

## Steps

### **What claims does the company make / what does the programme target?**

Steps claims to be suitable for individuals 5 years and over, including adults and English language learners, and claims to help those with dyslexia and ADHD. The programme claims to specifically target all aspects of literacy, including vocabulary, comprehension and verbal reasoning. The courses can range from a pre-literate level to a spelling level of 13 years plus, but can be customised up to a university level.

The programme claims to specifically target phonological awareness, phonic knowledge, fluency, vocabulary, comprehension, visual perception, sequencing, memory and motor development. Steps claims to help children read words confidently, recognise words instantly, put words into context, spell words and break them down into their individual phonemes, blend words, define words and type/write words. The programme also claims to improve memory, specifically visual memory, auditory sequential memory and working memory.

### **Evidence for/against efficacy:**

The tasks in Steps are informed by research (see <http://learningstaircase.co.nz/why-steps/steps-research/> and, <http://learningstaircase.co.nz/why-steps/steps-and-dyslexia/> for greater details and references).

While the programme takes into account research on literacy and dyslexia, there are unfortunately no peer-reviewed studies evaluating the programme's efficacy. Consequently, we cannot comment on whether or not the programme appears to be an effective intervention for language difficulties.

### **Price:**

A Stage 1 training course in Steps costs \$195. This course is aimed at teachers, RTLB's, teacher aides or tutors who are interested in Steps.

### **What it involves:**

Steps is a computer-game programme that uses a structured, multi-sensory literacy approach based on educational principles. The programme can be completed at home (ideally by older learners or parents), through tutors, tutoring centres or at school. The literacy areas covered by the programme include phonological awareness, phonic knowledge, fluency, vocabulary and comprehension. The website claims that all activities used in Steps, described below, are cumulative and based on research about literacy acquisition and how the brain works. Note that the descriptions below were obtained from the Steps website.

#### *Wordlist Activities: Word Recognition*

The words used in the wordlist activities depend on a range of different wordlists available through Steps, but can also include individualised wordlists. These Wordlist Activities are intended to be done in the order described below.

- *Find the Word:* a target word is said aurally, and the learner must find the word in a group of words scattered across the screen. Targets word recognition, decoding skills and familiarisation with vocabulary.
- *Choose the Word:* a sentence is presented visually and aurally with a missing word. The

learner must select the appropriate word from several words to complete the sentence. Targets learning how to use the word in context and vocabulary.

- *Word Flash*: a word flashes on screen (flash can either be slow, medium or fast). The learner must select the flashed word from a list of words. Targets instant visual recognition and allegedly activates the occipito-temporal area.
- *Sentence Builder*: words randomly scattered across the screen have to be sequenced in an order that makes sense. Targets using the word in context, understanding sentence structure and sequencing.
- *Word Search*: the learner has to find embedded words in a word search grid. Words are only presented horizontally. Targets visual discrimination, pattern recognition and an awareness of word structure.

#### *Wordlist Activities: Spelling*

- *Spelling*: the learner must spell out a word while it is briefly on screen. The word then disappears and the learner has to type out the word. If a mistake is made, the computer shows the learner where they went wrong (i.e. what letters were incorrect), and the learner has another attempt at spelling out the word. Teaches the spelling of the word, visual sequencing and an awareness of phonic structure.
- *Chunks*: the learner hears a word and must choose the correct onset and rime from several possibilities. Targets an awareness of onset plus rime, an awareness of initial sounds/blends, blending and analogical transfer (awareness of and ability to use patterns in language).
- *Drop*: the learner hears a word. The letters of the word then appear in random order, and the learner must place them in the correct space/location within the word. The completed word is then dragged and placed on a visual presentation of the target word from a list of several words located to the left of the screen. Targets familiarity with spelling, awareness of phonic pattern, auditory and visual sequencing, and the ability to visualise words.
- *Spelling Test*: provides practice with spelling words and checks spelling ability and familiarisation with words in the list. The learner gets a bronze, silver or gold medal depending on their spelling accuracy.

