



# Helping students develop greater independence through improving metacognition and effective feedback

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## Gareth D Morewood

Co-Director of Curriculum Support & Specialist Leader of Education,  
Priestnall School, Stockport; Honorary Research Fellow, University of Manchester;  
Education Advisor, Studio III; Associate Editor, Good Autism Practice Journal  
& Vice-Chair *SENCo-Forum* Advisory Group.

# The 'Bananarama' Principle...

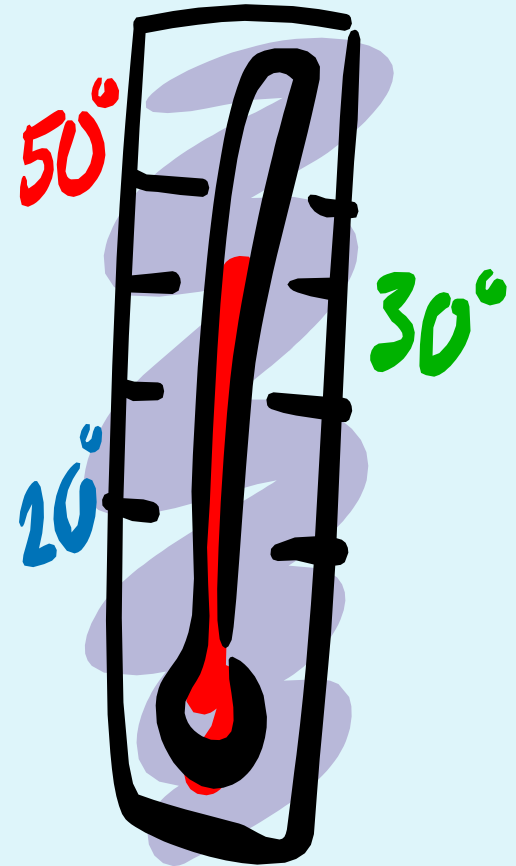
- It ain't what you do it's the way that you do it...
- So how do you spend to 'get results'?
- Or, what does the evidence say is a good investment or a poor investment for your students?
- It ain't what you spend but the way that you spend it... what works for one, may not for others!



Quoted from Prof Steve Higgins

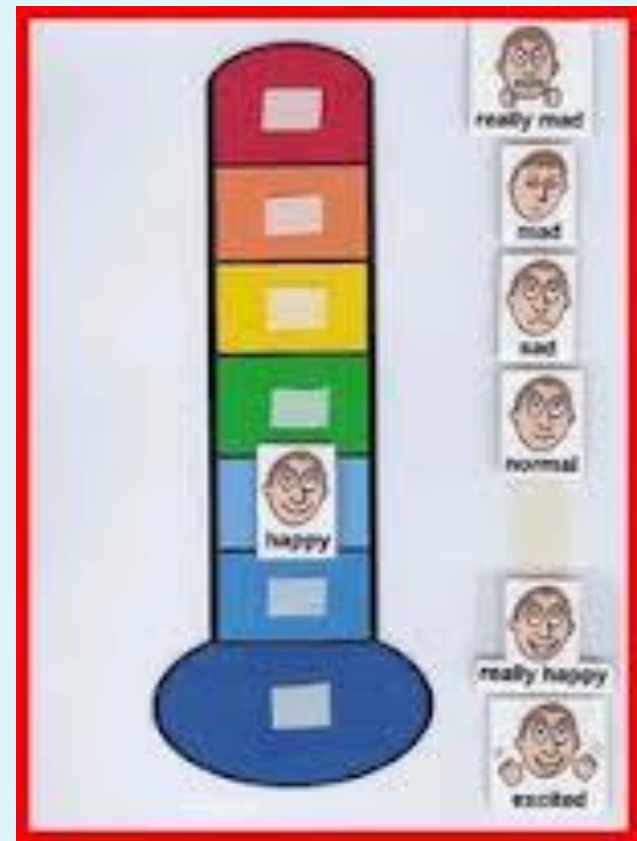
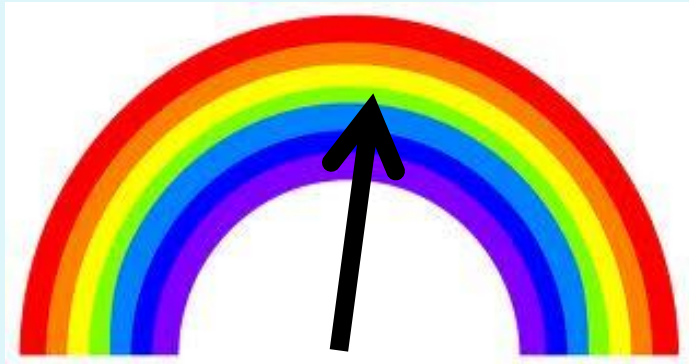
# Feelings thermometer

- Current state of emotion can be represented visually on a scale
- Some people learn to recognise their own feelings and may be able to use calming strategies – different strategies might be used at different points on the scale
  - 20 degrees – ask for help
  - 30 degrees – breathing exercises
  - 50 degrees – leave the room



# Emotional Regulation ... key!!!

Supporting emotional regulation is essential...



# How can you develop provision?

- There is a clear need to be pro-active with supportive systems...
- NOT re-active with sanctions and punitive measures...
- Strip each incident/situation back to the starting points – what can be done differently?
- How can provision evolve to minimise risks?

