

Gigantic elephants make big footprints

David Crabtree



Principles of inclusive education

All children have an entitlement to education

All children have the capacity to make progress



A Game

Say the colour
NOT
the word....

Let's try it out, all together and
LOUD

Green

The **Colour** not the word

Blue

Red

Pink

Yellow

black

orange

Pink

blue

Yellow

Purple

Pink

Black


Red

White

Yellow

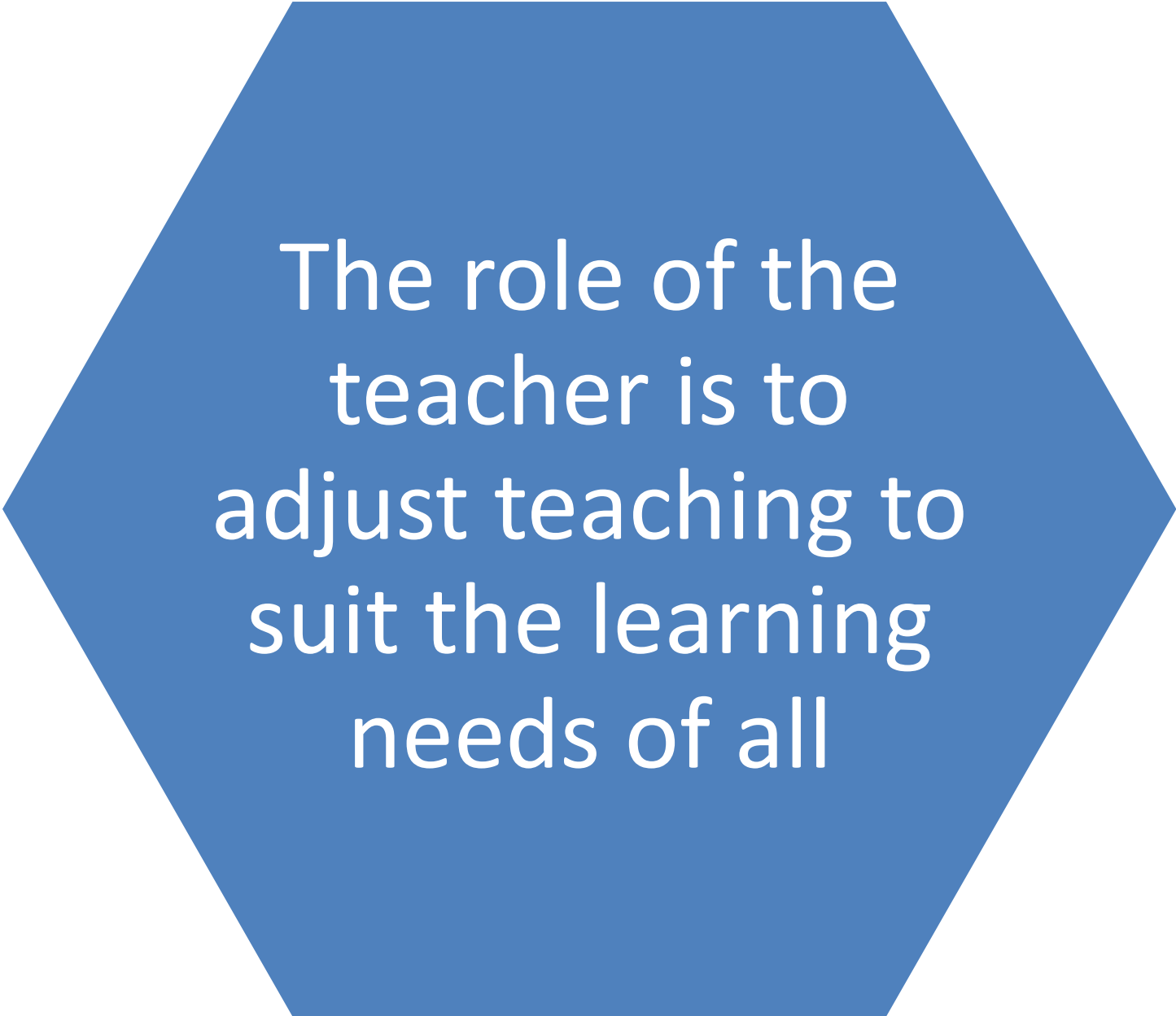
What was going on for
you then?

Long term memory
vs
working memory

A solid blue hexagon with a white text overlay. The text is centered and reads: "Knowing about cognition helps us to identify how adapt our teaching".

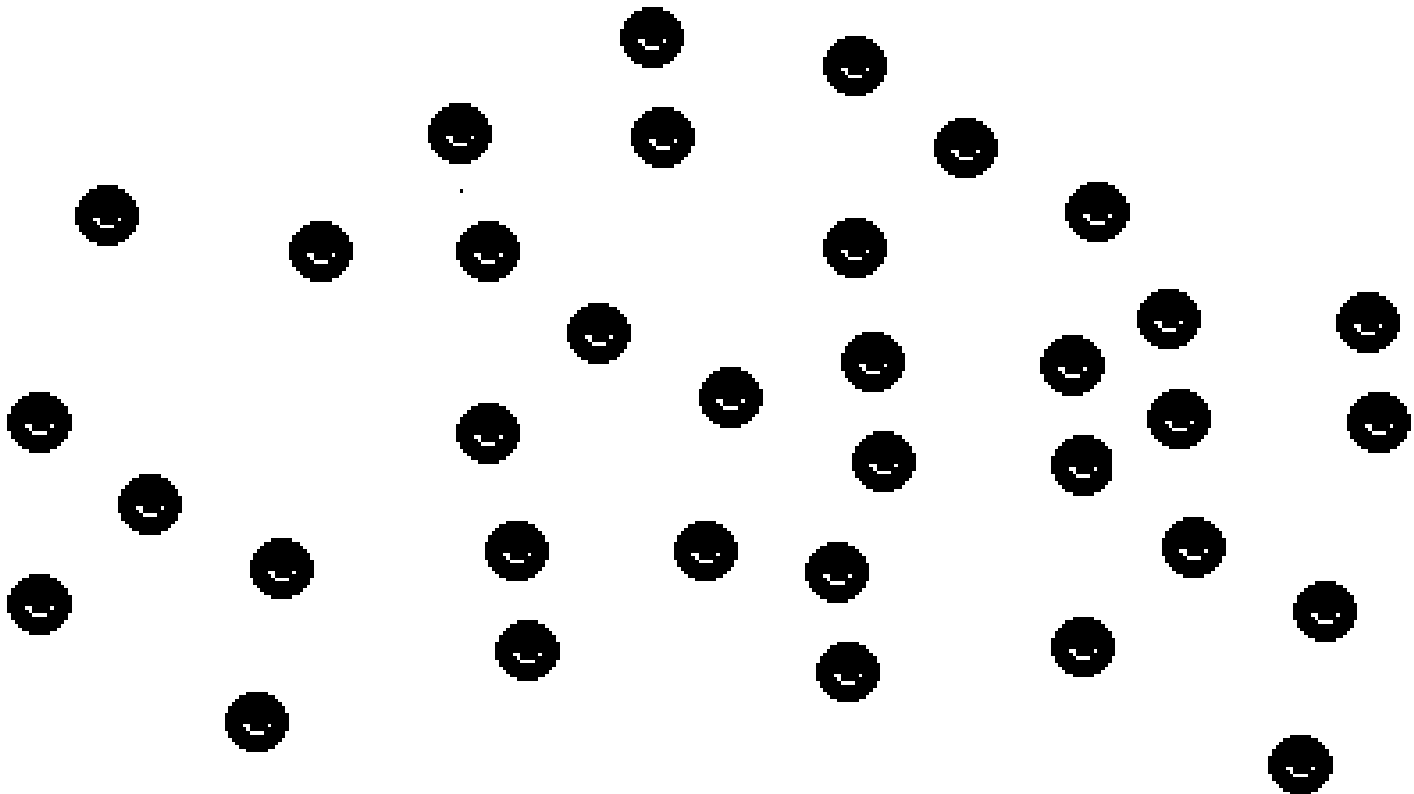
Knowing about
cognition helps
us to identify
how adapt our
teaching



A blue hexagon with a white border, containing white text. The text is centered and reads: "The role of the teacher is to adjust teaching to suit the learning needs of all".

