7 PROVEN STEPS

THAT HAVE HELPED OUR MATH HATER STUDENT JUMP FROM GRADE **'F'** TO **'B'**

WITHIN 2 WEEKS!

BY **JOHN YEO**

Hi,

I'm **John Yeo** and I'm the Chief Math trainer. I have been interviewed by Channel 8 News, The New Paper, My Paper, The Asian Parent, Mother & Baby, Shin Min Daily News, Lianhe Wanbao, CCTV News, TV Tokyo and The Strait Times, among others.

In this Math learning strategies report, my team and I are going to share with you our proven **LOB CPS Problem Sums Coaching Programme** which has helped thousands of children and parents.


News

Tutors feeling PSLE heat

As the exam nears, they have to conduct extra, longer lessons

(This CPS model is the exact model which I have done in a training for a group of primary school Math teachers, HODs, teacher mentor and VP.)

Soon, your child is going to sit for his next Math test or exam.

Perhaps right now, your child is still not performing as well as he should. You have tried almost every method you know and yet your child's grade is still stagnant or shows little improvement.

You absolutely have no idea what to do next and time is running out fast!

Many times, through our coaching experience using our Math Learning Model in Learning Out of the Box, Maths grade of any committed child can improve tremendously within a very short time frame. But only if he knows how to do it and only if he diligently follows these 7 proven steps.

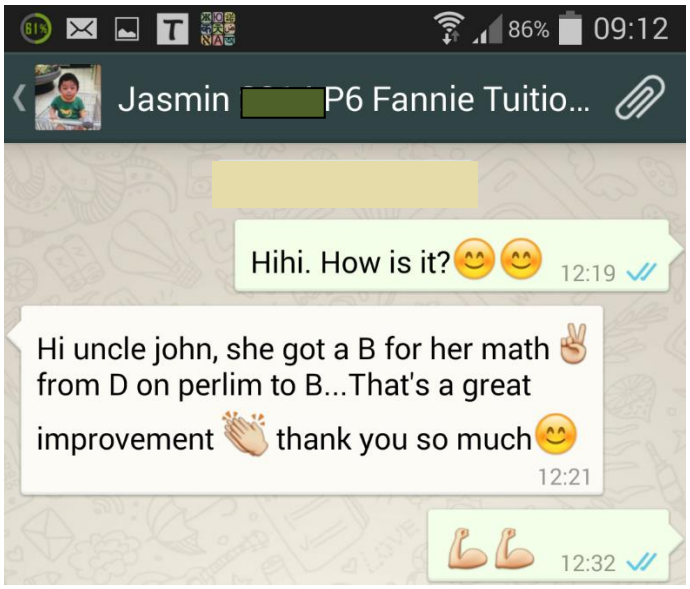
Let us share with you a story on how we coached a student. He was a Math Hater. His previous tutor used to tear his book or worksheet whenever he got the answers wrong. This made him hate Maths even more.

However, under our coaching programme, he managed to get a B grade from fail grade within 2 weeks.

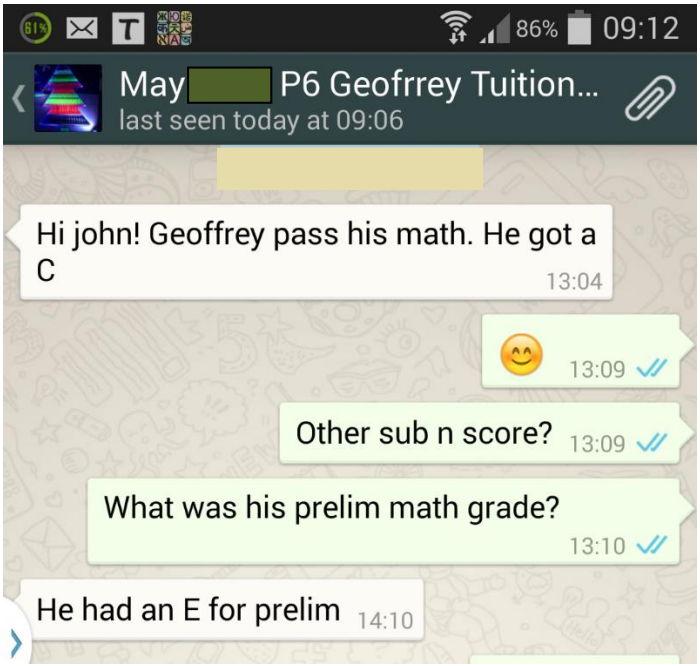
(With **hard work** and **persistence**, he eventually scored a high A grade for his PSLE Maths and we were really very happy that he reached his goal.)

