1                           | 2                   |
|                                       | 25            | 1                             | 4 | Boy   | 1             | 21                 | 09-10                      | 08-04                            | 0            | 1                   | 1                                  | 1                | 1                                | 45                        | 1                        | 0             |                             |                     |
|                                       | 29            | 1                             | 4 | Boy   | 1             | 22                 | 10-03                      | 08-06                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 62                       | 1             | 1                           | 3                   |
|                                       | 1             | 1                             | 4 | Boy   | 1             | 23                 | 10-06                      | 08-08                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 50                       | 1             | 1                           | 4                   |
|                                       | 13            | 1                             | 4 | Girl  | 1             | 24                 | 10-10                      | 08-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 63                       | 1             | 1                           | 1                   |
|                                       | 26            | 1                             | 4 | Boy   | 1             | 24                 | 10-10                      | 08-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 1                         | 49                       | 1             | 1                           | 2                   |
|                                       | 9             | 1                             | 4 | Boy   | 1             | 27                 | 10-11                      | 09-04                            | 0            | 1                   | 1                                  | 1                | 1                                | 53                        | 1                        | 0             |                             |                     |
|                                       | 14            | 1                             | 4 | Boy   | 1             | 27                 | 09-10                      | 09-04                            | 0            | 1                   | 1                                  | 1                | 1                                | 46                        | 1                        | 0             |                             |                     |
| *                                     | 3             | 1                             | 4 | Boy   | 1             | 28                 | 11-02                      | 09-06                            | 0            | 1                   | 1                                  | 1                | 1                                | 50                        | 1                        | 0             |                             |                     |
|                                       | 4             | 1                             | 4 | Girl  | 1             | 29                 | 09-11                      | 09-08                            | 0            | 1                   | 1                                  | 1                | 1                                | 43                        | 1                        | 0             |                             |                     |

| Parent's requested results of project | Sample Number | Number of subjects in Grade 5 |   | Grade | Male / Female | Permission granted | Spelling Difficulty        |                                  |              |                     | English schooling for last 2 years | No WP experience | Absence of specific difficulties |                           |                          |               | Qualifying for sample group | Sample group number |
|---------------------------------------|---------------|-------------------------------|---|-------|---------------|--------------------|----------------------------|----------------------------------|--------------|---------------------|------------------------------------|------------------|----------------------------------|---------------------------|--------------------------|---------------|-----------------------------|---------------------|
|                                       |               |                               |   |       |               |                    | Graded Spelling Test Score | Age at Graded Word Spelling Test | Spelling age | Spelling difficulty |                                    |                  | Functional hearing               | No attention difficulties | Functional mouse control |               |                             |                     |
|                                       |               |                               |   |       |               |                    |                            |                                  |              |                     |                                    |                  |                                  |                           | Mouse tracking speed     | Mouse control |                             |                     |
|                                       |               |                               |   |       |               |                    |                            |                                  |              |                     |                                    |                  |                                  |                           |                          |               |                             |                     |
| *                                     | 54            | 1                             | 5 | Girl  | 1             | 8                  | 12-11                      | 06-05                            | 1            | 1                   | 1                                  | 1                | 1                                | 48                        | 1                        | 1             | 3                           |                     |
|                                       | 32            | 1                             | 5 | Boy   | 1             | 10                 | 11-11                      | 06-08                            | 1            | 1                   | 1                                  | 1                | 1                                | 44                        | 1                        | 1             | 4                           |                     |
|                                       | 53            | 1                             | 5 | Girl  | 1             | 10                 | 12-00                      | 06-08                            | 1            | 1                   | 1                                  | 1                | 1                                | 51                        | 1                        | 1             | 1                           |                     |
|                                       | 56            | 1                             | 5 | Boy   | 1             | 13                 | 11-11                      | 07-01                            | 1            | 1                   | 1                                  | 1                | 1                                | 54                        | 1                        | 1             | 2                           |                     |
|                                       | 59            | 1                             | 5 | Boy   | 1             | 14                 | 11-10                      | 07-03                            | 1            | 1                   | 1                                  | 1                | 1                                | 46                        | 1                        | 1             | 3                           |                     |
|                                       | 47            | 1                             | 5 | Boy   | 1             | 15                 | 10-11                      | 07-05                            | 1            | 1                   | 1                                  | 1                | 1                                | 56                        | 1                        | 1             | 4                           |                     |
|                                       | 31            | 1                             | 5 | Boy   | 1             | 17                 | 10-10                      | 07-08                            | 1            | 1                   | 1                                  | 1                | 1                                | 43                        | 1                        | 1             | 1                           |                     |
|                                       | 55            | 1                             | 5 | Boy   | 1             | 18                 | 12-03                      | 07-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 54                        | 1                        | 1             | 2                           |                     |
|                                       | 41            | 1                             | 5 | Boy   | 1             | 19                 | 10-07                      | 08-00                            | 1            | 1                   | 1                                  | 1                | 1                                | 63                        | 1                        | 1             | 3                           |                     |
|                                       | 43            | 1                             | 5 | Boy   | 1             | 19                 | 12-00                      | 08-00                            | 1            | 1                   | 1                                  | 1                | 1                                | 49                        | 1                        | 1             | 4                           |                     |
|                                       | 48            | 1                             | 5 | Boy   | 1             | 19                 | 11-10                      | 08-00                            | 1            | 1                   | 1                                  | 1                | 1                                | 52                        | 1                        | 1             | 1                           |                     |
|                                       | 49            | 1                             | 5 | Boy   | 1             | 19                 | 12-03                      | 08-00                            | 1            | 1                   | 1                                  | 1                | 1                                | 53                        | 1                        | 1             | 2                           |                     |
|                                       | 34            | 1                             | 5 | Girl  | 1             | 21                 | 12-00                      | 08-04                            | 1            | 1                   | 1                                  | 1                | 1                                | 48                        | 1                        | 1             | 3                           |                     |
|                                       | 57            | 1                             | 5 | Girl  | 1             | 21                 | 12-06                      | 08-04                            | 1            | 1                   | 1                                  | 1                | 1                                | 54                        | 1                        | 1             | 4                           |                     |
|                                       | 58            | 1                             | 5 | Boy   | 1             | 21                 | 12-04                      | 08-04                            | 1            | 1                   | 1                                  | 1                | 1                                | 41                        | 1                        | 1             | 1                           |                     |
|                                       | 37            | 1                             | 5 | Boy   | 1             | 23                 | 12-00                      | 08-08                            | 1            | 1                   | 1                                  | 1                | 1                                | 57                        | 1                        | 1             | 2                           |                     |
|                                       | 51            | 1                             | 5 | Boy   | 1             | 23                 | 11-06                      | 08-08                            | 1            | 1                   | 1                                  | 1                | 1                                | 44                        | 1                        | 1             | 3                           |                     |
|                                       | 36            | 1                             | 5 | Girl  | 1             | 24                 | 11-08                      | 08-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 45                        | 1                        | 0             |                             |                     |
|                                       | 39            | 1                             | 5 | Boy   | 1             | 24                 | 12-08                      | 08-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 46                        | 1                        | 1             | 4                           |                     |
|                                       | 45            | 1                             | 5 | Boy   | 1             | 24                 | 10-08                      | 08-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 39                        | 1                        | 1             | 1                           |                     |
|                                       | 40            | 1                             | 5 | Girl  | 1             | 25                 | 11-06                      | 09-00                            | 1            | 1                   | 1                                  | 1                | 1                                | 67                        | 1                        | 1             | 2                           |                     |
|                                       | 44            | 1                             | 5 | Girl  | 1             | 26                 | 11-10                      | 09-02                            | 1            | 1                   | 1                                  | 1                | 1                                | 56                        | 1                        | 1             | 3                           |                     |
|                                       | 33            | 1                             | 5 | Boy   | 1             | 27                 | 12-03                      | 09-04                            | 1            | 1                   | 1                                  | 1                | 1                                | 36                        | 1                        | 1             | 4                           |                     |
|                                       | 30            | 1                             | 5 | Boy   | 1             | 28                 | 11-03                      | 09-06                            | 1            | 1                   | 1                                  | 1                | 1                                | 56                        | 1                        | 1             | 1                           |                     |
|                                       | 35            | 1                             | 5 | Girl  | 1             | 28                 | 12-04                      | 09-06                            | 1            | 1                   | 1                                  | 1                | 1                                | 39                        | 1                        | 1             | 2                           |                     |
|                                       | 38            | 1                             | 5 | Girl  | 1             | 29                 | 12-00                      | 09-08                            | 1            | 1                   | 1                                  | 1                | 1                                | 51                        | 1                        | 1             | 3                           |                     |
|                                       | 42            | 1                             | 5 | Boy   | 1             | 29                 | 11-10                      | 09-08                            | 1            | 1                   | 1                                  | 1                | 1                                | 49                        | 1                        | 1             | 4                           |                     |
|                                       | 52            | 1                             | 5 | Boy   | 1             | 30                 | 13-04                      | 09-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 45                        | 1                        | 1             | 1                           |                     |
|                                       | 61            | 1                             | 5 | Girl  | 1             | 30                 | 11-06                      | 09-10                            | 0            | 1                   | 1                                  | 0                | 1                                | 69                        | 1                        | 0             |                             |                     |
|                                       | 46            | 1                             | 5 | Boy   | 1             | 32                 | 12-06                      | 10-03                            | 1            | 1                   | 1                                  | 1                | 1                                | 56                        | 1                        | 1             | 2                           |                     |
|                                       | 60            | 1                             | 5 | Boy   | 1             | 35                 | 12-00                      | 10-10                            | 0            | 1                   | 1                                  | 1                | 1                                | 42                        | 1                        | 0             |                             |                     |
|                                       | 50            | 1                             | 5 | Girl  | 1             | 37                 | 11-02                      | 11-02                            | 0            | 1                   | 1                                  | 1                | 1                                | 49                        | 1                        | 0             |                             |                     |

| Parent's requested results of project | Sample Number | Number of subjects in Grade 5 |   | Grade | Male / Female | Permission granted | Spelling Difficulty        |                                  |              |                     | English schooling for last 2 years | No WP experience | Absence of specific difficulties |                           |                          |               | Qualifying for sample group | Sample group number |
|---------------------------------------|---------------|-------------------------------|---|-------|---------------|--------------------|----------------------------|----------------------------------|--------------|---------------------|------------------------------------|------------------|----------------------------------|---------------------------|--------------------------|---------------|-----------------------------|---------------------|
|                                       |               |                               |   |       |               |                    | Graded Spelling Test Score | Age at Graded Word Spelling Test | Spelling age | Spelling difficulty |                                    |                  | Functional hearing               | No attention difficulties | Functional mouse control |               |                             |                     |
|                                       |               |                               |   |       |               |                    |                            |                                  |              |                     |                                    |                  |                                  |                           | Mouse tracking speed     | Mouse control |                             |                     |
|                                       |               |                               |   |       |               |                    |                            |                                  |              |                     |                                    |                  |                                  |                           |                          |               |                             |                     |
| *                                     | 91            | 1                             | 6 | Girl  | 1             | 6                  | 13-06                      | 06-02                            | 1            | 1                   | 1                                  | 1                | 1                                | 45                        | 1                        | 1             | 3                           |                     |
|                                       | 97            | 1                             | 6 | Boy   | 1             | 11                 | 13-05                      | 06-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 53                        | 1                        | 1             | 4                           |                     |
|                                       | 67            | 1                             | 6 | Boy   | 1             | 13                 | 13-01                      | 07-01                            | 1            | 1                   | 1                                  | 1                | 1                                | 40                        | 1                        | 1             | 1                           |                     |
|                                       | 88            | 1                             | 6 | Boy   | 1             | 13                 | 12-03                      | 07-01                            | 1            | 1                   | 1                                  | 1                | 1                                | 42                        | 1                        | 1             | 2                           |                     |
|                                       | 98            | 1                             | 6 | Boy   | 1             | 13                 | 12-10                      | 07-01                            | 1            | 1                   | 1                                  | 1                | 1                                | 42                        | 1                        | 1             | 3                           |                     |
|                                       | 74            | 1                             | 6 | Boy   | 1             | 15                 | 13-05                      | 07-05                            | 1            | 1                   | 1                                  | 1                | 1                                | 50                        | 1                        | 1             | 4                           |                     |
|                                       | 71            | 1                             | 6 | Boy   | 1             | 17                 | 11-07                      | 07-08                            | 1            | 1                   | 1                                  | 1                | 1                                | 39                        | 1                        | 1             | 1                           |                     |
|                                       | 85            | 1                             | 6 | Boy   | 1             | 17                 | 12-07                      | 07-08                            | 1            | 1                   | 1                                  | 1                | 1                                | 47                        | 1                        | 1             | 2                           |                     |
|                                       | 83            | 1                             | 6 | Boy   | 1             | 18                 | 13-01                      | 07-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 44                        | 1                        | 1             | 3                           |                     |
|                                       | 96            | 1                             | 6 | Boy   | 1             | 18                 | 11-10                      | 07-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 46                        | 1                        | 1             | 4                           |                     |
|                                       | 80            | 1                             | 6 | Boy   | 1             | 19                 | 12-10                      | 08-00                            | 1            | 1                   | 1                                  | 1                | 1                                | 43                        | 1                        | 1             | 1                           |                     |
|                                       | 72            | 1                             | 6 | Boy   | 1             | 20                 | 11-07                      | 08-02                            | 1            | 1                   | 1                                  | 1                | 1                                | 41                        | 1                        | 1             | 2                           |                     |
|                                       | 79            | 1                             | 6 | Boy   | 1             | 21                 | 12-00                      | 08-04                            | 1            | 1                   | 1                                  | 1                | 1                                | 48                        | 1                        | 1             | 3                           |                     |
|                                       | 87            | 1                             | 6 | Boy   | 1             | 21                 | 14-02                      | 08-04                            | 1            | 1                   | 1                                  | 1                | 1                                | 43                        | 1                        | 1             | 4                           |                     |
|                                       | 93            | 1                             | 6 | Girl  | 1             | 21                 | 12-03                      | 08-04                            | 1            | 1                   | 1                                  | 1                | 1                                | 49                        | 1                        | 1             | 1                           |                     |
|                                       | 86            | 1                             | 6 | Girl  | 1             | 24                 | 12-08                      | 08-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 45                        | 1                        | 1             | 2                           |                     |
|                                       | 90            | 1                             | 6 | Girl  | 1             | 24                 | 13-01                      | 08-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 58                        | 1                        | 1             | 3                           |                     |
|                                       | 94            | 1                             | 6 | Boy   | 1             | 24                 | 12-01                      | 08-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 49                        | 1                        | 1             | 4                           |                     |
|                                       | 62            | 1                             | 6 | Boy   | 1             | 25                 | 12-05                      | 09-00                            | 1            | 1                   | 1                                  | 1                | 1                                | 34                        | 1                        | 1             | 1                           |                     |
|                                       | 68            | 1                             | 6 | Girl  | 1             | 26                 | 13-01                      | 09-02                            | 1            | 1                   | 1                                  | 1                | 1                                | 51                        | 1                        | 1             | 2                           |                     |
|                                       | 81            | 1                             | 6 | Boy   | 1             | 26                 | 12-08                      | 09-02                            | 1            | 1                   | 1                                  | 1                | 1                                | 37                        | 1                        | 1             | 3                           |                     |
|                                       | 78            | 1                             | 6 | Boy   | 1             | 27                 | 13-04                      | 09-04                            | 1            | 1                   | 1                                  | 1                | 1                                | 45                        | 1                        | 1             | 4                           |                     |
|                                       | 99            | 1                             | 6 | Boy   | 1             | 27                 | 13-05                      | 09-04                            | 1            | 1                   | 1                                  | 1                | 1                                | 38                        | 1                        | 1             | 1                           |                     |
|                                       | 70            | 1                             | 6 | Girl  | 1             | 28                 | 12-05                      | 09-06                            | 1            | 1                   | 1                                  | 1                | 1                                | 40                        | 1                        | 1             | 2                           |                     |
|                                       | 73            | 1                             | 6 | Girl  | 1             | 28                 | 12-10                      | 09-06                            | 1            | 1                   | 1                                  | 1                | 1                                | 62                        | 1                        | 1             | 3                           |                     |
|                                       | 77            | 1                             | 6 | Boy   | 1             | 29                 | 12-00                      | 09-08                            | 1            | 1                   | 1                                  | 1                | 1                                | 43                        | 1                        | 1             | 4                           |                     |
|                                       | 69            | 1                             | 6 | Girl  | 1             | 30                 | 12-00                      | 09-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 43                        | 1                        | 1             | 1                           |                     |
|                                       | 76            | 1                             | 6 | Girl  | 1             | 30                 | 12-08                      | 09-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 44                        | 1                        | 1             | 2                           |                     |
|                                       | 95            | 1                             | 6 | Girl  | 1             | 30                 | 12-01                      | 09-10                            | 1            | 1                   | 1                                  | 0                | 1                                | 42                        | 1                        | 0             |                             |                     |
|                                       | 64            | 1                             | 6 | Boy   | 1             | 31                 | 13-05                      | 10-01                            | 1            | 1                   | 1                                  | 1                | 1                                | 44                        | 1                        | 1             | 3                           |                     |
|                                       | 89            | 1                             | 6 | Boy   | 1             | 31                 | 13-05                      | 10-01                            | 1            | 1                   | 1                                  | 1                | 1                                | 37                        | 1                        | 1             | 4                           |                     |
|                                       | 66            | 1                             | 6 | Girl  | 0             | 37                 | 12-08                      | 11-02                            | 0            | 1                   | 1                                  | 1                | 1                                | 47                        | 1                        | 0             |                             |                     |
|                                       | 65            | 1                             | 6 | Boy   | 1             | 40                 | 13-06                      | 11-08                            | 1            | 1                   | 1                                  | 0                | 1                                | 40                        | 1                        | 0             |                             |                     |
|                                       | 84            | 1                             | 6 | Girl  | 0             | 41                 | 12-02                      | 11-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 41                        | 1                        | 0             |                             |                     |
|                                       | 92            | 1                             | 6 | Girl  | 1             | 41                 | 13-10                      | 11-10                            | 1            | 1                   | 1                                  | 1                | 1                                | 56                        | 1                        | 1             | 1                           |                     |
|                                       | 82            | 1                             | 6 | Girl  | 1             | 44                 | 11-09                      | 12-06                            | 0            | 1                   | 1                                  | 1                | 1                                | 55                        | 1                        | 0             |                             |                     |
|                                       | 75            | 1                             | 6 | Boy   | 1             | 46                 | 11-10                      | 12-10                            | 0            | 1                   | 1                                  | 1                | 1                                | 39                        | 1                        | 0             |                             |                     |
|                                       | 63            | 1                             | 6 | Boy   | 1             |                    | 12-07                      |                                  | 1            | 1                   | 0                                  | 1                | 1                                | 171                       | 0                        | 0             |                             |                     |
| Total                                 |               | 99                            |   |       | 97            |                    |                            |                                  | 88           | 99                  | 98                                 | 96               | 97                               | 50.03                     | 98                       | 81            |                             |                     |
| Average                               |               |                               |   |       |               |                    |                            |                                  |              |                     |                                    |                  |                                  |                           |                          |               |                             |                     |

**Appendix B : Headmaster’s letter of permission for the pilot study**

The Principal  
KING’S SCHOOL BRYANSTON

Dear Mr Moore

I request permission to conduct a research project amongst the Grade 3 to Grade 6 children of Forest Town School.