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“With some children with SEN, how can I teach the whole class?”

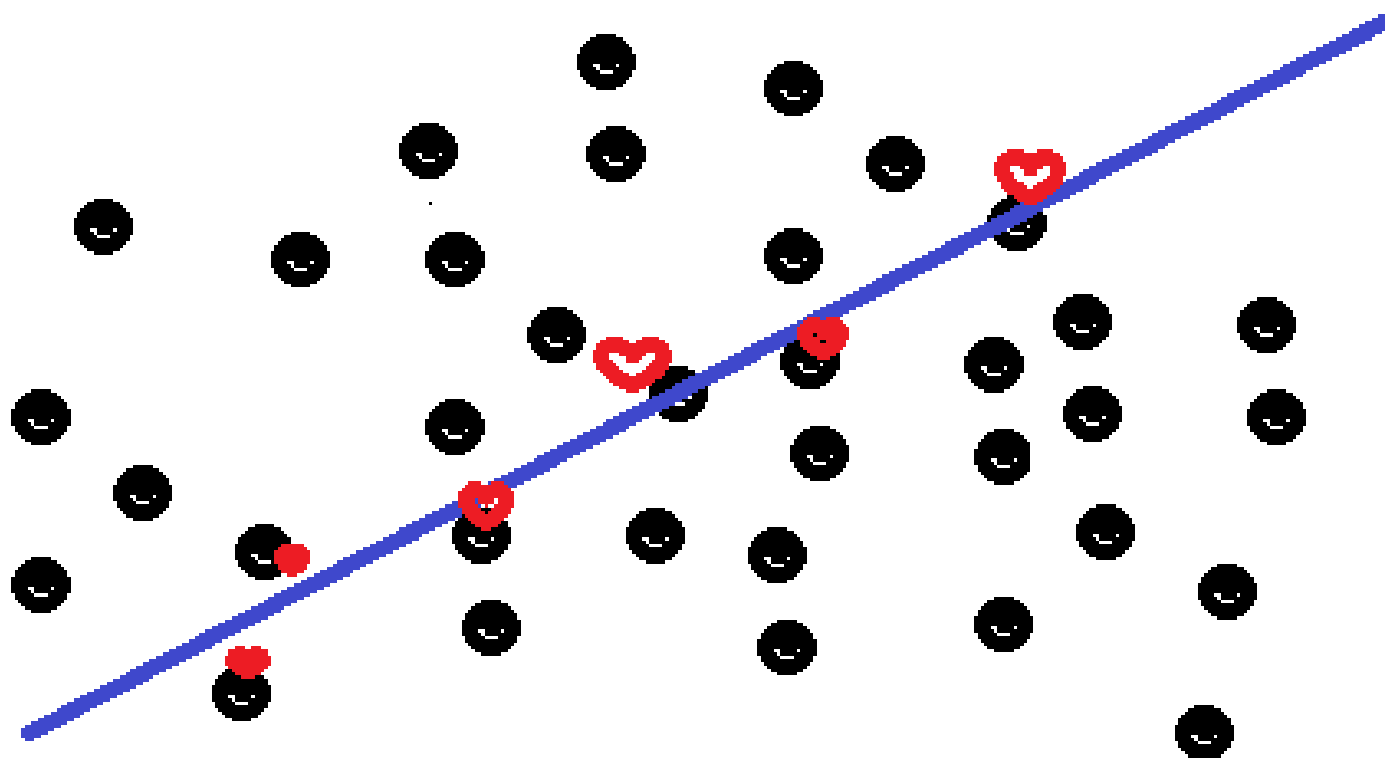


Same 'pitch' to all the class



They are learning something, but maybe not what you are
'teaching'

Same lesson about the middle



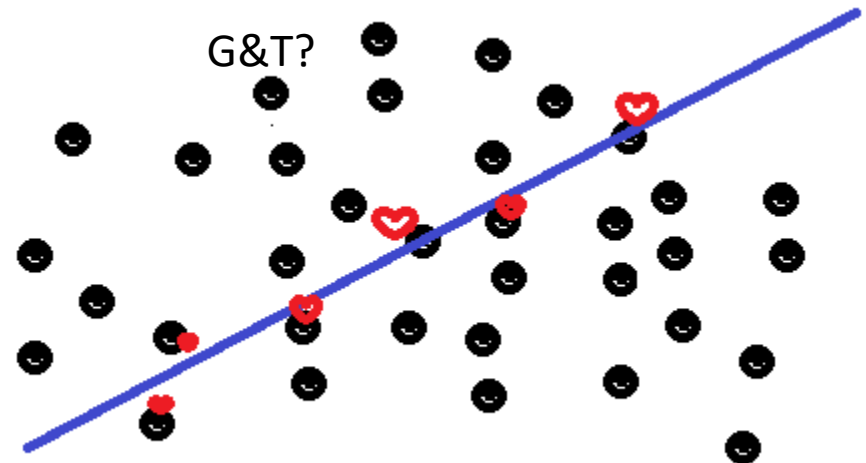
SEN and Inclusion are slightly different approaches

Special Educational Needs

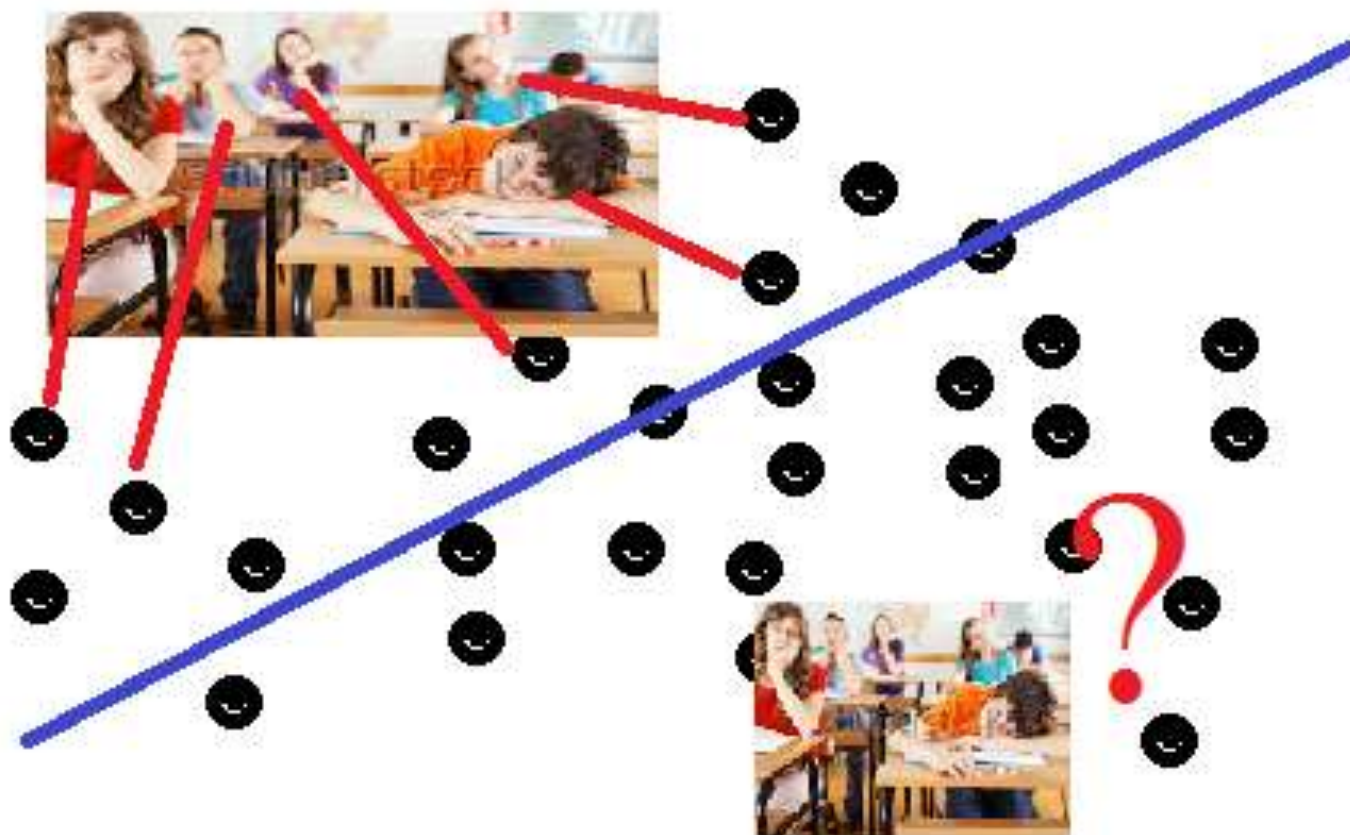
For some children to learn, this may require some reasonable adjustments (for those children)

