

BEHAVIOURAL READING™

ESSENTIAL SEQUENCING™

Written by Philip Gruhl

Illustrated by Justine Butler

www.BEHAVIOURALREADING.com.au

HOW TO USE THESE MATERIALS

Behavioural Reading™ (BR™) techniques are innovative and have been developed by supporting students through neurodevelopmental and individual learning strategies. They have been designed to specifically support struggling students.

It is assumed that students have a good knowledge of phonics and exhibit no underlying physical or neurological development delays. If said delays are suspected the student should be referred to a Speech Pathologist and/or Behavioural Optometrist to determine the underlying causes and plan a path of correction.

These workbooks have been designed for use by teachers, coaches and parents and at BR™ Coaching seminars. You may find the online tutorial useful also.

DUPLICATION LICENSE

Upon purchase of BR™ materials, users are deemed to have agreed to these license terms & conditions.

Materials and concepts used in BR™ Workbooks are not to be repackaged, reprinted or adapted in any form.

This copyrighted material cannot be copied other than the Working Checklist, found at the back of the workbook.

Workbooks and their content are not to be uploaded to any other website or server without prior permission.

OWNERSHIP OF THESE MATERIALS IS THE SOLE PROPERTY OF TYQUIN GROUP
READING CLINIC

ABN 29 076 593 523 www.tyquin.com.au

INTRODUCTION

Times tables are so much more than the recalling of number facts. They are the perfect vehicle to gain a fascinating insight into the way our brains learn at many levels. Spin-off benefits for the student learning their tables lay in two areas.

Firstly, if they are astute, they may recognise that the steps required to learn this skill can be applied to learning just about anything.

Secondly, the brain generalises all its learning experiences. The neural efficiency derived from learning this task will have positive benefits in many other aspects of frontal lobe functions including sequencing, recall, impulse control and rate. This will facilitate easier learning of facts in the future.

As you move through this technique, I would like you to be especially vigilant about the sequences of a) looking at the fingers and then b) looking away to the list of answers (step 11). It always amazes me how some students find this simple sequencing so difficult, but it is evident that this difficulty is in fact the key to unlocking a vital array of skills and abilities that are often holding the student back.

REMEMBER THE FACTS OF MEMORY



FACTS OF MEMORY

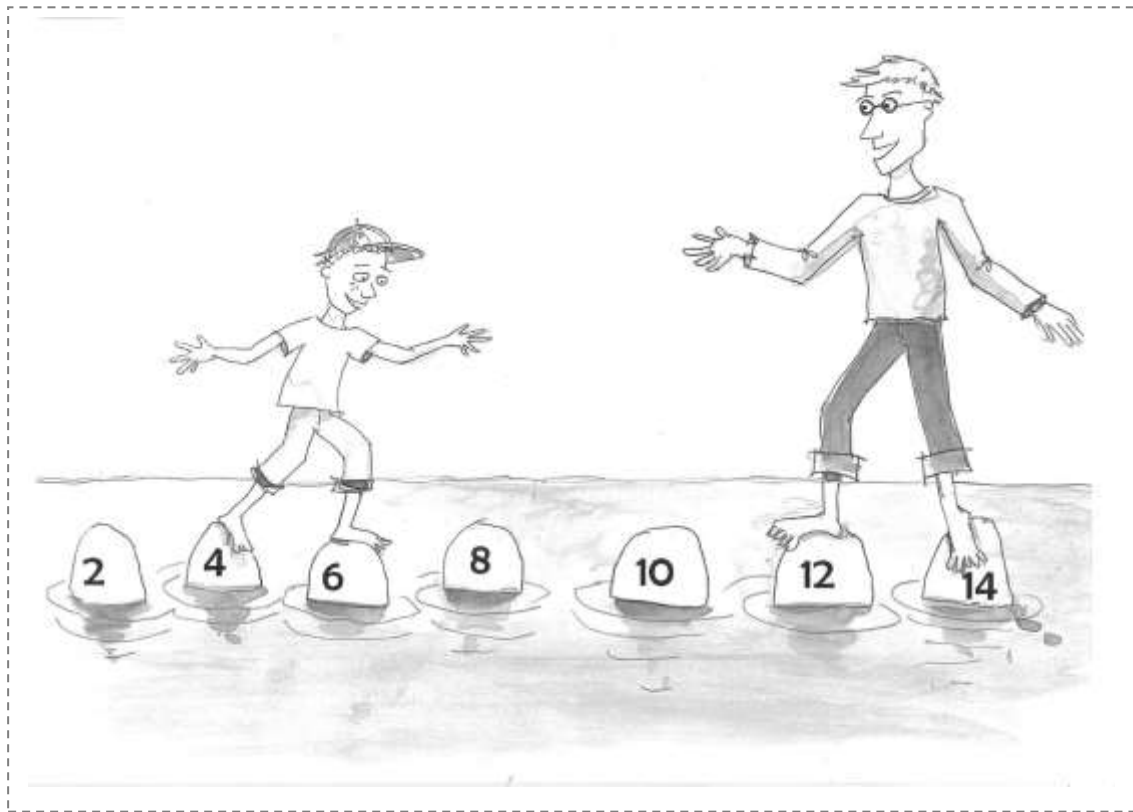
It is important to teach the Facts of Memory and remind students what they are.