The research is in partial fulfilment of the requirements for the Masters in Augmentative and Alternative Communication Degree through the University of Pretoria. The purpose of the study is to investigate the usefulness of Word Prediction software to serve as writing support where there are spelling and writing difficulties. The project entails each child executing two short computer tasks, with and without the aid of word prediction, and evaluating the relative effectiveness of the two approaches in terms of speed and quality of output.

The study will require each child to leave the classroom for twenty to thirty minutes. Great care will be taken to minimise the impact of the study on academic school time. Also, the children’s anonymity in the publication of the research results is assured. A research assistant will be employed (at the researcher’s own expense) to help administer the tests, so as to minimise the impact on the therapist’s working time.

A summary of the research results will be available to any staff, parents or interested persons and a full copy of the completed research project will be given to Forest Town School. The outcome of the project is expected to have direct potential applicability in the remedial approach of the learners at Forest Town School.

The permission of the parents of each of the children involved in the study will be secured before testing commences, as well as the permission of the Gauteng Department of Education. All the relevant teachers will be informed and their support secured.

I would appreciate it if you would consider this request favourably and sign below to acknowledge your permission.

Thank you

\_\_\_\_\_  
Marina Herold  
Occupational Therapist

\_\_\_\_\_  
Date

\_\_\_\_\_  
Mr Moore  
Principal of The King's School Bryanston

\_\_\_\_\_  
Date

**Appendix C : Parent’s letter of permission for the pilot study**

13<sup>th</sup> March 2003

Dear Parents

I am conducting the pilot study of a research project amongst the Grade 2 to Grade 5 children of The King’s School Bryanston and request permission to use your child as one of the participating subjects.

The research is in partial fulfillment of the requirements for the Masters in Augmentative and Alternative Communication Degree through the University of Pretoria. The purpose of the study is to investigate the usefulness of Word Prediction software to serve as writing support where there are spelling and writing difficulties. The project entails each child doing a handwritten spelling test, and then executing two short computer tasks, with and without the aid of word prediction, and evaluating the relative effectiveness of the two approaches in terms of speed and quality of output.

The main study will be conducted at a school for children with learning impairments. It is only the pilot study which will be conducted at your child’s school. The pilot study serves to validate procedural aspects of the study, to identify weaknesses in the flow of the test program and instructional difficulties, and to determine whether the test program is indeed valid in testing for the criteria it is designed to test.

Teachers have been requested to select randomly for the study 5 children from each of the participating grades. Your child was one of the chosen ones. Your child will be required to leave the classroom for approximately ½ hr for the research task but care will be taken to minimize the impact on his/her academic time. Testing will commence on 24<sup>th</sup> March and continue each day thereafter until all the children have been tested. Your child’s anonymity in the research results is assured. The test program is not in any way threatening to the children and it is envisaged that most will consider it a fun experience. Each participating child will be rewarded with a chocolate as a thank you gift.

I would be glad to answer any questions that you may have and would appreciate it if you would sign the consent form below and return it to your child’s teacher.

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Marina Herold  
Occupational Therapist  
Enquiries: 463-5203

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Mr Moore  
Principal of The King’s School Bryanston

✂-----

My child ..... MAY / MAY NOT participate in the research project on the effectiveness of word prediction software as a writing support technique.

Signature of parent / guardian ..... Date .....

Your child’s Grade ..... Your child’s Date of Birth .....

## Appendix D : Vocabulary list in word prediction lexicon

Note : The words in **bold enlarged font** are the ones used for the research's two wordlists.

The words in **bold enlarged underlined letters** are the three word pairs not found in Penfriend's Default Lexicon List, but added to normalise the experience of using word prediction.

The words in ***bold enlarged italicised letters*** are the words added to Penfriend's vocabulary for the research project.

|              |            |              |            |              |
|--------------|------------|--------------|------------|--------------|
| <b>A</b>     | although   | arrived      | bank       | big          |
| a bit        | always     | art          | bar        | bigger       |
| a few        | am         | as           | bare       | bike         |
| a little     | amazing    | as far as    | barked     | bird         |
| a lot        | among      | as if        | barking    | birds        |
| able         | an         | as long as   | bath       | birthday     |
| about        | Anabelle   | as soon as   | bathroom   | biscuits     |
| above        | ancient    | as though    | be         | bit          |
| absolutely   | and        | as well      | beach      | bits         |
| accident     | anger      | as well as   | bean       | black        |
| across       | angle      | aside        | bear       | blanket      |
| act          | angles     | ask          | beast      | blew         |
| action       | angrily    | asked        | beautiful  | blinked      |
| actually     | angry      | asking       | because    | blob         |
| add          | animal     | asleep       | because of | <b>blood</b> |
| added        | animals    | at           | become     | bloody       |
| admit        | announced  | at all       | bed        | blow         |
| advice       | another    | at first     | bedroom    | blue         |
| afraid       | answer     | as last      | been       | board        |
| after        | answered   | as least     | before     | boat         |
| afternoon    | answers    | at once      | beg        | body         |
| afterwards   | anxiously  | ate          | began      | bones        |
| again        | any        | attack       | begin      | book         |
| against      | anybody    | attempt      | beginning  | books        |
| age          | anyone     | attention    | begun      | boots        |
| ages         | anything   | attic        | behind     | born         |
| ago          | anyway     | August       | being      | both         |
| agree        | anywhere   | <b>awake</b> | believe    | bother       |
| agreed       | apart      | aware        | believed   | bothered     |
| ah           | apart from | away         | bell       | bottle       |
| ahead        | appearance | away form    | belong     | bottom       |
| ain't        | appeared   | awful        | below      | bought       |
| air          | apple      | aye          | belt       | bound        |
| alive        | apples     |              | beneath    | bowl         |
| all          | April      | <b>B</b>     | bent       | box          |
| all right    | are        | baby         | beside     | boxes        |
| all the same | area       | back         | besides    | boy          |
| allowed      | aren't     | backwards    | best       | boy's        |
| almost       | arm        | bad          | bet        | brain        |
| <b>alone</b> | armchair   | badly        | better     | branch       |
| along        | arms       | bag          | between    | branches     |
| already      | around     | <b>ball</b>  | beyond     | brave        |
| also         | arranged   |              | bible      | bread        |

break  
breakfast  
breath  
breathing  
breeze  
**bridge**  
brilliant  
bring  
broad  
broke  
broken  
brother  
brothers  
brought  
brown  
brownie  
brownies  
bucket  
building  
buildings  
built  
bully  
bunch  
bunny  
buried  
burned  
burning  
burst  
bus  
business  
busy  
but  
butler  
buy  
by  
by now

**C**  
cage  
cake  
call  
called  
calling  
calls  
calm  
came  
can  
can't  
canal  
candle  
cannot  
cap  
captain  
car  
card

cards  
care  
careful  
carefully  
carol  
**carpet**  
carried  
carry  
carrying  
cars  
cart  
case  
cast  
castle  
cat  
catch  
caught  
ceiling  
centre  
certain  
certainly  
chair  
chairs  
chance  
change  
changed  
check  
cheek  
cheeks  
cheerful  
cheese  
chest  
**chief**  
child  
children  
chin  
China  
chocolate  
choice  
choose  
chosen  
Christian  
Christmas  
church  
cigar  
circle  
city  
clan  
class  
clean  
clear  
cleared  
clearly  
clever  
climb

climbed  
climbing  
clock  
close  
closed  
closer  
cloth  
clothes  
cloud  
clouds  
**clown**  
coat  
coffee  
cold  
collar  
coloured  
colours  
come  
comes  
comfort  
comfortable  
coming  
commander  
common  
company  
competition  
complete  
completely  
considered  
continued  
control  
conversation  
cook  
cool  
copy  
corner  
correct  
corridor  
corridors  
cost  
cottage  
cotton  
could  
couldn't  
counter  
countries  
country  
couple  
courage  
course  
cousin  
cover  
covered  
cow  
crack  
crawled

crazy  
cream  
creative  
creatures  
crept  
cried  
cross  
crossed  
crouched  
crowd  
**crown**  
**cry**  
crying  
crystal  
cup  
cupboard  
**curious**  
curtain  
curtains  
cut  
cutting  
  
**D**  
d'you  
dad  
dad's  
daddy  
daft  
damp  
dance  
dancing  
danger  
dangerous  
dare  
dared  
dark  
darkness  
darling  
daughter  
dawn  
day  
days  
dead  
dear  
death  
December  
decided  
decimal  
deep  
definitely  
delighted  
demanded  
desk  
desperate  
desperately

despite  
determined  
did  
didn't  
die  
died  
difference  
different  
difficult  
difficulty  
dinner  
direction  
directly  
dirty  
disappeared  
discovered  
dish  
distance  
do  
doctor  
does  
doesn't  
dog  
dogs  
doing  
don't  
done  
door  
doors  
doorway  
double  
doubt  
downstairs  
dragged  
drank  
draw  
drawing  
drawn  
dreadful  
dream  
dress  
dressed  
drew  
drink  
drinking  
drive  
driving  
drop  
dropped  
drove  
drunk  
**dry**  
ducks  
during  
dust  
dirty

dying

**E**

each  
each other  
ear  
earlier  
early  
ears  
earth  
easier  
easily  
easy  
eat  
eaten  
eating  
edge  
Edinburgh  
effort  
egg  
eggs  
eh  
eight  
either  
else  
empty  
end  
ended  
endill  
enemy  
engine  
England  
English  
enjoy  
enjoyed  
enormous  
enough  
eat  
entered  
entrance  
envelope  
equal  
er  
erika  
escape  
escaped  
especially  
estate  
even  
even if  
even though  
evening  
eventually  
ever  
every

everybody  
everyone  
everything  
everywhere  
evil  
exactly  
example  
except  
excited  
excitement  
exciting  
exclaimed  
excuse  
exercise  
exhausted  
expect  
expected  
explain  
explained  
expression  
extra  
extraordinary  
eye  
eyebrows  
eyes

**F**

face  
faces  
fact  
factory  
faint  
fair  
***fairy***  
fairly  
fall  
fallen  
falling  
familiar  
family  
famous  
fancy  
far  
farm  
farmer  
fast  
faster  
fat  
father  
father's  
fault  
favourite  
fear  
***feather***  
February

feed  
feel  
feeling  
feelings  
feet  
felt  
fence  
fetch  
few  
field  
fields  
fifty  
fight  
fighting  
figure  
figures  
fill  
filled  
film  
finally  
find  
finding  
fine  
finger  
fingers  
finish  
**finished**  
**fire**  
firelight  
firm  
firmly  
first  
fish  
fist  
fit  
fire  
fixed  
flat  
flesh  
flew  
floor  
flowers  
fling  
fly  
flying  
folded  
folk  
**follow**  
followed  
following  
food  
fool  
foot  
for  
for ever

force  
forced  
forehead  
forest  
forget  
forgotten  
form  
forward  
forwards  
found  
***fountain***  
four  
fraction  
free  
fresh  
Friday  
***fridge***  
friend  
friendly  
friends  
frightened  
frog  
from  
front  
frowned  
**fruit**  
full  
fun  
funny  
fur  
**furious**  
furniture  
further

**G**

game  
games  
**garden**  
gary  
gas  
gasped  
gate  
gates  
gathered  
gathering  
gave  
gaze  
gazed  
gazing  
gazzer  
gentle  
gently  
get  
gets

getting  
ghost  
ghosts  
giant  
girl  
girls  
give  
given  
giving  
glad  
glance  
glanced  
glared  
glass  
glasses  
glory  
go  
god  
goes  
going  
gold  
golden  
gone  
good  
goodbye  
goodness  
got  
grabbed  
got  
grabbed  
grand  
grandfather  
graph  
grass  
grateful  
great  
green  
grew  
grey  
grin  
grinned  
grinning  
grip  
ground  
grasp  
grow  
growing  
grown  
grunted  
guard  
guards  
guess  
guessed  
guide  
guides  
gun



**H**

ha  
had  
hadn't  
hair  
**hairy**  
half  
hall  
hand  
handed  
handkerchief  
handle  
hands  
hang  
hanging  
happen  
happened  
happening  
happens  
happily  
happy  
hard  
harder  
hardly  
harm  
has  
hasn't  
hat  
hate  
hated  
hatred  
have  
haven't  
having  
hay  
he  
he'd  
he'll  
he's  
head  
headmaster  
headmistress  
heads  
hear  
heard  
hearing  
heart  
heat  
heavily  
heavy  
hedge  
hedgehog  
held  
hell

hello  
helmet  
help  
helped  
helping  
hens  
her  
here  
here's  
hers  
herself  
hesitated  
hey  
hid  
hidden  
hide  
hiding  
high  
higher  
hill  
him  
himself  
his  
hissed  
history  
hit  
hold  
holding  
hole  
holes  
holiday  
home  
honest  
hope  
hoped  
hoping  
**horrible**  
horror  
horse  
horses  
hospital  
hot  
hour  
hours  
house  
houses  
how  
however  
huge  
human  
hundred  
hundreds  
hung  
hungry  
hurried  
hurry

**hurt**

husband  
hut

**I**

I  
I'd  
I'll  
I've  
ice  
idea  
ideas  
if  
ill  
imagine  
imagined  
immediately  
important  
impossible  
in  
in case  
in front of  
in spite of  
indeed  
information  
inside  
insisted  
instead  
instead of  
interest  
interested  
interesting  
interrupted  
into  
invited  
iron  
is  
island  
isn't  
it  
it'll  
it's  
its  
itself

**J**

jack  
jacket  
**jail**  
jam  
January  
jazz  
jerked  
jeans

job  
join  
joined  
joke  
journey  
joy  
July  
jump  
jumped  
jumping  
June  
just

**K**

Karl  
keep  
keeping  
kept  
key  
keys  
kicked  
kill  
killed  
kind  
kindly  
king  
king's  
kiosk  
kitchen  
knees  
knew  
knife  
knock  
knocked  
knocking  
know  
knowing  
known  
knows

**L**

lad  
**ladder**  
ladies  
lady  
laid  
lake  
lamp  
land  
landed  
lane  
lap  
large  
larger

lass  
last  
late  
later  
laugh  
laughed  
laughing  
laughter  
law  
lay  
lead  
leading  
leaned  
leaning  
leapt  
learn  
learned  
learnt  
least  
leather  
leave  
leaves  
leaving  
led  
left  
leg  
legs  
length  
lengths  
less  
lesson  
lessons  
let  
let's  
**letter**  
letters  
letting  
library  
lid  
lie  
lies  
life  
lift  
lifted  
**light**  
lights  
like  
liked  
likely  
likes  
line  
lined  
lines  
lip  
lips

list  
listen  
lit  
little  
live  
lived  
lives  
living  
local  
lock  
locked  
London  
lonely  
long  
longer  
look  
looked  
looking  
looks  
loose  
lord  
lose  
lost  
lot  
lots  
loud  
loudly  
love  
loved  
lovely  
low  
lower  
luck  
lucky  
lump  
lunch  
lying

## M

machine  
machines  
mad  
made  
magic  
magician  
main  
make  
makes  
making  
man  
man's  
managed  
manner  
many  
map

March  
mark  
market  
**married**  
master  
match  
**matches**  
matter  
May  
maybe  
me  
meal  
mean  
means  
meant  
measure  
meat  
meet  
meeting  
memory  
men  
mention  
mess  
message  
met  
metal  
method  
meters  
middle  
midnight  
might  
miles  
milk  
mill  
mind  
mine  
minute  
minutes  
mirror  
miserable  
miss  
missed  
mistake  
mixed  
**mixture**  
moment  
Monday  
money  
monster  
month  
months  
mood  
moon  
more  
morning

most  
mostly  
mother  
mother's  
mould  
**mountain**  
mouse  
mouth  
move  
moved  
movement  
moving  
much  
mud  
mum  
mummy  
murmured  
music  
must  
mustn't  
muttered  
my  
myself

