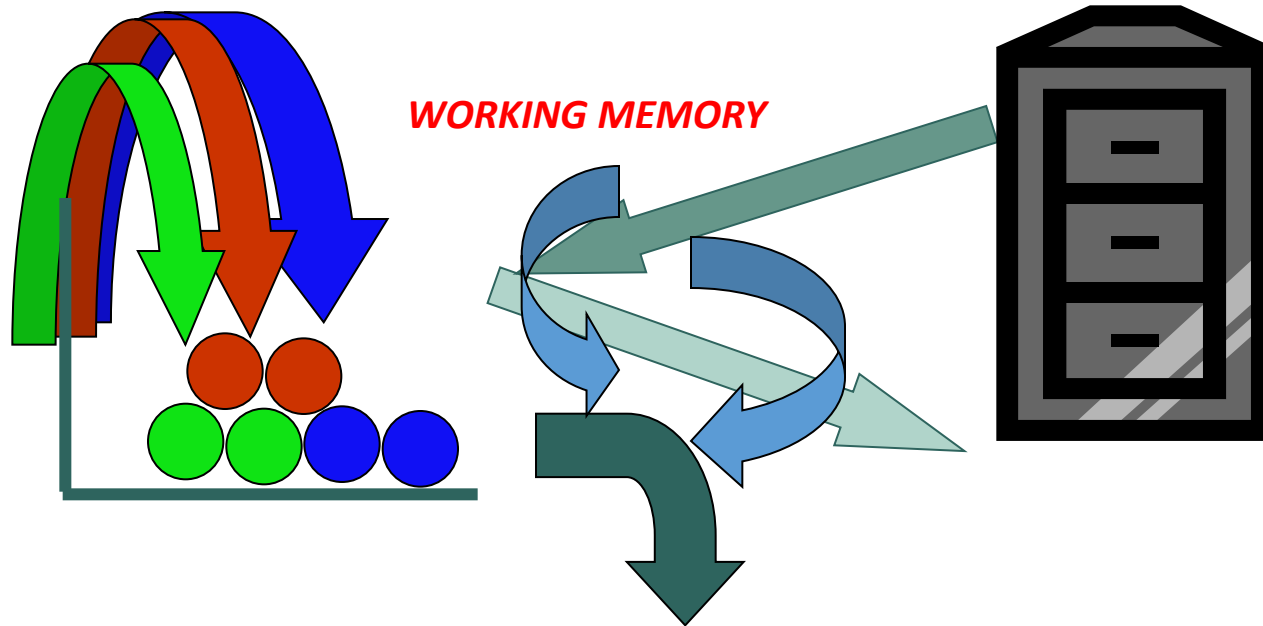# 10 Practical ideas

and why

David Crabtree

Working memory

WORKING MEMORY

Catastrophic Loss

USE OF MULTI SENSORY PROCESSING

Kinaesthetic
Hands on activity
Creating
Experiencing
Exploring
Movement
Acting out
Handling objects
Colours to identify key points
Breaks
Typing text

Auditory
Verbal explanations
Participating in classroom discussions
Learning from other learners
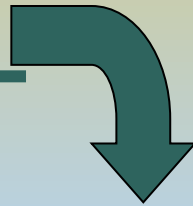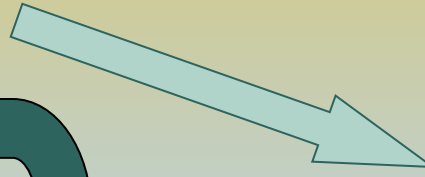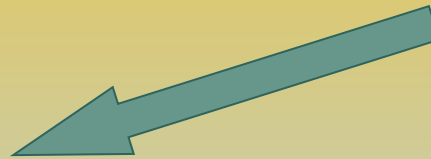Creating analogies or stories
Music
Memories
Rhymes

Stickability
Metaphor
Analogy
Humour
Pictures
Colour
Kinaesthetic activity
Own experiences
Matching activities
Games
Music
Mnemonics
Patterns
Giving the big picture
Mind maps
Drama
Modelling
Acting out
Realia

Visual
Pictures
Diagrams
Charts
Maps
Illustrations
DVDs
Photographs
Mind maps
Colour
Teacher's body language

Relevant disposal and lack of clutter

7. Build in Multisensory Processing and Stickability Strategies

6. **Assess for learning at the end of every step**

SUCCESS ▶

5. Teach only one thing at a time

4. Create *light bulb* moments which make use of pupils own self-realisation

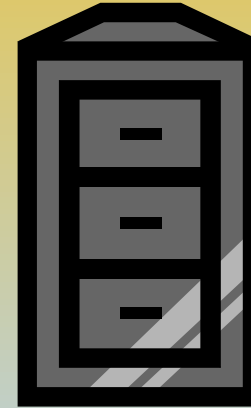**3. Identify the main elements for Stickability ? Build in Stickability**

2. Each lesson as a Learning Journey
It has a beginning and end with a step-by-step focus on pupil learning, planned interventions and the provision of targeted differentiation.