#### *Wordlist Activities: Phonics*

- *Sound Tiles*: targets phonemic awareness, auditory sequencing, segmentation/blending and phonic knowledge.
- *Sound Boxes*: each phoneme from a word has to be sorted into separate boxes. Targets phonemic awareness, auditory sequencing, segmentation/blending and phonic knowledge.
- *Initial Sounds*: targets awareness of onset plus rime, phoneme transposition and analogical transfer.

#### *Wordlist Activities: Memory*

- *Visual Memory*: a matching game where the learner must match words in as few clicks as possible. Targets visual and spatial memory, focus and concentration, and word recognition.
- *Word Grid*: the learner first hears one target word. Several words then appear on a grid

and the learner must click on the target word. If this is done correctly, the learner will then hear two words and then select those words in the correct order from the grid. The number of target words increases by one with each correct response. Targets auditory sequential memory, focus and concentration, working memory, listening skills and the use of auditory rehearsal techniques.

- *Word Memory*: targets auditory sequential memory, focus and concentration, working memory, listening skills and spelling of the word.

#### *Wordlist Activities: Additional*

- *Definitions*: targets vocabulary, verbal reasoning and comprehension.
- *Homophones*: targets an understanding of homophones, word recognition and vocabulary.

#### *Games*

- *Pop the Balloon*: 26 holes are lined up, each corresponding to a letter of the alphabet. Balloons, sometimes in clusters, come out of the holes, with letters on it corresponding to the hole that it came out of. The learner has to shoot the balloon(s) by pressing the letter on the balloon (clusters of balloons can be shot by just pressing one of the letters from the balloon cluster). Occasionally a rabbit will appear from one of the holes, and the learner must figure out what letter corresponds to the hole the rabbit came out of and shoot it by pressing that letter. The game can also be done without letters on the balloon. Targets spatial awareness of the alphabet, alphabet sequencing, ability to "count on", keyboard knowledge and quick thinking.
- *Blocks*: essentially Tetris, but the speed can be slowed. Targets spatial awareness, fine motor coordination and quick thinking.
- *Vowel Sounds*: a word is presented with the vowel missing. Vowels pass along the screen on a conveyor belt, and the learner must shoot the missing vowel. This task automatically adapts to the level of the learner. Targets phonic knowledge and an awareness of medial vowel sounds.
- *Clear the Skies*: the game uses a 3D design and involves the learner flying an in airplane. Words are presented with a missing letter, and the learner must shoot balloons with the missing letter. Targets phonic knowledge, an awareness of medial vowel sounds and spatial awareness.
- *Fireworks*: letters come along the screen, requiring the learner to track from left to right. The learner must click on a target letter within a particular timeframe. At the end of the timeframe, fireworks go off. Letters classified as targets can be determined by the learner or a trainer prior to starting the game, and the speed and timeframe can be customised. The activity can also be completed using numbers or words. Targets letter recognition (reversals, etc.), directionality, tracking and visual discrimination.
- *Snap*: cards with shapes which can vary in form or colour are presented from two decks. The learner must click to "snap" when the cards match. Targets perceptual organisation, quick thinking and visual recognition.
- *Vowel Ladder*: the learner plays against the computer, where both the individual and the computer have a "ladder" of letters with missing vowel sounds in between (e.g. "r ...m"). The learner must then select vowel letters and place them in the ladder to form a word (e.g. place "I" between the r and m to form "rim"). The vowel sound and speech can be customised. Targets phonic knowledge, phonemic awareness,

medial vowel sounds and initial/end blends.