## N

nails  
name  
names  
narrow  
nasty  
natural  
near  
nearer  
nearly  
neck  
need  
needed  
needs  
neither  
nervous  
nest  
never  
new  
news  
newspaper  
next  
next to  
nice  
no  
no longer  
no one  
no-one  
nobody  
nodded  
**noise**

none  
nonsense  
nor  
normal  
nose  
not  
note  
notes  
nothing  
notice  
noticed  
November  
now  
now that  
nowhere  
number  
numbers  
nurse  
nutty

## O

o'clock  
obvious  
obviously  
odd  
of  
of course  
off  
offer  
offered  
office  
official  
often  
oh  
oil  
OK  
old  
older  
on  
on to  
on top of  
once  
one  
ones  
only  
on to  
open  
opened  
opening  
opposite  
or  
orange  
order  
ordered  
ordinary

other  
others  
otherwise  
ought  
our  
out  
out of  
outside  
over  
owl  
own  
owner

## P

pack  
**packet**  
packed  
page  
pages  
paid  
pain  
paint  
painted  
pair  
palace  
pale  
paper  
papers  
parents  
park  
part  
parts  
party  
pass  
passage  
passed  
past  
patch  
path  
pattern  
pause  
paused  
pay  
peace  
peculiar  
peered  
pencil  
people  
perfect  
perfectly  
perhaps  
person  
pet  
phone  
photograph

pick  
 picked  
 picking  
**picture**  
 pictures  
 piece  
 pieces  
 pile  
 pink  
 pipe  
 pit  
 pity  
 place  
 placed  
 places  
 plain  
 plan  
 plane  
 plant  
 plants  
 plate  
 play  
 played  
 playground  
 playing  
 please  
 pleased  
 pleasure  
 plenty  
 pocket  
 point  
 pointed  
 pointing  
 points  
 police  
 policeman  
**polished**  
 politely  
 pony  
 pool  
 poor  
 position  
 possible  
 possibly  
 post  
 potatoes  
 pounds  
 pored  
 power  
 prepared  
 present  
 pressed  
 pretty  
 princess  
 prison

private  
 probably  
 problem  
 problems  
 promise  
 promised  
 proper  
 properly  
 proud  
**pull**  
 pulled  
 pulling  
 pupils  
**push**  
 pushed  
 pushing  
 put  
 putting  
 puzzled

**Q**  
 queen  
 queer  
 question  
 questions  
 quick  
 quickly  
 quiet  
 quietly  
 quite

**R**  
 rabbit  
 raced  
 radish  
 rage  
 railway  
 rain  
 rainbow  
 raised  
 ran  
 rang  
 range  
 rather  
 rather than  
 reach  
 reached  
 read  
 reading  
 ready  
 real  
 realised  
 realized  
 really

reason  
 reckon  
 red  
 refused  
 relief  
 remained  
 remember  
 remembered  
 remembering  
 reminded  
 repeated  
 replied  
 reply  
 rest  
 return  
 returned  
 rich  
 rid  
 ride  
 riding  
**right**  
 ring  
 rising  
 river  
 riverbank  
 road  
 rock  
rocket  
 roll  
 rolled  
 roof  
 room  
 rooms  
 rope  
 rose  
 rough  
 round  
 row  
 rows  
 rubbed  
 rubbish  
 run  
 running  
 rushed

**S**  
 sad  
 safe  
 said  
 sailing  
 sake  
 salt  
 same  
 Sammy  
 sank

sat  
 Saturday  
 save  
 saw  
 say  
 saying  
 says  
 scared  
 scene  
 school  
 Scotland  
 scream  
 screamed  
 screaming  
 screen  
 sea  
 seat  
 second  
 seconds  
 secret  
 see  
 seeing  
 seem  
 seemed  
 seems  
 seen  
 sell  
 send  
 sense  
 sent  
 September  
 serious  
 set  
 sets  
 settled  
 seven  
 several  
 shadow  
 shaking  
 shell  
 shape  
 share  
 sharp  
 sharply  
 she  
 she'd  
 she'll  
 she's  
 shed  
 sheep  
 shelf  
 shelves  
 shining  
 ship  
 ships  
 shirt

shock  
 shocked  
 shoes  
 shone  
 shook  
 shoot  
 shooting  
 shop  
 shops  
 short  
 shot  
 should  
 shoulder  
 shoulders  
 shouldn't  
 shout  
 shouted  
 shouting  
 show  
 showed  
 showing  
 shown  
 shrugged  
 shut  
 sick  
 side  
 sides  
 sideways  
 sighed  
 sight  
 sign  
 silence  
 silent  
 silently  
 silly  
 silver  
 simple  
 simply  
 since  
 singing  
 single  
 sink  
 sir  
 sister  
 sit  
 sitting  
 six  
 size  
 skin  
 skull  
 sky  
 slave  
 slaves  
 sleep  
**sleeping**  
 sleeve

|           |           |                 |               |                |
|-----------|-----------|-----------------|---------------|----------------|
| slept     | stairs    | suit            | that that's   | toilet         |
| slid      | stand     | summer          | the           | told           |
| slightly  | standing  | sun             | theatre       | tomorrow       |
| slip      | star      | Sunday          | thee          | tone           |
| slipped   | stared    | supper          | there         | tongue         |
| slope     | staring   | support         | them          | tonight        |
| sloped    | stars     | suppose         | themselves    | too            |
| slowly    | start     | supposed        | then          | took           |
| small     | started   | sure            | there         | top            |
| smaller   | starting  | surely          | there'd       | torch          |
| smell     | startled  | surface         | there's       | total          |
| smile     | state     | surprise        | these         | touch          |
| smiled    | station   | surprised       | they          | touched        |
| smiling   | stay      | swallowed       | they'd        | towards        |
| smoke     | stayed    | swan            | they'll       | town           |
| smooth    | steady    | <b>sweeping</b> | they've       | train          |
| snapped   | Stella    | sweet           | thick         | training       |
| snow      | step      | sweets          | <b>thief</b>  | tramp          |
| so        | stepped   | swim            | thin          | trap           |
| so that   | steps     | swimming        | thing         | tray           |
| soft      | stick     | switched        | things        | treat          |
| softly    | sticking  | swung           | think         | tree           |
| sold      | sticks    |                 | thinking      | trees          |
| some      | stiff     | <b>T</b>        | thinks        | trembling      |
| somebody  | still     | table           | third         | triangle       |
| somehow   | stomach   | <b>tail</b>     | this          | triangles      |
| someone   | store     | take            | those         | tried          |
| something | stones    | taken           | though        | trouble        |
| sometimes | stood     | takes           | thought       | trousers       |
| somewhere | stop      | taking          | thoughtfully  | true           |
| son       | stopped   | <b>talk</b>     | thoughts      | trust          |
| soon      | stopping  | talked          | thousand      | truth          |
| sorry     | stories   | talking         | thousands     | try            |
| sort      | story     | <b>tall</b>     | three         | trying         |
| soul      | straight  | taste           | threw         | Tuesday tunnel |
| sound     | strange   | taught          | throat        | <b>turn</b>    |
| sounded   | straw     | tea             | through       | turned         |
| sounds    | street    | teach           | throw         | turning        |
| space     | streets   | teacher         | throwing      | turns          |
| spare     | strength  | teachers        | thrown        | twelve         |
| speak     | stretched | team            | thrust        | twenty         |
| speaking  | string    | tears           | thumb         | twice          |
| special   | strong    | teeth           | Thursday tide | twins          |
| speed     | struck    | telephone       | tied          | two            |
| spell     | struggled | television      | tight         |                |
| spend     | stuck     | tell            | till          |                |
| spent     | students  | telling         | time          | <b>U</b>       |
| spirit    | study     | tells           | times         | unable         |
| spirits   | stuff     | ten             | tin           | uncle          |
| split     | stuffed   | <b>terrible</b> | Tina          | under          |
| spoke     | stupid    | terrified       | tiny          | underneath     |
| spot      | such      | than            | tip           | understand     |
| spread    | sudden    | thank           | tired         | understood     |
| spring    | suddenly  | thanks          | to            | uniform        |
| square    | sugar     |                 | today         | unless         |
| stage     | suggested |                 | together      |                |

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**W**

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**Y**

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**Z**

## Appendix E : Specific outcomes of the Foundation Phase according to the Gauteng Department of Education

| Assessment Criteria  | Performance Indicator  | Level of Complexity  | Extension Steps   |   |
|--|--|--|---|---|
| Original meaning is created through personal texts                 | When learners can create a personal text and <u>communicate</u> it <u>orally</u> and visually.                                   | Tell/illustrate personal experiences   | Tell ideas and feelings   | Share opinions and decisions and use emergent writing   |
|  | Engage with different handwriting/production skills in order to <u>develop a personal strategy for recording communication</u> . | Recognise that symbols convey meaning including the sense of the appropriate use of capital letters  | Refine hand writing, production, giving attention to size, shape, formation and legibility  | Further refine hand writing/production, giving attention to speed and personal style  |
|  |  | Develop directionality and orientation   |   |   |
|  |  | Develop and refine the ability to form letters/symbols   |   |   |
|  |  | Clusters/spaces letters/symbols to form meaningful words and patterns  |   |   |
| Experiment with phonetic spelling                                  |  |  |   |   |
| Communicate a creative range of personal texts in <u>writing</u> . | Write phrases and sentences which are familiar   | Writes sentences using a wider vocabulary and logical structure  | Writes for different purposes and audiences e.g. letters, newspaper reports, poetry   |   |
| A key message is identified and clarified                          | <u>Listen with understanding</u> in order to identify, clarify and respond to a key message.                                     | Auditory skills are applied in the following activities: Listening and responding kinaesthetically/orally/visually to sounds, instructions/directions, questions, conversations, short stories, TV/radio and tapes | Listen and respond orally/visually to more complex stories poetry, plays and music  | Listen and respond in writing to a range of inputs  |
| Meaning is created through <u>reading</u>                          | Show his/her understanding of a written text by using a range of decoding and comprehension skills to make meaning               | Develop basic perceptual skills (auditory and visual), decoding skills (phonetic, visual and contextual cues) and comprehension skills   | Further developing perceptual skills (auditory and visual), decoding skills (phonetic, visual and contextual cues) and comprehension skills | Develop more advanced perceptual skills (auditory and visual), decoding skills (phonetic, visual and contextual cues) and comprehension skills. |

## Appendix F : Grade 3 phonics

To select the words for the research task wordlists, the following approach was taken.

1. The Grade 3 syllabus of the special education school where the research project was done was taken as a foundation. The curriculum was typed out exactly as presented in the school's lesson plan. Because only 40 words would be used for the pilot study task, a word could not be found for every element of the curriculum. The curriculum was thus sorted into a table of logical units, so that a balanced and full range of words representing all of the logical units could be chosen.
2. The Grade 3 curriculum of the pilot study school was then compared to that of the previous curriculum. Where the second curriculum had additional items to the first one, they were added to the table. The additional items are printed in **bold**. It can be seen that there were not many differences.
3. Thirdly, the syllabus of a local government mainstream school was consulted and a couple of additional curriculum items were added to the table. These appear in *italics*.

Some of the units are represented by more words than others, simply because of their sheer weight of representation in the English language. These are short vowel sounds, consonant blends and consonant digraphs. Many of the words fall into more than one category eg sleeping and sweeping fall into 'Initial consonant blends', as well as 'Vowel digraphs' and 'Important suffixes'.

| Spelling curriculum<br>(grouped into large units)                                       | Words chosen for the two wordlists |               |                   |
|---|------------------------------------|---------------|-------------------|
| Lesson  |                                    |               |                   |
| 1 Revision of Grade 2 work ( <b>Assessment and consolidation of grade two phonics</b> ) |                                    |               |                   |
| 1.1 All letter sounds of alphabet   |                                    |               |                   |
| Spelling patterns related to consonants   |                                    |               |                   |
| Digraphs  |                                    |               |                   |
| 1.4 Consonant digraphs – initial and final - sh th ch wh                                | polished/finished                  | thief/chief   | white/wheel       |
|   | weather/feather                    |               |                   |
| 1.4 Consonant digraphs – initial and final - sk qu ng nk tch <b>nch</b>                 | matches/witches                    | string/strong |                   |
| Blends  |                                    |               |                   |
| 1.5 Initial consonant blends  | string/strong                      | cry/dry       | fruit/blood       |
|   | sleeping/sweeping                  |               | dress/cross       |
| 1.3 Final consonant blends  | hurt/turn                          | tall/ball     | rock(et)/pack(et) |
| Silent letters  |                                    |               |                   |
| 14 Recognition of the silent letters  | light/right                        | walk/talk     | knock/knife       |
| Phonic variations on consonants   |                                    |               |                   |
| 2 Hard and soft sound of 'c' ( <b>ace</b> ) ( <b>ice</b> )                              | circle/circus                      |               |                   |
| 3 Hard and soft sound of 'g'  | message/village                    | fridge/bridge |                   |
| 17 -ph- has the sound of f  |                                    |               |                   |
| -s- sounds 'z'  | voice/noise                        |               |                   |

| Spelling curriculum<br>(grouped into large units)   | Words chosen for the two wordlists  |                                      |                                    |
|---|---|--------------------------------------|------------------------------------|
| Spelling patterns related to vowels   |   |                                      |                                    |
| Short vowel sounds<br>1.2 Short vowel sounds – a e i o u  | rocket/pocket<br>horrible/terrible  | worried/married<br>polished/finished | message/village<br>picture/mixture |
| Long vowel sounds<br>A i o u (e) with final e mute<br><b>Silent e exceptions</b><br>1.7 Long vowel sounds at the end of words   | furious/curious<br>alone/awake  | cake/coke                            |                                    |
| 4 long 'i' ( <b>igh</b> )<br>15 barn a (sounds 'ah')<br><b>long o</b>   | light/right   |                                      |                                    |
| Vowel digraphs ( <i>sounding like long vowel sounds</i> )<br>1.8 vowel digraphs – ee ea ai ay oa oe ie ue ( <b>ey</b> ) ( <b>ei</b> )   | tie/pie<br>sleeping/sweeping  | break/great<br>thief/chief           | tail/jail                          |
| Vowel digraphs ( <i>new vowel sounds</i> )<br>1.10 two sounds of the irregular double vowel oo<br>1.11 irregular double vowels au and aw<br>1.12 irregular double vowel ow<br>1.13 diphthongs ou and ow<br>1.14 diphthongs oi and oy<br>1.15 diphthong ew   | yellow/follow<br>mountain/fountain<br>voice/noise   | crown/clown                          |                                    |
| R' modified vowels<br>1.16 vowels modified by r - ar er ir or ur<br>18 vowel digraph –ai- modified by 'r'<br>19 vowel digraph –ea- modified by 'r'<br>20 Combination of the fairy 'e' and the pest 'r'<br>( <b>eer</b> ) ( <b>oar</b> ) ( <b>our</b> ) ( <b>ier</b> )   | garden/carpet<br>fairy/hairy<br>fire/wire   | hurt/turn<br>picture/mixture         | letter/ladder                      |
| Some other vowels<br>16 Words with –ea- pronounced 'e'<br>1.9 Y used as a vowel<br>( <b>ough</b> ) ( <b>ugh</b> ) ( <b>ould</b> )   | weather/feather<br>cry/dry  | fairy/hairy                          | quickly/quietly                    |
| Suffixes  |   |                                      |                                    |
| Important suffixes<br>1.17 Words containing the ending 'le'<br>7 Suffix 'ed' (ed as ed)<br>8 Suffix 'ed' (ed as d and ed as t)<br>9 Suffixes -s and –es<br>1.18 Suffix 'ing'<br>11 Suffix –ing doubling the final consonant<br>12 Suffix -ed doubling the final consonant<br>13 Suffixes -ing and –ed dropping the final 'e'<br>10 Changing y to i before adding suffix | horrible/terrible<br>polished/finished<br>witches/matches<br>sleeping/sweeping<br>worried/married |                                      |                                    |
| Some other suffixes<br><b>ous tion ture que –able –ible tain</b>  | operation/injection<br>picture/mixture  | mountain/fountain                    | curious/furious                    |
| Irregular words   |   |                                      |                                    |
| Irregular words   | one/eye<br>fruit/blood  | push/pull                            | talk/walk                          |
| 5 Syllabification<br>6 Compound words<br><b>Contractions</b><br><b>Prefixes</b>   |   |                                      |                                    |