TEACHER – *'Remember the Facts of Memory?'*

STUDENT – *'I forget.'*

TEACHER – *'Say it after me. Do it once equals fail, repeat it equals success.'*

ESSENTIAL SEQUENCING™ WITH TIMES TABLES



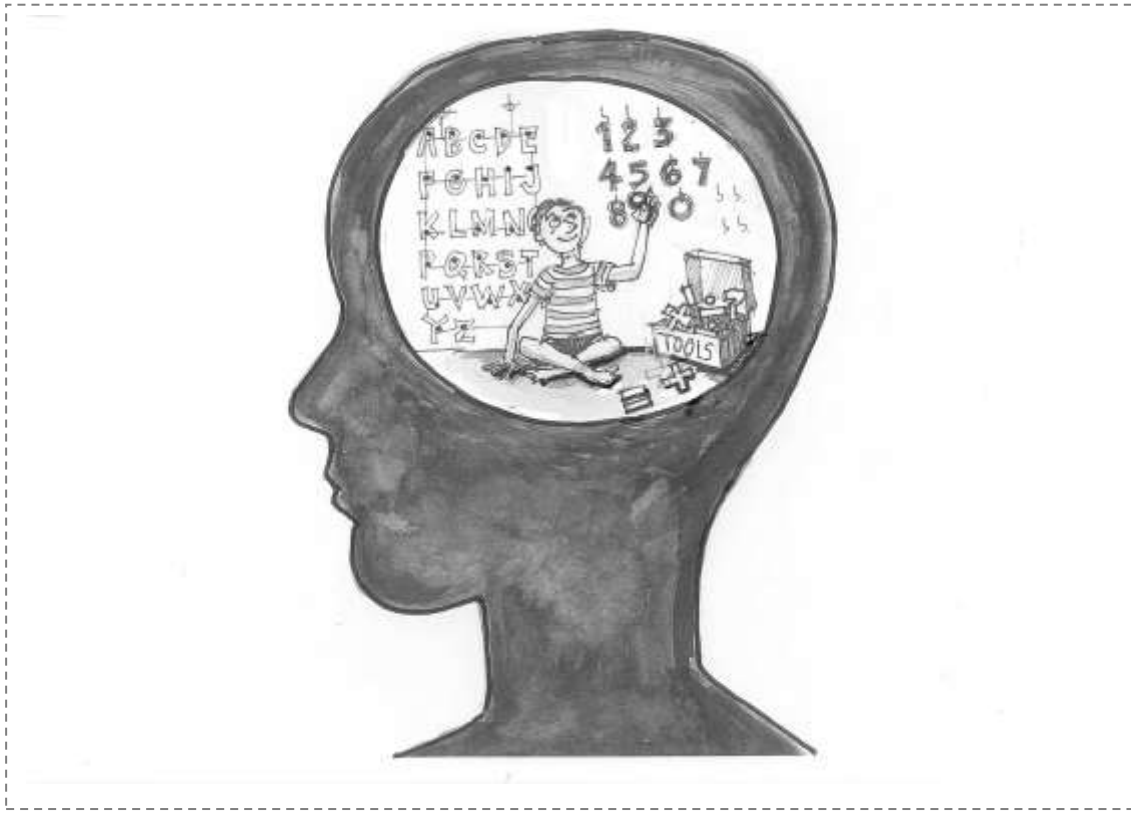
So, we have to ask ourselves – is it about the times tables or is it about the sequencing needed to recite the tables?

Answer - It's about both!

Times tables are great because they come in really handy in day to day life. The little effort to learn them pays off handsomely throughout life.

The sequencing....well that is vital for a quick and efficient brain. Everyone who does amazing things can sequence really well.

OUR BRAINY TOOLBOX



Our *brainy toolbox* needs lots of tools like:

The Alphabet – ABCDEFGHIJKLMNOPQRSTUVWXYZ

Numbers – 1 2 3 4 5 2 4 6 8 10 1 3 5 7 9 $1 + 2 = 3$ $3 - 1 = 2$
 $4 + 5 = 9$ $1 \times 3 = 3$ $2 \times 3 = 6$ $3 \times 3 = 9$ $4 \times 3 = 12$

DOING MATH WITHOUT TABLES



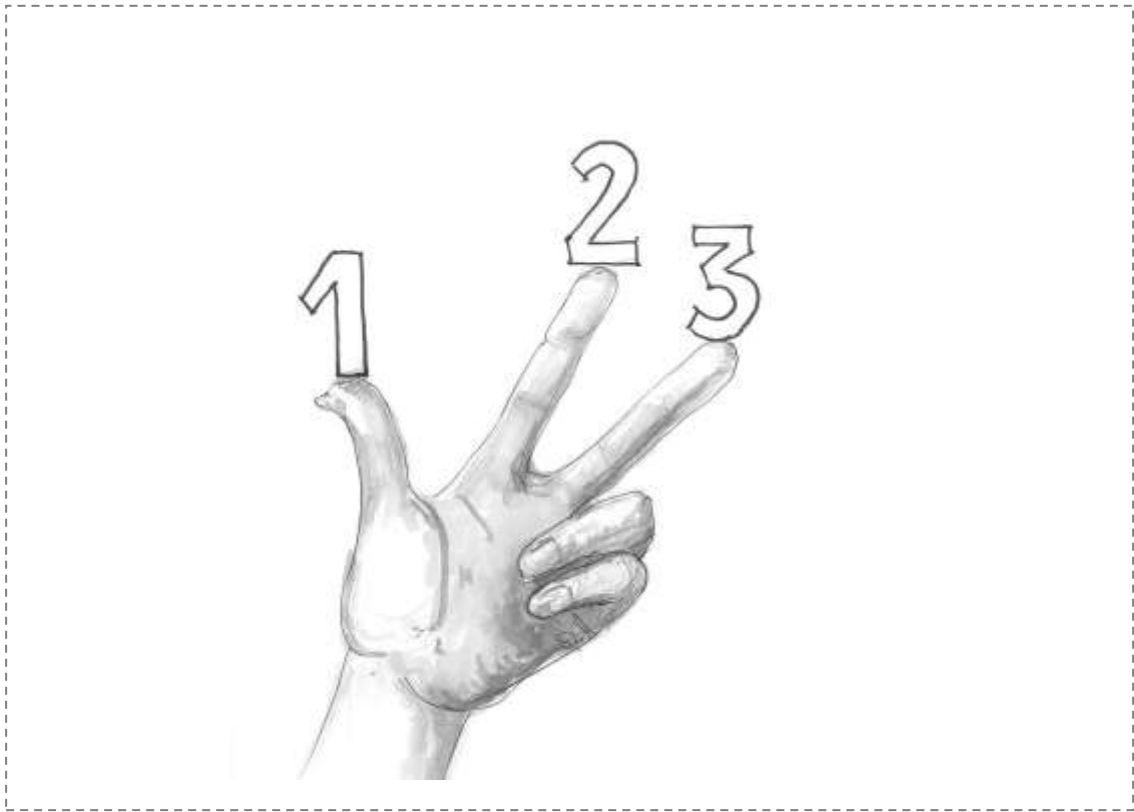
Doing math without tables is like reading without the alphabet.