Inclusion

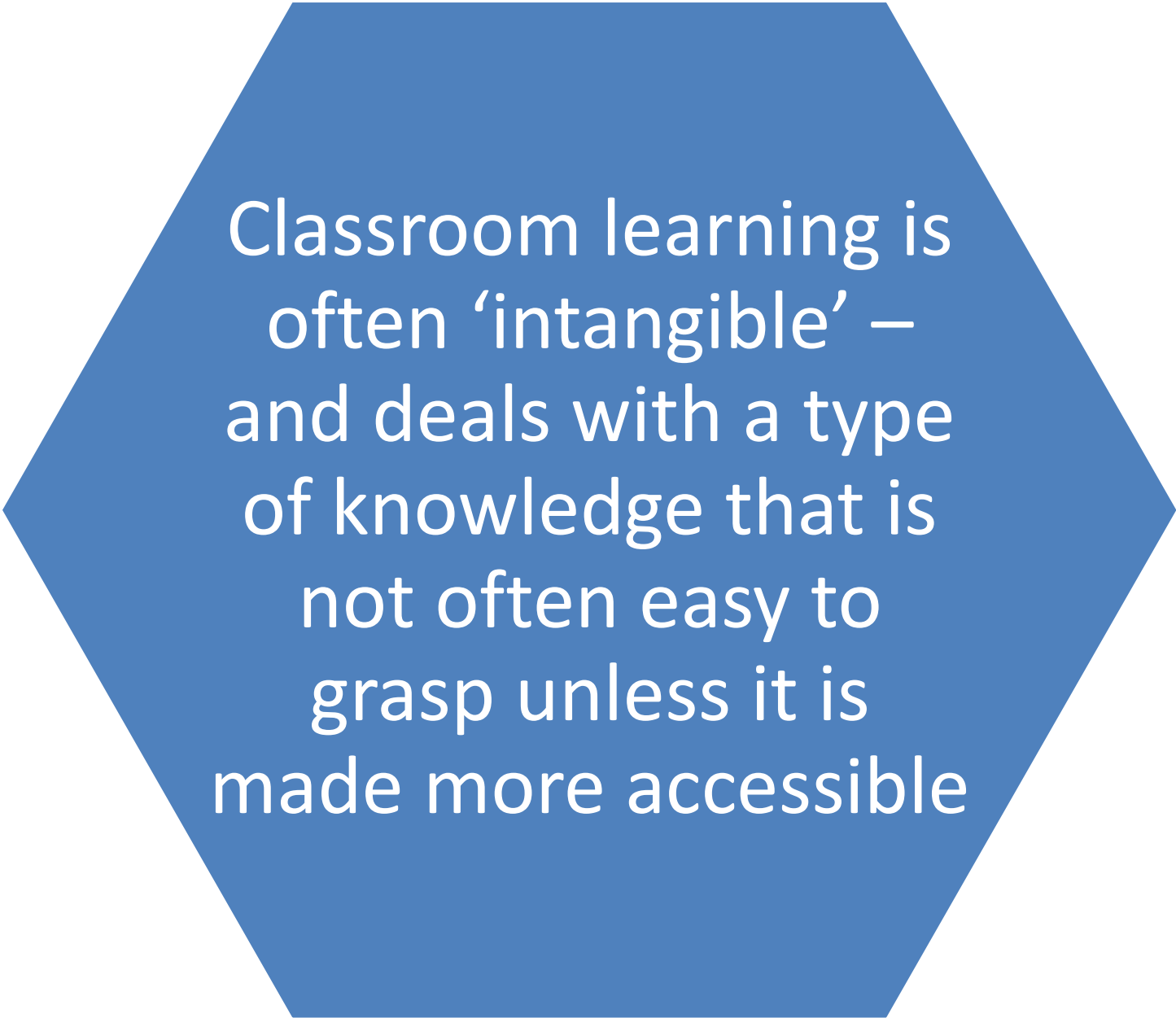
All children have different learning needs



One 'diet' for **all** misses **most**



Every class has children with learning needs

A blue hexagon with a white border, containing white text. The text is centered and reads: "Classroom learning is often 'intangible' – and deals with a type of knowledge that is not often easy to grasp unless it is made more accessible".

Classroom learning is
often 'intangible' –
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Classroom learning

Is dealing with 'stuff' that is not tangible

e.g. 2

Or this

$2 + 2 =$

How much of what you teach in the classroom relates to what happens for the child outside the classroom?

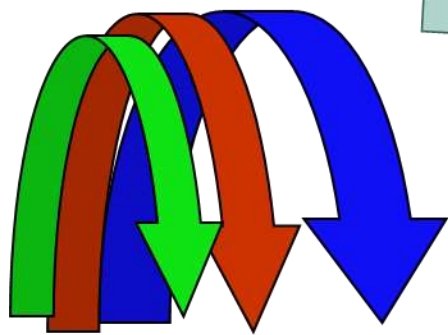
What do YOU think?

Is the brain leaky or sticky?

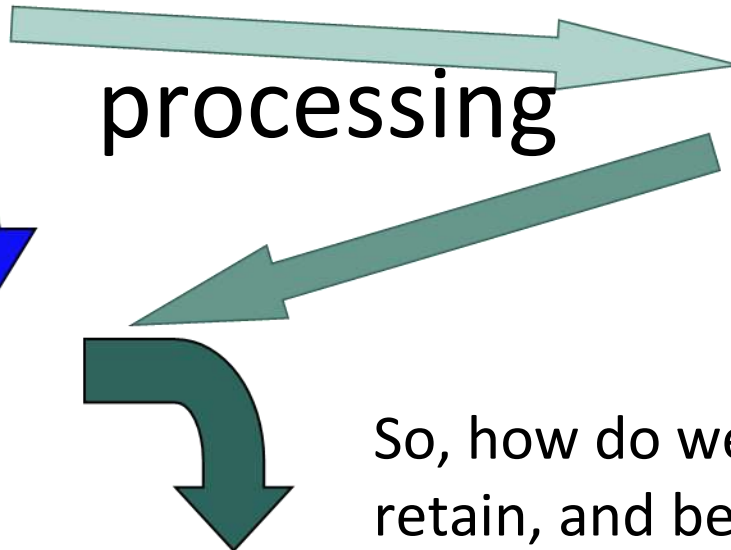


Cognition – simple model

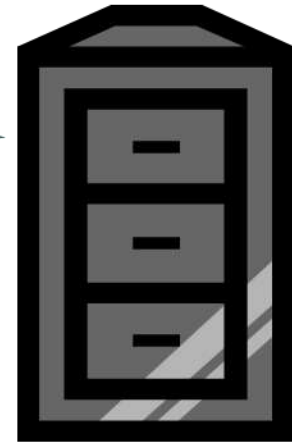
input



processing



memory



So, how do we get our pupils to retain, and be interested?