Appendix G : Raw data - Pilot study

| Subject number | School | Age     | Gender | Typing Only      |      |                  |      |              |              |               |               | Odd prs | A/B or B/A | Word Prediction  |      |                  |      |              |              | Could subject operate word prediction? |               |               |                       |        |   |  |        |   |
|----------------|--------|---------|--------|------------------|------|------------------|------|--------------|--------------|---------------|---------------|---------|------------|------------------|------|------------------|------|--------------|--------------|--|---------------|---------------|-----------------------|--------|---|--|--------|---|
|                |        |         |        | Wordlist TO on A |      | Wordlist TO on B |      | Sc. Diff A/B | Sc. Diff 1/2 | Time Diff A/B | Time Diff 1/2 |         |            | Wordlist WP on A |      | Wordlist WP on B |      | Sc. Diff A/B | Sc. Diff 1/2 |  | Time Diff A/B | Time Diff 1/2 | Wordlist A TO-WP Diff |        | Wordlist B TO-WP Diff   |  |        |   |
|                |        |         |        | Sc               | Time | Sc               | Time | Sc.          | Sc.          | Time          | Time          |         |            | Sc               | Time | Sc               | Time | Sc.          | Sc.          |  | Time          | Time          | Sc                    | Time   | Sc  | Time   |        |   |
| Grade 2        | 2.1    | King's  | 08-03  | Boy              | 9    | 22:12            |      |              |              |               |               |         |            |                  |      | A                |      |              |              |  |               |               |                       |        | Yes<br>No. Couldn't spell or read<br>No. Couldn't spell or read<br>Yes<br>Yes. Very thorough. |  |        |   |
|                | 2.2    | King's  | 07-09  | Girl             |      |                  |      |              |              |               |               |         |            |                  |      | B                |      |              |              |  |               |               |                       |        |   |  |        |   |
|                | 2.3    | King's  | 07-08  | Girl             | 0    |                  |      |              |              |               |               |         |            |                  |      |                  |      |              |              |  |               |               |                       |        |   |  |        |   |
|                | 2.4    | King's  | 08-03  | Girl             | 0    |                  |      |              |              |               |               |         |            |                  |      |                  |      |              |              |  | 0             |               |                       |        |   |  |        |   |
|                | 2.5    | Private | 08-02  | Girl             | 5    |                  | 5    |              | 0            | 0             |               |         |            |                  |      | 8                | A/B  | 11           | 15:20        |  |               |               |                       |        |   |  |        |   |
|                | 2.6    | Private | 08-11  | Girl             | 6    |                  | 4    |              | -2           | -2            |               |         |            |                  |      | 6                | A/B  |              |              | 15                                     | 26:52         |               |                       |        |   |  |        |   |
| Grade 3        | 3.1    | King's  | 08-09  | Girl             | 33   | 10:36            | 33   | 09:00        | 0            | 0             | -01:36        | -01:36  | 4          | A/B              |      |                  |      |              |              |  |               |               |                       |        |   | Yes<br>Yes<br>No. Couldn't read words<br>Yes |        |   |
|                | 3.2    | King's  | 08-03  | Girl             | 36   | 13:41            | 36   | 13:17        | 0            | 0             | -00:24        | +00:24  | 4          | B/A              |      |                  |      |              |              |  |               |               |                       |        |   |  |        |   |
|                | 3.3    | King's  | 09:00  | Boy              | 5    | 18:22            |      |              |              |               |               |         |            |                  |      | A                |      |              |              |  |               |               |                       |        |   |  |        |   |
|                | 3.4    | King's  | 09:04  | Boy              | 1    | 10:15            | 3    | Oops!        | +2           | -2            |               |         |            |                  |      | 2                | B/A  |              |              |  |               |               |                       |        |   |  |        |   |
| Grade 4        | 4.1    | King's  | 09:11  | Girl             | 10   | 11:41            | 9    | 9:49         | -1           | -1            | -01:52        | -01:52  | 3          | A/B              |      |                  |      |              |              |  |               |               |                       |        |   | Yes<br>Yes<br>Yes<br>Yes. Loved it.          |        |   |
|                | 4.2    | King's  | 09:11  | Boy              | 22   | 08:59            | 24   | 15:29        | +2           | -2            | +06:30        | -06:30  | 12         | B/A              |      |                  |      |              |              |  |               |               |                       |        |   |  |        |   |
|                | 4.3    | Private | 10:02  | Girl             | 33   | 08:58            |      |              |              |               |               |         |            |                  |      | A                | 39   | 08:36        |              |  |               |               |                       | +6     | -00:22  |  |        |   |
|                | 4.4    | Private | 10:02  | Girl             | 29   | 10:29            | 25   | 09:42        | -4           | -4            | +00:47        | +00:47  | 5          | A/B              | 36   | 10:19            | 33   | 11:58        | -3           | -3                                     | +01:39        | +01:39        | +7                    | -00:10 | +8  |  | +02:16 |   |
| Grade 5        | 5.1    | King's  | 10:00  | Girl             | 39   | 10:31            | 39   | 11:19        | 0            | 0             | +00:48        | +00:48  | 0          | A/B              |      |                  |      |              |              |  |               |               |                       |        |   | Yes<br>Yes<br>Yes<br>Yes<br>Yes              |        |   |
|                | 5.2    | King's  | 10:10  | Boy              | 37   | 07:40            | 37   | 08:17        | 0            | 0             | +00:37        | -00:37  | 2          | B/A              |      |                  |      |              |              |  |               |               |                       |        |   |  |        |   |
|                | 5.3    | King's  | 11:07  | Girl             | 30   | 14:20            | 32   | 11:50        | +2           | +2            | -02:30        | +02:30  | 7          | A/B              |      |                  |      |              |              |  |               |               |                       |        |   |  |        |   |
|                | 5.4    | King's  | 11:06  | Boy              | 31   | 9:51             | 37   | 10:16        | +6           | -6            | +00:25        | -00:25  | 8          | B/A              |      |                  |      |              |              |  |               |               |                       |        |   |  |        |   |
|                | 5.5    | Private | 11:00  | Girl             | 39   |                  | 39   |              | 0            | 0             |               |         |            |                  |      | A/B              | 40   | 08:31        | 39           | 06:50                                  | -1            | -1            | -01:41                | -01:41 | +1  |  |        | 0 |
|                |        |         |        |                  |      |                  |      | -5           | -15          | -03:45        | -00:01        |         |            |                  |      |                  |      |              |              |  |               |               |                       |        |   |  |        |   |

| Key | Sc | Score   | Sc. Diff A/B | Score difference between scores on Wordlist A and B (B - A) | Sc. Diff 1/2 | Score difference between scores on 1st and 2nd administered wordlists (2nd - 1st) | A/B or B/A | Order of presentation of Wordlists A and B | Odd prs | Unmatched pairs |
|-----|----|---|--------------|---|--------------|---|------------|--|---------|-----------------|
|     |    | and similarly for Time Diff A/B and Time Diff 1/2 |              |   |              |   |            |  |         |                 |

**Appendix H : Data tables - Pilot study**

Note : Only the data of the subjects who executed *both* wordlists in TO is displayed, so that a relationship between their performance on the two wordlists could be assessed.

**Correctly spelled words**

| Subjects  | Accuracy scores |     |     |     |     |     |     |     |     |     |     |     |     | Total |
|---|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
|   | 2.5             | 2.6 | 3.1 | 3.2 | 3.4 | 4.1 | 4.2 | 4.4 | 5.1 | 5.2 | 5.3 | 5.4 | 5.5 |       |
| Score on Wordlist A (TO)                              | 5               | 6   | 33  | 36  | 1   | 10  | 22  | 29  | 39  | 37  | 30  | 31  | 39  | 319   |
| Score on Wordlist B (TO)                              | 5               | 4   | 33  | 36  | 3   | 9   | 24  | 25  | 39  | 37  | 32  | 37  | 39  | 324   |
| Score difference (B-A)                                | 0               | -2  | 0   | 0   | +2  | -1  | +2  | -4  | 0   | 0   | +2  | +6  | 0   | -5    |
| Score on Wordlist presented 1 <sup>st</sup> (TO)      | 5               | 6   | 33  | 36  | 3   | 10  | 24  | 29  | 39  | 37  | 30  | 37  | 39  | 328   |
| Score on Wordlist presented 2 <sup>nd</sup> (TO)      | 5               | 4   | 33  | 36  | 1   | 9   | 22  | 25  | 39  | 37  | 32  | 31  | 39  | 313   |
| Score difference (2 <sup>nd</sup> - 1 <sup>st</sup> ) | 0               | -2  | 0   | 0   | -2  | -1  | -2  | -4  | 0   | 0   | -2  | -6  | 0   | -15   |

**Time scores**

| Subjects   | Time taken (in minutes) |        |        |        |       |       |        |        |        | Total time difference |
|--|-------------------------|--------|--------|--------|-------|-------|--------|--------|--------|-----------------------|
|  | 3.1                     | 3.2    | 4.1    | 4.2    | 4.4   | 5.1   | 5.2    | 5.3    | 5.4    |                       |
| Time for Wordlist A (TO)                             | 10:36                   | 13:41  | 11:41  | 08:59  | 10:29 | 10:31 | 07:40  | 14:20  | 09:51  |                       |
| Time for Wordlist B (TO)                             | 9:00                    | 13:17  | 9:49   | 15:29  | 09:42 | 11:19 | 08:17  | 11:50  | 10:16  |                       |
| Time difference (B-A)                                | -01:36                  | -00:24 | -01:52 | 06:30  | 00:47 | 00:48 | 00:37  | -02:30 | 00:25  | +2:15                 |
| Time presented 1 <sup>st</sup> (TO)                  | 10:36                   | 13:17  | 11:41  | 15:29  | 10:29 | 10:31 | 08:17  | 14:20  | 10:16  |                       |
| Time presented 2 <sup>nd</sup> (TO)                  | 9:00                    | 13:41  | 9:49   | 08:59  | 09:42 | 11:19 | 07:40  | 11:50  | 09:51  |                       |
| Time difference (2 <sup>nd</sup> - 1 <sup>st</sup> ) | -01:36                  | 00:24  | -01:52 | -06:30 | 00:47 | 00:48 | -00:37 | -02:30 | -00:25 | -11:32                |

**Appendix I : Unmatched pairs - Pilot study**

| Word pairs |           |           | Number of times a word pair was unmatched |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Total |     |
|------------|-----------|-----------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----|
|            |           |           | Subjects                                  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       |     |
|            |           |           | 2.1                                       | 2.2 | 2.3 | 2.4 | 2.5 | 2.6 | 3.1 | 3.2 | 3.3 | 3.4 | 4.1 | 4.2 | 4.3 | 4.4 | 5.1 | 5.2 | 5.3 |       | 5.4 |
| 4          | tall      | ball      |   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       | 0   |
| 10         | fire      | wire      |   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       | 0   |
| 15         | cry       | dry       |   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       | 0   |
| 19         | fairy     | hairy     |   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       | 0   |
| 20         | horrible  | terrible  |   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       | 0   |
| 22         | talk      | walk      |   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       | 0   |
| 39         | mountain  | fountain  |   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       | 0   |
| 1          | letter    | ladder    |   |     |     |     |     |     |     |     |     |     |     |     | 1   |     |     |     |     |       | 1   |
| 6          | yellow    | follow    |   |     |     |     |     |     |     |     |     |     |     |     | 1   |     |     |     |     |       | 1   |
| 7          | married   | worried   |   |     |     |     |     |     |     |     |     | 1   |     |     |     |     |     |     |     |       | 1   |
| 9          | garden    | carpet    |   |     |     |     |     |     |     |     |     | 1   |     |     |     |     |     |     |     |       | 1   |
| 11         | white     | wheel     |   |     |     |     |     |     |     |     |     | 1   |     |     |     |     |     |     |     |       | 1   |
| 12         | picture   | mixture   |   |     |     |     |     |     |     |     |     | 1   |     |     |     |     |     |     |     |       | 1   |
| 16         | rocket    | packet    |   |     |     |     |     |     |     |     | 1   |     |     |     |     |     |     |     |     |       | 1   |
| 21         | chief     | thief     |   |     |     |     |     |     | 1   |     |     |     |     |     |     |     |     |     |     |       | 1   |
| 27         | fruit     | blood     |   |     |     |     |     |     |     |     |     |     |     | 1   |     |     |     | 1   |     |       | 1   |
| 28         | tail      | jail      |   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       | 1   |
| 29         | light     | right     |   |     |     |     |     | 1   |     |     |     |     |     |     |     |     |     |     |     |       | 1   |
| 30         | bridge    | fridge    |   |     |     |     |     |     |     |     |     |     |     |     |     |     | 1   | 1   |     |       | 1   |
| 31         | hurt      | turn      |   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |       | 1   |
| 8          | push      | pull      |   |     |     |     | 1   |     |     |     |     |     |     | 1   |     |     |     |     |     |       | 2   |
| 13         | alone     | awake     |   |     |     | 1   |     |     |     |     |     | 1   |     |     |     |     |     | 1   |     |       | 2   |
| 14         | noise     | voice     |   |     |     |     |     |     |     |     |     |     |     |     |     |     | 1   |     |     |       | 2   |
| 18         | crown     | clown     |   |     |     |     | 1   |     |     |     | 1   |     |     |     |     |     |     |     |     |       | 2   |
| 25         | furious   | curious   |   |     |     |     |     |     | 1   |     |     |     |     |     |     | 1   |     | 1   |     |       | 2   |
| 26         | witches   | matches   |   |     |     |     |     |     | 1   |     |     |     |     |     |     |     |     |     |     |       | 2   |
| 34         | polished  | finished  |   |     |     |     |     | 1   |     |     |     | 1   |     |     |     |     |     |     |     |       | 2   |
| 35         | sleeping  | sweeping  |   |     |     | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |       | 2   |
| 37         | weather   | feather   |   |     |     |     |     |     |     |     |     | 1   |     |     |     |     | 1   |     |     |       | 2   |
| 40         | string    | strong    |   |     |     | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |       | 2   |
| 5          | cake      | coke      |   |     |     | 1   |     |     |     |     | 1   |     |     |     |     |     |     |     |     |       | 2   |
| 2          | dress     | cross     |   |     |     | 1   | 1   |     |     |     | 1   |     |     |     |     |     |     |     | 1   |       | 3   |
| 3          | quietly   | quickly   |   |     |     |     |     |     |     |     |     | 1   |     |     |     |     | 1   | 1   |     |       | 3   |
| 17         | tie       | pie       |   |     |     | 1   | 1   |     |     |     |     |     |     |     |     |     |     |     |     |       | 3   |
| 24         | eye       | one       |   |     |     | 1   |     |     |     |     | 1   |     |     |     |     |     | 1   |     |     |       | 3   |
| 32         | knock     | knife     |   |     |     | 1   | 1   |     |     |     | 1   |     |     |     |     |     |     | 1   |     |       | 3   |
| 33         | circle    | circus    |   |     |     |     | 1   |     |     |     |     |     |     | 1   |     |     |     | 1   | 1   |       | 3   |
| 36         | break     | great     |   |     |     |     |     |     |     |     | 1   |     |     |     |     |     |     | 1   |     |       | 3   |
| 38         | village   | message   |   |     |     |     |     |     |     |     | 1   |     |     |     |     |     | 1   |     |     |       | 3   |
| 23         | operation | injection |   |     |     |     |     |     | 1   |     |     | 1   |     |     |     | 1   | 1   |     |     |       | 4   |
|            |           |           |   |     |     | 8   | 6   | 4   | 4   |     | 2   | 3   | 12  |     | 5   | 0   | 2   | 7   | 8   | 2     | 63  |

Note : The ten words highlighted in grey were removed in the compilation of the final wordlists. Nine received the highest unmatched scores and the tenth was chosen from the next highest unmatched rating.

**Appendix J : Record form – Pilot study**

| Name                              |                 | XXXXX   |     |            | Number     |                                   | 4.2      |  |
|-----------------------------------|-----------------|---|-----|------------|------------|-----------------------------------|----------|--|
| Wordlist A                        |                 |   |     | Wordlist B |            |                                   |          |  |
| Comment                           | Spelling errors | Words   | 1/0 | 1/0        | Words      | Spelling errors                   | Comment  |  |
|                                   |                 | letter  | 1   | 1          | 1          | ladder                            |          |  |
|                                   |                 | dress   | 1   | 2          | 1          | cross                             |          |  |
|                                   |                 | quietly   | 1   | 3          | 0          | quickly                           | quiqely  |  |
|                                   |                 | tall  | 1   | 4          | 1          | ball                              |          |  |
|                                   |                 | cake  | 1   | 5          | 1          | coke                              |          |  |
|                                   |                 | yellow  | 1   | 6          | 1          | follow                            |          |  |
|                                   |                 | married   | 1   | 7          | 0          | worried                           | woried   |  |
|                                   |                 | push  | 1   | 8          | 1          | pull                              |          |  |
|                                   |                 | garden  | 1   | 9          | 0          | carpet                            | carput   |  |
|                                   |                 | fire  | 1   | 10         | 1          | wire                              |          |  |
|                                   |                 | white   | 1   | 11         | 0          | wheel                             | weal     |  |
|                                   | pitcher         | picture   | 0   | 12         | 1          | mixture                           |          |  |
|                                   | aloan           | alone   | 0   | 13         | 1          | awake                             |          |  |
|                                   | nouse           | noise   | 0   | 14         | 0          | voice                             | vuese    |  |
|                                   |                 | cry   | 1   | 15         | 1          | dry                               |          |  |
|                                   |                 | rocket  | 1   | 16         | 1          | packet                            |          |  |
|                                   |                 | tie   | 1   | 17         | 1          | pie                               |          |  |
|                                   | croun           | crown   | 0   | 18         | 0          | clown                             | cloud    |  |
|                                   | farey           | fairy   | 0   | 19         | 0          | hairy                             | harey    |  |
|                                   | horibell        | horrible  | 0   | 20         | 0          | terrible                          | terabell |  |
|                                   | chife           | chief   | 0   | 21         | 0          | thief                             | fieth    |  |
|                                   |                 | talk  | 1   | 22         | 1          | walk                              |          |  |
|                                   | oparation       | operation   | 0   | 23         | 1          | injection                         |          |  |
|                                   |                 | eye   | 1   | 24         | 1          | one                               |          |  |
|                                   | furius          | furious   | 0   | 25         | 0          | curious                           | curius   |  |
|                                   |                 | witches   | 1   | 26         | 1          | matches                           |          |  |
|                                   | frute           | fruit   | 0   | 27         | 0          | blood                             | blud     |  |
|                                   | tale            | tail  | 0   | 28         | 0          | jail                              | jale     |  |
|                                   |                 | light   | 1   | 29         | 1          | right                             |          |  |
|                                   | brige           | bridge  | 0   | 30         | 0          | fridge                            | frige    |  |
|                                   |                 | hurt  | 1   | 31         | 1          | turn                              |          |  |
|                                   | nock            | knock   | 0   | 32         | 1          | knife                             |          |  |
|                                   | circel          | circle  | 0   | 33         | 0          | circus                            | circes   |  |
|                                   | pollisht        | polished  | 0   | 34         | 1          | finished                          |          |  |
|                                   |                 | sleeping  | 1   | 35         | 1          | sweeping                          |          |  |
|                                   | brake           | break   | 0   | 36         | 1          | great                             |          |  |
|                                   | wether          | weather   | 0   | 37         | 1          | feather                           |          |  |
|                                   |                 | village   | 1   | 38         | 0          | message                           | message  |  |
|                                   | mountane        | mountain  | 0   | 39         | 0          | fountain                          | fountane |  |
|                                   |                 | string  | 1   | 40         | 1          | strong                            |          |  |
| Number of words spelled correctly |                 |   | 22  | 12         | 24         | Number of words spelled correctly |          |  |
| Time 8.59                         |                 | Number of unmatched pairs   |     |            | 15.29 Time |                                   |          |  |
| NB conventional keyboard          |                 |   |     |            |            |                                   |          |  |
| General comments                  |                 | Got tired and restless. Asked to use conventional keyboard for 2 <sup>nd</sup> list. Agreed, to investigate the difference in time usage between conventional and on-screen keyboard use. |     |            |            |                                   |          |  |

Note :

1. The areas shaded in grey highlight the word pairs that scored differently on the two word lists. i.e. the unmatched pairs.
2. It is interesting to note that although the child had 12 unmatched pairs, his total scores on the two lists only differed by 2 points.