A student needs to master their tables before they can move onto more complex math.

And... a student needs the coordination and sequences involved in learning and knowing the times tables.

Let's begin!

TABLES THE BRAIN FRIENDLY WAY - Step 1 – COUNT TO THREE



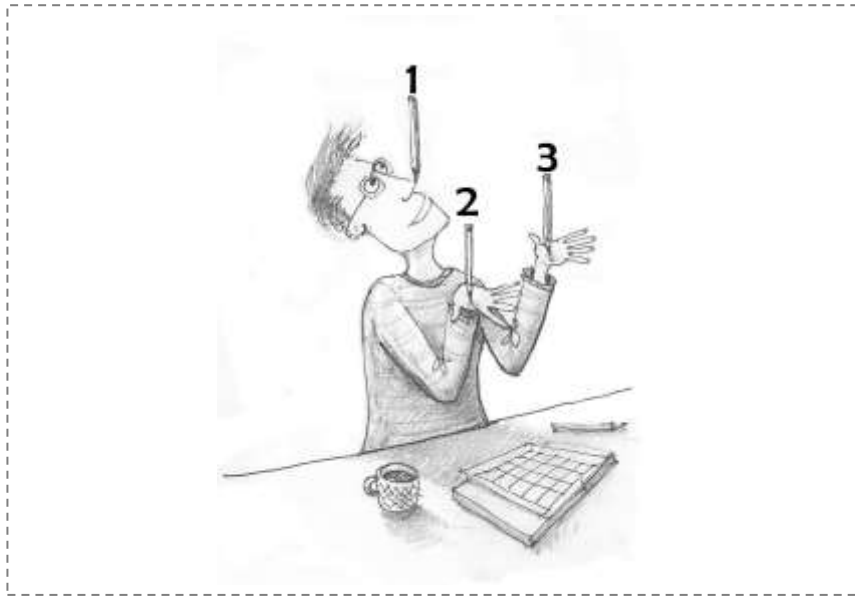
TEACHER - Ask the student to count out loud using their fingers.

STUDENT – While looking at their fingers – ‘one – two – three...’

Have the student REPEAT, REPEAT, REPEAT.

STUDENT – ‘one – two – three... one – two – three... one – two – three’

TABLES THE BRAIN FRIENDLY WAY – Step 2 – ADD SILLY OBJECTS



Add silly objects to the sequence like... *pencils*.

STUDENT – ‘*One pencil - two pencils - three pencils.*’

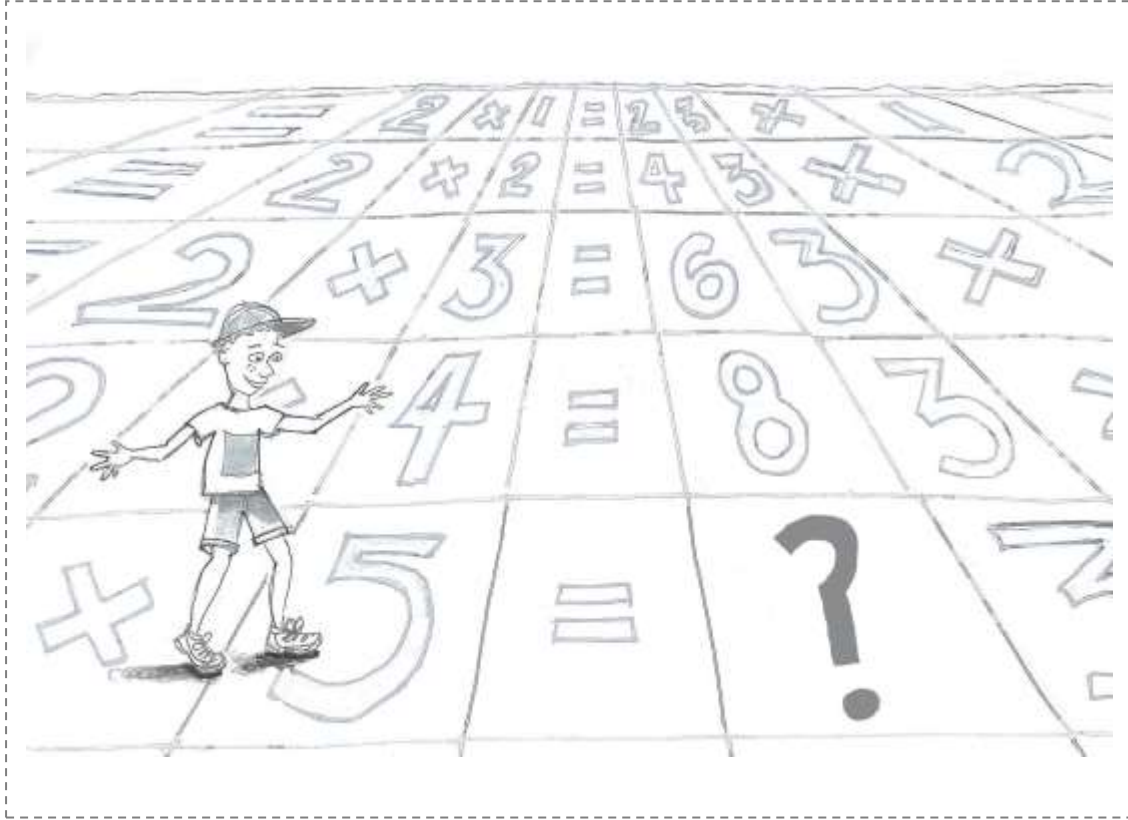
TEACHER – ‘*Remember to look at your finger when saying the number.*’



Add *cups*.