Catastrophic loss / Brain dumping

Basic idea one

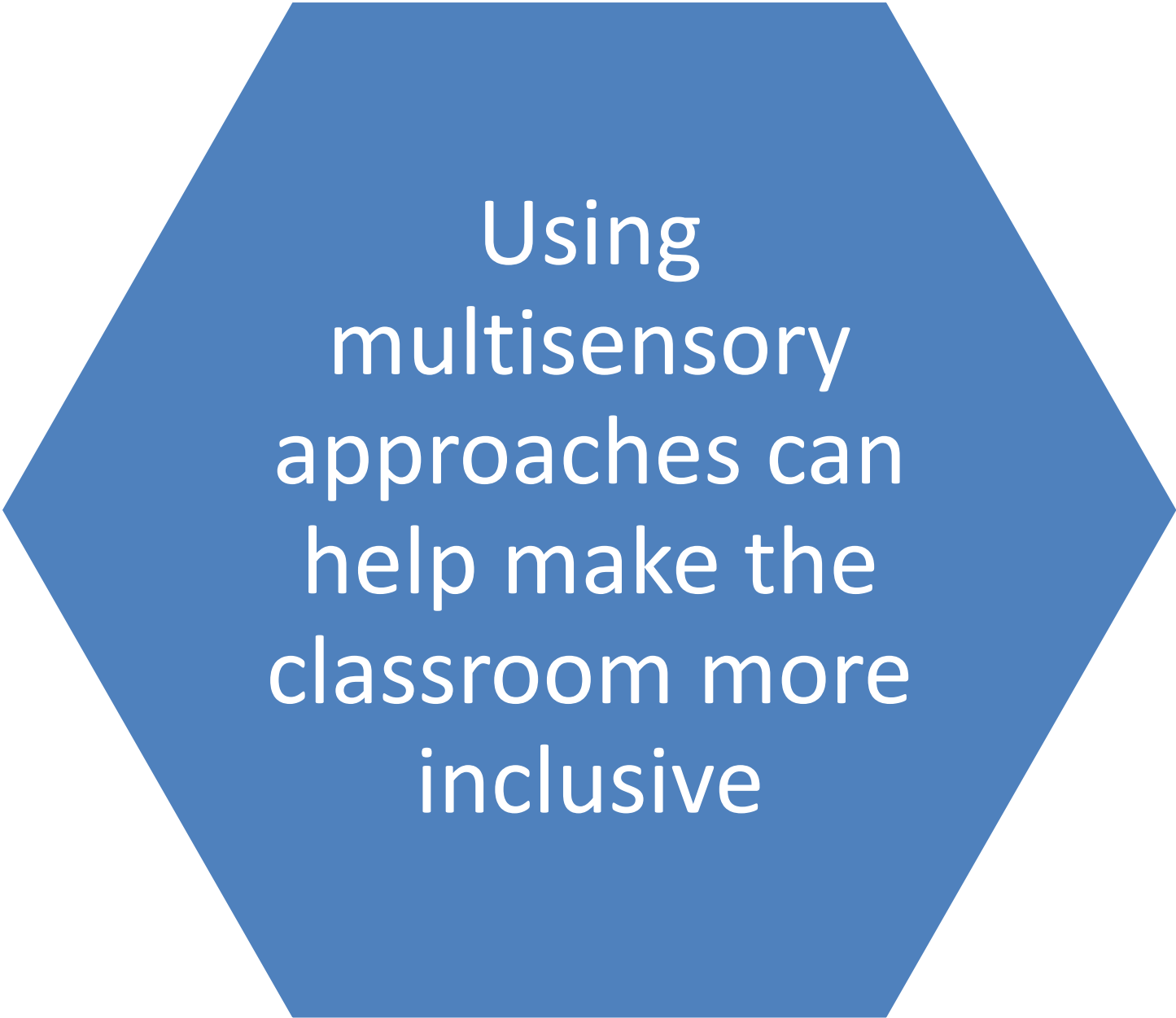
Just because something has been
'taught', do not assume that it has
been learnt.

What is taught in the classroom often does not relate to life outside the classroom and is therefore intangible and does not easily link into existing knowledge (and therefore does not 'stick')

Learning in class is complex and requires

- Holding information (long enough to retain it and recognise its significance) Say the **colour** not the word
- Successfully doing different things at the same time
- Processing quite large amounts of 'stuff'
- Linking new things with existing things
- Establishing 'new' knowledge
- Putting things into order
- Rehearsing the 'new' knowledge
- Staying 'on task'

Think of one of
your lessons -
what actually do
pupils have to
do?

A blue hexagon with a white border, centered on a white background. Inside the hexagon, the text "Using multisensory approaches can help make the classroom more inclusive" is written in white, sans-serif font, arranged in six lines.

Using
multisensory
approaches can
help make the
classroom more
inclusive

Where are we?