1. Learning Route Map
Puts learning into context. Allows learners to see direction, relevance, progress and revise. They can look back as well as look forwards to see how things fit together.

bav ib duts omed obcornin adowl

dav

puts

opco

abowl

id

omep

rnin

- David put some popcorn in a bowl

Dyslexia

A difficulty processing written language

- discriminating or 'holding' sounds

- Auditory processing?

- confusing or omitting sounds when spelling

Visual processing?

Sequencing?

Speed of processing?

Catastrophic loss

Lets try some exercises to show us what having dyslexia means…

•Say the colour NOT the word….

Green

Dyslexia

Spatial/Temporal

- difficulties with telling the time
- left/right confusion
- gets lost easily

Memory Difficulties

- sequences
  - phone numbers
  - alphabet
  - times tables
- dates

Motor Control

- co-ordination problems
- handwriting difficulties
- difficulty copying

Reading

- losing place in text
- moving or overlapping text
- needing to re-read

Spelling

- can't remember what words look like
- difficulty 'hearing' sounds
- similar sounds cause confusion

Listening

- find background noise distracting
- problems note taking

Writing

- can't find the right word
- organisational problems
- difficulty getting ideas on paper

Blue

Red

Pink

Yellow

black

orange

Pink

blue

Yellow

Purple
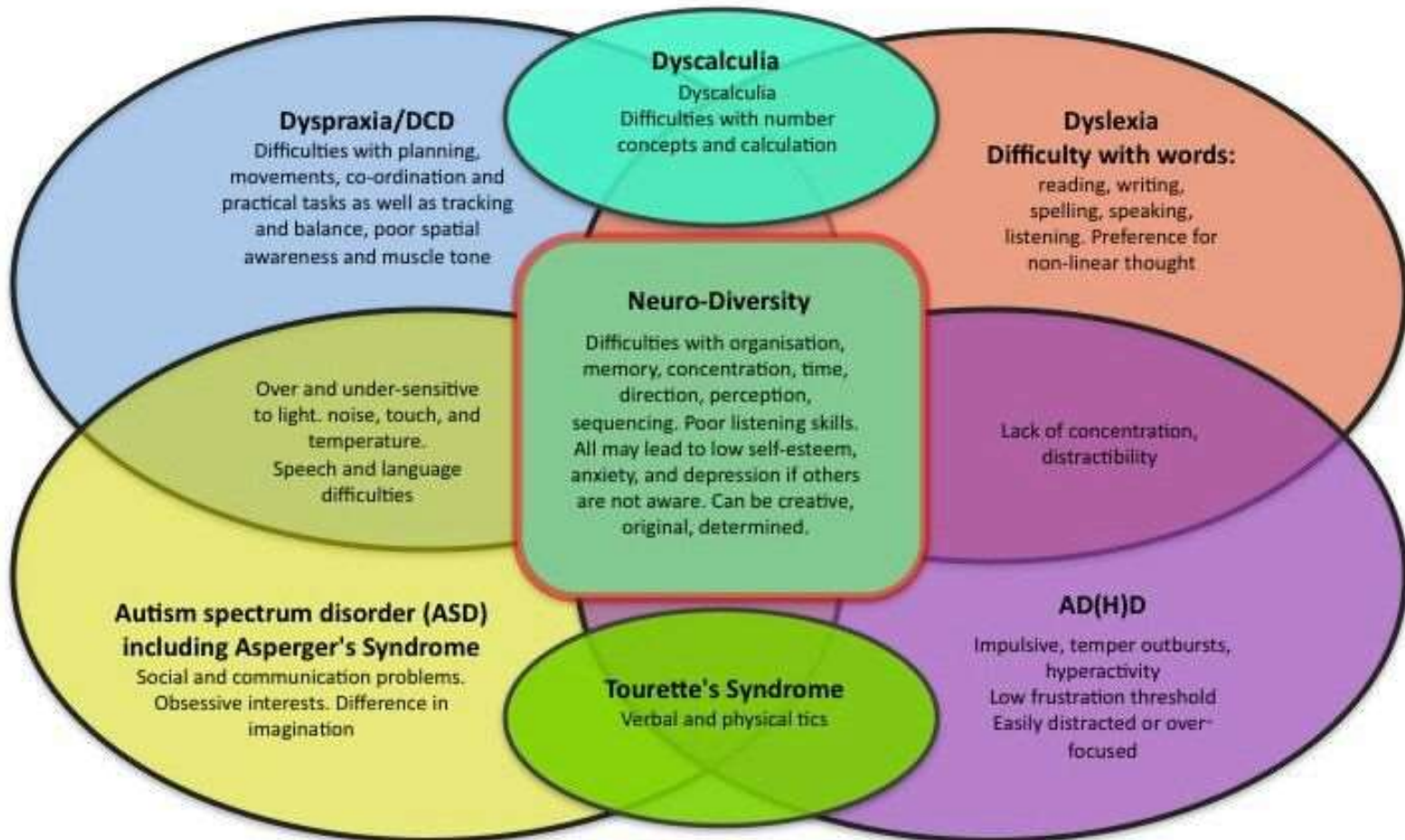
Pink

Black

Red

White

Yellow

Neurodiversity

The Make-up of Neuro-Diversity

This is a document for discussion, concentrating mainly on the difficulties of those with neuro-diversity. It must however be pointed out that many such people are excellent at maths, co-ordination, reading etc. We are people of extremes.