Using the **same model**, many children who were willing to **work very hard** and to put in consistent effort were able to achieve similar jump in grades within a short time.

P6 Girl Jumped by 2 Grades from D to B within 1 month!



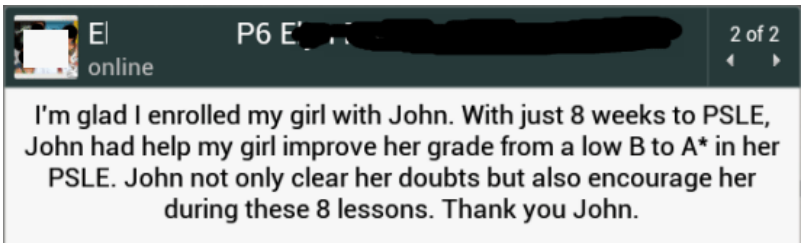
P6 Boy Jumped by 2 Grades from E to C within 1 month!



This model works very well even for student scoring Bs and As.

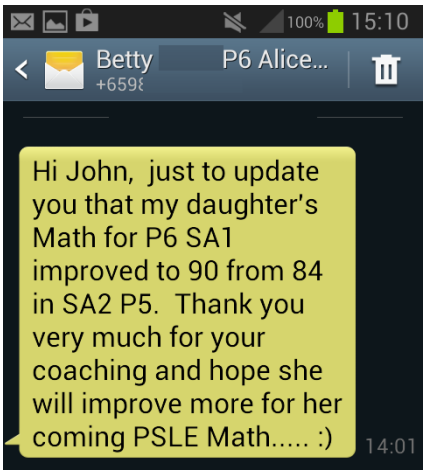
"With just 8 weeks to PSLE, my girl improved her grade from a low B to A* in her PSLE."

Elsie, mother of Elyn (P6)



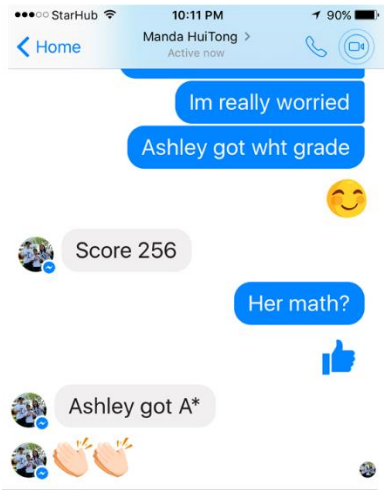
"She improved to 90 (for the first time in P6). From 84 in P5 SA2."

Betty, mother of Alice (P6)



"In the past, she could go blank during exam and even have nausea...She has scored A* for Maths in PSLE."

Sze Wei, mother of Ashely (P6)



Again, this model is not for everyone. It is only **hardworking children who put in consistent daily effort**.

So, if your child is one of them too, we would really want to share these tips with you so you can help your child to improve his Math too. ☺

So here goes…

STEP 1 UNDERSTANDING THE CHILD

When we first met this child, we started to build rapport with him so he can share as much as he can on how he feels about his Math grade and how he sees himself.

This is crucial because if he still dislikes Maths or even fears Maths, the entire coaching will be useless.

STEP 2 ASSESSING THE CHILD'S STANDARD

Our next step is to assess how good (or bad) his Maths currently is.

How can we easily do that? We will have to go through and analyse his most recent exam paper.

These are what we will look out for and ask him for:

- The type of questions he got wrong
- Reasons he got it wrong (is it because he really do not understand or it is due to carelessness?) *(*Do read up your bonus content on how to identify and reduce careless mistake)*
- If he does not understand, what exactly does he not understand?
- What kind of careless mistake is it specifically?
- The type of questions he got right
- Reasons he got them right (is it because he is a more visual person or he finds this topic more interesting?)

This step alone if done right can help the child **add another 10 to 20 marks** to his overall grades. In addition, this is a booster to the child's confidence, enabling him to be even more ready to perform better in the future.

STEP 3 REDO THE QUESTIONS HE GOT WRONG

We will get the child to redo the questions he got wrong.