STUDENT – ‘*One cup - two cups - three cups.*’

WHY TABLES?

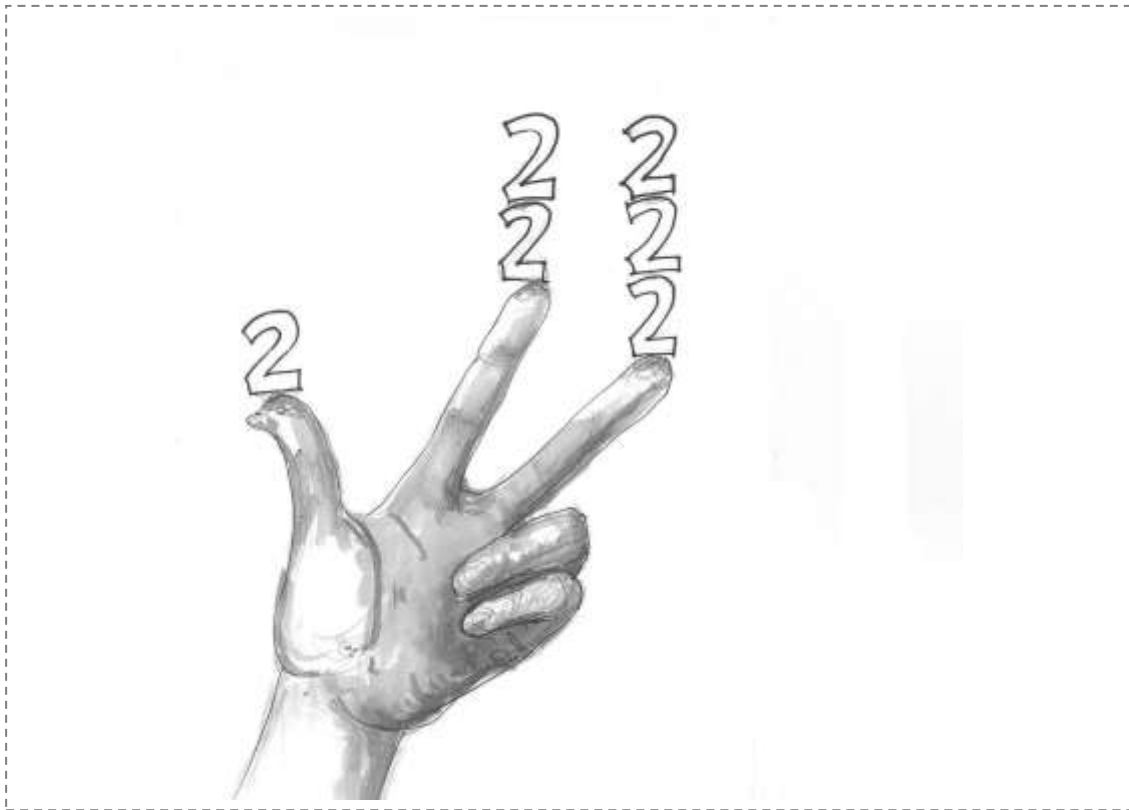


TEACHER Conversation - 'Why tables, you may ask?' Answer – 'It makes working things out quicker.'

E.g. How many tyres on ten cars? How many slices of bread in three sandwiches?

Note: this distraction from finger counting is also a small brain rest before we continue. It assists the memory process and other cognitive learning processes.

COUNT USING FINGERS – Step 3



Now, ask your student to count numbers using their fingers like we just did with the pencils and cups.

TEACHER – *‘On the thumb count one two. On the forefinger count two twos. On the middle finger count three twos. Watch me while I practise.’*

Show the student how you do it.

STUDENT – using fingers - *‘One two - two twos - three twos*

TEACHER - Have them repeat this practise with threes and fours.

TEACHER – *‘Try with threes now.’*

STUDENT – *‘One three - two threes – three threes*

TEACHER – *‘And fours...’*

STUDENT – *‘One four - two fours – three fours*

TAKE THE TIME



Let the brain process this new sequence for a few minutes.

Relax.... no rush...

Note: It is remarkable how the brain uses 'rest' when it is learning new sequence based activities. The 'rest' is when the brain assembles the new sequences it was just exposed to.