Dyspraxia/DCD
Difficulties with planning, movements, co-ordination and practical tasks as well as tracking and balance, poor spatial awareness and muscle tone

Dyscalculia
Dyscalculia
Difficulties with number concepts and calculation

Dyslexia
Difficulty with words:
reading, writing, spelling, speaking, listening. Preference for non-linear thought

Neuro-Diversity
Difficulties with organisation, memory, concentration, time, direction, perception, sequencing. Poor listening skills. All may lead to low self-esteem, anxiety, and depression if others are not aware. Can be creative, original, determined.

Over and under-sensitive to light. noise, touch, and temperature. Speech and language difficulties

Lack of concentration, distractibility

Autism spectrum disorder (ASD) including Asperger's Syndrome
Social and communication problems. Obsessive interests. Difference in imagination

Tourette's Syndrome
Verbal and physical tics

AD(H)D
Impulsive, temper outbursts, hyperactivity
Low frustration threshold
Easily distracted or over-focused

Created by Mary Colley

'In terms of specialised functions there is an important difference between the left and right halves of the brain'
Neuropsychological Treatment of Dyslexia D.J. Bakker

Left brain hemisphere

- Language
- Facts
- Analysis
- Time orientation
- Sequencing
- Structure
- Mathematics
- Listening

Right brain hemisphere

- Pictures
- Feelings
- Humour
- Artistic
- Musical
- 3-D visual/spatial
- Patterns
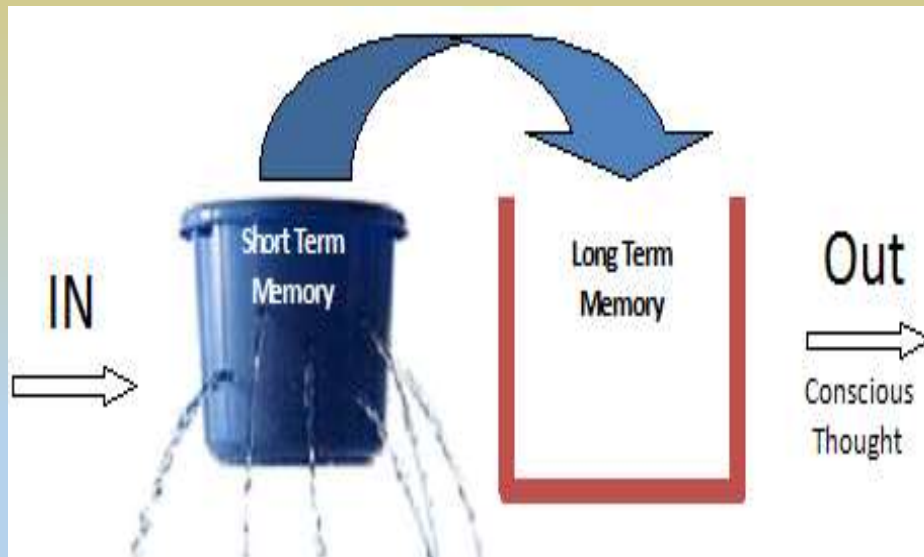- 'Whole picture'

This is true for the majority of people.

Working memory and behaviour

- Being "easily distracted", "forgetful", and "off-task", is an exterior sign of the shutdown of the nerve impulses inside the brain responsible for working memory.

- Much so-called poor classroom behaviour is the outcome of working memory capacity being over-stretched during the lesson.

- In such a way, the minute differences in working memory from one child to another are massively magnified on a daily basis

Working memory

- Working memory acts as a kind of "holding area" for temporary recall of the information which is being processed at any point in time e.g. classroom activity

- Working memory holds a small amount of information (typically around 7 items or even less) in mind in an active, readily-available state for a short period of time (typically from 10 to 15 seconds, or sometimes up to a minute).

- Working memory links into a "hook" in long term memory to help "place" the new memory in with other memories and be stored

- Working memory supports speed of processing across the "cerebral hemispheres"

- Working memory has been shown to be important for successful classroom learning.

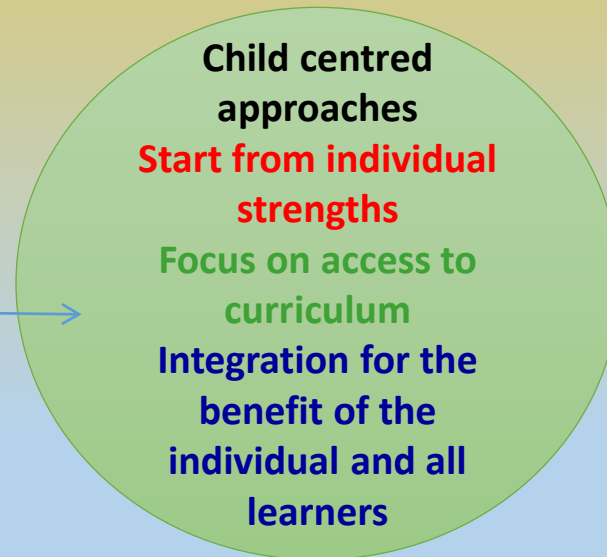One important function of the brain is to shed input