# Chester Zoo

**Don't forget to wear your trainers. Bring your pack lunch and a coat in case it rains.**

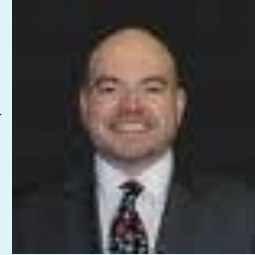
**Leave home at  
8:15 am**



**Be in school at  
8:30 am**



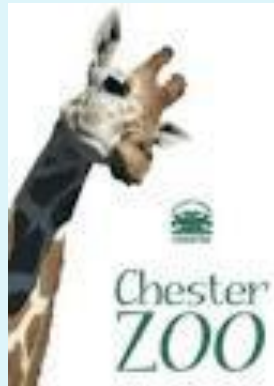
**Register in the  
Nurture Room**



**Coach leaves at  
9:00 am. Will  
not wait if late**



**Arrive at  
Chester Zoo**



**Coach returns  
to school for  
3:15 pm**



# TECHNOLOGY

1) Sit down and wait for teachers **instructions**.



2) Watch teachers **demonstrations (very IMPORTANT)**.



3) Its **practical time**. Hang up blazer and put on your apron.



## REMEMBER

1. To tell the teacher if you need to leave the class.
2. If you feel angry or stressed go to blue chair in Mr Morewood's office.

4) Don't forget to put on your **safety glasses** when using the machines.



5) Use equipment **safely and carefully**.



6) Put equipment away **neatly**.





1. Arrive to lesson. Sit down and write down Date, Title and Objective.

2. Listen and watch the teachers demonstration.

3. If you have a comment or question put your hand up.



4. Remember to record (write up) your results when doing your experiments.

5. If instructed to wear safety goggles keep them on at all times.



## REMEMBER

- **To tell a teacher if you need to leave the classroom.**
- **If you are feeling stressed or angry go to blue chair in Mr Morewood's office.**

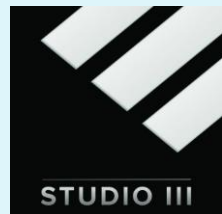




# Evidence Based Learning Strategies

- Spaced Practice
- Retrieval Practice
- Elaboration
- Interleaving
- Concrete Examples
- Dual Coding

The Learning Scientists - [www.learningscientists.org](http://www.learningscientists.org)



# Is a picture worth a thousand words?

- A good strategy for supporting students with SEND is a good strategy for all. The use of visual supports should be no exception.
- Historically, there have been cases where good ideas and evidence becomes twisted into a harmful myth – ‘learning styles’ being a recent example.

(<http://www.learningspy.co.uk/featured/just-semantic-subtle-but-important-misunderstandings-about-learning-styles-modalities-and-preferences/>)

# What the research suggests...

- Research undertaken by Mayer et al (1996) found that accompanying visuals with a short summary (no more than 50 words) is more favourable to learning and retaining information than longer explanations with accompany visuals.
- This is a simple and positive inclusive strategy for all.

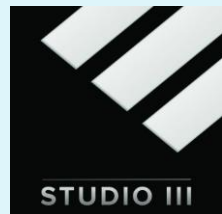
# Combining visuals and words is a good investment in learning.

(Mayer & Anderson, 1992)

Schneider and Goldstein (2010) considered the use of social stories and visuals to support behaviour for young people with autism.

Their resultant paper suggested that social stories are effective in improving on-task behaviour, particularly when pupils are given a visual schedule of the key steps in a story.

A good strategy for learning  
transcends social and academic areas  
and can work at home and in school.



# Using visual support strategies can:

- help us communicate information clearly
- support the organization of thinking
- be used to give choices, communicate rules and clarify expectations
- and support new information explicitly: what is happening, what is not happening and what is changing.

# Making an impact in a new way...

- Research (Higgins et al) demonstrates that how Teaching Assistants are used can be extremely effective in narrowing gaps in attainment
- It is important that TAs don't simply do things for a young person and create a 'learned helplessness'; but are proactive in using evidence-based techniques that are proven
- This may require a 'new way of working', but is essential in order to meet modern need and work effectively in partnership with teaching staff
- Let us consider two 'high impact' methods: feedback & meta-cognition & self-regulation

# Effective Feedback - Very High Impact (low cost)

Research suggests that providing effective feedback is challenging. To be effective, it should be:

- About challenging tasks or goals rather than easy ones
- Given sparingly so that it is meaningful;
- About what is *right* more often than about what is wrong
- Specific, accurate and clear, e.g. not just “correct” or “incorrect”
- Provide examples of what is correct and not just tell students when they are wrong
- Encouraging and supportive of further effort without threatening a learner’s self-esteem



(from Education Endowment Foundation - <http://educationendowmentfoundation.org.uk/toolkit>)



# Improving student performance

If our aim is to improve student performance, not just measure it, we must ensure that students know the performances expected of them, the standards against which they will be judged, and have opportunities to learn from the assessment in future assessments.