- *Hangman*: like the classic Hangman game. Targets an understanding of word structure and phonic patterns, as well as spelling.
- *Four in a Row*: the learner can play against a second player or the computer in this game. A grid is presented, with each column numbered. During each player's turn, the individual "rolls" a virtual dice and then selects a cell in the grid from the numbered column corresponding to the number rolled from the dice. They are then presented with a fill-in-the-blank question, where they must select a word from a selection that completes the sentence. Players must try to get four cells in a row. The game can be done with a vocabulary or homophones option. Targets strategic thinking and spelling/homophones knowledge.

#### *General: Alphabet Section*

- *Alphabet — Reference*: the learner is showed how to form a letter, and is told the letter name and its sound. Teaches letter formation, letter sounds, letter names, different sounds of a letter and phonemic awareness (initial sounds).
- *Letter Names*: targets the development of letter names, letter recognition and lower and upper case knowledge.
- *Letter Sounds*: targets the development of letter names, letter recognition and lower and upper case knowledge.
- *Letter Chunks*: teaches alphabet sequencing.
- *Reversals*: this task is for learning how to avoid reversals with letters that are commonly mixed up e.g. b and d, p and q. If the learner struggles with distinguishing b and d, then the task involves b and d letters scattered across the screen which the learner must sort into the appropriate "b" or "d" container. Targets visual discrimination and directionality.
- *Alphabet Order*: the learner has to track left to right along a word grid, clicking letters as they come up in alphabetical order (so will first have to find "a", then "b" then "c" along the grid and so on). Targets visual discrimination, alphabet sequencing and tracking.

#### *General: Number Section*

- *Numbers — Digits*: targets number recognition and the recognition of number words.
- *Number Chunks*: targets number sequencing.
- *Number Grid (Levels 1 & 2)*: targets auditory sequential memory, focus and concentration and the use of auditory rehearsal strategies.
- *Number Grid (Level 3)*: As above, plus working memory.
- *Reversals*: the learner can choose up to three numbers that they struggle with. The numbers are scattered across the screen, either in reversed or correct form. Reversed numbers go into the wrong container, marked "x", and the numbers in correct form go into their respective numbered containers. Targets visual discrimination, number reversals and directionality.

#### *General: Spatial Section*

- *Directions*: teaches left/right automaticity, spatial concepts (up/down), colour/shape

awareness and the ability to process several concepts at once.

- *Perception*: targets spatial awareness and perceptual organisation. Requires the ability to rotate shapes and make spatial judgements.

#### *General: Spelling Section*

- *Initial Blends*: targets phonic knowledge, auditory discrimination, phonemic awareness and blending.
- *Endings, -k, -ke, -ck*: teaches phonic knowledge, an understanding of the silent -e pattern, and the rule "-ck" after short vowel sound, "-k" after long vowel sound.
- *Silent -e*: targets an understanding of the silent -e rule, auditory discrimination of long/short vowel sounds and an understanding of visual pattern.
- *Short Vowels*: targets an understanding of short vowel patterns, auditory discrimination of short vowel sounds and an understanding of visual patterns.

#### *General: Useful Stuff*

- *Colours*: teaches colour recognition and colour words.
- *Days*: teaches sequencing days of the week and auditory sequencing skills.
- *Months*: teaches sequencing months of the year and auditory sequencing skills.

#### *Spelling Test*

- *Spelling Test*: Schonell spelling test – used for pre-test or post-test. Gives a record of errors.

Participants in the Steps programme are assessed on their literacy level prior to taking part in the programme. Steps then advises the individuals on where they can start in the course, based on their literacy ability.

The programme is said to be customisable, such that schools and workplaces can adapt the programme to suit the school curriculum or workplace needs by altering the wordlists used or creating their own wordlists. There are also additional Steps resources available to accompany the programme, such as workbook-based literacy courses, games for school or home use and printable worksheets with word lists/flash cards, word grid games and handwriting tasks. The Steps website also notes that the programme is also currently working on developing a Maori course, but Steps' customisable nature means that Maori words can be added to wordlists.

#### **Website / for more information see:**

<http://learningstaircase.co.nz/why-steps/>