REFLECTION – Step 4

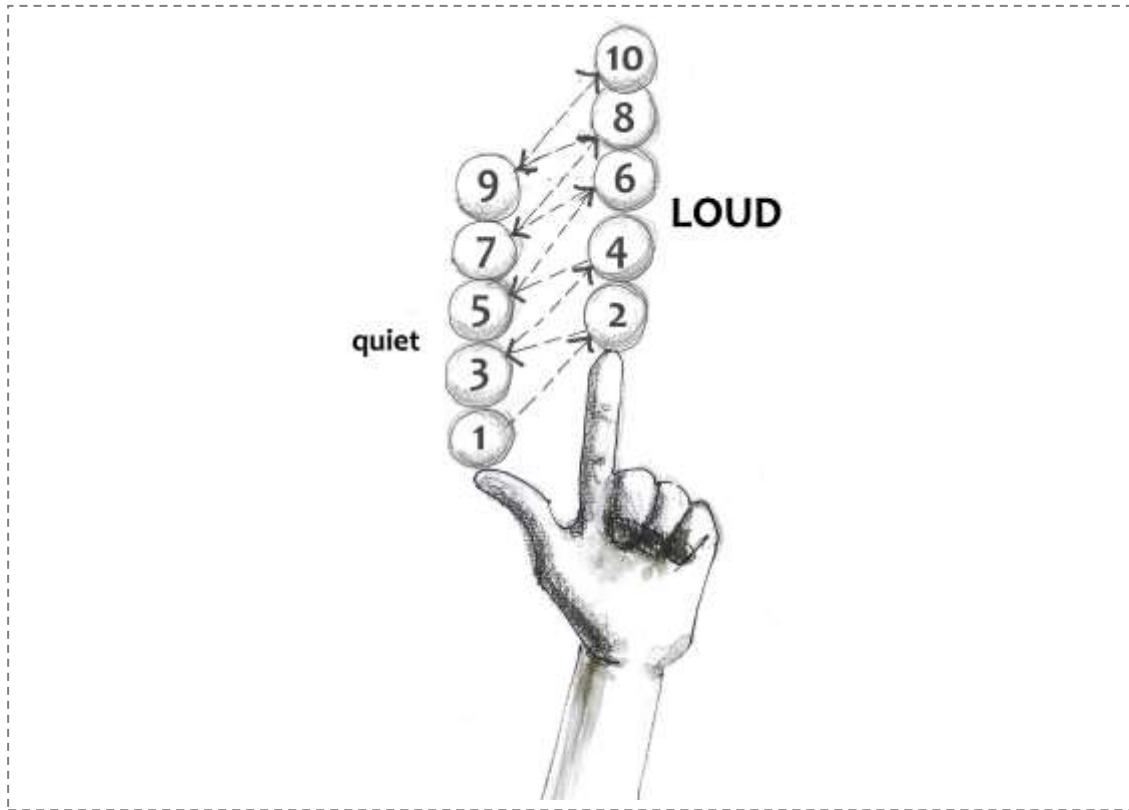


While the student is resting and processing the finger counting sequences, reflect on where the tables come from in our head?

Note: Our tables use two main parts of the brain, a) the frontal cortex at the front, and b) the general area further back where long term memory is based.

To practise and use our tables our brain flicks front to back, front to back. Some people can actually feel it happening.

AUDITORY – VISUAL CONNECTION a – Step 5

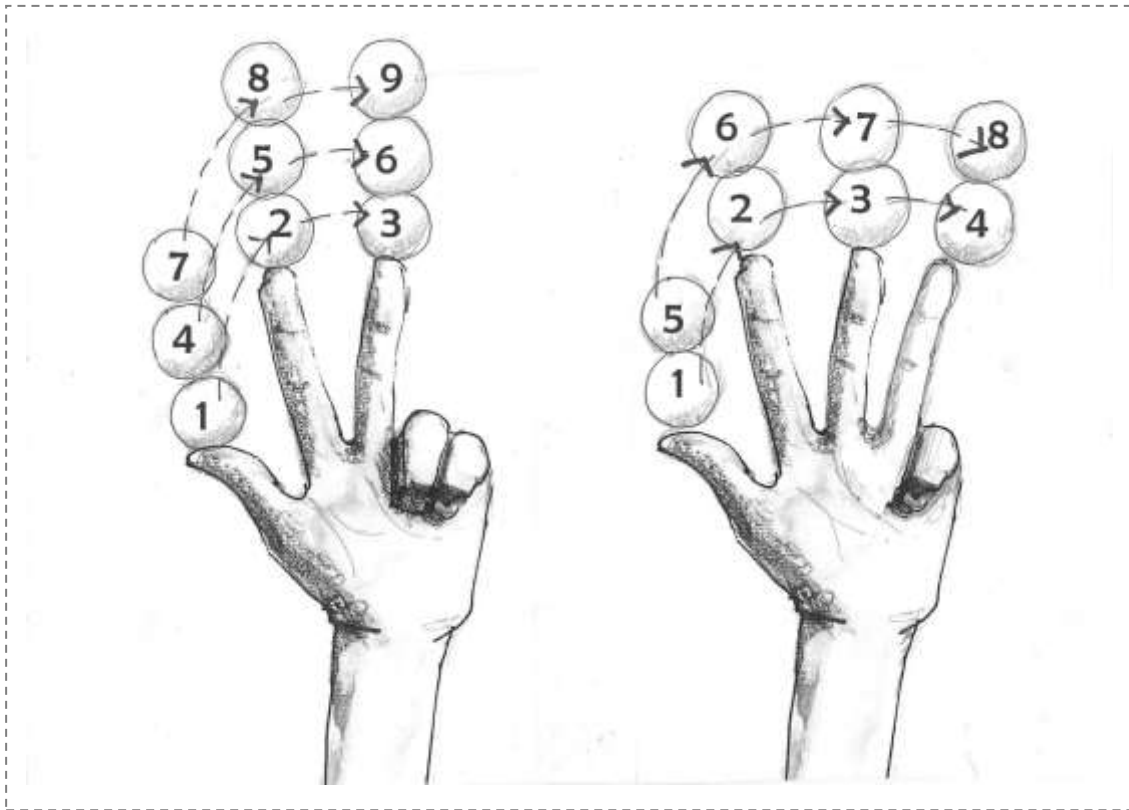


TEACHER – ‘Now we will build the times table answers. Using only two fingers count in ones using quiet and LOUD.’

TEACHER – ‘Watch and listen to how I do it. one - TWO – three – FOUR – five – SIX – seven – EIGHT – nine – TEN – eleven - TWELVE’

STUDENT – ‘one - TWO – three – FOUR – five – SIX – seven – EIGHT – nine – TEN – eleven - TWELVE’

AUDITORY – VISUAL CONNECTION b – Step 6



TEACHER – ‘Try using three times tables with three fingers with quiet and LOUD.’

STUDENT – ‘one – two – THREE – four – five – SIX – seven – eight – NINE – ten – eleven – TWELVE.’