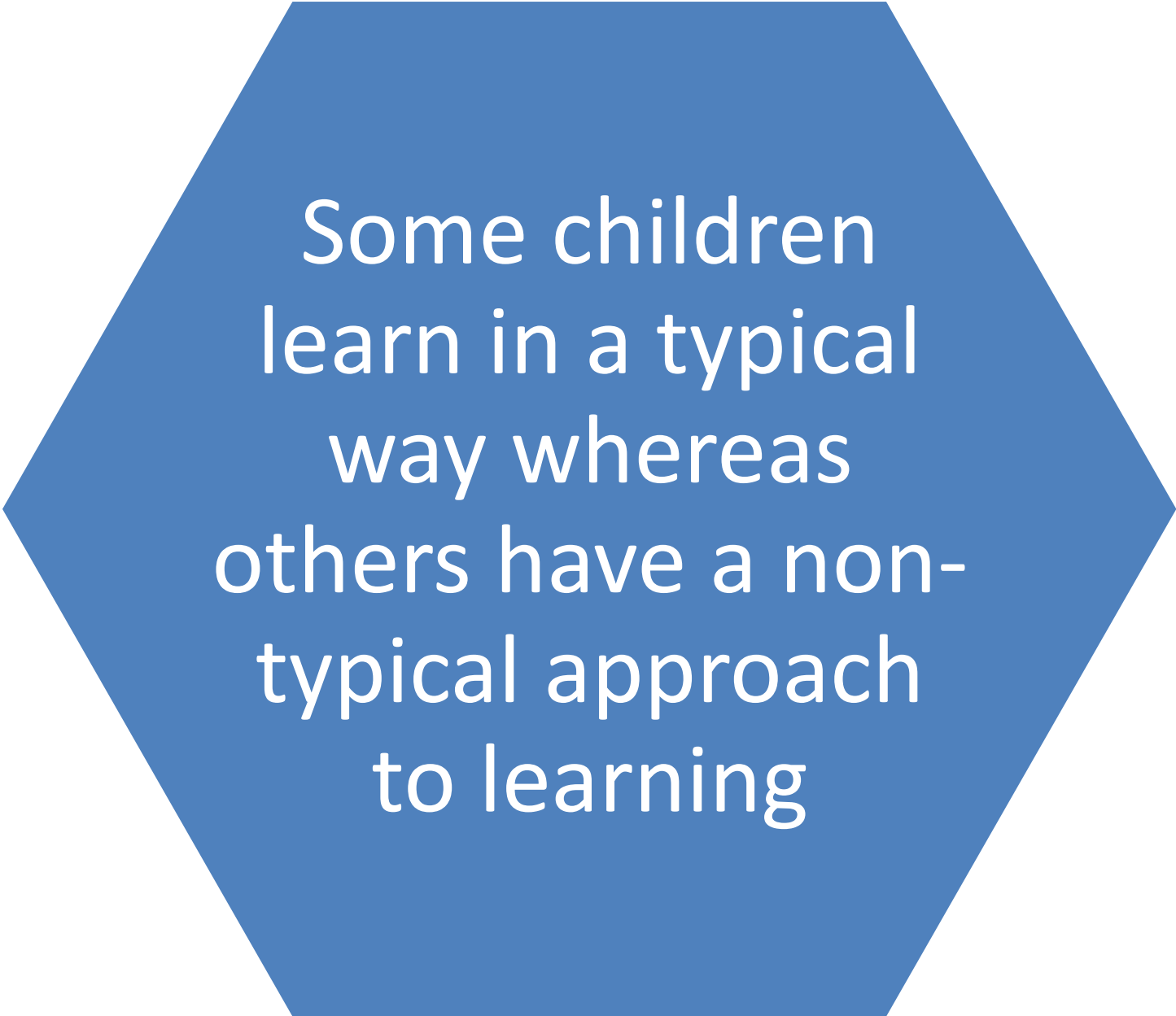


Basic idea two

Multi-sensory classrooms are the super-highway

One sensory channel is a
narrow track, two is path,
three is a road -

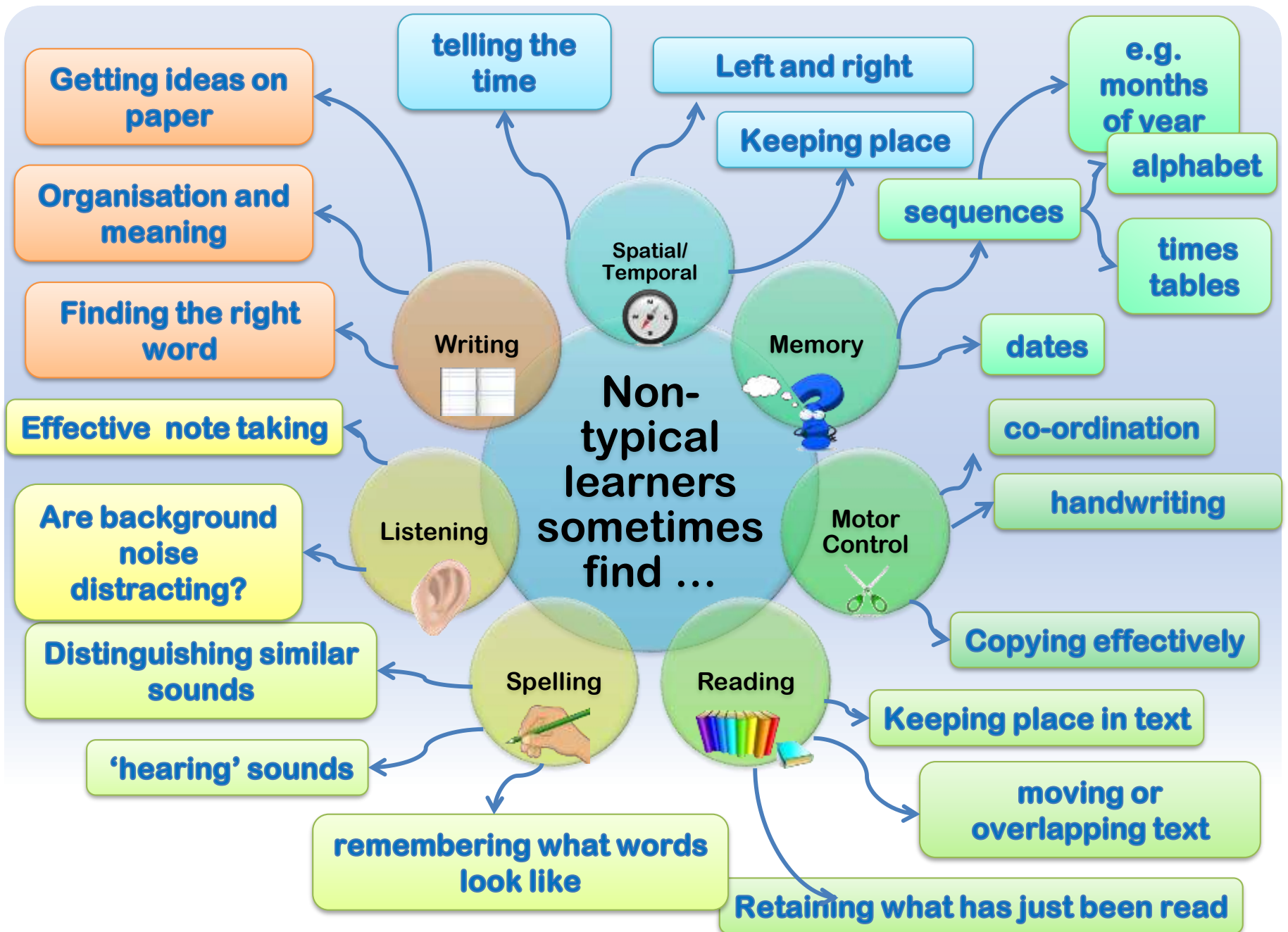
Lets build a super highway

A blue hexagon with a white border, containing white text. The text is centered and reads: "Some children learn in a typical way whereas others have a non-typical approach to learning".

Some children
learn in a typical
way whereas
others have a non-
typical approach
to learning

Each human's brain develops differently - and, in this way each individual is unique





Why 'non-typical'?



- Linear Vs. Holistic Processing
- Logical Vs. Intuitive
- Sequential Vs. Random Processing
- Verbal Vs. Nonverbal Processing
- Symbolic Vs. Concrete Processing
- Reality-Based Vs. Fantasy-Oriented Processing

Do we all 'see' the same thing/s?



Our brain is
doing the
'seeing'

Writing tends to be on or across the centre line of the body

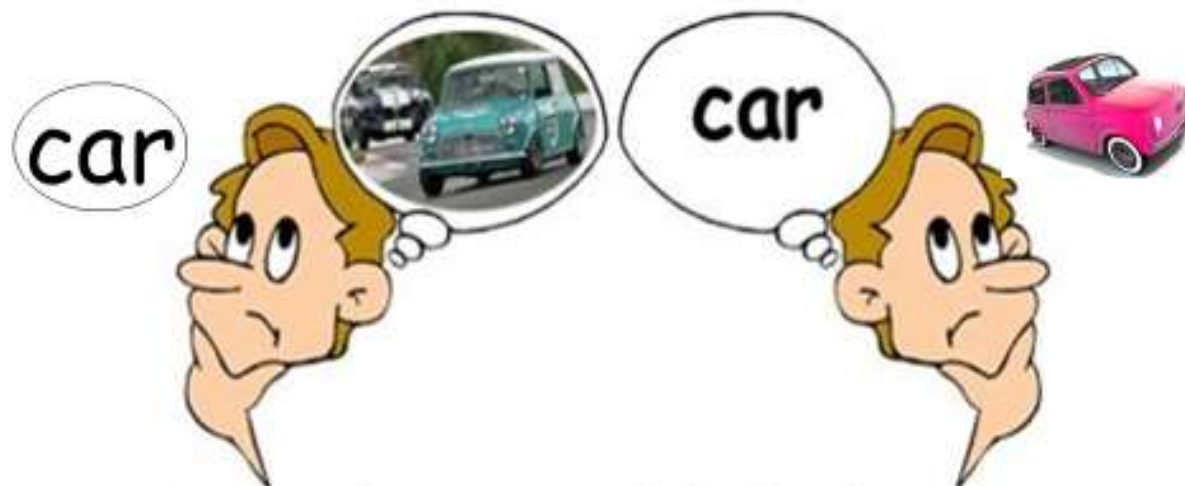


Dysgraphia

Visual-spatial difficulties: trouble processing what the eye sees

Language processing difficulty: trouble processing and making sense of what the ear hears

Spelling and Semantics



Right-brain and left-brain
the word "car"

Examples

Sound

Word

Number

Name

Symbol

Meaning

Value

Face

This has all of the characteristics of a **p** (except one)



What sound does it make?

Sound/Symbol relationship



Fernald



Mirror



Sound

p q d b

p q d b

What sound does it make?

And, what sort of brain will climb inside?





Lateralisation

Lateralisation

- Is the tendency for some neural functions or cognitive processes to be specialised to one side of the brain or the other
- However, there are numerous counter examples to each generalisation. Each human's brain develops differently leading to unique lateralisation in individuals
- Lateralisation refers only to the function of one structure divided between two hemispheres
- Language functions such as grammar, vocabulary and literal meaning are typically lateralized to the left hemisphere
- Broca's area and Wernicke's area, two areas associated with the production of speech, are located in the left cerebral hemisphere for about 95% of right-handers, but about 70% of left-handers.