(Grant Wiggins, 2002)

# What is feedback?

- Feedback is information about how we have performed in relation to a stated goal
- Feedback tells us what did or did not happen:

*You were aware of where other players were positioned and made use of that knowledge when you had to dispose of the ball.*

# What is effective feedback?

Effective feedback provides:

- **information** about what happened or was done
- an **evaluation** of how well or otherwise the action or task was performed
- **guidance** as to how performance can be improved

# An example of effective feedback

You were clearly aware of where other players were positioned because you were constantly looking around you, and you made very good use of that knowledge when you had to dispose of the ball. You made sure that you selected a player who was free of an opponent or in a good position from which she could shoot for goal. Sometimes, though, your disposal was not accurate and the other player missed the ball. At training tomorrow we'll do some drills to focus on improving ball disposal.

# Principles of effective feedback

- Is specific and avoids vague comments
- Is varied in its method of application
- Uses models showing desired outcomes
- Shows a valuing of student work
- Uses marks or grades only some of the time
- Provides time for students to act upon advice
- Enables students to know how they will benefit

# When does feedback occur?

- Feedback can occur at any point in the learning cycle:
  - while students are working on a task
  - while students are presenting a task
  - at the end of the task

# Features of effective feedback

- Acknowledges success and provides an indication in several areas where improvement could occur
- Is accessible – must be able to be read and understood
- Students are made aware of the purposes of feedback

# Effective feedback in action (1)

- Teacher comments should focus on improvement in future tasks
- ‘Comments like “Use paragraphs!” are useless – if I knew how to use them, I would have done so.’
- Effective comments are clear, succinct and related to the specific learning intention



# Effective feedback in action (2)

- There is no one **appropriate** way of providing feedback to students
- Rather, the nature of the task and the context of the work in the particular learning area should determine the form in which the feedback occurs
- In some learning areas, moderate and focused praise is essential in building student self-confidence

# Effective feedback in action (3)

- Peer correction can be an effective strategy
- Peer assessment/feedback needs practice and teacher guidance
- Peer assessment/feedback helps make students more reflective of their own work

# Effective feedback in action (4)

- Some learning areas require ongoing and regular student-teacher dialogue, with feedback to guide students through smaller key developmental steps
- In other learning areas, keeping the balance between feedback about content or knowledge and feedback about process is crucial as feedback often needs to correct key misunderstandings

# Effective feedback in action (5)

- When giving verbal feedback, use of a positive tone of voice, with regular indications that the teacher is listening, enables the students to feel at ease and to be willing to actively participate in the dialogue
- Avoid damaging self-esteem – concentrate on the task rather than the student

# Possible feedback strategies (1)

- Work with students to ensure understanding of the meaning and application of assessment criteria prior to their commencement of a task
- Use wall displays and checklists which identify what is being sought in the learning
- Give verbal feedback while students work on a task
- Model the standard of work required and frame feedback in relation to this
- Ask older students to maintain learning journals and model 'good practice'

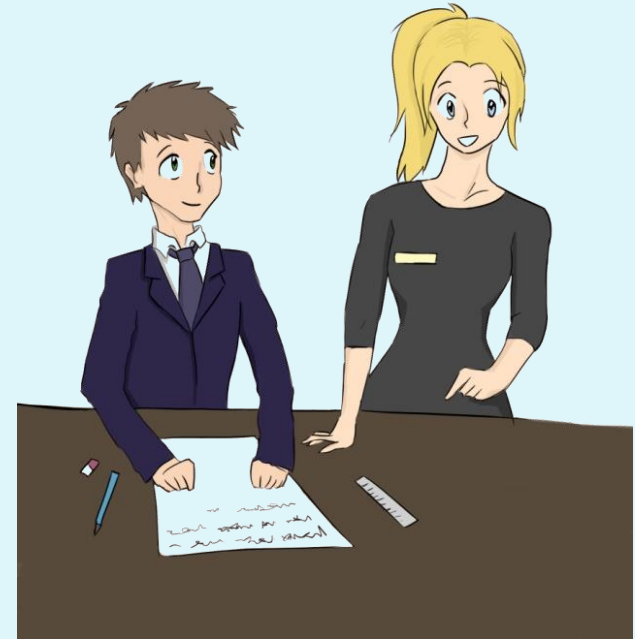
# Possible feedback strategies (2)

- Develop agreed symbols for annotating student work, to focus on improving work
- Where appropriate, use self-adhesive notes to give quick feedback, without devaluing the student's work, especially in the case of major projects
- Encourage older students to write a learning intention at the outset
- Consciously focus on highlighting successes
- Use marks or grades sparingly, not constantly
- Make use of student self-assessment or peer assessment

# Metacognition & Self-Regulation – High Impact (low cost)

Research suggests that:

- Teaching approaches which encourage learners to plan, monitor and evaluate their learning have very high potential, but require careful implementation.
- Teach students explicit strategies to plan, to monitor and to evaluate their learning and give them opportunities to use them with support and then independently.
- When using approaches for planning, ask students to identify the different ways that they could plan (general strategies) and about the best approach for a particular task (specific technique).
- Monitoring involves identifying the key steps they need to be aware of as they go through a task to keep it on track – where might this go wrong; what will be the difficult parts ...