TEACHER – ‘Now let’s use four fingers for the four times tables.’

STUDENT – ‘one – two – three – FOUR – five – six – seven – EIGHT – nine – ten – eleven – TWELVE.’

REST TIME – Step 7



Our brain is really smart and will keep processing.

Take a break of three to seven days!

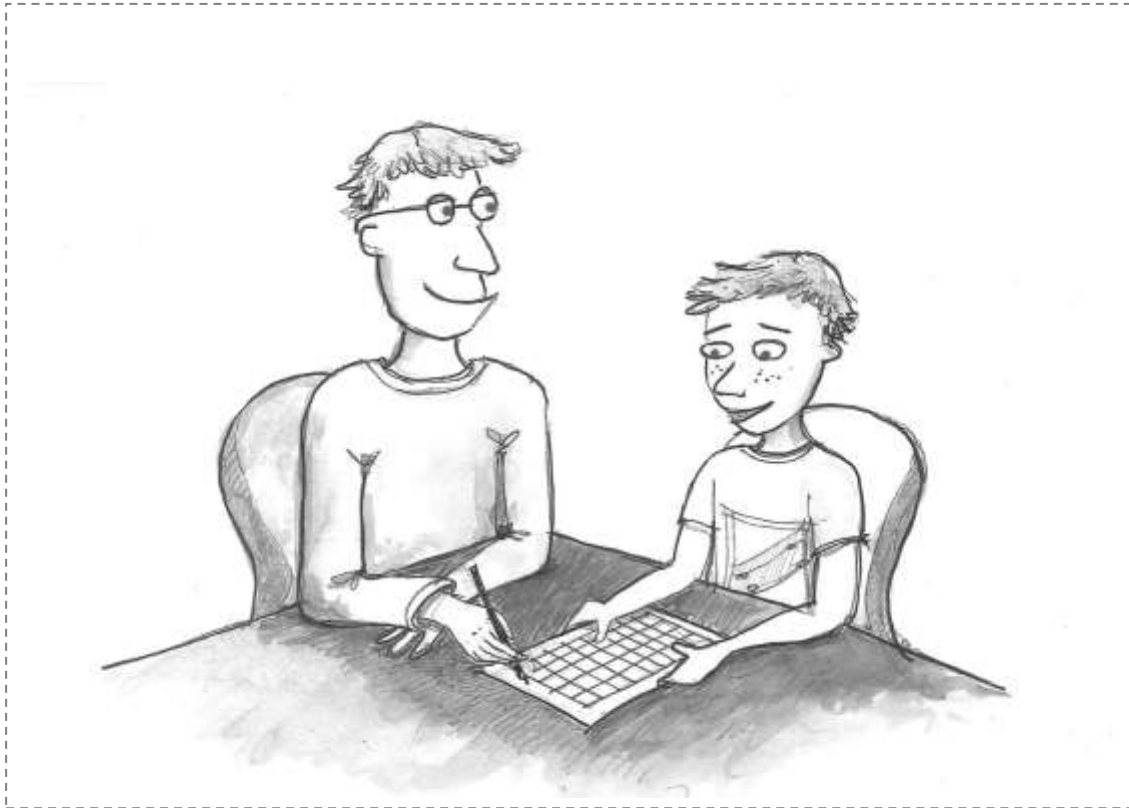
QUICK REMINDER – Step 8



After the break have a quick reminder.

Repeat steps 1 to 6 with the student.

VISUAL – PHYSICAL/COGNITIVE CONNECTION – Step 9



TEACHER – ‘Now let’s write out the answers as we say them. Here, just like this.’

Model the behaviour if the student doesn’t know how to start.

Count using your thumb and forefinger – ‘one- TWO’. Write down 2.

Count again using the same fingers – ‘three-FOUR’. Write down 4.

You are building the physical/cognitive connection using the two times tables.

Ask the student to repeat what you have just shown them and move them through the two, three and four times tables with two, three and four fingers. You will end up with a worksheet that resembles a times tables chart.

COMBINE AUDITORY, VISUAL AND PHYSICAL – Step 10



Now combine the two parts. Using the two times tables have the student say the first three two times tables (but only the first three) looking at their fingers and turning their head before they say the answer.

TEACHER – *'Now turn your head before each answer to look at the answer on the paper.'*