Bilateral Integration Stages

Symmetrical Integration



Reciprocal Integration

Asymmetrical Integration

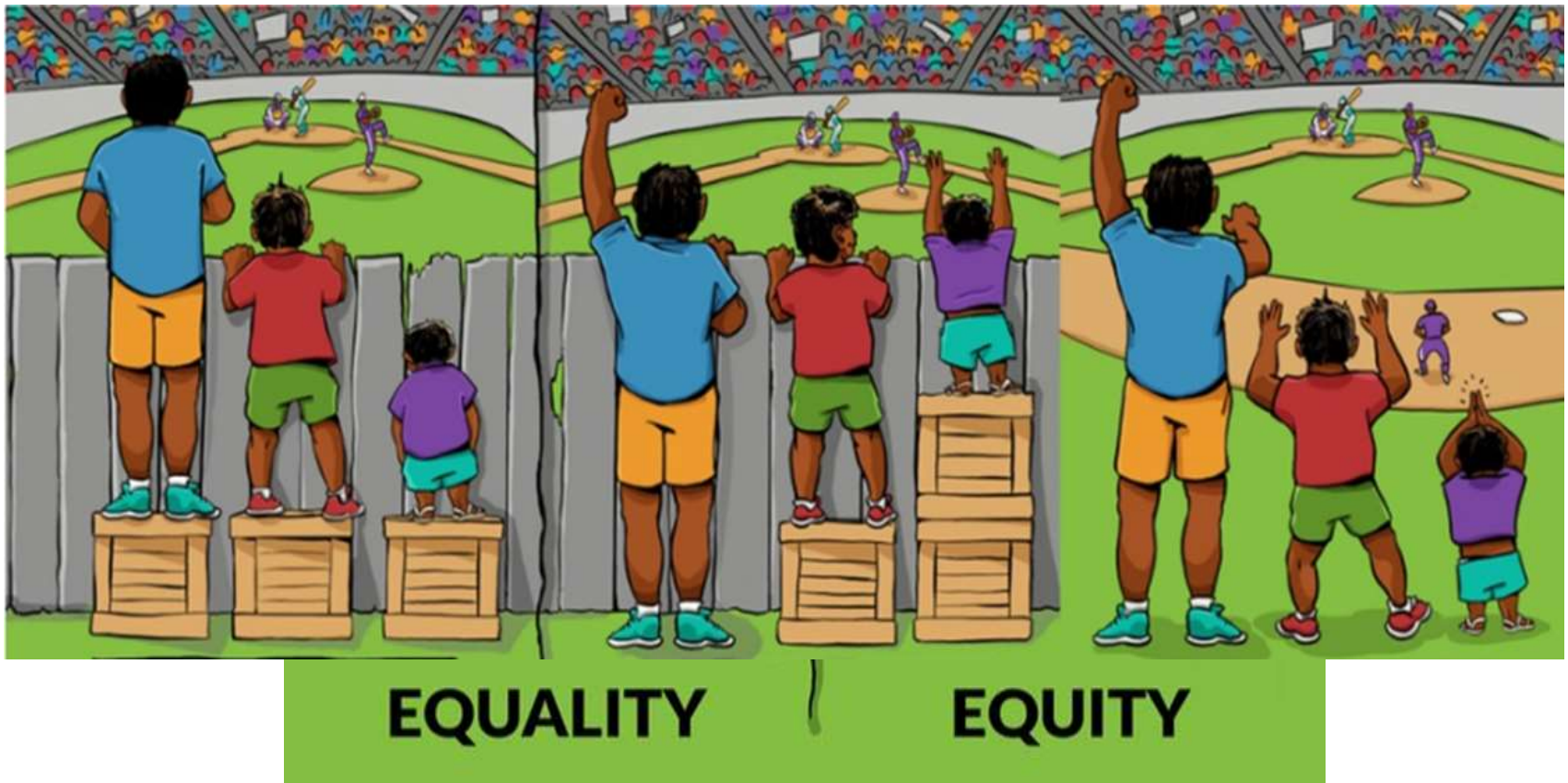


Crossing the Midline

Bilateral Integration: Stages of Bilateral Integration for Reading, Tracking, Writing and Crossing the Midline


Basic idea three

Removing barriers to learning



If some children do not learn in the way you teach, teach them in the way they learn

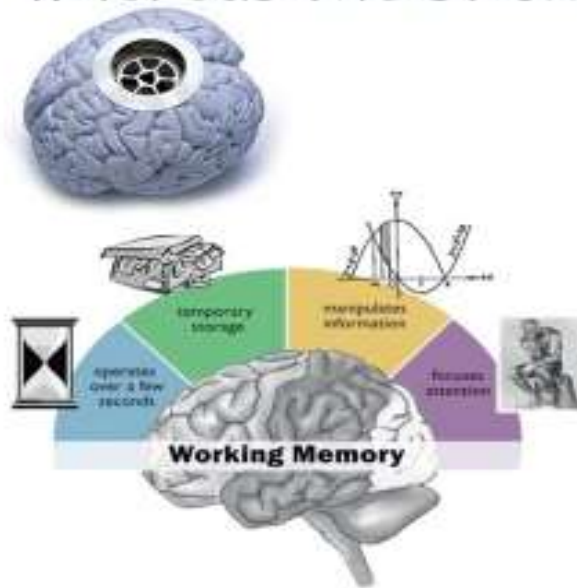


A solid blue hexagon is centered on a white background. Inside the hexagon, the text "Knowing about cognition helps us to identify how adapt our teaching" is written in a white, sans-serif font, arranged in five lines.

Knowing about
cognition helps
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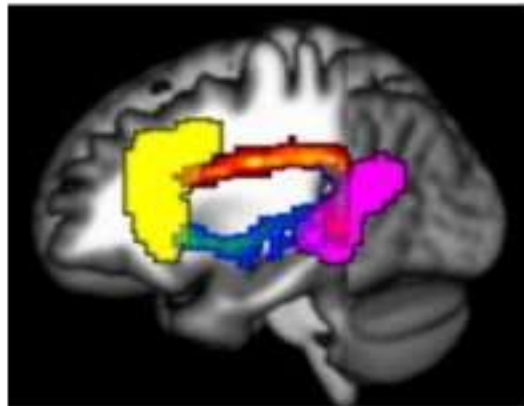
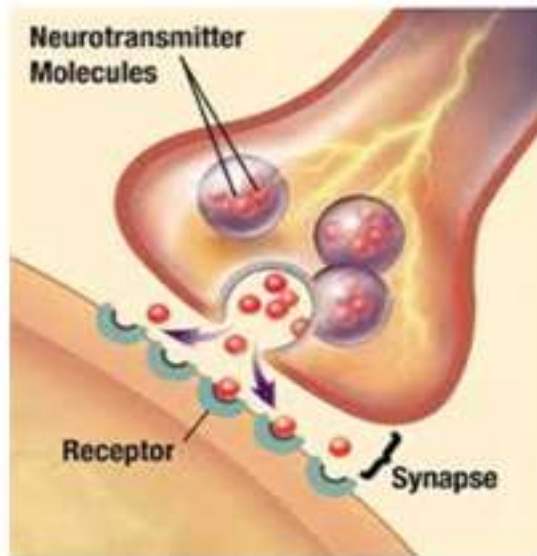
Let's return to the 'leaky' and the 'sticky' brain

The leaky bit is a chemical reaction, whereas the sticky bit is physical



Expanding long term memory means building efficient synaptic connections for each child

Long term memory is a new synaptic connection



Within an existing network

Working memory

Working memory is a vitally important part of classroom learning for ALL pupils



Teaching for Success

Think of one of

Classroom learning requires your lessons

- Holding information (long enough to retain it and recognise its significance)
- Successfully doing different things at the same time
- Processing quite large amounts of 'stuff'
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www.teachingenglish.org.uk