(from Education Endowment Foundation - <http://educationendowmentfoundation.org.uk/toolkit>)

# Metacognition

Helping students to self-regulate

Learning-to-learn



# Definitions

- *Metacognition* - literally “beyond knowing”, knowing what one knows and doesn’t know - promoting a student’s ability to self-monitor levels of understanding and predict how well (s)he will do on a particular task
- *Self-regulation* - students monitoring their own comprehension and assessing their own abilities without teacher help

# Metacognition

- Most closely associated with a teacher's instructional practices
- The teacher's metacognitive practices, if done effectively, can lead to student self-regulation
- We need to think carefully about language and communication to facilitate this

# Self-Regulation

- A process in which a person actively searches for relationships and patterns to resolve contradictions or bring coherence out of a set of experiences
- Contradictions lead to disequilibrium, accommodation, and assimilation
- Self-regulation begins with exploration, and progresses through invention and application
- The work of self-regulation calls for students to identify patterns, draw of inferences, and make comparisons
- Self-regulation is essential in order to increase both declarative and procedural knowledge

Declarative knowledge involves knowing THAT something is the case - that J is the tenth letter of the alphabet...

Procedural knowledge involves knowing HOW to do something - ride a bike, for example...

# Solid Evidence

- There is ample evidence to show that metacognition and self-regulatory practices aid significantly in student learning (EEF Toolkit)
- Heuristic approaches are often considered the best\*, and each student has his or her own
- Highly effective if integrated into a course (e.g., students talk about practices)

\*not to be taken as 'the only way'!!!

# Instructional Strategies - 1

- Make students aware they are responsible for their own learning
- State objectives or learning outcomes (potential conflict?)
- Provide practice tests and homework (where appropriate)
- Provide guided practice before homework
- Have students participate in complex tasks such as presentations and report writing

# Instructional Strategies - 2

- Monitor student progress; provide feedback
- Distinguish deep and surface learning
- Promote reciprocal teaching and reading
- Provide info about reading techniques
- Teach content in multiple contexts - reading, discussion, labs, demos, presentations
- Provide abstract representations

# Instructional Strategies - 3

- Address preconceptions
- Identify relevant knowledge and skills
- Explicitly define and characterise metacognitive and self-regulatory approaches
- Teach mastery skills - provide information about study skills, time and effort
- Set high expectations for student performance



# Instructional Strategies - 4

- Use mnemonics
- Informal assessment should focus on making students' thinking visible to both teachers and students
- Encourage reflection and revision
- Provide timely and useful feedback
- Planning for instruction should include an analysis of required knowledge and skills required for problem solving

# Self-Regulatory Strategies - 1

- Compare performance against a set of performance standards (e.g., salient behaviours)
- Compare performance against stated objectives
- Predict outcomes on various tasks
- Reciprocal reading
- Reciprocal teaching

# Self-Regulatory Strategies - 2

- Note failures to comprehend
- Practice tests
- Planning ahead - apportion time and memory
- Promote active listening
- Analysis of problem solving - explain what was done and why

# Simple Strategies

- Planning
- Monitoring
- Evaluating
- Resourcing
- Grouping
- Note taking
- Pre-testing
- Complex tasks
- Summarizing
- Deduction/induction
- Concept mapping
- Peer instruction
- Elaboration
- Socratic dialogues
- Graphical organizers

# Small Group Tuition - High Impact

Research suggests that:

- Intensive tuition in small groups is very effective;
- Students can be grouped according to current level of attainment or specific need;
- It is important to assess students' needs accurately and provide work at a challenging level with effective feedback and support;
- The cost effectiveness of one-to-two and one-to-three indicates that greater use of these approaches would be productive in schools;
- Professional development and evaluation are likely to increase the effectiveness of small group tuition;



(from Education Endowment Foundation - <http://educationendowmentfoundation.org.uk/toolkit>)

# Peer Tutoring – Very High Impact (low cost)

Research suggests that:

- Activities should be sufficiently challenging for the tutee that they can benefit from the tutor's support but not too difficult that they cannot succeed with support;
- There are several different approaches to peer-tutoring which make different demands on the teacher(s) organising the pairs and on the tutors and tutees;
- Reviewing challenges and successes with tutors will improve their skills and learning;
- Relatively short but intensive periods of tutoring over 4-10 weeks are likely to be more effective than for a longer period with more routine sessions;