Whenever anyone asks a child if he fully understood why he got those questions wrong, he will usually say "yes". However, we can only know if a child really understands by asking him to rework those questions.

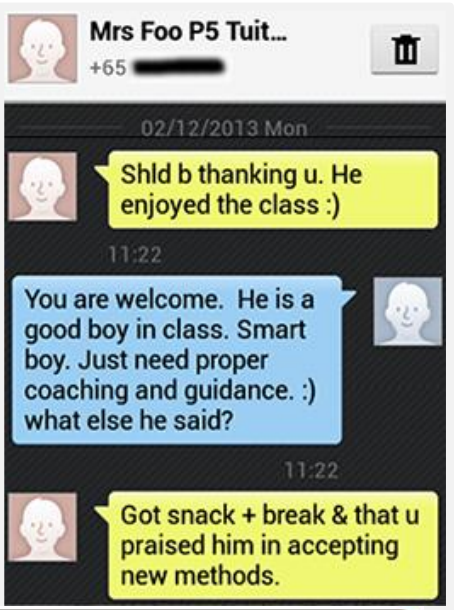
While doing this, we can also assess how the child **thinks**, **analyses** and **solves** different questions.

STEP 4 EMPOWERING THE CHILD WITH WORDS

For our next step, it will be largely based on how we subtly encourage and empower the child during our coaching session.

The only principle we strongly believe is **"Children thrive with praises."**

A coach should always praise the child for any improvement he has made, no matter how small or insignificant it is. Even we adults like to be praised, don't we?



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STEP 5 INCREASING THE CHILD'S SPEED

Next is to train the child on his speed.

For those questions the child can confidently solve, he should be encouraged to speed up and to accurately solve them within a specific time frame. Once he can speed up, he will have more time to tackle the harder questions.

On average, one mark equals to one minute of work which includes reading the question, understanding it and solving it.

STEP 6 PRACTICING CONSISTENTLY

Next, his problem sums solving skill has to be toughened and strengthened with consistent practice.

One does not need to spend 6 hours a day. One just needs to spend between 20 to 30 minutes a day to solve at least one to two problem sums so that the child can be tested on different concepts.

In this step, consistency is the key.

STEP 7 RINSE AND REPEAT

Rinse and repeat step 1 to step 6 till the day before the PSLE Maths exam date. By this time, the child would have gotten enough confidence and skills to do very well for his Maths exam.

Remember, your child should sleep early on the night before sitting for any exam paper. This helps his mind to get enough rest so that he will be able to think better and faster while sitting for the paper.

BONUS CONTENT:

MORE ACTIONABLE TIPS THAT YOU AND YOUR CHILD CAN LEARN TODAY!

From our experience of helping children, many who don't do well in Math lack at least one of these 3 important components in their learning strategies.

Component 1: **CONTENT (Topic)**

In school text books, the main bulk of the content is arranged based on topics like Fractions, Ratio and Angles. This is great for the initial learning phase because it helps your child to get the content organised into various group or topic. However, this is not a long term strategy.

The reason is the questions in exam papers are scattered and they appear randomly. One question may be about "Numbers" (normally this is the first topic) and the next question may be on "Angles" (a few topics after the first). So while being able to master and know all the content is ideal, it is just the very beginning stage of the exam smart strategies.

The next stage is to **learn and master the concepts** because exam questions test children on concepts, rather than just purely on content. Without knowing the existence of concepts, most children who are struggling in Math do not have a concept-based understanding to help them to relate what they have learnt to questions in exam papers.

This brings us to the next step – mastering the concepts.

Component 2: **CONCEPTS**

In PSLE Math syllabus, there are a total of 12 level 1 problem sums types or concepts. Without learning these concepts, most children will find Math problem sums, especially those in Paper 2, very challenging. This leads to a great loss in marks, either due to leaving the questions blank or doing it "anyhow", hoping that some part of their workings can get them some marks. This also leads to a waste of time for children who don't understand problem sum types and they use a lot of time to try to solve the questions from scratch.

There are 12 common or Level 1 problem sums types concepts:

1. If-if or when-when (2 ifs)
2. Working backwards
3. Equal fractions
4. Number of units x value
5. Same total
6. Same difference
7. Same one
8. Remainder concept
9. Units and parts
10. Repeated identity
11. Simultaneous
12. Guess and check

Here is a short description of simple strategies on how your child can identify each of them.