## Appendix K : Difficulty rating of words – Pilot study

| Word      | Frequency correctly spelled | Word      | Frequency correctly spelled | Word     | Frequency correctly spelled | Word     | Frequency correctly spelled |
|-----------|-----------------------------|-----------|-----------------------------|----------|-----------------------------|----------|-----------------------------|
| curious   | 1                           | bridge    | 7                           | mixture  | 8                           | cry      | 10                          |
| furious   | 3                           | hurt      | 7                           | jail     | 8                           | rocket   | 10                          |
| witches   | 3                           | knock     | 7                           | great    | 8                           | crown    | 10                          |
| thief     | 4                           | circle    | 7                           | feather  | 8                           | talk     | 10                          |
| circus    | 4                           | polished  | 7                           | letter   | 9                           | eye      | 10                          |
| chief     | 5                           | quickly   | 7                           | dress    | 9                           | light    | 10                          |
| operation | 5                           | worried   | 7                           | yellow   | 9                           | dry      | 10                          |
| village   | 5                           | voice     | 7                           | fire     | 9                           | clown    | 10                          |
| mountain  | 5                           | hairy     | 7                           | white    | 9                           | walk     | 10                          |
| matches   | 5                           | injection | 7                           | alone    | 9                           | right    | 10                          |
| fountain  | 5                           | blood     | 7                           | coke     | 9                           | knife    | 10                          |
| horrible  | 6                           | fridge    | 7                           | carpet   | 9                           | sweeping | 10                          |
| break     | 6                           | married   | 8                           | wire     | 9                           | cake     | 11                          |
| weather   | 6                           | tie       | 8                           | awake    | 9                           | string   | 11                          |
| terrible  | 6                           | fruit     | 8                           | packet   | 9                           | pie      | 11                          |
| message   | 6                           | tail      | 8                           | turn     | 9                           | tall     | 12                          |
| quietly   | 7                           | ladder    | 8                           | finished | 9                           | sleeping | 12                          |
| picture   | 7                           | follow    | 8                           | strong   | 9                           | cross    | 12                          |
| noise     | 7                           | pull      | 8                           | push     | 10                          | ball     | 12                          |
| fairy     | 7                           | wheel     | 8                           | garden   | 10                          | one      | 13                          |

Note : The words have been arranged in order of the number of times they were correctly spelled.  
The shaded words are the words that were removed from the wordlists, being the most unmatched words.

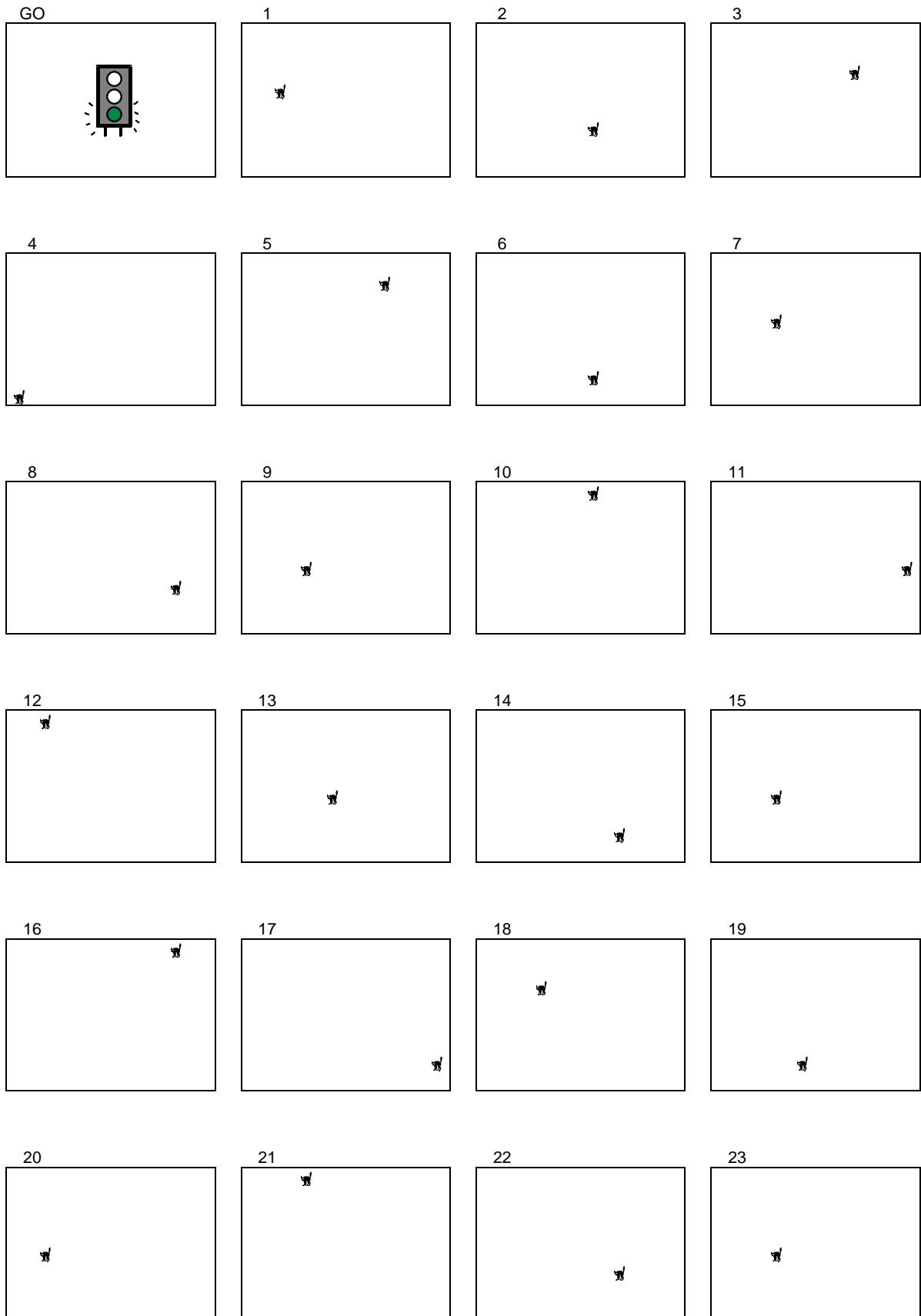
## Appendix L : Problematic issues with the wordlists - Pilot study

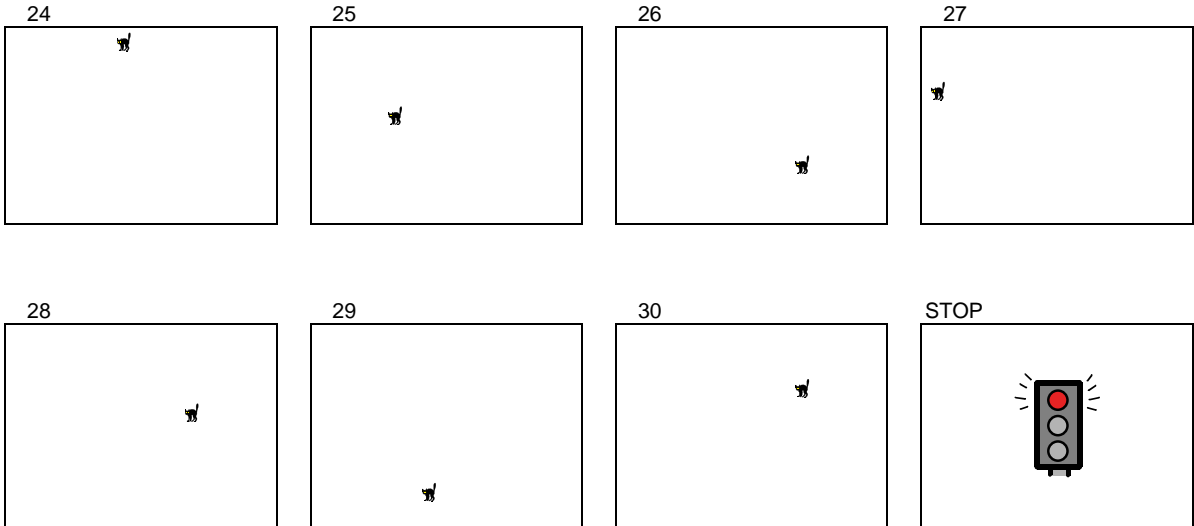
| Minimum number of keystrokes required to spell word using WP (including selection of word in prediction list) | Word List A | Order of presentation | Word List B | Minimum number of keystrokes required to spell word using WP (including selection of word in prediction list) |
|---|-------------|-----------------------|-------------|---|
| 4   | letter      | 1                     | ladder      | 4   |
| 4   | dress       | 2                     | cross       | 3   |
| 2   | quietly     | 3                     | quickly     | 2   |
| 4   | tall        | 4                     | ball        | 4   |
| 4   | cake        | 5                     | coke        | 4   |
| 3   | yellow      | 6                     | follow      | 4   |
| 4   | married     | 7                     | worried     | 5   |
| 4   | push        | 8                     | pull        | 3   |
| 3   | garden      | 9                     | carpet      | 5   |
| 3   | fire        | 10                    | wire        | 4   |
| 4   | white       | 11                    | wheel       | 4   |
| 3   | picture     | 12                    | mixture     | 4   |
| 4   | alone       | 13                    | awake       | 3   |
| 4   | noise       | 14                    | voice       | 2   |
| 3   | cry         | 15                    | dry         | 3   |
| 6   | rocket      | 16                    | packet      | 6   |
| 3   | tie         | 17                    | pie         | 3   |
| 5   | crown       | 18                    | clown       | 5   |
| 5   | fairy       | 19                    | hairy       | 5   |
| 4   | horrible    | 20                    | terrible    | 4   |
| 4   | chief       | 21                    | thief       | 5   |
| 3   | talk        | 22                    | walk        | 4   |
| 9   | operation   | 23                    | injection   | 9   |
| 3   | eye         | 24                    | one         | 2   |
| 4   | furious     | 25                    | curious     | 3   |
| 7   | witches     | 26                    | matches     | 7   |
| 4   | fruit       | 27                    | blood       | 3   |
| 4   | tail        | 28                    | jail        | 4   |
| 3   | light       | 29                    | right       | 2   |
| 4   | bridge      | 30                    | fridge      | 6   |
| 3   | hurt        | 31                    | turn        | 3   |
| 2   | knock       | 32                    | knife       | 3   |
| 3   | circle      | 33                    | circus      | 6   |
| 3   | polished    | 34                    | finished    | 3   |
| 3   | sleeping    | 35                    | sweeping    | 8   |
| 3   | break       | 36                    | great       | 4   |
| 4   | weather     | 37                    | feather     | 7   |
| 2   | village     | 38                    | message     | 4   |
| 4   | mountain    | 39                    | fountain    | 8   |
| 5   | string      | 40                    | strong      | 5   |
| 153   |             |                       |             | 173   |

Shaded words

Word does not appear on prediction list as it is not in the word prediction lexicon.  
 Note how many more of the unpredicted words were assigned to Wordlist B, and how many of them were positioned in a cluster.