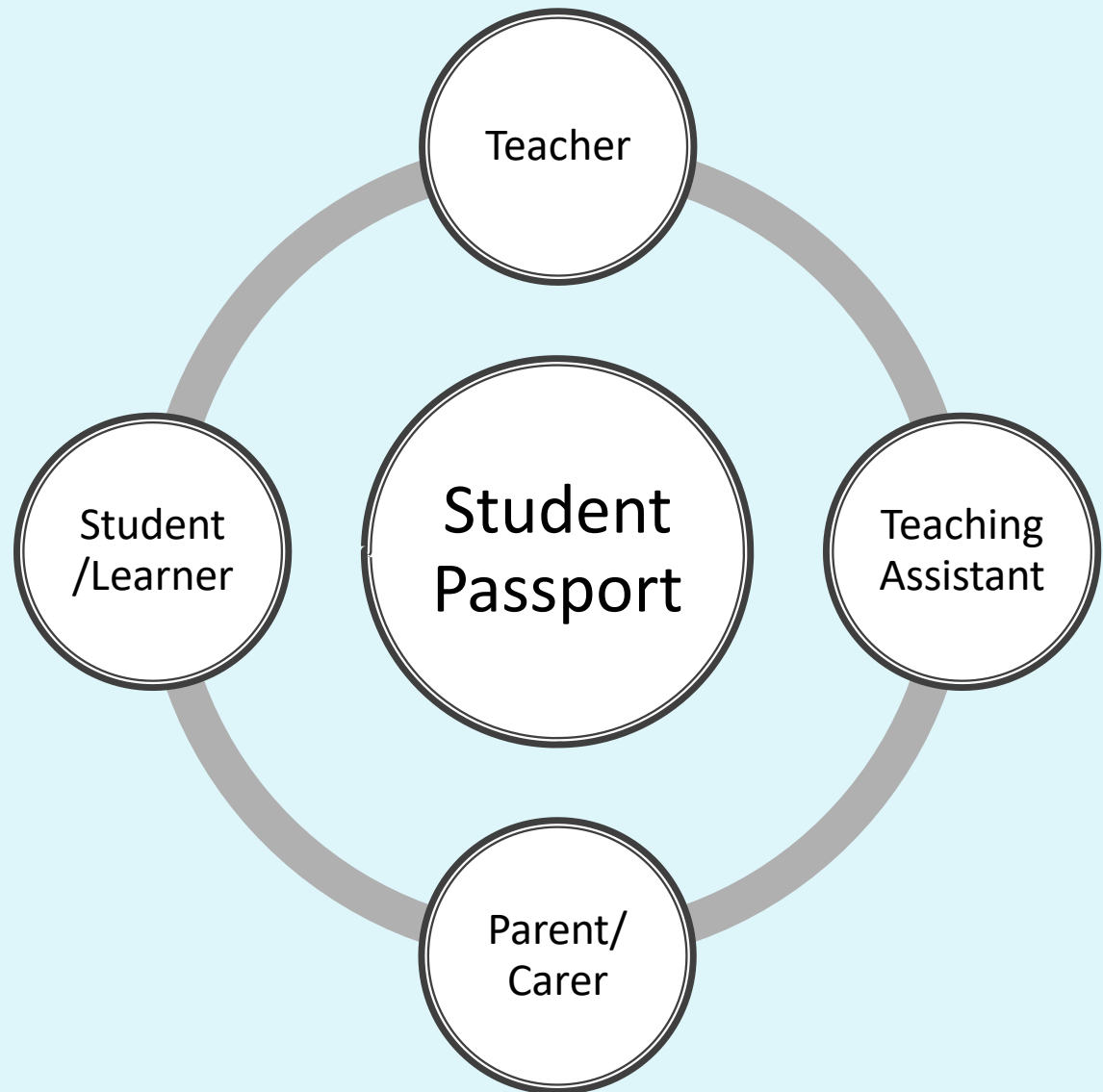


(from Education Endowment Foundation - <http://educationendowmentfoundation.org.uk/toolkit>)

# Using Metacognition with Student Passports

- Develop a new way of supporting students and teacher's understanding
- Lots of different ideas, but our Student Passports have been hugely successful
- Here is a short film explaining why...
- Based on 'high impact' research; engages students in 'learning to learn' - metacognitive approaches ... and (most importantly?) ...

- Keeps the young person central to provision
- Essential as part of our student centred approach
- A useful tool to engage parents/carers





# It is important to create a 'can do' attitude amongst staff...

- It is very easy to look at things you cannot do and focus on them...
- Think back to the key themes in making the learning partnerships more effective:
  - Passports to support learning and participation
  - Use of data to increase understanding
  - Development of Daily Record Sheets to inform provision
  - Use of Feedback and Metacognition

# Establishing a positive ethos

- Being a positive as possible and working in a 'solution focused' manner is important
- Whilst remembering that the learner should be central to all decision making
- Questions to keep in the forefront are:
  - What can we do to solve this?
  - How can we do this differently?
  - What are the outcomes for the learners?
  - How can we demonstrate progress/impact?

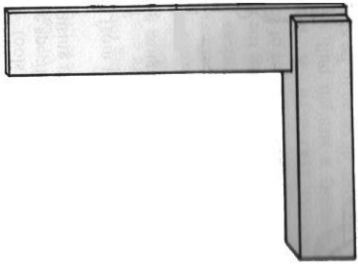
# Positive messages...ESSENTIAL!

- Postcards...Letters...E-mails...Texts...etc...
- Any positive contact home is immensely powerful
- Often schools get into negative spirals
- Establish one or two positive mechanisms [some at relatively low cost] and see what the impact is?
- Never forget how you feel when you are praised
- Providing positive feedback to learners and parents/carers is a powerful part of supporting the progress of individual learners

# Using Visual Supports...

- Using visuals to support young people with routines and processes can be extremely effective
- This is often considered as 'method for young people with autism', however experience shows that Visual Supports can reduce anxiety and risks associated with uncertainty **for all learners**
- See some examples that follow and develop a series of Visual Supports for recurring events and situations

# Create a positive language environment



**try square**



**plane**



# Reduce uncertainty in your lessons...



**Tripod & Gauze**



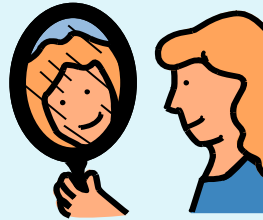
**Pencil, Ruler & Rubber**

# Support the vocabulary you use...

## Key Words & Meanings

**Reflection**

re flec tion

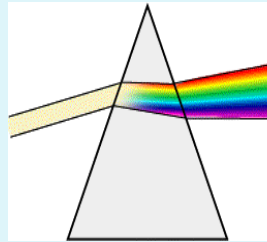


When light waves hit a surface and bounce back.