STUDENT – *'One two is'...* looks at answer... *'two.'*

STUDENT – *'Two twos are'...* looks at answer... *'four.'*

PRACTISE – Step 11

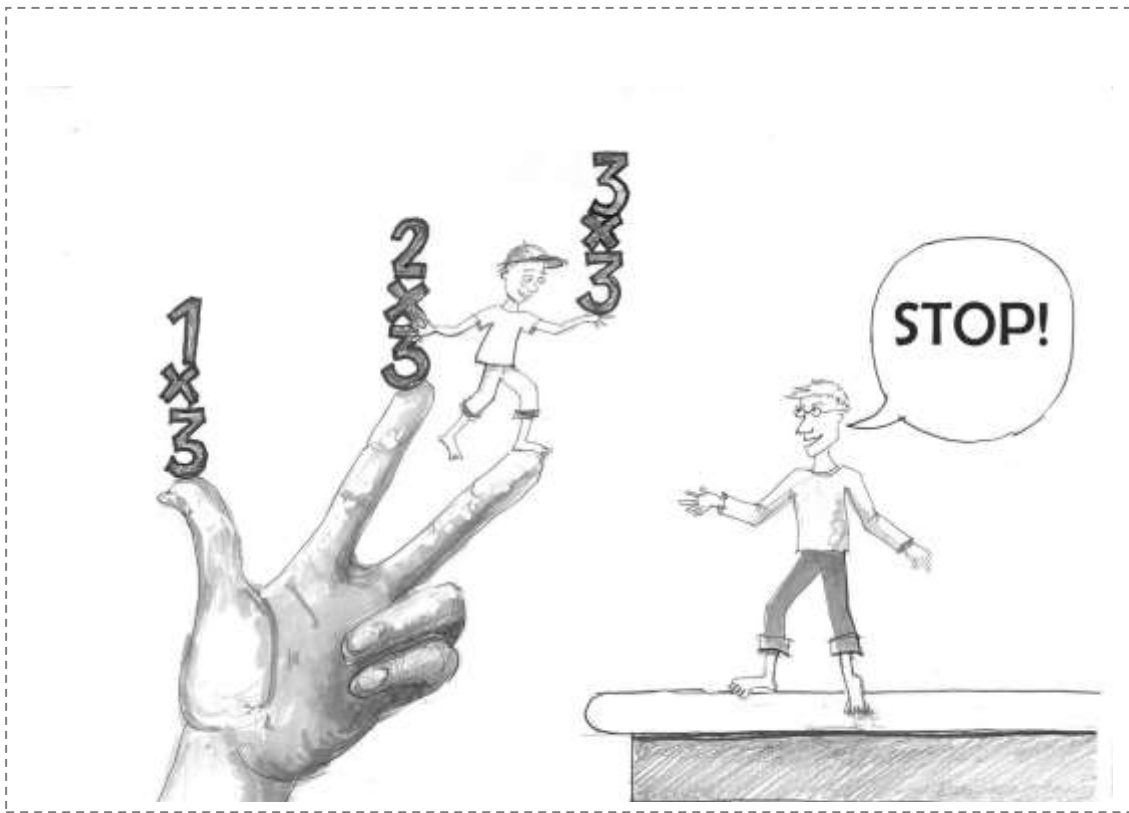


TEACHER – Ask the student to practise this neural sequencing pattern combination ten times.

Coach them through turning their head to look at the answer before speaking it.

Note: The roles here are 'coach' and 'athlete'. The coach is training his athlete to do the skill (turning head, looking at the answer, speaking the answer) with precision and consistency. Quite literally you are building a ritualised pattern of movements involving muscles, nerves and growth of new dendrites.

GENERALISE THE SEQUENCING – Step 12



Using the times tables begin to generalise the sequencing skills.

Remember to STOP! Use only the basic tables.

i.e. STOP at three fingers – 1×3 , 2×3 , 3×3 STOP... 1×4 , 2×4 , 3×4 STOP... 1×5 , 2×5 , 3×5 STOP

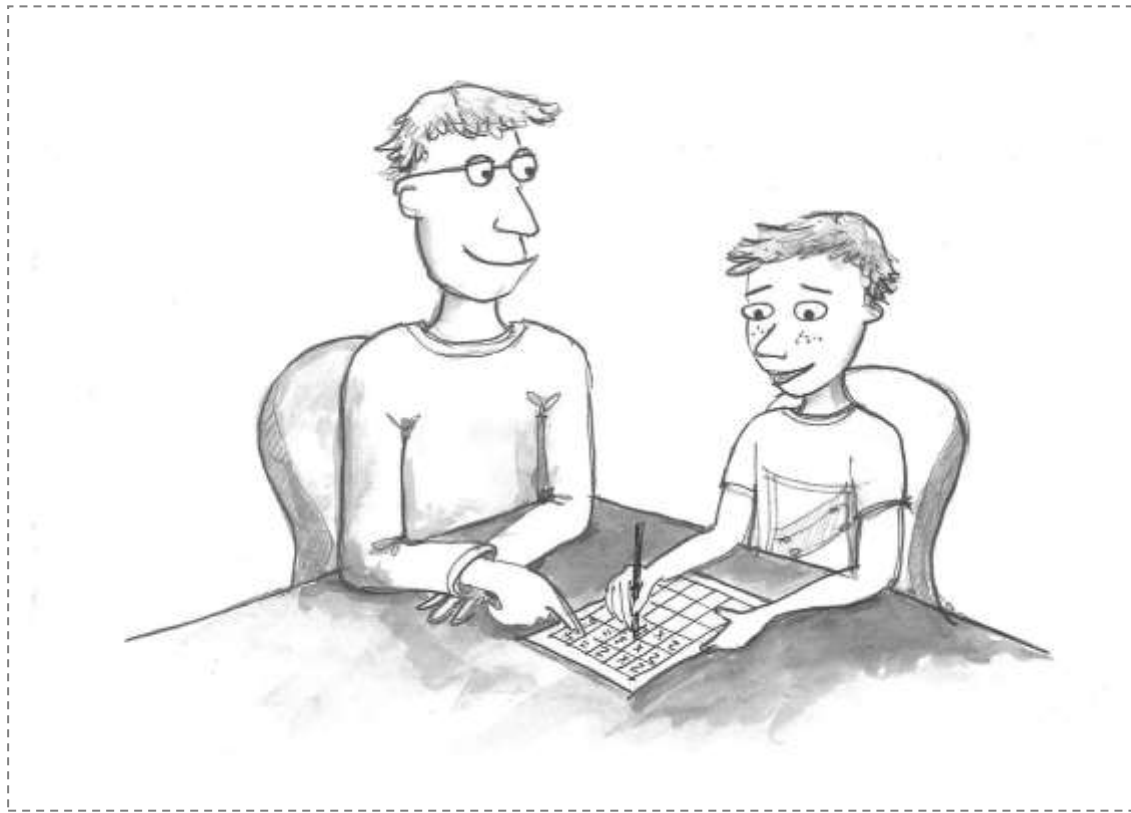
Don't do more than this. We are only using the tables to build the sequencing skills at this stage. We will do more later on, but NOT now.

STUDENT – using fingers – ‘*One three is three, two threes are six, three threes are nine.*’

TEACHER – ‘*Now try with the four times tables.*’

STUDENT – using fingers – ‘*One four is four, two fours are eight, three fours are twelve.*’

PERFECT SEQUENCING – Step 13



Recognising when it is time to progress is easy. When these simple tables are performed perfectly, then it is time to progress

The hard part is done....because the sequencing is now perfect. Dendrites have been growing and with a tiny bit of practise they will last a lifetime.