**Appendix M : Mouse control screening**

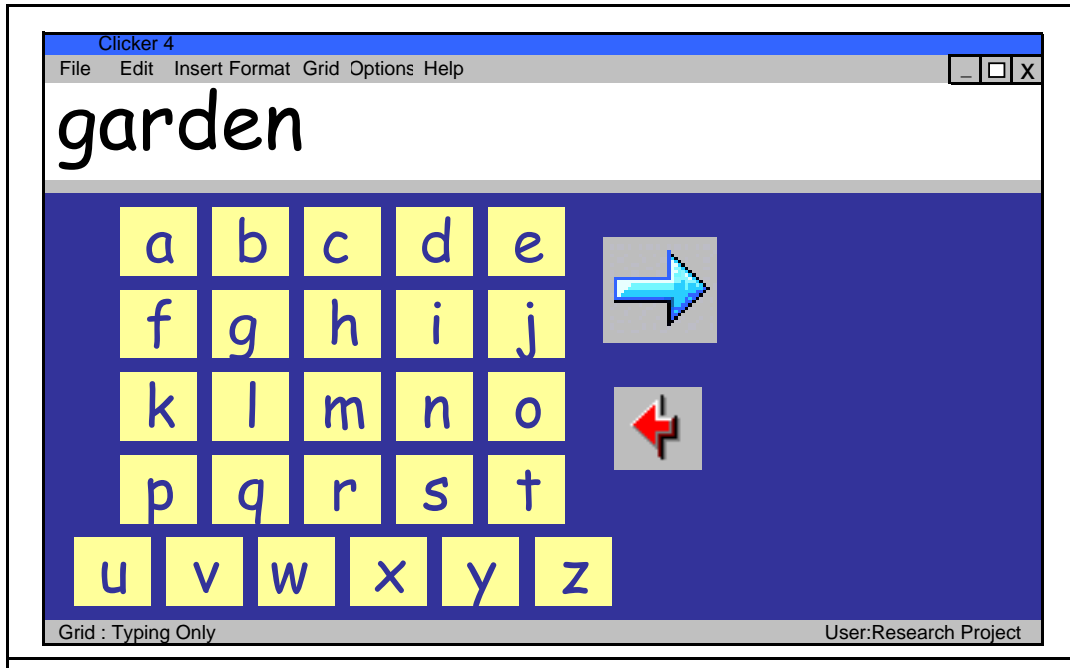




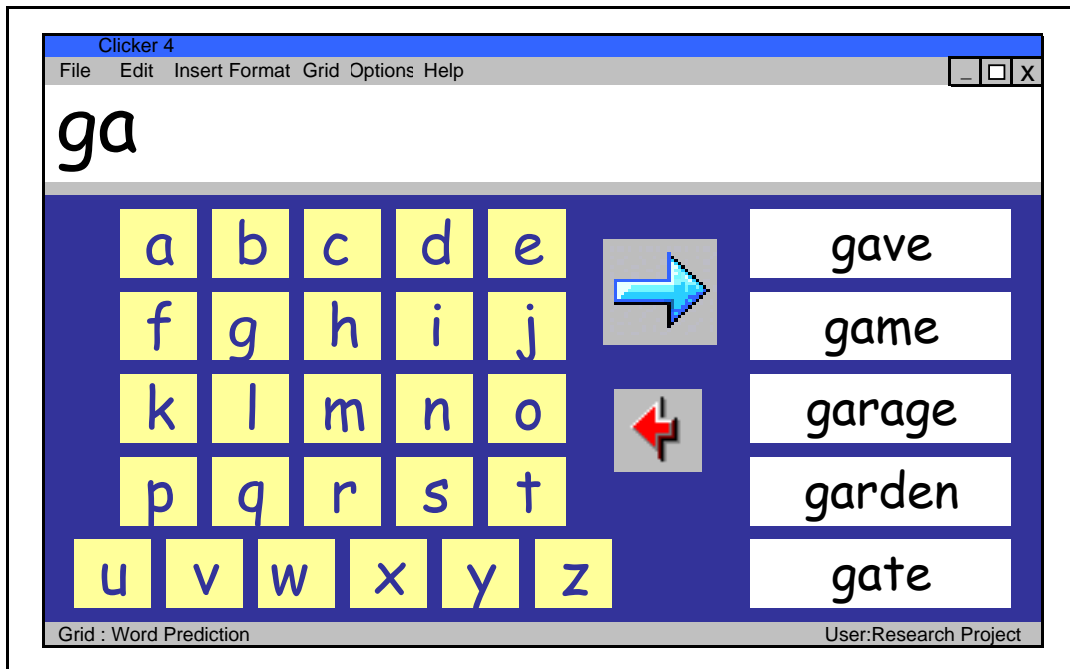


Appendix N : Screen format for TO and WP subtests

TO screen format



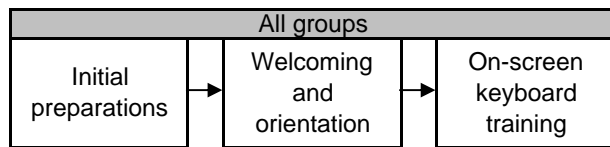
WP screen format



**Appendix O : Graded Word Spelling Test – List of words**

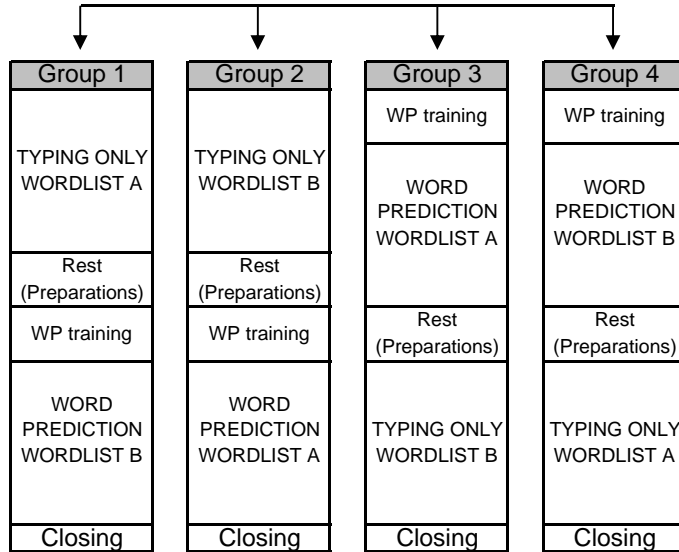
| No. | Word        | No. | Word        | No. | Word       | No. | Word       |
|-----|-------------|-----|-------------|-----|------------|-----|------------|
| 1   | is          | 2   | am          | 3   | see        | 4   | up         |
| 5   | do          | 6   | red         | 7   | bit        | 8   | gun        |
| 9   | down        | 10  | milk        | 11  | sick       | 12  | story      |
| 13  | grass       | 14  | cold        | 15  | letter     | 16  | head       |
| 17  | fire        | 18  | paint       | 19  | chair      | 20  | earth      |
| 21  | young       | 22  | honey       | 23  | pencil     | 24  | thumb      |
| 25  | office      | 26  | always      | 27  | reason     | 28  | complete   |
| 29  | shovel      | 30  | crowded     | 31  | royal      | 32  | million    |
| 33  | honest      | 34  | straight    | 35  | arrive     | 36  | except     |
| 37  | length      | 38  | whose       | 39  | region     | 40  | suitable   |
| 41  | require     | 42  | autograph   | 43  | gradual    | 44  | guilty     |
| 45  | beautiful   | 46  | previous    | 47  | pressure   | 48  | knowledge  |
| 49  | cooperate   | 50  | frequently  | 51  | foreign    | 52  | cautious   |
| 53  | mischief    | 54  | initials    | 55  | vehicle    | 56  | scheme     |
| 57  | ceremony    | 58  | principles  | 59  | achieve    | 60  | efficient  |
| 61  | authentic   | 62  | seize       | 63  | vicious    | 64  | centenary  |
| 65  | physique    | 66  | catastrophe | 67  | crescent   | 68  | villainy   |
| 69  | spaghetti   | 70  | aggressive  | 71  | insatiable | 72  | colossal   |
| 73  | eligible    | 74  | occurred    | 75  | menagerie  | 76  | precocious |
| 77  | accommodate | 78  | erroneous   | 79  | abscess    | 80  | allegiance |

Appendix P : Procedure and record sheet



| On-screen keyboard training |      |                   |
|-----------------------------|------|-------------------|
| 1                           | bus  | A school bus.     |
| 2                           | red  | The colour red.   |
| 3                           | hand | Put up your hand. |
| 4                           | love | I love you.       |
| 5                           | book | Read a book.      |

|              |
|--------------|
| Number       |
|              |
| Sample Group |
|              |



| Word prediction training |    |             | Comments                |  |
|--------------------------|----|-------------|-------------------------|--|
| Training                 | 1  | cat         | A cat miaows.           |  |
|                          | 2  | stop        | Stop doing that.        |  |
|                          | 3  | frog        | A frog is green.        |  |
|                          | 4  | television  | Watch television.       |  |
|                          | 5  | chocolate   | Chocolate is delicious. |  |
|                          | 6  | snake       | A snake is dangerous.   |  |
|                          | 7  | jump        | Jump over the wall.     |  |
|                          | 8  | flower      | Smell the flower.       |  |
|                          | 9  | grandfather | My grandfather is old.  |  |
|                          | 10 | policemen   | Policemen help us.      |  |
| Trying alone             | 11 | get         | Which one did you get?  |  |
|                          | 12 | black       | The colour black.       |  |
|                          | 13 | sing        | Sing in a choir.        |  |
|                          | 14 | pram        | A baby rides in a pram. |  |
|                          | 15 | understand  | Do you understand this? |  |
|                          | 16 | yes         | Yes, you can.           |  |
| WP test                  | 17 | top         | Put it on top.          |  |
|                          | 18 | man         | A lady and a man.       |  |
|                          | 19 | run         | Walk, don't run!        |  |
|                          | 20 | look        | Look at this!           |  |

| TO/WP?                       | Wordlist A | Comment                   |
|------------------------------|------------|---------------------------|
| *** START TIMING ***         |            |                           |
| 1                            | tall       | A tall man.               |
| 2                            | fire       | A veld fire.              |
| 3                            | cry        | Babies cry a lot.         |
| 4                            | fairy      | A fairy godmother.        |
| 5                            | horrible   | It tastes horrible.       |
| 6                            | talk       | Talk softly.              |
| 7                            | mountain   | Climb a mountain.         |
| 8                            | letter     | Write a letter.           |
| 9                            | yellow     | The colour yellow.        |
| 10                           | married    | A married woman.          |
| 11                           | garden     | A flower garden.          |
| 12                           | white      | The colour white.         |
| 13                           | picture    | Draw a picture            |
| 14                           | rocket     | A space rocket.           |
| 15                           | chief      | An Indian chief.          |
| 16                           | fruit      | Fruit juice.              |
| 17                           | tail       | The dog wags his tail.    |
| 18                           | light      | Switch the light on.      |
| 19                           | bridge     | Cross over on the bridge. |
| 20                           | hurt       | I hurt my arm.            |
| 21                           | push       | Push the trolley.         |
| 22                           | alone      | He is all alone.          |
| 23                           | noise      | Don't make a noise.       |
| 24                           | crown      | A queen wears a crown.    |
| 25                           | furious    | Mom was furious.          |
| 26                           | witches    | Witches and wizards.      |
| 27                           | polished   | Polished shoes.           |
| 28                           | sleeping   | Sleeping Beauty.          |
| 29                           | weather    | Rainy weather.            |
| 30                           | string     | A ball of string.         |
| *** STOP TIMING and SAVE *** |            |                           |

| TO/WP?                       | Wordlist B | Comment                    |
|------------------------------|------------|----------------------------|
| *** START TIMING ***         |            |                            |
| 1                            | ball       | Throw the ball.            |
| 2                            | wire       | Electric wire.             |
| 3                            | dry        | Dry your hands.            |
| 4                            | hairy      | The hairy dog.             |
| 5                            | terrible   | A terrible thing happened. |
| 6                            | walk       | Don't walk on the grass.   |
| 7                            | fountain   | A water fountain.          |
| 8                            | ladder     | Climb a ladder.            |
| 9                            | follow     | Follow the leader.         |
| 10                           | worried    | You look worried.          |
| 11                           | carpet     | Sit on the carpet.         |
| 12                           | wheel      | Turn the wheel.            |
| 13                           | mixture    | Cough mixture.             |
| 14                           | packet     | A packet of chips.         |
| 15                           | thief      | A thief steals.            |
| 16                           | blood      | Blood is red.              |
| 17                           | jail       | The robber is in jail.     |
| 18                           | right      | Right or wrong.            |
| 19                           | fridge     | A fridge is cold inside.   |
| 20                           | turn       | Turn the tap off.          |
| 21                           | pull       | Pull the suitcase.         |
| 22                           | awake      | Wide awake.                |
| 23                           | voice      | A lovely singing voice.    |
| 24                           | clown      | A circus clown.            |
| 25                           | curious    | The curious cat.           |
| 26                           | matches    | Don't play with matches.   |
| 27                           | finished   | This is nearly finished.   |
| 28                           | sweeping   | Sweeping the floor.        |
| 29                           | feather    | A bird's feather.          |
| 30                           | strong     | Strong muscles.            |
| *** STOP TIMING and SAVE *** |            |                            |

|                          |
|--------------------------|
| Researcher or Evaluator? |
|                          |
| Date                     |
|                          |
| Grade                    |
|                          |
| Name                     |
|                          |

|                  |  |
|------------------|--|
| Score Wordlist A |  |
|------------------|--|

|                 |  |
|-----------------|--|
| Time Wordlist A |  |
|-----------------|--|

|                  |  |
|------------------|--|
| Score Wordlist A |  |
|------------------|--|

|                 |  |
|-----------------|--|
| Time Wordlist A |  |
|-----------------|--|

**Appendix Q : Gauteng Education Department’s letter of permission for the main study**

GAUTENG EDUCATION DEPARTMENT

To Whom It May Concern

PERMISSION FOR RESEARCH PROJECT TO BE CONDUCTED AT FOREST TOWN SCHOOL

I request permission to conduct a research project amongst the Grade 3 to Grade 6 children of Forest Town School.

The research is in partial fulfillment of the requirements for the Masters in Augmentative and Alternative Communication Degree through the University of Pretoria. The purpose of the study is to investigate the usefulness of Word Prediction software to serve as writing support where there are spelling and writing difficulties. The project entails each learner executing two short computer tasks, with and without the aid of word prediction, and evaluating the relative effectiveness of the two approaches in terms of speed and quality of output. The results of The Graded Spelling Test, administered to all the Grade 3-Grade 6 classes, will be required for correlation purposes.

The study will require each child to leave the classroom for twenty to thirty minutes. Great care will be taken to minimize the impact of the study on academic school time. A research assistant will be employed (at the researcher’s own expense) to help administer the tests, so as to minimize the impact on the therapist’s working time.

The children’s anonymity in the publication of the research results is assured. A summary of the research results will be available to any staff, parents or interested persons and a full copy of the completed research project will be given to Forest Town School (and the Department if requested). The outcome of the project is expected to have direct potential applicability in the remedial approach of the learners at Forest Town School.

The permission of the parents of each of the children involved in the study will be secured before testing commences (see attached letter). The principal of Forest Town School has been informed of the project and his permission obtained (see attached letter). All the relevant teachers have been informed and their positive support secured. Also attached is a copy of the research proposal (although there have been some changes to the research plan since its initial conception, the proposal gives a good indication of the purpose and nature of the project).

I would appreciate it if you would consider this application and sign below to acknowledge your permission.

Thank you

\_\_\_\_\_  
Marina Herold  
Occupational Therapist at Forest Town School

\_\_\_\_\_  
Date

\_\_\_\_\_  
Gauteng Education

\_\_\_\_\_  
Date

## Appendix R : Headmaster’s letter of permission for the main study

The Principal  
FOREST TOWN SCHOOL

### Permission for research project to be conducted at Forest Town School

Dear Mr Jackson

I request permission to conduct a research project amongst the Grade 3 to Grade 6 children of Forest Town School.

The research is in partial fulfillment of the requirements for the Masters in Augmentative and Alternative Communication Degree through the University of Pretoria. The purpose of the study is to investigate the usefulness of Word Prediction software to serve as writing support where there are spelling and writing difficulties. The project entails each child executing two short computer tasks, with and without the aid of word prediction, and evaluating the relative effectiveness of the two approaches in terms of speed and quality of output. The results of The Graded Spelling Test, administered to all the Grade 3-Grade 6 classes, will be required for correlation purposes.

The study will require each child to leave the classroom for twenty to thirty minutes. Great care will be taken to minimise the impact of the study on academic school time. Also, the children’s anonymity in the publication of the research results is assured. A research assistant will be employed (at the researcher’s own expense) to help administer the tests, so as to minimise the impact on the therapist’s working time.

A summary of the research results will be available to any staff, parents or interested persons and a full copy of the completed research project will be given to Forest Town School. The outcome of the project is expected to have direct potential applicability in the remedial approach of the learners at Forest Town School.

The permission of the parents of each of the children involved in the study will be secured before testing commences, as well as the permission of the Gauteng Department of Education. All the relevant teachers will be informed and their support secured.

I would appreciate it if you would consider this request favourably and sign below to acknowledge your permission.

Thank you

\_\_\_\_\_  
Marina Herold  
Occupational Therapist at Forest Town School

\_\_\_\_\_  
Date

\_\_\_\_\_  
Mr L. Jackson  
Principal of Forest Town School

\_\_\_\_\_  
Date

**Appendix S : Parent’s letter of permission for the main study**

FOREST TOWN SCHOOL  
Occupational Therapy Department

24<sup>th</sup> February 2003

Dear

I am conducting a research project amongst the Grade 3 to Grade 6 children of Forest Town School. Permission is requested for your child \_\_\_\_\_ to participate in the project.

The research is in partial fulfilment of the requirements for the Masters in Augmentative and Alternative Communication Degree through the University of Pretoria. The purpose of the study is to investigate the usefulness of Word Prediction software to serve as writing support where there are spelling and writing difficulties. The project entails each child executing two short computer tasks, with and without the aid of word prediction, and evaluating the relative effectiveness of the two approaches in terms of speed and quality of output.

The study will require your child to leave the classroom for twenty to thirty minutes. Great care will be taken to minimise the impact of the study on academic school time. Also, your child’s anonymity in the publication of the research results is assured. A summary of research results will be available to anyone on request.

I would appreciate it if you would complete the section below, and return it to your child’s class teacher as soon as possible.

Thank you

Marina Herold  
Occupational Therapist at Forest Town School

---

My child \_\_\_\_\_ MAY / MAY NOT participate in the research project on the usefulness of word prediction for writing support.

Signature of parent / guardian \_\_\_\_\_

Date \_\_\_\_\_

## Appendix T : Instructions

The following passages were not read verbatim, so that eye contact and a rapport could be established with the subject. The underlined words reflect the main aspects that were essential to communicate to the subject.

### Instructions for the Mouse Control Screening

Thank you for coming. What we are doing here is a little fun exercise to see if you can see small objects on the screen and move the mouse to those objects. You will be chasing a cat around the screen with your mouse. When I tell you to start, you must click on the green light. A little cat will appear on the screen. Click on it. That cat will appear again in another position. Click on it. Just carry on 'catching' the cat until the red light appears. Got it? It is very easy. Just go as fast as you can because I will be timing you. OK? 1,2,3 GO!

### 1. Welcoming and Orientation

Hello -----. Thank you so much for being part of this research project. I just want to explain to you what this is all about. I am doing a project to test a new way of spelling. I want to see if young children like you can learn to use a new method of spelling and if this new way helps a child to spell better and faster. By doing this exercise, you will really be helping me and I thank you very much. You must understand that this is not a test, and it will not go on your report. It doesn't matter if you can't spell all the words right so don't worry if you don't know how to spell them. I just want to see if there is any difference when you spell with the new method. There are going to be two parts to this exercise. You will spell 30 words with one method of typing. After a break, you will spell another 30 words with the other method. There is a juice and chocolate for you to enjoy while you are waiting. One more thing. I will be video taping the whole session. The video is so that someone can mark me, not you. They want to be sure that I do the exact same thing with every child, and that I do not cheat by helping some of the children. So, once we start, you must understand that I am not allowed to help you. OK? Any questions? Then we are ready to start.

## 2. On-screen keyboard training

| Order        | Verbal instructions to the child   | Concept taught   |
|--------------|--|--|
| Introduction | You will not be using the usual keyboard to type your words with, but this on-screen keyboard. Notice that the letters are in alphabetical order, starting with the 'a' and ending with a 'z'. As you click on the letters, they will appear here ( <i>point to the area on the screen where the letters will appear</i> ). Let's try a word.  | Familiarising the child with the layout of the screen and the keyboard.  |
| 1            | Type <b>bus</b> . <b>A school bus</b> . <b>Bus</b> . Good. Once you have finished typing in the word, you must enter it here ( <i>point to the enter icon</i> ). The word disappears off the screen and the computer will tell me that you are ready for the next word which I will then call out.   | Familiarising the child with the concept of typing through an on-screen keyboard, the way a word appears in the word processor section of the screen as it is typed, and the way the word disappears on entering it. |
| 2            | Type <b>red</b> . <b>The colour red</b> . <b>Red</b> . Good. Now let's pretend you made a mistake and you want to fix it. You click on the delete icon ( <i>show the 'delete' icon</i> ) and one letter at a time will disappear. Delete 'red' and then type it in again to see how it works. You can change your word as much as you want to while you are spelling it, but once you have entered it, it is gone and too late to change. Understand? Well, that is all there is to it. Just to test you know how to work this keyboard, you can try 3 more words. | Familiarising the child with the function of the 'delete' icon.  |
| 3            | Type <b>hand</b> . <b>Put up your hand</b> . <b>Hand</b> . .....Very good. Always remember to enter your word as soon as you have finished typing it. Then I will know you are ready for the next one.   | Practice using the on-screen keyboard as well as the procedure of the task – listening for the next word, typing it in and entering the word etc.  |
| 4            | Type <b>love</b> . <b>I love you</b> . <b>Love</b> . ..... Yes.  |  |
| 5            | Type <b>book</b> . <b>Read a book</b> . <b>Book</b> . ..... I think you have got it.   |  |
| Closing      | Have you got any questions about how to use this keyboard? .....   | Confirming that the child feels comfortable with the on-screen typing and the procedure of the task.   |



### 3. Word prediction training

Instructions are shown in italics.