When light bounces back from a surface, e.g. a mirror.

**Dispersion**

dis per sion

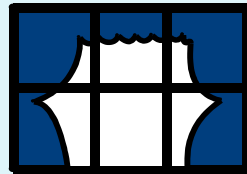


When a light beam is separated into different colours, e.g. when a prism disperses the light into the light spectrum.

When a light beam spreads out into different colours.

**Transparent**

trans pa rent



A clear and see through material, e.g. glass.

Clear.

# Difficulties with Speech

Possible difficulties can include:-

- Speech is difficult to understand, which might include difficulty making different sounds
- Problems discriminating between speech sounds, so 'conscious' and 'conscience' might sound the same
- Stammering or stuttering where sounds or words are repeated or may be difficult to produce without effort
- Difficulty using intonation to add meaning to words



# Difficulties with Language

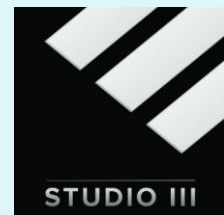
- Using sentence structures more appropriate for someone younger
- Problems linking sentences with words such as 'so', 'and', 'but', 'then'
- Difficulties sequencing sentences to make meaningful narrative
- Problems learning new words
- Difficulties finding the right words at the right time
- Limited vocabulary for emotions, thoughts and feelings
- Difficulty understanding complex sentences
- Difficulty understanding idioms such as 'don't hit the roof'

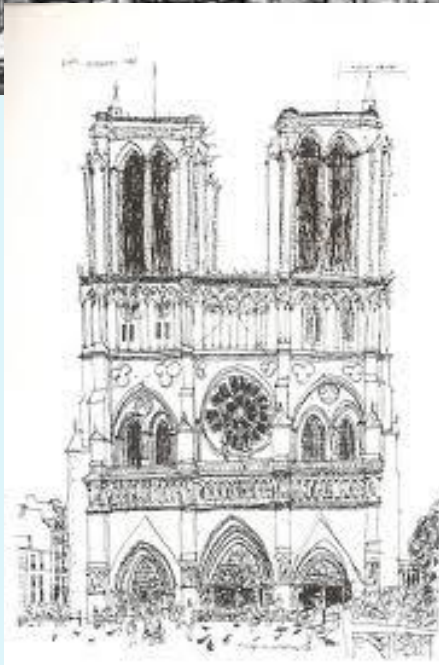
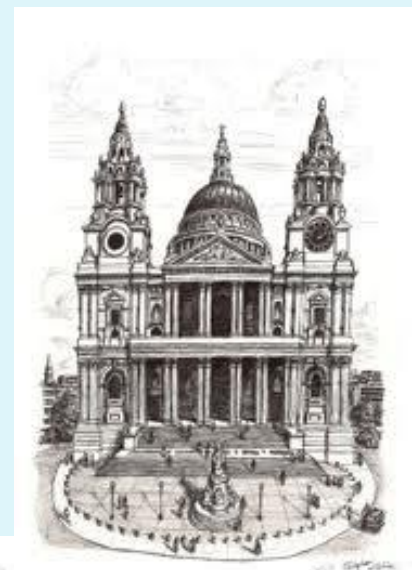
# Difficulties with Communication

- Limited eye contact
- Poor turn taking and difficulty with starting and ending conversations
- Difficulty getting a conversation back on track after two people have talked at once
- Difficulty understanding and responding to feedback from the listener, not noticing when someone is bored or doesn't understand
- Difficulty staying on topic
- Problems using language to negotiate in discussions or arguments



Gareth D Morewood  
[www.gdmorewood.com](http://www.gdmorewood.com)





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STUDIO III

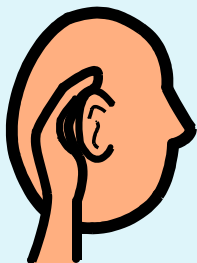
# Speech, Language & Communication is Equally important

REMEMBER:

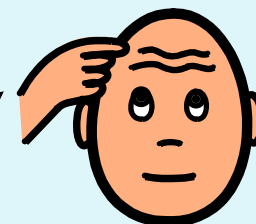
*It is important to realise that legally, it is as important to speak and communicate as it is to read and write.*

- Bearing that in mind – what do you think a speech and communication difficult is?
- Can you think of examples?
- Language difficulties are much more than ‘just’ speaking...

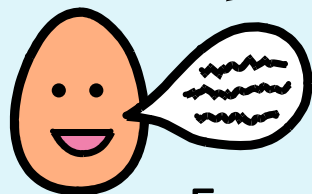
Listening to and  
recalling information



Processing  
information

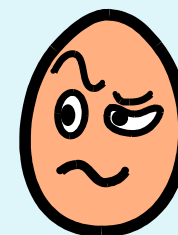


# Language Difficulties



Formulating and  
using language

Understanding  
verbal information



- 
- A photograph of an iceberg floating in the ocean. The small, jagged tip of the iceberg is visible above the water surface, while the much larger, submerged part of the iceberg is visible below the surface. The water is a deep blue, and the sky is a lighter blue with some clouds. This image serves as a metaphor for the relationship between visible and hidden skills.
- **Speech sounds**
  - **Social skills**
  - **Expressions**

- **Understanding**
- **Memory**
- **Attention**
- **Listening**

film      doorzichtig   lichtbron  
foto      zon      kaarsen   snelheid

Licht komt in onze ogen zodat wij kunnen zien.