Next, add in the rest of the tables like this:

Have the student write out the variable for the times table and then say the answers to the times tables for that variable.

STUDENT – writes 2 – and says ‘two – four – six – eight – ten’

STUDENT – writes 3 – and says ‘three – six – nine – twelve – fifteen’

COMBINE SKILLS – Step 14



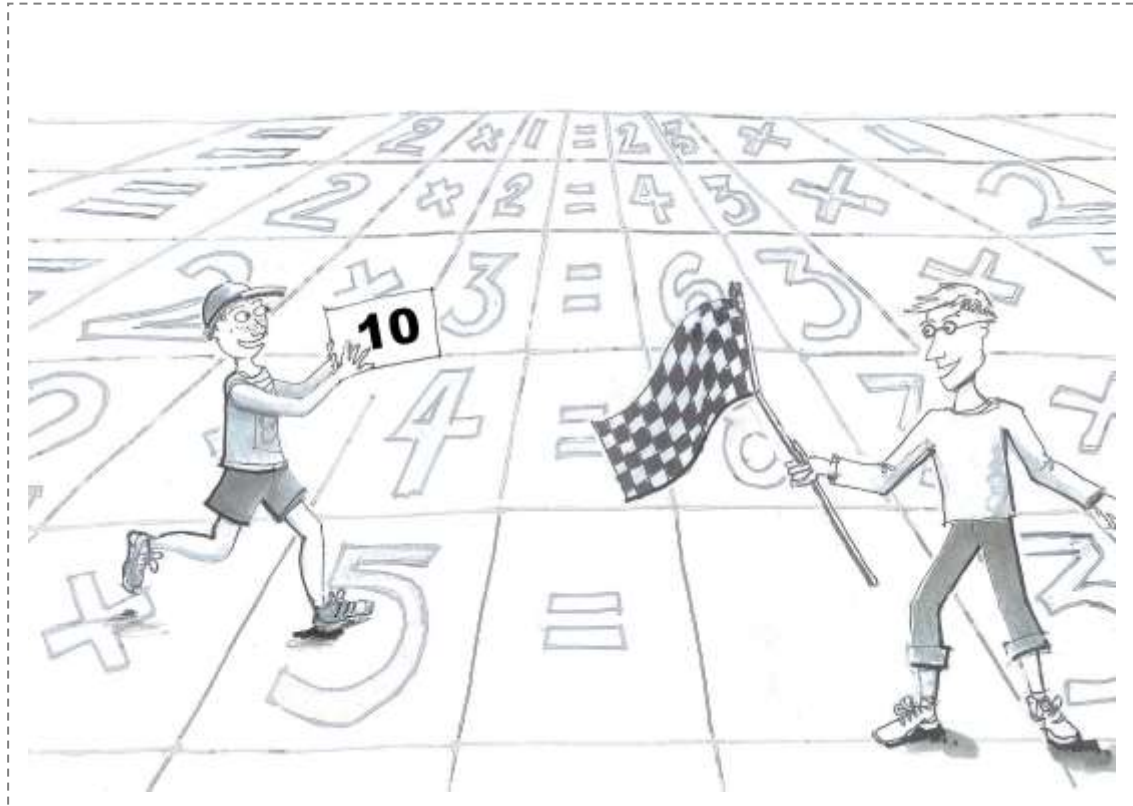
Now combine fingers and answers as on page 17, step 10.

STUDENT – using fingers - *'One two is two, two twos are four, three twos are six, four twos are eight*

TEACHER – *'And again.'*

Practise over again and again. Don't rush through.

PERFECT TECHNIQUE – Step 15



Check for perfect technique.

Perfect Technique means *Perfect Imprinting*.

It is essential for the brain to learn this perfectly.

PERFECT is:

1. an even speed
2. relaxed
3. no stutters
4. no jerkiness; no fast-then-slow,
5. no stop/start

PERFECT ALWAYS

From the very beginning always have the student speak and do every step perfectly.

The brain loves a *Perfect Imprint* and hates a messy imprint.

WORKING CHECKLIST

Workbook 4 – ESSENTIAL SEQUENCING

STUDENT NAME _____

- | | |
|--|--------------------------|
| REMEMBER THE FACTS OF MEMORY | <input type="checkbox"/> |
| Step 1 TABLES THE BRAIN FRIENDLY WAY – COUNT TO THREE | <input type="checkbox"/> |
| Step 2 TABLES THE BRAIN FRIENDLY WAY - ADD SILLY OBJECTS | <input type="checkbox"/> |
| WHY TABLES | <input type="checkbox"/> |
| Step 3 COUNT USING FINGERS | <input type="checkbox"/> |
| Step 4 REFLECTION | <input type="checkbox"/> |
| Step 5 AUDITORY-VISUAL CONNECTION a | <input type="checkbox"/> |
| Step 6 AUDITORY-VISUAL CONNECTION b | <input type="checkbox"/> |
| Step 7 REST TIME | <input type="checkbox"/> |
| Step 8 QUICK REMINDER | <input type="checkbox"/> |
| Step 9 VISUAL-PHYSICAL/COGNITIVE CONNECTION | <input type="checkbox"/> |
| Step 10 COMBINE AUDITORY, VISUAL AND PHYSICAL | <input type="checkbox"/> |
| Step 11 PRACTISE | <input type="checkbox"/> |
| Step 12 GENERALISE THE SEQUENCING | <input type="checkbox"/> |
| Step 13 PERFECT SEQUENCING | <input type="checkbox"/> |
| Step 14 COMBINE SKILLS | <input type="checkbox"/> |
| Step 15 PERFECT TECHNIQUE | <input type="checkbox"/> |