..... indicate pauses where the researcher allows the child to type the word.

| Phase        | Verbal instructions   | Concept to learn                                    |
|--------------|---|---|
| Introduction | I am now going to teach you another way to spell. It is called word prediction. You use the exact same on-screen keyboard as before, only this time there is a column of white cells over <i>here (point to prediction window)</i> . As you start typing your word the computer is going to try and guess, or predict, what word you are planning to type. The computer will put its guesses here in these white boxes ( <i>point to the five cells</i> ). If the computer guesses correctly, you can use the word if offers you instead of typing it yourself! This is how it works .....  |   |
| Training     | 1 Type <b>cat</b> . <b>A cat miaows. Cat</b> . Notice that as you typed the letter ‘c’, a row of words starting with the letter ‘c’ appeared. Did the computer guess ‘cat’? No, it did not. Type another letter. Can you see ‘cat’ yet? Yes. See what happens if you click on the word ‘cat’ ..... The word goes up here ( <i>point to blank area where typed words go</i> ) and you don’t have to finish it. Just enter to show you ready for the next word.   | Introduction of basic idea                          |
|              | 2 Let’s try another one. <b>Stop. Stop doing that! Stop</b> . Type a letter and look for the word ‘stop’. If it is not there, type another letter. Is it there yet? Yes, it has come in now. Click on it and in it goes. Don’t forget to enter your word once you are finished, even if the computer finishes the word for you.   |   |
|              | 3 <b>Frog. A frog is green. Frog</b> . ..... Do you think you are getting the idea?   |   |
|              | 4 Let’s try a longer word. <b>Television. Watch television. Television</b> . ..... The computer guessed ‘television’ on the third letter.   | Long words and difficult words can be found easily  |
|              | 5 Here’s another longish and more difficult word. <b>Chocolate. Chocolate is delicious. Chocolate</b> . I am sure you can see that this is a quick way to type in long words, and an easy way to spell more difficult words!  |   |
|              | 6 Let’s see what happens with this next word. <b>Snake. A snake is dangerous. Snake</b> . ..... This time the word never appeared at all and all the white boxes became empty as you typed the end of the word. Sometimes the computer does not have the word you want in its memory, so it will never guess that word, or it can’t think of more to guess. This is important to remember. If the word does not come, don’t worry. Just keep typing and checking for the word until you have finished the word. Sometimes the word you are looking for comes in to the boxes after the first letter you typed, but not often. Sometimes you have to type a lot of letters before it comes in. And sometimes it never comes in at all. Most often the word comes after the 2 <sup>nd</sup> or 3 <sup>rd</sup> letter. But whatever happens, just keep on typing and checking. Don’t stop because you think there is a problem. | Keep typing if the word doesn’t appear. Don’t stop! |

| Phase    |   | Verbal instructions  |   | Concept to learn  |
|----------|---|--|---|---|
| Training | 7   | Let's try another word. <b>Jump. Jump over the wall. Jump.</b> Type the first letter of 'jump'. Look what has happened here. 'Jumped' and 'jumping' has come in, but not 'jump'. You have to be careful of words like this. You must type the exact word I call. So what can you do? You can do two things. You can carry on typing. The next letter in 'jump' is 'u'. Now 'jump' has come in, and you can use it. Lets go back to the first letter ( <i>delete up to the 'j'</i> ). You can do something else too. You can use the word 'jumping' or 'jumped' and then change it. Click on 'jumping', take away the space behind it, and take the 'ing' away. |   | Taking care which form of the word to use, manipulating a word found in the prediction list to make it match the required form of the target word, or, typing the target word out while copying the word from the prediction list for correct spelling. |
|          | 8   | Let's see what happens with this word. <b>Flower. Smell the flower. Flower.</b> ..... You will notice that 'flowers' comes in after the 3 <sup>rd</sup> letter, but I asked for 'flower', not 'flowers'. Again, you can choose what you would prefer to do. You can either click in 'flowers' and then remove the 's'. Or you can look at how 'flowers' is spelt and copy the spelling as you type out 'flower' yourself. Then you know that you have the correct spelling.  |   |   |
|          | 9   | Here's another trick. Type <b>Grandfather. My grandfather is old. Grandfather.</b> ..... Notice how the word 'grand' has appeared. 'Grand' is part of 'grandfather'. You can keep typing until 'grandfather' appears. Try it. It came in when you typed the next letter. Or, ( <i>delete the word up till the 'g'</i> ) you can use 'grand', take away the space, and add in 'father'. Notice how 'grandfather' came in the moment the space was removed.  |   |   |
|          | 10  | Let's try one more. <b>Policemen. Policemen help us. Policemen.</b> ..... This time we have the word 'policeman' appear. But I asked for 'policemen'? What can you do? You can do two things again. Use it and change it – change the 'a' to 'e'. Or, you can copy the spelling of the word and type it out yourself.  |   |   |
| Practice | I am now going to see if you have got the idea. I am going to let you try some on your own. ( <i>But help the child if he makes any errors or misses opportunities to use the predicted words</i> ).  |  |   |   |
|          | 11  | Get. Which one did you get? Get.   | Allow the child to try on his own. Using training principles below to guide interaction.  | Semi-independent practice   |
|          | 12  | Black. The colour black. Black.  |   |   |
|          | 13  | Sing. Sing in a choir. Sing.   |   |   |
|          | 14  | Pram. A baby rides in a pram. Pram.  |   |   |
| 15       | Understand. Do you understand this? Understand.   |  |   |   |
| Test     | I am now going to call out five very easy words. But this time I am not going to help you at all. I want to see if you can use this spelling program without any help at all. ( <i>Mark which ones the child gets right and wrong on the Procedure and Record Form</i> ). |  |   |   |
|          | 16  | Yes. Yes, you can. Yes.  | No prompting or assistance allowed. Record on the record form the number of times the child correctly uses a word from the prediction list. | Testing if Word Prediction as a typing strategy has been learned.   |
|          | 17  | Top. Put it on top. Top.   |   |   |
|          | 18  | Man. A man and a lady. Man.  |   |   |
|          | 19  | Run. Don't run in the corridors! Run.  |   |   |
| 20       | Look. Look at this! Look.   |  |   |   |
| Closing  | You have done very well. I think you know what to do! (Move directly on to the WP Subtest)  |  |   |   |

**Appendix U : Master data chart**

| 1                 | 2                        | 3       | 4     | 5      | 6     | 7                      | 8  | 9                 | 10  | 11                           | 12                         | 13                               | 14                             | 15  | 16   | 17                            |
|-------------------|--------------------------|---------|-------|--------|-------|------------------------|--|-------------------|---|------------------------------|----------------------------|----------------------------------|--------------------------------|---|--|-------------------------------|
| Respondent Number | Tester reliability check | Present | Grade | Gender | Group | Chronological age (CA) | Graded Word Spelling Test score (GWST score) | Spelling age (SA) | Difference between chronological age and spelling age (CA-SA) | Typing Only score (TO score) | Typing Only time (TO time) | Word Prediction score (WP score) | Word Prediction time (WP time) | Difference between WP and TO scores (WP score - TO score) | Difference between WP and TO times (WP time - TO time) | Number of approximations used |

|    |   |   |   |      |   |       |    |       |      |    |       |    |       |    |       |    |
|----|---|---|---|------|---|-------|----|-------|------|----|-------|----|-------|----|-------|----|
| 1  | 1 | 1 | 4 | Boy  | 4 | 10.50 | 23 | 8.67  | 1.83 | 13 | 9.55  | 20 | 14.03 | 7  | 4.43  | 2  |
| 2  |   | 1 | 4 | Boy  | 3 | 11.17 | 14 | 7.25  | 3.92 | 3  | 7.57  | 5  | 8.27  | 2  | 0.67  | 4  |
| 5  | 1 | 1 | 4 | Boy  | 1 | 11.33 | 11 | 6.83  | 4.50 | 6  | 9.87  | 12 | 10.05 | 6  | 0.15  | 6  |
| 6  |   | 1 | 4 | Boy  | 3 | 10.50 | 17 | 7.67  | 2.83 | 3  | 7.75  | 16 | 10.78 | 13 | 2.98  | 2  |
| 7  |   | 1 | 4 | Boy  | 2 | 10.00 | 21 | 8.33  | 1.67 | 6  | 8.72  | 18 | 9.42  | 12 | 0.72  | 2  |
| 8  |   | 1 | 4 | Girl | 3 | 12.50 | 12 | 7.00  | 5.50 | 5  | 7.20  | 10 | 10.08 | 5  | 2.88  | 2  |
| 10 |   | 1 | 4 | Boy  | 2 | 10.50 | 16 | 7.58  | 2.92 | 5  | 12.50 | 8  | 12.75 | 3  | 0.25  | 2  |
| 11 |   | 1 | 4 | Girl | 3 | 11.92 | 9  | 6.58  | 5.34 | 0  | 9.35  | 5  | 14.30 | 5  | 4.90  | 8  |
| 12 |   | 1 | 4 | Boy  | 2 | 10.17 | 13 | 7.08  | 3.09 | 5  | 11.60 | 7  | 17.13 | 2  | 5.53  | 4  |
| 13 |   | 1 | 4 | Girl | 1 | 10.83 | 24 | 8.83  | 2.00 | 20 | 8.23  | 25 | 10.22 | 5  | 2.02  | 1  |
| 16 | 1 | 1 | 4 | Boy  | 1 | 10.92 | 5  | 6.08  | 4.84 | 1  | 15.98 | 3  | 18.53 | 2  | 2.53  | 10 |
| 17 |   | 1 | 4 | Boy  | 4 | 11.00 | 9  | 6.58  | 4.42 | 1  | 7.87  | 6  | 9.62  | 5  | 1.72  | 8  |
| 18 |   | 1 | 4 | Boy  | 2 | 12.00 | 7  | 6.33  | 5.67 | 0  | 12.05 | 2  | 9.98  | 2  | -2.12 | 22 |
| 19 | 1 | 1 | 4 | Boy  | 4 | 11.33 | 17 | 7.67  | 3.66 | 8  | 7.27  | 11 | 11.07 | 3  | 3.77  | 1  |
| 20 | 1 | 1 | 4 | Girl | 1 | 11.33 | 19 | 8.00  | 3.33 | 7  | 6.93  | 12 | 8.25  | 5  | 1.35  | 7  |
| 21 |   | 1 | 4 | Boy  | 4 | 11.25 | 12 | 7.00  | 4.25 | 3  | 6.03  | 6  | 7.55  | 3  | 1.55  | 2  |
| 23 |   | 1 | 4 | Boy  | 1 | 11.42 | 15 | 7.42  | 4.00 | 5  | 12.23 | 11 | 14.12 | 6  | 1.92  | 3  |
| 24 |   | 1 | 4 | Girl | 4 | 10.92 | 14 | 7.25  | 3.67 | 1  | 6.75  | 4  | 8.00  | 3  | 1.20  | 7  |
| 26 |   | 1 | 4 | Boy  | 2 | 10.83 | 24 | 8.83  | 2.00 | 10 | 10.28 | 22 | 11.17 | 12 | 0.87  | 1  |
| 27 | 1 | 1 | 4 | Boy  | 2 | 10.42 | 11 | 6.83  | 3.59 | 4  | 10.88 | 10 | 15.57 | 6  | 4.67  | 5  |
| 28 | 1 | 1 | 4 | Girl | 1 | 11.67 | 12 | 7.00  | 4.67 | 5  | 11.53 | 10 | 12.57 | 5  | 1.07  | 5  |
| 29 |   | 1 | 4 | Boy  | 3 | 10.25 | 22 | 8.50  | 1.75 | 11 | 10.88 | 20 | 10.75 | 9  | -0.15 | 0  |
| 30 |   | 1 | 5 | Boy  | 1 | 11.25 | 28 | 9.50  | 1.75 | 19 | 11.27 | 26 | 12.58 | 7  | 1.28  | 1  |
| 31 |   | 1 | 5 | Boy  | 1 | 10.83 | 17 | 7.67  | 3.16 | 12 | 7.38  | 12 | 8.95  | 0  | 1.55  | 5  |
| 32 |   | 1 | 5 | Boy  | 4 | 11.92 | 9  | 6.67  | 5.25 | 2  | 10.75 | 5  | 12.85 | 3  | 2.05  | 6  |
| 33 | 1 | 1 | 5 | Boy  | 4 | 12.25 | 27 | 9.33  | 2.92 | 17 | 7.95  | 20 | 8.33  | 3  | 0.33  | 4  |
| 34 |   | 1 | 5 | Girl | 3 | 12.00 | 21 | 8.33  | 3.67 | 14 | 8.10  | 21 | 8.35  | 7  | 0.25  | 0  |
| 35 |   | 1 | 5 | Girl | 2 | 12.33 | 28 | 9.50  | 2.83 | 20 | 9.73  | 25 | 7.93  | 5  | -1.77 | 1  |
| 37 | 1 | 1 | 5 | Boy  | 1 | 12.00 | 23 | 8.67  | 3.33 | 15 | 8.52  | 12 | 10.73 | -3 | 2.23  | 5  |
| 38 |   | 1 | 5 | Girl | 4 | 12.00 | 29 | 9.67  | 2.33 | 22 | 8.68  | 24 | 8.52  | 2  | -0.18 | 1  |
| 39 |   | 1 | 5 | Boy  | 4 | 12.67 | 24 | 8.83  | 3.84 | 15 | 8.37  | 18 | 11.87 | 3  | 3.47  | 5  |
| 40 | 1 | 1 | 5 | Girl | 2 | 11.50 | 25 | 9.00  | 2.50 | 10 | 8.90  | 23 | 9.55  | 13 | 0.65  | 3  |
| 41 | 1 | 1 | 5 | Boy  | 3 | 10.58 | 19 | 8.00  | 2.58 | 6  | 10.60 | 19 | 14.05 | 13 | 3.45  | 2  |
| 42 |   | 1 | 5 | Boy  | 3 | 11.83 | 28 | 9.67  | 2.16 | 14 | 9.63  | 20 | 10.28 | 6  | 0.68  | 0  |
| 43 |   | 1 | 5 | Boy  | 4 | 12.00 | 19 | 8.00  | 4.00 | 14 | 10.12 | 6  | 11.03 | -8 | 0.93  | 2  |
| 44 |   | 1 | 5 | Girl | 3 | 11.83 | 26 | 9.17  | 2.66 | 15 | 9.68  | 26 | 10.75 | 11 | 1.05  | 2  |
| 45 | 1 | 1 | 5 | Boy  | 1 | 10.67 | 24 | 8.83  | 1.84 | 12 | 8.15  | 20 | 8.57  | 8  | 0.37  | 0  |
| 46 |   | 1 | 5 | Boy  | 2 | 12.50 | 32 | 10.25 | 2.25 | 23 | 8.07  | 26 | 8.17  | 3  | 0.07  | 0  |
| 47 | 1 | 1 | 5 | Boy  | 3 | 10.92 | 15 | 7.42  | 3.50 | 5  | 8.85  | 5  | 10.83 | 0  | 1.93  | 4  |
| 48 |   | 1 | 5 | Boy  | 1 | 11.83 | 19 | 8.00  | 3.83 | 12 | 7.67  | 18 | 10.15 | 6  | 2.45  | 0  |