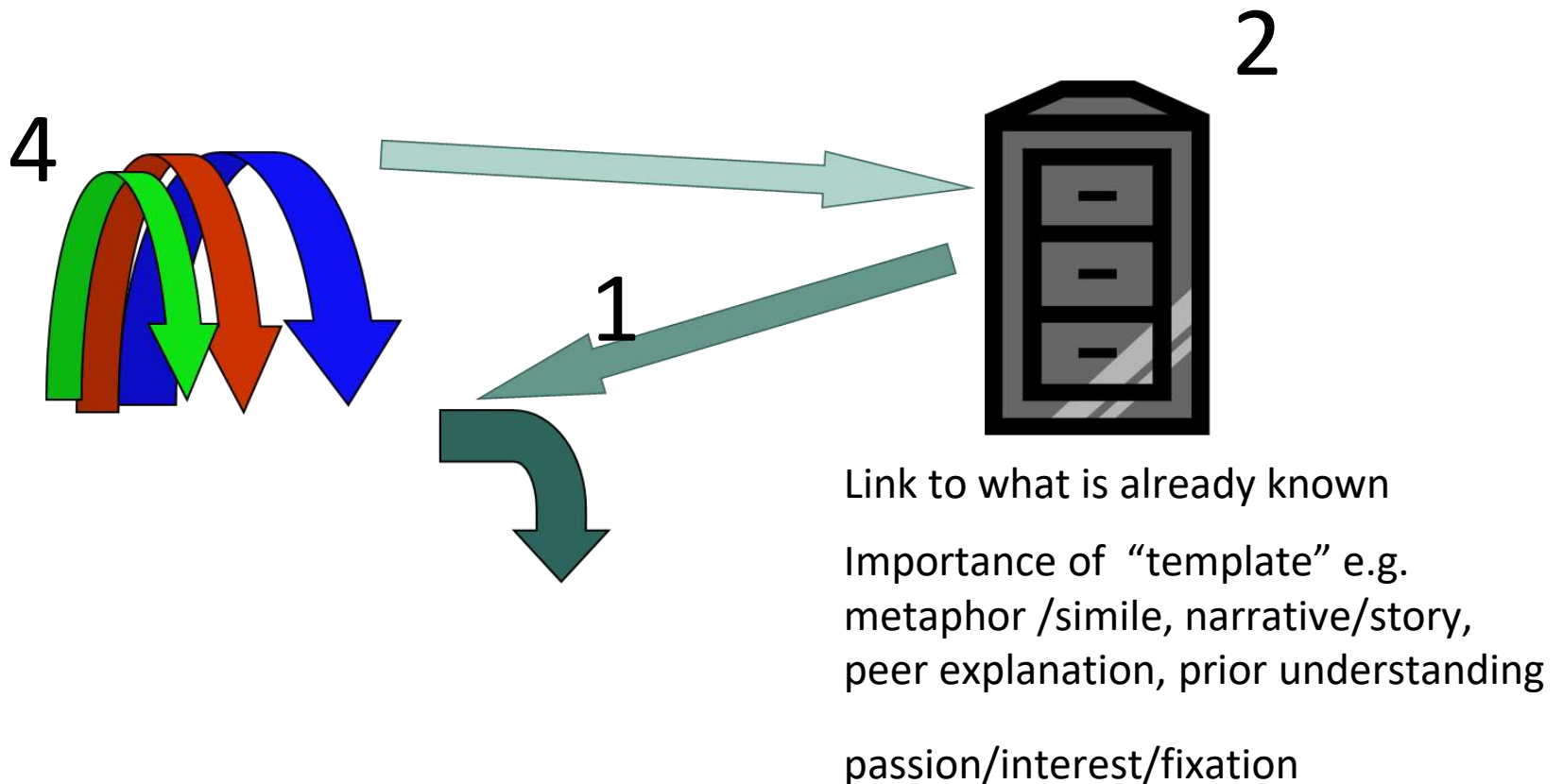
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So that you know what's going on: so you know what links into what: so you know what to do.

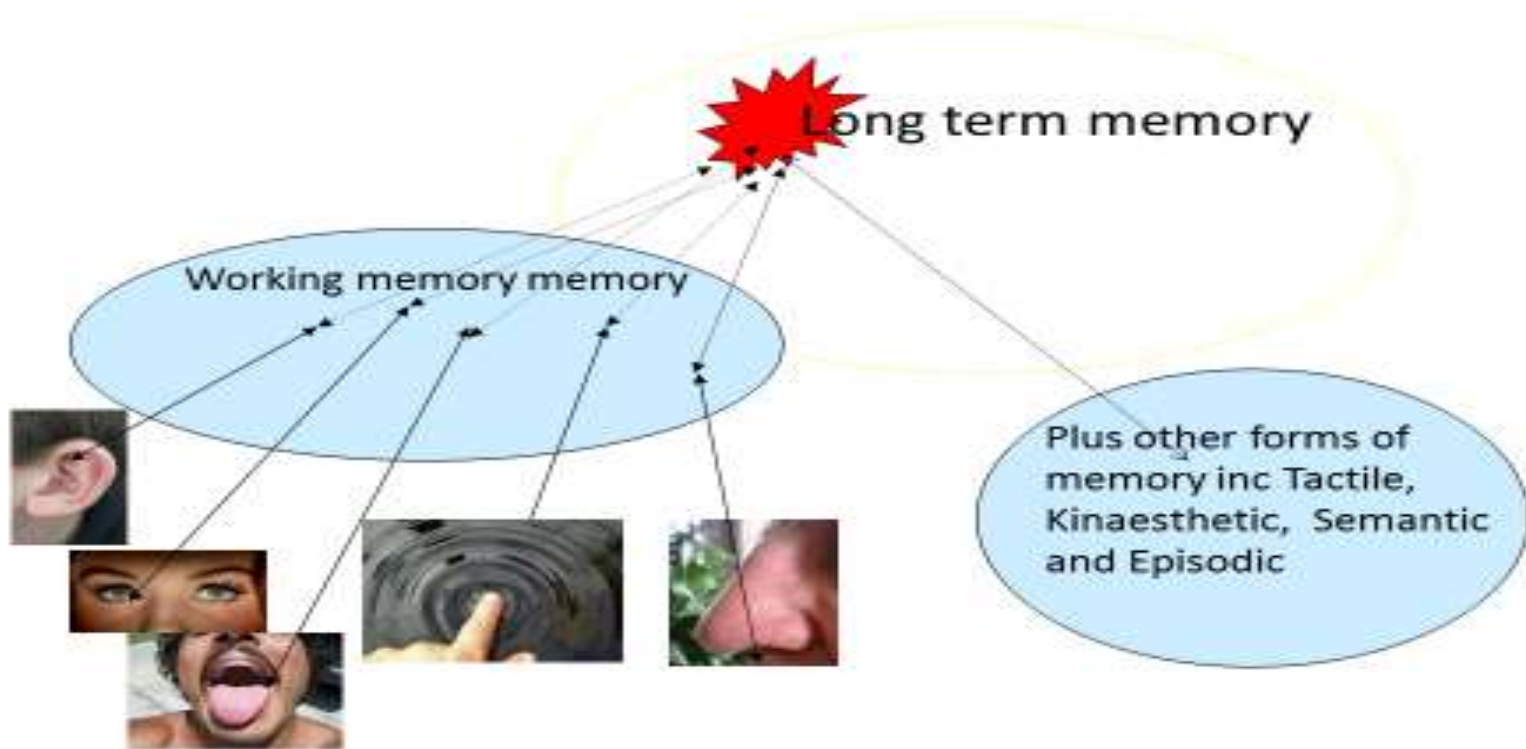
Small differences in WM from child to child have huge repercussions for classroom learning

- It 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
- Catastrophic loss results in off-task activity
- The metaphysical nature of classroom knowledge and classroom learning relies upon ‘imagining’ as opposed to ‘doing’