If-if or when-when
You can see the words "if-if" or "when-when" showing 2 possible arrangements. For example, if the vase has 6 flowers, you are short of 5 flowers. If the vase has 9 flowers, you will need 10 more. Method used is only 3 simple steps. Most children use the long method resulting in a lot of time lost.

Working backwards
The question shows you a beginning, a series of changes and the after. Normally, the question will end off with "how many does he have at first?" To solve it, you need to solve backwards.

Equal fractions
You see words like "same as" or "equal to". Method used is tic-tac-toe.

Number of units x value (or commonly called Grouping)
You see two items with individual value. Normally, the items are coins, dollar notes or the items have various price value. Method used is grouping.

Same total
The total remained the same and there is internal transfer from one person to the other. So the total will always remain the same.

The 2nd scenario is that one quantity increases by, example 50 and the quantity of the other item drops by the same number. So total is still the same.

Same difference
The difference is always the same and the question is normally related to age. The other way to identify is you can check if there is equal number of items being bought in or removed. So the difference is still the same.

Same one
The quantity of one of the two items didn't change. So make use of the unchanged identity.

Remainder concept
You can look for words like "remainder", "remaining". It is solved using branching method or pull-down method.

Units and parts
This is an external unequal change meaning that more items are brought in or given away. It is solved using simultaneous method by using units and parts.

Repeated identity
The object or identity is repeated in various sentences. For example in sentence 1, it reads "John and Sam have…". In sentence 2, it reads "John and Tommy have…". "John" is the repeated identity.

Simultaneous
For example, 1 cup and 1 plate cost $3. 2 cups and 5 plates cost $12. What you need to do is to form simultaneous equations and make one of the unknown to be the same. So the price difference is due to the difference in the quantity of the other unknown.

Guess and check
This is normally related to finding the number of farm animals when you know the number of legs or finding the number of cars/motorcycles if you know the total number of wheels or finding the number of 50-cent coins / 20-cent coins if you know the total amount. Method used is 4-step assumption method. If your child is still using table method, he is losing a lot of precious time, especially in exams when time is so limited.

There are many more such as level 2 and 3 problem sums types.
To master these, your child must first be able to identify the level 1 problem sums types. Not doing so will result in a great loss of marks.

Component 3: **SKILLSET**

Ratio method
Everything can be easily converted to ratio. Percentage, fraction, decimal are similar to ratio.

For example, 50% is 1/2 or 0.5 or 1:2. And the 3 basic steps are to form ratio, balance using the lowest common multiple and finding the value of one unit.

Model method
Model method helps when a child is more visual (and most children are visual learners). By drawing the boxes or units, some questions can be solved much faster, compared to using ratio method. It can be used for problems that do not have ratio (and these are found in "more than/ less than" questions).

Many parents ask me which method their kids should learn. My reply is to **always learn BOTH** and to be prepared to use any one of them. It is about being flexible in problem-solving. Sometimes, both methods are required to help a child to better understand the questions and then solve them.

There are many other skills to learn, including:

1. Identifying the right concept of the question
2. Converting percentage/ fraction/ decimal to my preferred way of working
3. Understanding the story/ concept behind the question
4. Managing my time during test/ exam
5. Planning out my steps to solve the question
6. Checking my own answer so that I know I'm really right
7. Feeling confident that I can solve the questions
8. Feeling sure of myself that my final answer is right
9. Knowing when to use the right info and when not to
10. Being more careful and avoiding careless mistakes

Other skills to master include goal setting and problem solving (in a more confident manner). This brings us to the last two important points.

Aiming For Specific Marks

Unless you are aiming for 100 marks, there's **absolutely** no need to answer *all* the questions correctly.

Let's say, if your child is aiming for 'A' grade, ask your child if he's aiming for a low A grade or a high one. There is a difference of 15 marks. (75 is a low A grade and 90 is a high one.)

Don't just say "I'm aiming for a B." Instead, say "I'm aiming for 70 marks." To get 70 marks, you can aim to get 35/40 for paper 1 and only about half right for paper 2. By doing this, your child can still get a B!

Helping Your Child to Perceive Word Problems Differently

Most children see 1-mark questions as easy or at least doable. Most, if not all, 4 to 5-mark questions are made up of 4 to 5 1-mark questions.

In fact, you can write at least one working for every sentence. Helping your child to see in this manner (or perception) does not make the question easier but it becomes more manageable and more solvable.