| 1                 | 2                        | 3       | 4     | 5      | 6     | 7                      | 8  | 9                 | 10  | 11                           | 12                         | 13                               | 14                             | 15  | 16   | 17                            |
|-------------------|--------------------------|---------|-------|--------|-------|------------------------|--|-------------------|---|------------------------------|----------------------------|----------------------------------|--------------------------------|---|--|-------------------------------|
| Respondent Number | Tester reliability check | Present | Grade | Gender | Group | Chronological age (CA) | Graded Word Spelling Test score (GWST score) | Spelling age (SA) | Difference between chronological age and spelling age (CA-SA) | Typing Only score (TO score) | Typing Only time (TO time) | Word Prediction score (WP score) | Word Prediction time (WP time) | Difference between WP and TO scores (WP score - TO score) | Difference between WP and TO times (WP time - TO time) | Number of approximations used |
| 49                |                          | 1       | 5     | Boy    | 2     | 12.25                  | 19   | 8.00              | 4.25  | 7                            | 13.23                      | 16                               | 13.75                          | 9   | 0.55   | 0                             |
| 51                | 1                        | 1       | 5     | Boy    | 3     | 11.50                  | 23   | 8.67              | 2.83  | 13                           | 7.08                       | 18                               | 7.45                           | 5   | 0.35   | 0                             |
| 52                |                          | 1       | 5     | Boy    | 1     | 13.33                  | 30   | 9.83              | 3.50  | 25                           | 8.17                       | 25                               | 9.23                           | 0   | 1.03   | 0                             |
| 53                |                          | 1       | 5     | Girl   | 1     | 12.00                  | 10   | 6.67              | 5.33  | 2                            | 7.40                       | 11                               | 11.60                          | 9   | 4.20   | 5                             |
| 54                |                          | 1       | 5     | Girl   | 3     | 12.92                  | 8  | 6.42              | 6.50  | 0                            | 6.75                       | 4                                | 10.08                          | 4   | 3.28   | 12                            |
| 55                |                          | 1       | 5     | Boy    | 2     | 12.25                  | 18   | 7.83              | 4.42  | 3                            | 7.70                       | 19                               | 11.23                          | 16  | 3.53   | 4                             |
| 56                |                          | 1       | 5     | Boy    | 2     | 11.92                  | 13   | 7.08              | 4.84  | 3                            | 8.27                       | 14                               | 11.53                          | 11  | 3.23   | 2                             |
| 57                |                          | 1       | 5     | Girl   | 4     | 12.50                  | 21   | 8.33              | 4.17  | 10                           | 8.27                       | 14                               | 9.25                           | 4   | 0.95   | 4                             |
| 58                |                          | 1       | 5     | Boy    | 1     | 12.33                  | 21   | 8.33              | 4.00  | 13                           | 9.02                       | 17                               | 11.03                          | 4   | 2.03   | 3                             |
| 59                |                          | 1       | 5     | Boy    | 4     | 11.83                  | 14   | 7.25              | 4.58  | 4                            | 7.93                       | 10                               | 11.73                          | 6   | 3.83   | 6                             |
| 62                |                          | 1       | 6     | Boy    | 1     | 12.42                  | 25   | 9.00              | 3.42  | 15                           | 7.12                       | 22                               | 6.70                           | 7   | -0.40  | 2                             |
| 64                | 1                        | 1       | 6     | Boy    | 3     | 13.42                  | 31   | 9.08              | 4.34  | 21                           | 9.88                       | 26                               | 10.45                          | 5   | 0.55   | 2                             |
| 67                |                          | 1       | 6     | Boy    | 1     | 13.08                  | 13   | 7.08              | 6.00  | 3                            | 7.77                       | 12                               | 10.25                          | 9   | 2.45   | 3                             |
| 68                |                          | 1       | 6     | Girl   | 2     | 13.08                  | 26   | 9.17              | 3.91  | 16                           | 8.48                       | 23                               | 8.38                           | 7   | -0.12  | 0                             |
| 69                |                          | 1       | 6     | Girl   | 1     | 12.00                  | 30   | 9.83              | 2.17  | 22                           | 6.48                       | 28                               | 7.12                           | 6   | 0.62   | 1                             |
| 70                |                          | 1       | 6     | Girl   | 2     | 12.42                  | 28   | 9.50              | 2.92  | 17                           | 6.47                       | 23                               | 7.10                           | 6   | 0.60   | 0                             |
| 71                |                          | 1       | 6     | Boy    | 1     | 11.58                  | 17   | 7.67              | 3.91  | 15                           | 8.95                       | 24                               | 10.92                          | 9   | 1.92   | 0                             |
| 72                |                          | 1       | 6     | Boy    | 2     | 11.58                  | 20   | 8.17              | 3.41  | 10                           | 8.77                       | 22                               | 9.97                           | 12  | 1.17   | 0                             |
| 73                |                          | 1       | 6     | Girl   | 3     | 12.83                  | 28   | 9.50              | 3.33  | 21                           | 7.42                       | 23                               | 8.73                           | 2   | 1.33   | 0                             |
| 74                |                          | 1       | 6     | Boy    | 4     | 13.42                  | 15   | 7.42              | 6.00  | 9                            | 11.03                      | 8                                | 14.33                          | -1  | 3.33   | 11                            |
| 76                |                          | 1       | 6     | Girl   | 2     | 12.67                  | 30   | 9.83              | 2.84  | 19                           | 8.08                       | 27                               | 9.37                           | 8   | 1.27   | 0                             |
| 78                |                          | 1       | 6     | Boy    | 4     | 13.33                  | 27   | 9.33              | 4.00  | 22                           | 8.38                       | 20                               | 7.80                           | -2  | -0.60  | 7                             |
| 79                |                          | 1       | 6     | Boy    | 3     | 12.00                  | 21   | 8.33              | 3.67  | 13                           | 7.97                       | 23                               | 10.45                          | 10  | 2.45   | 0                             |
| 80                |                          | 1       | 6     | Boy    | 1     | 12.83                  | 19   | 8.00              | 4.83  | 7                            | 7.43                       | 15                               | 9.15                           | 8   | 1.75   | 1                             |
| 81                |                          | 1       | 6     | Boy    | 3     | 12.67                  | 26   | 9.17              | 3.50  | 14                           | 6.20                       | 20                               | 6.93                           | 6   | 0.73   | 0                             |
| 83                |                          | 1       | 6     | Boy    | 3     | 13.08                  | 18   | 7.83              | 5.25  | 9                            | 7.08                       | 15                               | 7.90                           | 6   | 0.80   | 3                             |
| 85                |                          | 1       | 6     | Boy    | 2     | 12.58                  | 17   | 7.67              | 4.91  | 13                           | 14.20                      | 19                               | 16.03                          | 6   | 1.83   | 2                             |
| 86                |                          | 1       | 6     | Girl   | 2     | 12.67                  | 24   | 8.83              | 3.84  | 10                           | 9.90                       | 21                               | 10.13                          | 11  | 0.23   | 1                             |
| 87                | 1                        | 1       | 6     | Boy    | 4     | 14.17                  | 21   | 8.33              | 5.84  | 14                           | 6.73                       | 16                               | 8.22                           | 2   | 1.52   | 4                             |
| 88                |                          | 1       | 6     | Boy    | 2     | 12.25                  | 13   | 7.08              | 5.17  | 5                            | 14.42                      | 12                               | 14.45                          | 7   | 0.05   | 2                             |
| 89                |                          | 1       | 6     | Boy    | 4     | 13.42                  | 31   | 10.08             | 3.34  | 24                           | 8.52                       | 26                               | 10.20                          | 2   | 1.70   | 0                             |
| 90                | 1                        | 1       | 6     | Girl   | 3     | 13.08                  | 24   | 8.83              | 4.25  | 13                           | 10.93                      | 19                               | 15.83                          | 6   | 4.93   | 2                             |
| 91                | 1                        | 1       | 6     | Girl   | 3     | 13.50                  | 6  | 6.17              | 7.33  | 0                            | 8.15                       | 4                                | 10.42                          | 4   | 2.22   | 1                             |
| 92                |                          | 1       | 6     | Girl   | 1     | 13.83                  | 41   | 11.83             | 2.00  | 23                           | 9.12                       | 28                               | 10.40                          | 5   | 1.30   | 0                             |
| 93                | 1                        | 1       | 6     | Girl   | 1     | 12.25                  | 21   | 8.33              | 3.92  | 13                           | 8.45                       | 18                               | 9.92                           | 5   | 1.42   | 2                             |
| 94                |                          | 1       | 6     | Boy    | 4     | 12.08                  | 24   | 8.83              | 3.25  | 22                           | 8.43                       | 18                               | 10.30                          | -4  | 1.90   | 0                             |
| 96                | 1                        | 1       | 6     | Boy    | 4     | 11.83                  | 18   | 7.83              | 4.00  | 12                           | 6.58                       | 17                               | 9.70                           | 5   | 3.10   | 3                             |
| 97                |                          | 1       | 6     | Boy    | 4     | 13.42                  | 11   | 6.83              | 6.59  | 3                            | 8.35                       | 9                                | 10.02                          | 6   | 1.62   | 4                             |
| 98                |                          | 1       | 6     | Boy    | 3     | 12.83                  | 13   | 7.08              | 5.75  | 3                            | 10.30                      | 14                               | 13.63                          | 11  | 3.33   | 1                             |
| 99                |                          | 1       | 6     | Boy    | 1     | 13.42                  | 27   | 9.33              | 4.09  | 21                           | 8.40                       | 19                               | 9.70                           | -2  | 1.30   | 2                             |
|                   | 20                       | 80      |       |        |       | 12.00                  | 19.78  | 8.18              | 3.83  | 10.73                        | 8.97                       | 16.10                            | 10.61                          | 5.38  | 1.64   | 2.94                          |

## Appendix V : Summary of assessor's findings

| Respondent unique number | All units of the procedure executed, and in the correct order? | Time scores accurately recorded? |       |            |       |            |    | Irregularities in research protocol?  | Other assessor's comments                                      | Researcher's comments   |
|--------------------------|--|----------------------------------|-------|------------|-------|------------|----|---|--|---|
|                          |  | Assessor                         |       | Researcher |       | Difference |    |   |  |   |
|                          |  | TO                               | WP    | TO         | WP    | TO         | WP |   |  |   |
| 1                        | Yes  | 09:33                            | 14:02 | 09:33      | 14:02 | 0          | 0  | Procedure carried out over 2 days.  | Video a bit jumpy sometimes.                                   | Unexpected long test times and unpredicted school events sometimes resulted in the 2nd subtest having to be postponed to the following day.   |
| 5                        | Yes  | 09:53                            | 10:03 | 09:52      | 10:03 | -1         | 0  | None  | None   | None  |
| 16                       | Yes  | 16:00                            | ?     | 15:59      | 18:32 | -1         | ?  | None  | Video cut off on word 14 of 2nd subtest.                       | Testing time exceeded capacity of video cassette.   |
| 19                       | Yes  | 07:15                            | 11:07 | 07:16      | 11:04 | 1          | -3 | None  | None   | None  |
| 20                       | Yes  | 06:55                            | 08:17 | 06:56      | 08:15 | 1          | -2 | Faulty calling of 3rd word on Wordlist B (WP)                                   | None   | Researcher corrected self immediately after calling the wrong word.   |
| 27                       | Yes  | 10:53                            | ?     | 10:53      | 15:34 | 0          | ?  | None  | Video cut off on word 27 of 2nd subtest.                       | Testing time exceeded capacity of video cassette.   |
| 28                       | Yes  | 11:33                            | 12:34 | 11:32      | 12:34 | -1         | 0  | Very chatty to this subject and lots of praise given.                           | Sound quality poor for first part of word prediction training. | Subject appeared insecure. Generalised encouragement was given. Subject also required frequent reminders to 'enter' after completion of word.   |
| 33                       | Yes  | 08:00                            | 08:19 | 07:54      | 08:20 | -6         | 1  | Interruption on word 21 of Wordlist A (TO) - subject sneezed and needed tissue. | None   | Timing paused and 3 secs subtracted from time to compensate for time delay while the researcher reacted to the situation. The assessed -6 secs difference therefore becomes a -3 secs difference. |

| Respondent unique number | All units of the procedure executed, and in the correct order?           | Time scores accurately recorded? |       |            |       |            |     | Irregularities in research protocol?       | Other assessor's comments  | Researcher's comments  |
|--------------------------|--|----------------------------------|-------|------------|-------|------------|-----|--|--|--|
|                          |  | Assessor                         |       | Researcher |       | Difference |     |  |  |  |
|                          |  | TO                               | WP    | TO         | WP    | TO         | WP  |  |  |  |
| 37                       | Researcher error. Procedure for Group 1 was followed instead of Group 2. | 08:31                            | 10:44 | 08:31      | 10:44 | 0          | 0   | Interruption on word 13 of Wordlist A (TO) | None   | No compensation could be instituted for this procedural error. The data would be retained but recorded for Group 1. The interruption was someone attempting to come into the locked test room. The researcher just encouraged the subject to continue, which he appeared able to do.   |
| 40                       | Yes  | 08:55                            | 09:33 | 08:54      | 09:33 | -1         | 0   | False start on Wordlist A (WP)             |  | First word was called from incorrect list. Error noted immediately, test discontinued and restarted.   |
| 41                       | Yes  | 10:36                            | 14:03 | 10:36      | 14:03 | 0          | 0   | Procedure carried out over 2 days.         | Researcher looked at wrist watch. A wall clock in the room may have been useful. | Unexpected long test times and unpredicted school events sometimes resulted in the 2nd subtest having to be postponed to the following day.  |
| 45                       | Yes  | 08:08                            | 08:37 | 08:07      | 08:34 | -1         | -3  | Very chatty to this child.                 | None   | The <i>child</i> was chatty!   |
| 47                       | Researcher error. Procedure for Group 3 was followed instead of Group 4. | 08:51                            | 11:30 | 08:51      | 10:50 | 0          | -40 | None                                       | Video very jumpy during the closing.   | The procedural error was noted by the researcher during testing and compensated for by exchanging this subject's group for the group of the subject next on the list. The video was very stretched and distorted, explaining the extreme time differences between the researcher's and the assessor's times on the WP subtest. |
| 51                       | Changed word order of words 18 and 19 in Wordlist A (WP)                 | 07:05                            | 07:27 | 07:05      | 07:27 | 0          | 0   | None                                       | None   | No compensation for wrong order of words called.   |

| Respondent unique number | All units of the procedure executed, and in the correct order? | Time scores accurately recorded? |       |            |       |            |    | Irregularities in research protocol?            | Other assessor's comments  | Researcher's comments   |
|--------------------------|--|----------------------------------|-------|------------|-------|------------|----|---|--|---|
|                          |  | Assessor                         |       | Researcher |       | Difference |    |   |  |   |
|                          |  | TO                               | WP    | TO         | WP    | TO         | WP |   |  |   |
| 64                       | Yes  | 09:55                            | 10:26 | 09:53      | 10:27 | -2         | 1  | None  | Researcher looked at wrist watch. A wall clock in the room may have been useful.       | Good suggestion. However, the subject did not appear to be aware of the researcher looking at her watch, which was slowly and quietly done. |
| 87                       | Yes  | 06:43                            | 08:13 | 06:49      | 08:13 | 6          | 0  | None  | None   | Researcher corrected self immediately after calling the wrong word.   |
| 90                       | Yes  | 10:57                            | 15:50 | 10:56      | 15:50 | -1         | 0  | None  | None   | None  |
| 91                       | Yes  | 08:10                            | 10:25 | 08:09      | 10:25 | -1         | 0  | Premature calling of word 28 of Wordlist B (TO) | None   | No compensation. Prematurity of calling was slight.   |
| 93                       | Yes  | 08:27                            | 09:56 | 08:27      | 09:55 | 0          | -1 | None  | None   | None  |
| 96                       | Changed word order of words 12 and 13 in Wordlist A (TO)       | 06:36                            | 09:41 | 06:35      | 09:42 | -1         | 1  | Closing thank-you not on video.                 | Lots of background noise heard on video. Sound patchy during word prediction training. | No compensation for wrong order of words called. Subject appeared to be able to continue through background distractions.                   |

**Appendix W : Approximate words chosen**

|    | <b>Wordlist A</b> | <b>No of approx</b> | <b>Approximate words</b>                      | <b>Wordlist B</b> | <b>No of approx</b> | <b>Approximate words</b>                                |
|----|-------------------|---------------------|---|-------------------|---------------------|---|
| 1  | tall              | 3                   | toe, tell, torch                              | ball              | 0                   | ---   |
| 2  | fire              | 3                   | five, furious, fair                           | wire              | 1                   | were  |
| 3  | cry               | 1                   | kindly  | dry               | 2                   | drew, true  |
| 4  | fairy             | 5                   | furious, fair, really, fairly (2)             | hairy             | 4                   | here (2), her, hear                                     |
| 5  | horrible          | 1                   | had   | terrible          | 2                   | table, trouble  |
| 6  | talk              | 2                   | took, take                                    | walk              | 8                   | work (5), well, wake, woke                              |
| 7  | mountain          | 4                   | mostly, moving, monster, moment               | fountain          | 3                   | furniture (3)   |
| 8  | letter            | 8                   | let, little (4), later (2), light             | ladder            | 10                  | later, lady (5), lad, leader, leading, landed           |
| 9  | yellow            | 0                   | ---   | follow            | 4                   | folded (2), flow, fold                                  |
| 10 | married           | 1                   | moving  | worried           | 4                   | would, warned (3)                                       |
| 11 | garden            | 1                   | gathering                                     | carpet            | 2                   | captain, crept  |
| 12 | white             | 2                   | with, write                                   | wheel             | 14                  | well (7), we'll, while, will (5)                        |
| 13 | picture           | 3                   | piece, present, peach                         | mixture           | 8                   | mixed (2), measure (3), mixer, measure, mention         |
| 14 | rocket            | 2                   | right, rock                                   | packet            | 18                  | packed (16), pack, past                                 |
| 15 | chief             | 0                   | ---   | thief             | 4                   | feather, their (3)                                      |
| 16 | fruit             | 2                   | furious, front                                | blood             | 0                   | ---   |
| 17 | tail              | 4                   | tall (2), till, taste                         | jail              | 0                   | ---   |
| 18 | light             | 0                   | ---   | right             | 6                   | rather, write (5)                                       |
| 19 | bridge            | 4                   | bright, before, brought, drive                | fridge            | 2                   | feeling, feather  |
| 20 | hurt              | 5                   | hate (2), heat, hand, heard                   | turn              | 3                   | ten (3)   |
| 21 | push              | 1                   | place   | pull              | 8                   | pool (7), pulled  |
| 22 | alone             | 7                   | along (7), under                              | awake             | 5                   | work, wake (3), away+ke                                 |
| 23 | noise             | 7                   | nose (4), noticed, narrow, notice             | voice             | 2                   | those, view-s   |
| 24 | crown             | 3                   | crawl, could, clown                           | clown             | 0                   | ---   |
| 25 | furious           | 2                   | furniture, fridge                             | curious           | 4                   | karl, course, car, creatures                            |
| 26 | witches           | 9                   | which (4), witch (2), with, wished, watch +es | matches           | 14                  | much, machine, master, machines (8), match, measure (2) |
| 27 | polished          | 3                   | polish, bones, place                          | finished          | 6                   | finish (6)  |
| 28 | sleeping          | 2                   | stand, singing                                | sweeping          | 0                   | ---   |
| 29 | weather           | 4                   | walk, were (2), whether                       | feather           | 2                   | father (2)  |
| 30 | string            | 7                   | stand, straight (3), street, sting, strange   | strong            | 3                   | strange, stone, straight                                |
|    | <b>Total</b>      | <b>96</b>           |   | <b>Total</b>      | <b>139</b>          |   |