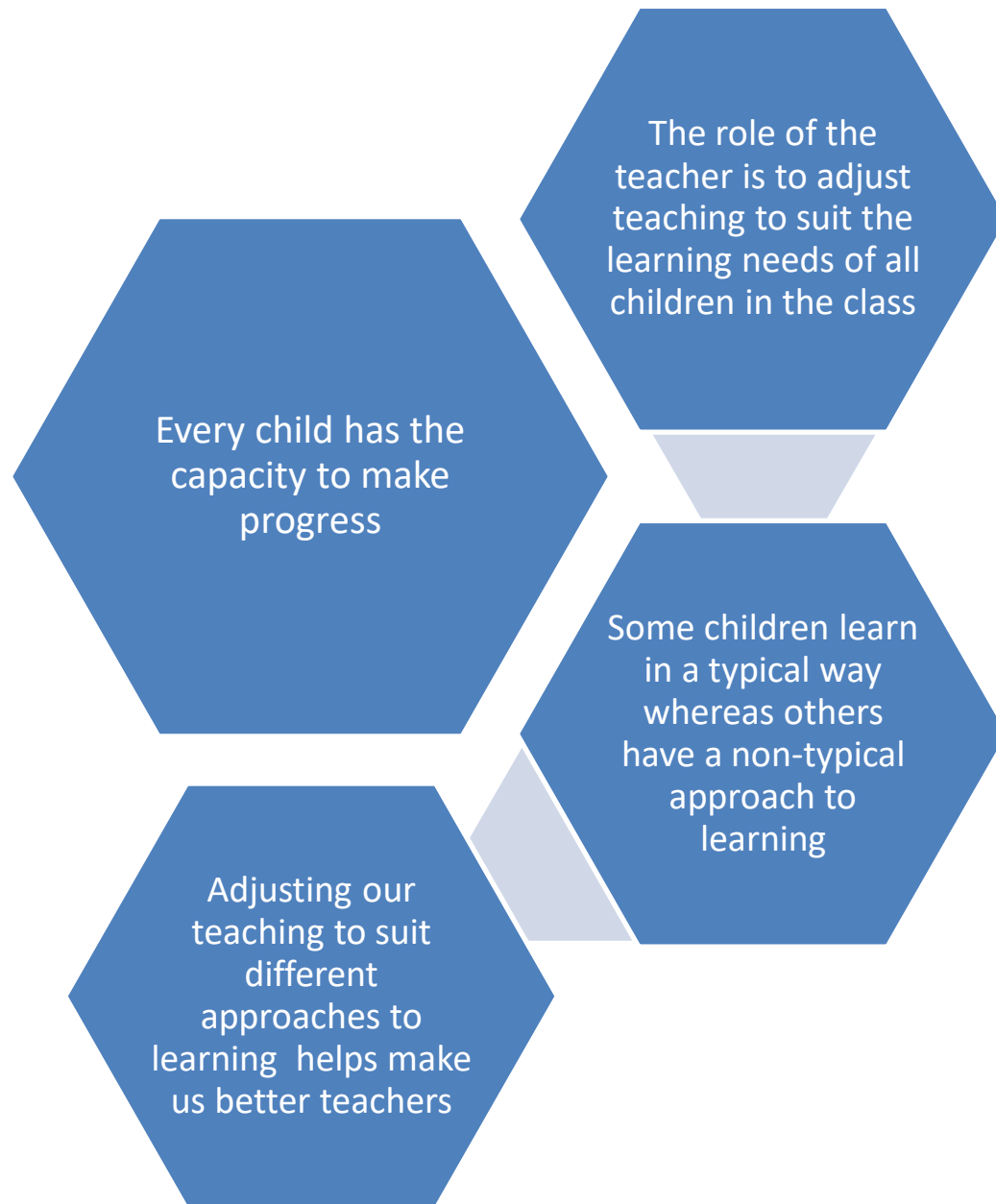
We begin with the child – successful retention



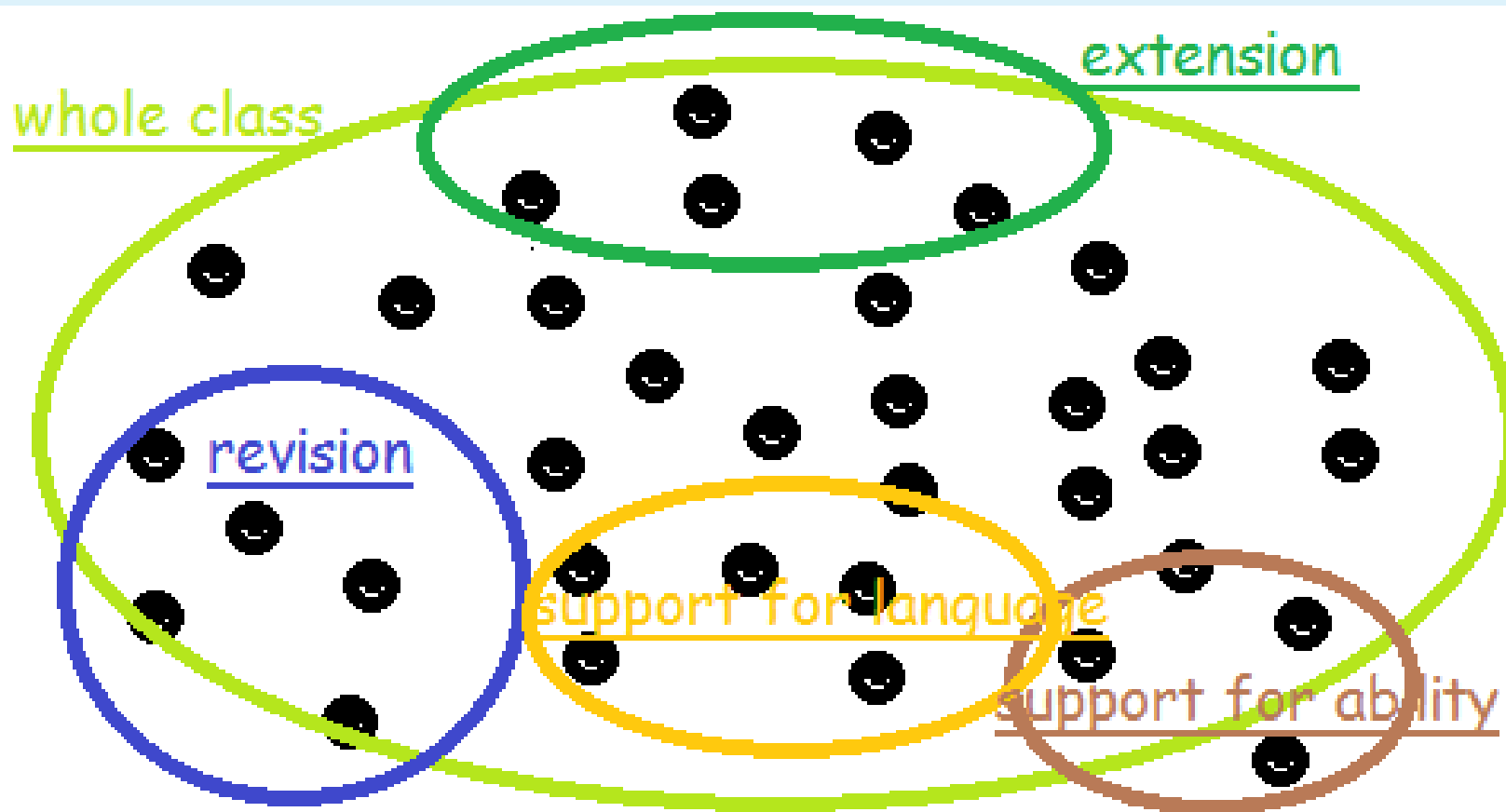
Learning is the **mental action / process of acquiring** knowledge and **understanding through thought, experience, and the senses.**



The senses are the primary source of information, knowledge and experience

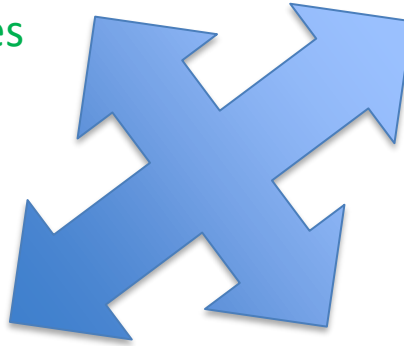


Differentiation according to need – a ‘learning’ approach



Auditory

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



Kinaesthetic

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



Holistic approach & a step by step

Visual

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

Towards an inclusive classroom

There were
three basic
ideas?

Just
because it
has been
taught,
does not
mean that
it has been
learnt



The superhighway -
multisensory

Remove 'barriers' to
learning



Some things about teaching to bear in mind when planning

When we teach, we are dealing with classroom learning

ALL children learn

Every brain is unique

Some children tend towards a more 'typical' approach to classroom learning

Some children are less typical

Every child is different and will grow up to be a unique person

An inclusive classroom enables ALL children to reach their potential

The brain is an incredibly flexible, complex and creative organ

An understanding of cognition and learning can help us unlock children's potential