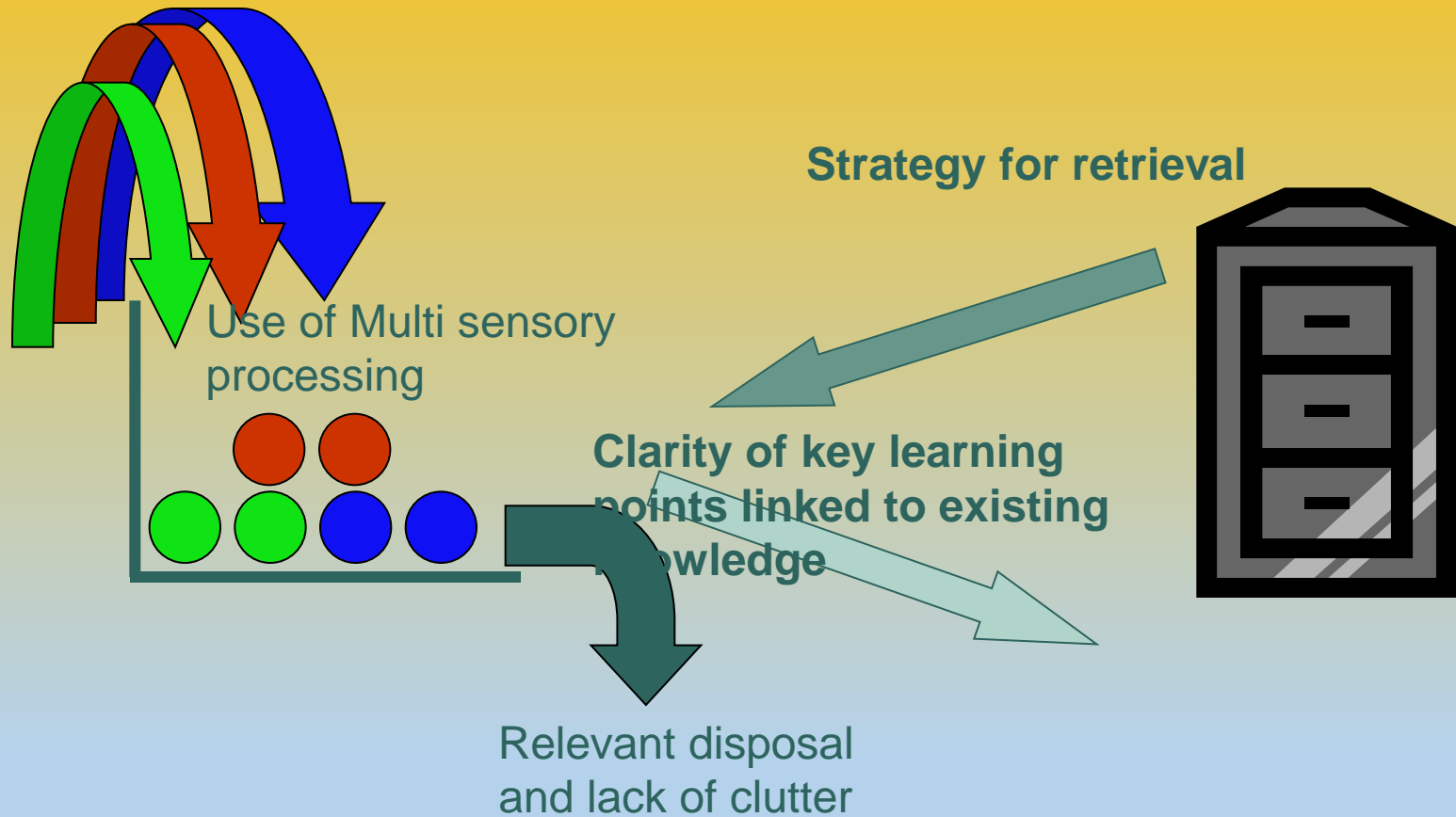# Implementing the social model for accessibility and engagement

Medical Model

Support agencies
Social workers
Occupational therapists
Educational psychologists
special schools
Medication

Social Model

Child centred approaches
Start from individual strengths
Focus on access to curriculum
Integration for the benefit of the individual and all learners
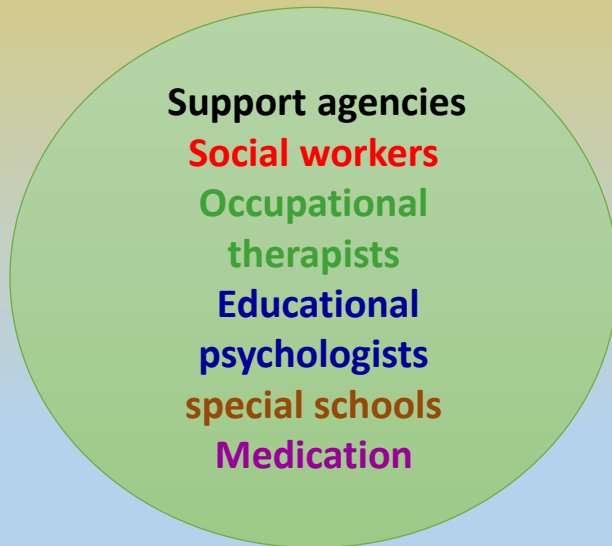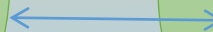
How do we help neurodiverse learners