Het licht komt van een \_\_\_\_\_ zoals de \_\_\_\_\_, gloeilamp,  
\_\_\_\_\_ en camera flits.

Het reist met hoge \_\_\_\_\_.

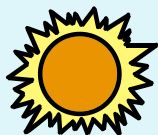
Licht kan door \_\_\_\_\_ materialen schijnen zoals de buitenkant  
van onze ogen of de lens voor een camera. Het licht dat de \_\_\_\_\_  
raakt in een camera maakt een \_\_\_\_\_.

Het licht dat de achterkant van onze ogen raakt laat ons zien.

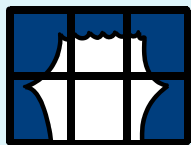




film



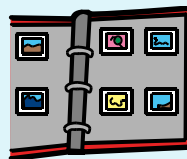
zon



doorzichtig



lichtbron



foto



kaarsen



snelheid

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# Understanding Language in Class...

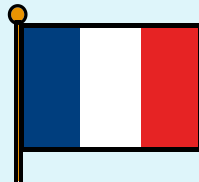
## NON - TECHNICAL WORDS:

- Related to syntax (language structure/grammar)
- Not subject specific, e.g. logical connectives
- Used to demonstrate ideas of sequence and causality, e.g. 'in spite of', 'unless', 'however'
- They are typically very difficult for children with language difficulties



## TECHNICAL WORDS:

- Related to semantics (word meanings)
- These are often subject specific, e.g. in science 'Bunsen burner'

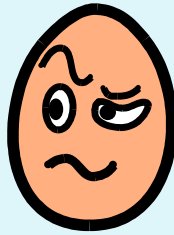
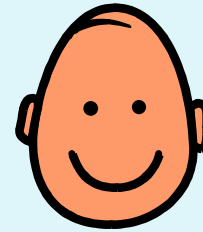


# Subject Specific (or technical) Words...

How are they learnt???

## NAMING words:

- Familiar object names, e.g. 'windpipe'
- New names, e.g. 'trachea'

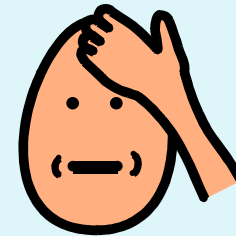


## CONCEPT Words:

- Sensory
- Dual Meanings - 'pitch'

## PROCESS words:

- Can see, e.g. 'evaporation'
- Can't see, e.g. 'evolution'



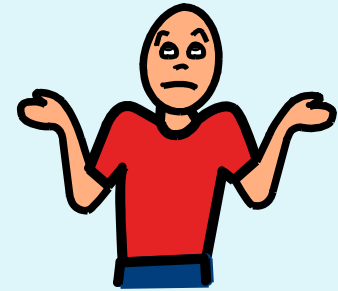
*Concept words cannot be understood in isolation*

# The Impact in the Classroom...

Poor literacy skills

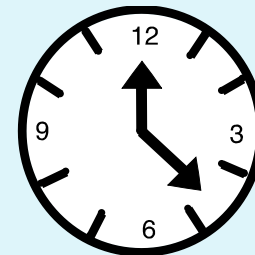


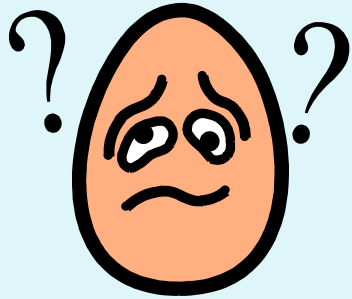
Difficulties retaining and recalling information



Difficulties understanding abstract vocabulary, concepts and ideas, e.g. language of time.

Can impact science, maths, history, etc.



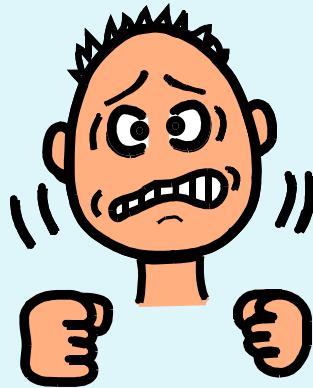


Difficulties formulating and generating sentences for explanations or discussions

Difficulties understanding humour, jokes and sarcasm



Not understanding or being understood can be very frustrating and can lead to outbursts and present challenging behaviour...



***Develop positive inclusive strategies as a whole-school approach – DO NOT just ‘react’ to presenting behaviour.***

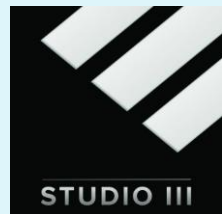
# A vital message first...