So it's just a matter of how your child sees (or perceives) the word problems that will help him to feel more confident and do well (or not do well) for Math.

Identify and eliminate careless mistakes

Please repeat after me "Mistakes are my best friend."

I'm not kidding. Yes, many children felt "bad" about making them and many parents felt disappointed because they felt that their kids shouldn't have made these mistakes in the first place.

There's GUILT.

While many got confused and wondered how the grades can be improved, they also overlooked that the mistakes made are clear indicators of areas they must work on in order to gain more marks.

I have listed out the common careless mistakes below (and lately while observing how one of our students is solving a math word problem, we have discovered another type of mistakes)

A. Copying the wrong number –

While reading the word problem, a child sees "16" but he writes "19". It can also happen when the child is moving from one step to the other in his workings. The worst thing that can happen is the child has found the right answer but wrote the wrong one in his answer box. Mark will definitely be deducted.

B. Writing the wrong units –

The answer should be in "cm" but the child wrote "m". Or the answer is to be given in "kg" but the child found the answer in "g or grams" instead. Some schools are very strict. Instead of deducting half mark, they deduct 1 mark for every wrong unit they see.

C. Illegible handwriting –

This is one of the most common mistakes. The good news is that this is easily avoidable. For example, a child wrote "1000" but the zeros look like "6" and so it' looks like "1666". Sometimes, the child can't even read his own handwriting. So keeping the handwriting neat and legible helps. One more thing. Good writing habit starts from home.

D. Keying in the wrong number while using the calculator –

The child read "16" from his question but keyed in "19" or he read "100" from the display panel of his calculator but he wrote "200" on his paper.

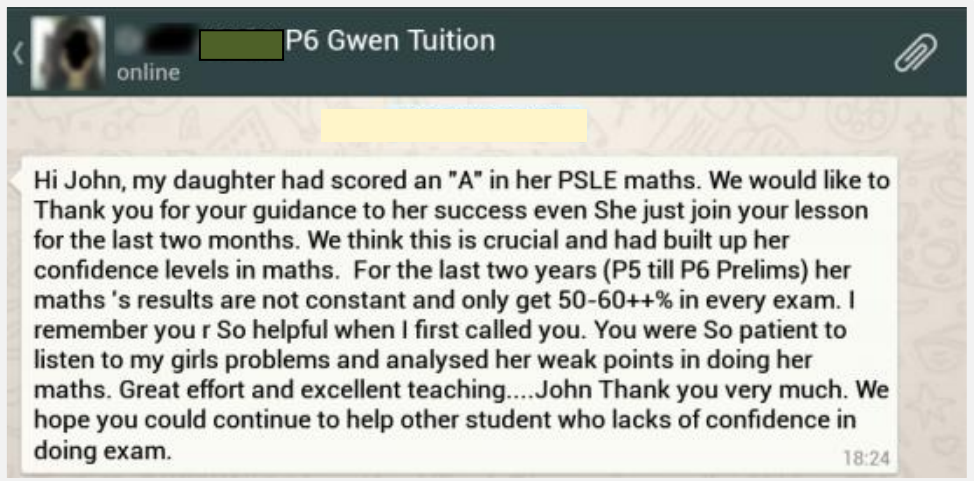
E. Writing the wrong operations "+, -. x, /" –

The child knows that he is supposed to multiply but he wrote a "+" instead of "x".

Of course, there may be other types of careless mistakes which I didn't add in. (If you know of any others, do let me know. Thanks! ☺

The key message here is to keep these mistakes to a minimal or (better still) not making them at all. I once did an assessment for a child and I discovered that the careless mistakes she made add up to 20 marks.

Realizing her room for improvement, she took our advice, worked on it and improved from 50+ to eventually an A.



We really hope that your child can learn and apply some of these strategies. In fact, some parents shared with us that their children have improved by a grade or two after their children have diligently applied some of them.

If you would like to find out more how our Math learning strategies and coaching programme can help your child to bring his Math to the next level too, click the button below to receive a **Free Phone Consultation** where you will learn our Concept-Processes-Skillset (CPS) Math learning model.

Click Here for Your Free Consultation!

http://www.learningoutofthebox.org/contact-us/

Together, we can help improve not only your child's grades, but his attitude towards learning as well. Don't wait until it's too late for your child.

John Yeo
Chief Problem Sums Trainer and Math 'Study Strategy' Author