Strategy for retrieval

Use of Multi sensory processing

Clarity of key learning points linked to existing knowledge

Relevant disposal and lack of clutter

10 Top tips to Inclusion

- Celebrate
- Be clear
- Link to existing knowledge
- Remove clutter
- Use multisensory approaches

- Scaffold
- Differentiate
- Ensure the lesson is accessible for all
- Assess for learning
- Encourage the learner voice (the learner is at the heart of everything we do)

Multisensory learning
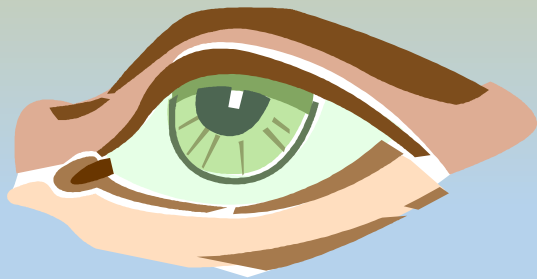
ONE CRITICAL INTERVENTION

Reduce 'catastrophic' loss

Assess for working memory

Put into place <u>whole class</u> strategies to support working memory

Would help neurodiverse learners

Would benefit all learners

The laminated blue thumb (Working memory)
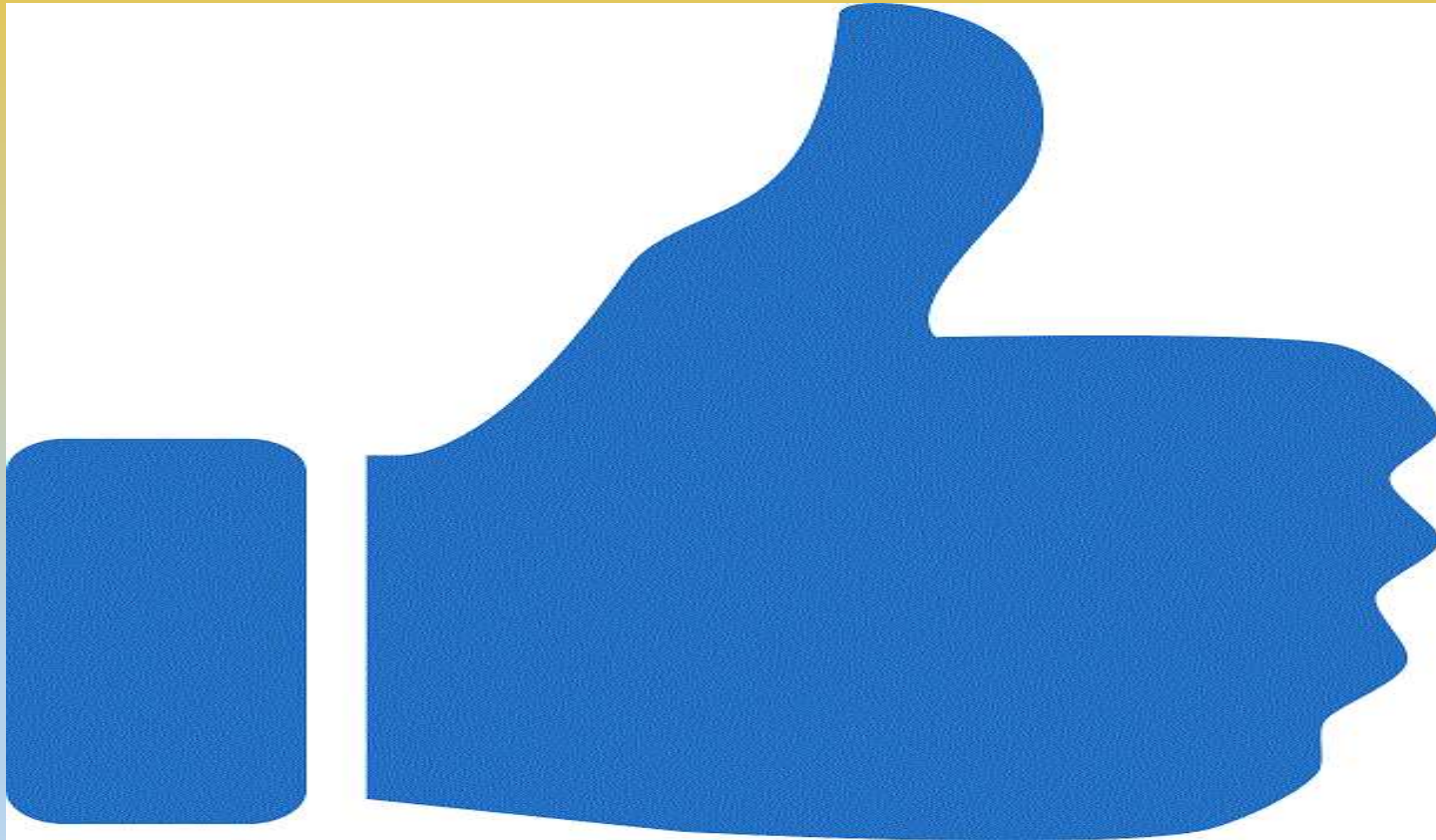
On task