*'No amount of intervention can make up for poor quality first inclusive teaching.'*

**For every complex problem  
there is a solution that is  
simple, neat...**

**... and wrong!**

H.L. Mencken 1880-1956



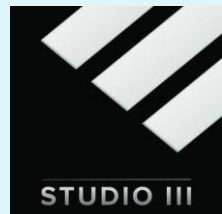


# Personalisation...

- Above all – remember to be
  - **adaptable,**
  - **innovative,**
  - **empathetic,**
  - and ... open minded.**
  
- **Remember that not one strategy fits all ... but strategies for one may well benefit others ... think about the individual ...**

***‘An educational system isn't worth a great deal if it teaches young people how to make a living but doesn't teach them how to make a life.’***

***Author Unknown***





“At this school I’ve got to meet lots of new teachers and friends.”

Jessica,  
age 11



Gareth D Morewood  
[www.gdmorewood.com](http://www.gdmorewood.com)

STUDIO III

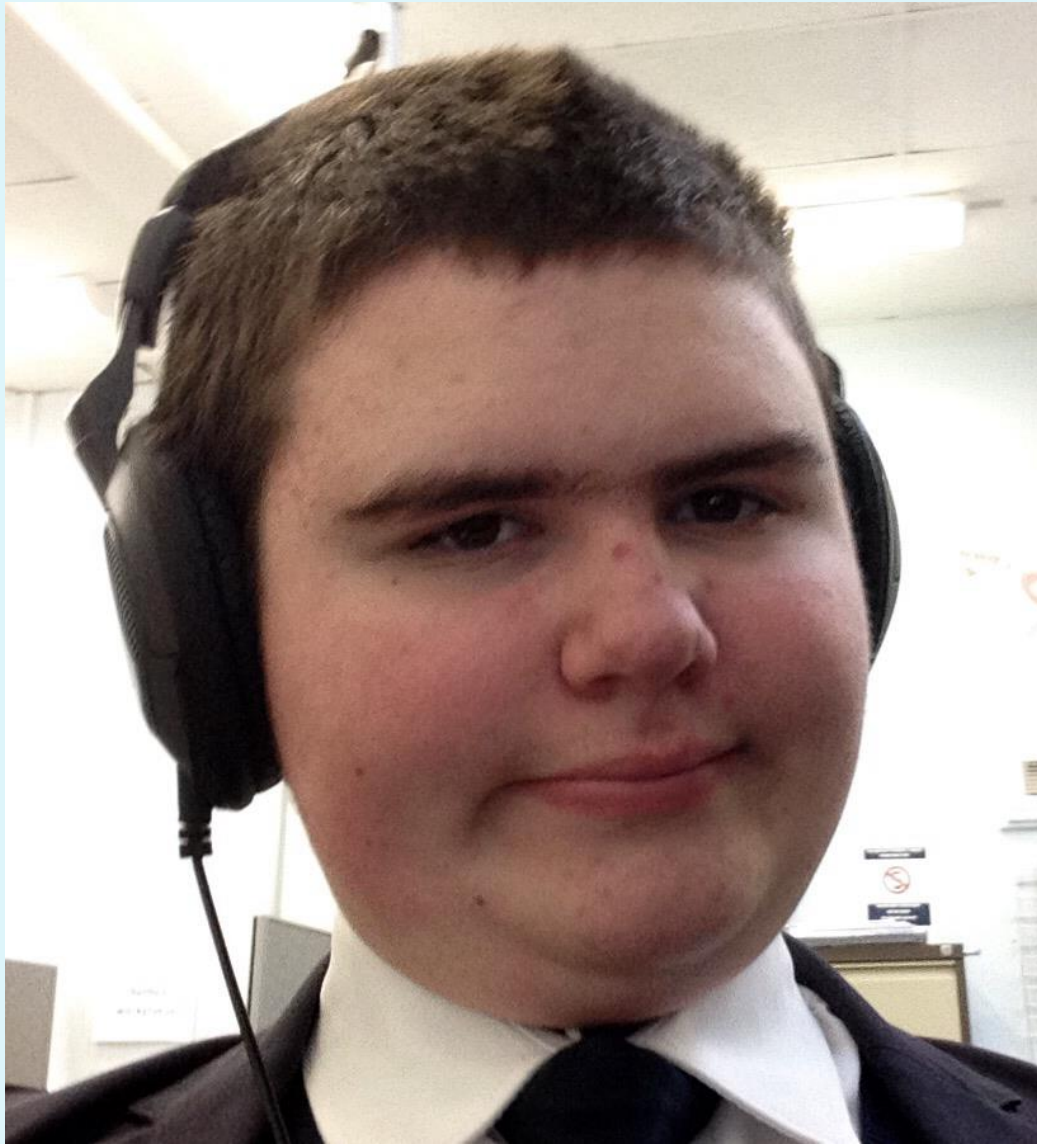


“I get to do everything my friends do, just that sometimes I have things changed a little so I can join in properly.” Lola, aged 14

“I enjoy school. I get to do things I didn’t at primary. I do my exercises and physio as well as my lessons, it works well. People are nice.”

Sara, aged 12





“At first it was very difficult for me at school but now I like to take on challenges and I like that here there are safe rooms for you to go to. I am good at maths.”

Jack, aged 14

# **Gareth D Morewood**

**[www.gdmorewood.com](http://www.gdmorewood.com)**

**@gdmorewood**

**[www.studio3.org](http://www.studio3.org)**

**@studiolll**