The laminated blue thumb
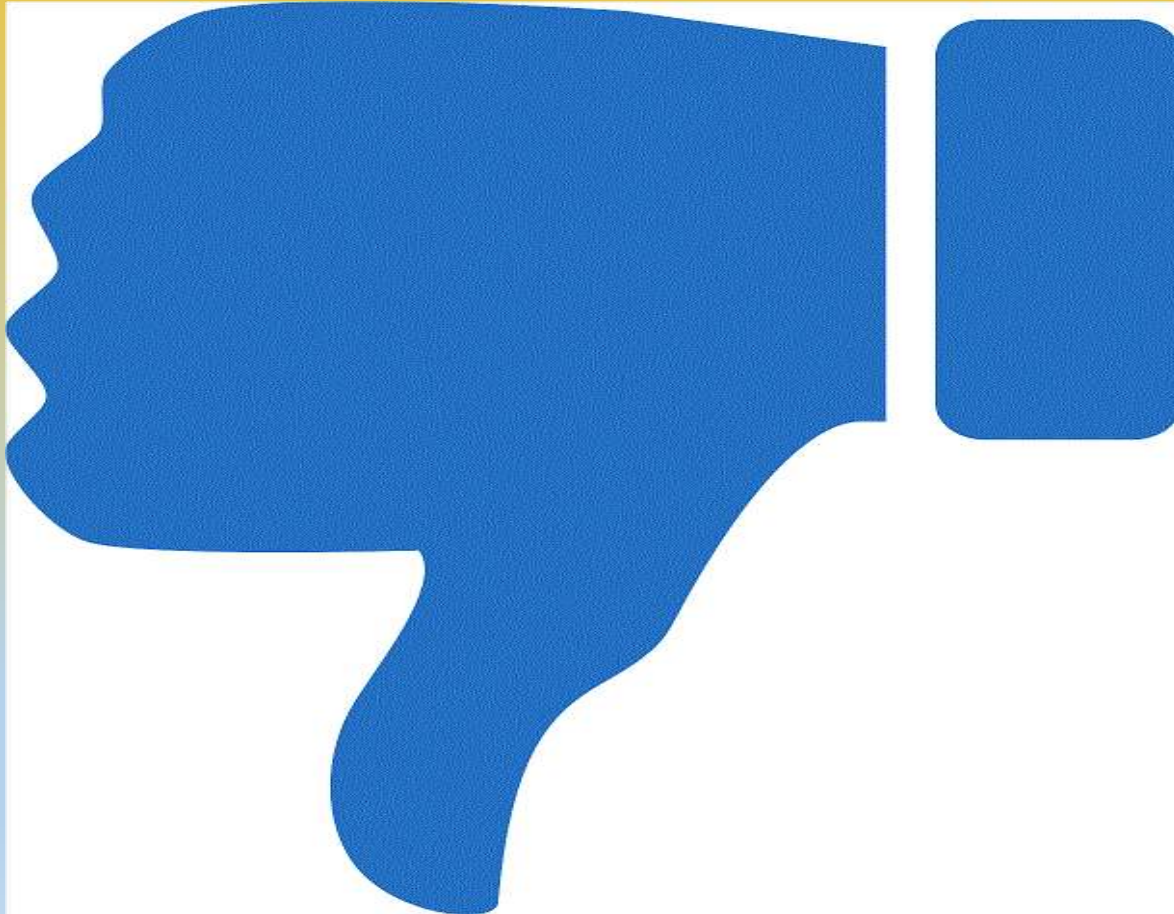
I am not too sure

Check Sheets

Provide students with check sheets for tasks. This gives them something they can refer back to as they progress. It is a means for them to keep track of where they are at and to know what they still have to do.

A particularly good use of check sheets is when students are doing written work.

In this case, the check sheet will help students to keep track of what they have done and where they are going, but it will also act as a tacit guide demonstrating how they should structure their work.

Listening Frame (Scaffolding)

Create a listening frame for students who struggle to make notes.

This could be a worksheet with a set of sections on it, each one headed by a question, statement or category.

The student can then use this to make notes. The sections will help them to order the information they receive. This will eliminate a thinking process for them, thus allowing them to concentrate exclusively on listening and writing.

In essence, a listening frame does a bit of the work for the student, making life easier for them.

Modelling

Modelling is where the teacher demonstrates to the class, or to individual students, what it is they want them to do.

Modelling could be physical. For example, you might walk through the steps involved in an envoys task.

Modelling could be written. For example, you might show students how you want them to create a table and what sort of things they are to write in it.

Modelling could be oral. For example, you might have a model discussion with a pupil and then ask the class to get into pairs and have their own discussions.

Keyword Display

A good way to help students get to grips with keywords is to display them in your room. Here are five ways you might do this:

- A list of keywords and definitions.
- Keywords accompanied by relevant images.
- Sentences in which the key words are being used.
- Key words in a table with synonyms and antonyms.
- Get your class to make collages or posters of keywords and display these.

Supporting Writing – a 5 stage model

- **generate** ideas
- **sort** ideas into themes
- **organise** the themes
- **sequence** the themes into paragraphs
- **rehearse** the plan by talking it through

The key to successful learning is the ability to organise thoughts. We teach you how to do it visually.

Supporting Writing – Generating ideas

Supporting Writing – Sorting ideas

ORGANISE: SORT IDEAS
- **Re-arrange** the DUMP words into **groups**
- Sort the groups by **shared features**

EXERCISE

Supporting Writing – organise ideas

MAP: ORGANISE IDEAS

- **Organise** the groups of words **hierarchically**
- Find the main words to **label** the main branches
- Find the **next level** of words (smaller branches)
- Continue until all words are organised
- Add more words too

Supporting Writing – sequence

SEQUENCE THE PARAGRAPHS
- Put the branches into the **order** you will use them
- Each main branch can be a **paragraph** or section of several branches
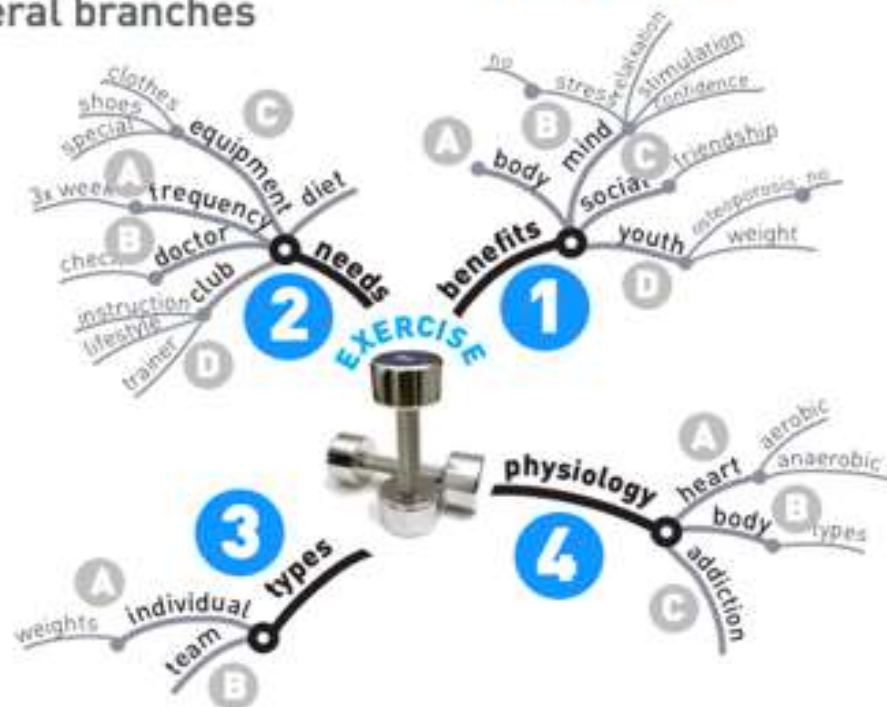
Supporting Writing – rehearse

REHEARSE THE COMMUNICATION
- Place the map between the pair
- In pairs, and in sequence, **explain** personal maps to one another
- **Add additional details** as you talk about them

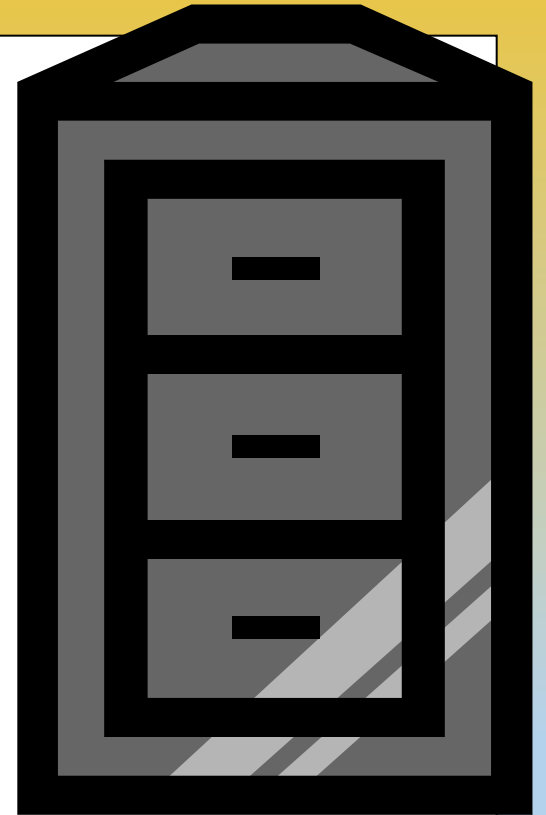# Supporting Writing – begin writing
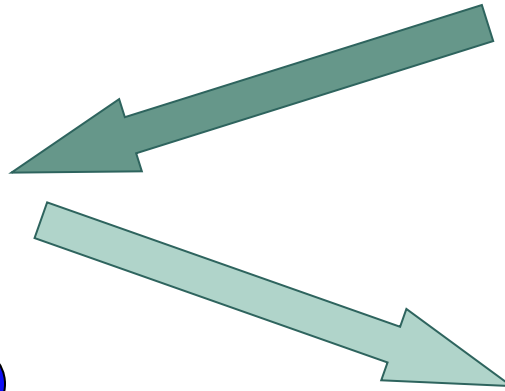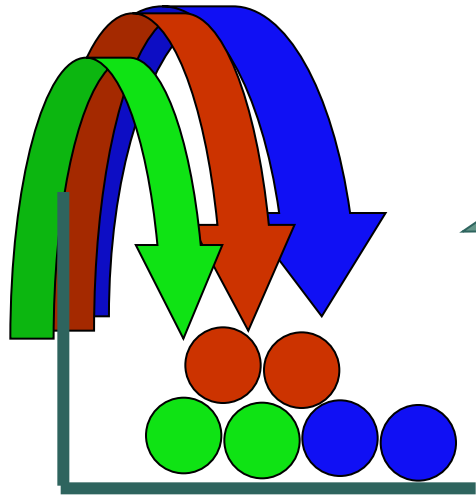

WRITE OUT THE PLAN
- Place the map **in front** of the pupil
- Write according to the **plan**
- Include the **extra details** mentioned in the talk

Talk less

Long term memory

T.G. West *In the Mind's Eye:*

'When people are known for their gifts, their difficulties remain unknown'

'When people are known for their difficulties, their gifts remain unknown'

Strengths of neurodiverse learners

- Creativity

- Thinking laterally and making unexpected connections

- Problem-solving skills

- Seeing the 'big picture'

- Good visual skills, thinking easily in 3-D

- Good verbal skills

- Good social skills

Linking to what is already 'known'
- Long term memory

- Metaphor
- Simile
- Realia

- Child's own interest

- Prior known knowledge

- What they think it is

(Conversation with a peer)

(A story, 'hook' or joke)

Left brain hemisphere

- Language
- Facts
- Analysis
- Time orientation
- Sequencing
- Structure
- Mathematics
- Listening

Right brain hemisphere

- Pictures
- Feelings
- Humour
- Artistic
- Musical
- 3-D visual/spatial
- Patterns
- 'Whole picture'

Big Picture

Often in school knowledge can become compartmentalised and lose its connection(s) to the real world.

Challenge students to re-forge these connections by transferring knowledge out of the classroom and into society and the environment.

Ask them to analyse how what they are learning might link to jobs, ideas, actions, beliefs or relationships. Or, where it might have come from originally and why it might now be deemed important for schoolchildren to know.

Mind Maps

Many people use mind maps to plan essays. A mind map has a central topic, out of which stem key ideas. From these key ideas, further branches develop, containing sub-points.

Mind maps help one to order information visually. They are also useful for ticking off information as it has been dealt with. In this way they act as an aide memoire, as well as an organisational tool.

Information on mind mapping can be found at:

http://freemind.sourceforge.net/wiki/index.php/Main_Page

http://www.mindtools.com/pages/article/newISS_01.htm
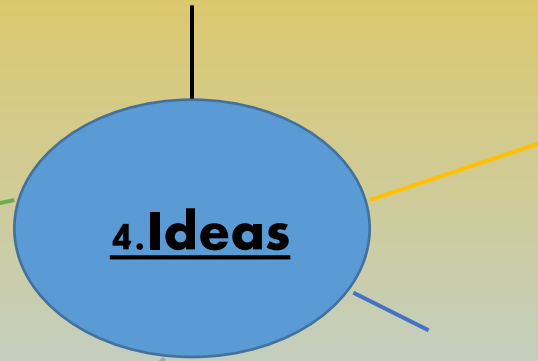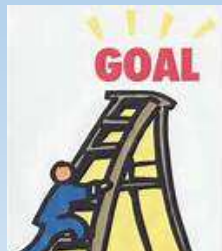
http://www.thinkbuzan.com/uk/

Route Map

What is expected of me within this lesson?

1. Write down the starter, title and the date

2. Write down the learning objective and understand the learning objective

3. Draw a mind map

4.Ideas

5. Complete the task to the best of my ability

6. What was the stickability in this lesson (what have I learnt?)

GOAL

Wonder Wall

- Create a space on your classroom wall called the 'Wonder Wall'. You might like to make this look like a wall by chalking bricks onto black paper.

- When students think of questions and there is not enough time to explore these, ask them to write them down on a Post-It® note and to stick this on the Wonder Wall.

- When students have finished the tasks you have set in a lesson, ask them to fetch a question from the 'Wonder Wall' and to explore it either with a partner or in writing.

https://www.teachingenglish.org.uk/teacher-training/special-educational-needs

The units are:

- introduction

- gifted and talented learners

- multi-cultural influences and the impact on learning difficulties

- dyspraxia

- inclusive assessment approaches

- attention deficit hyperactivity disorder (ADHD)

- autism spectrum disorder (ASD)

- language and speech difficulties

- visual, hearing and physical impairments

- dyslexia

- social, emotional and behavioural difficulties (SEBDs)