



Hyddysg

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GCSE Mathematics Project

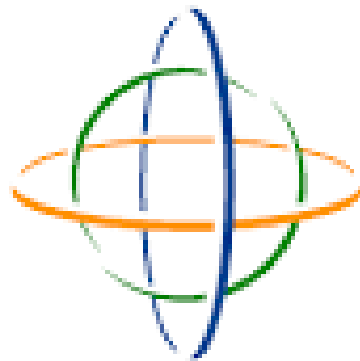
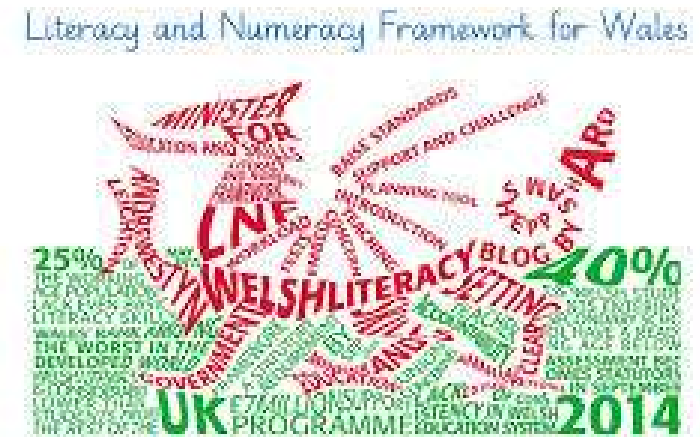
26th March 2015






QUALIFIED FOR LIFE

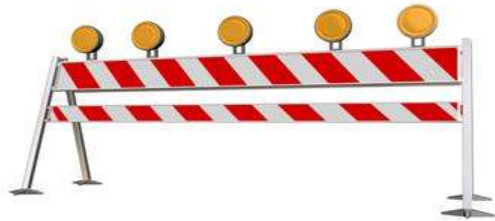
Literacy and Numeracy Framework for Wales



Shift happens video clip



So what?





Numeracy SAMS Non Calculator

Q2 Higher Tier

Q9 Intermediate Tier

The *Hafod Hotel* swimming pool is currently in need of improvement.

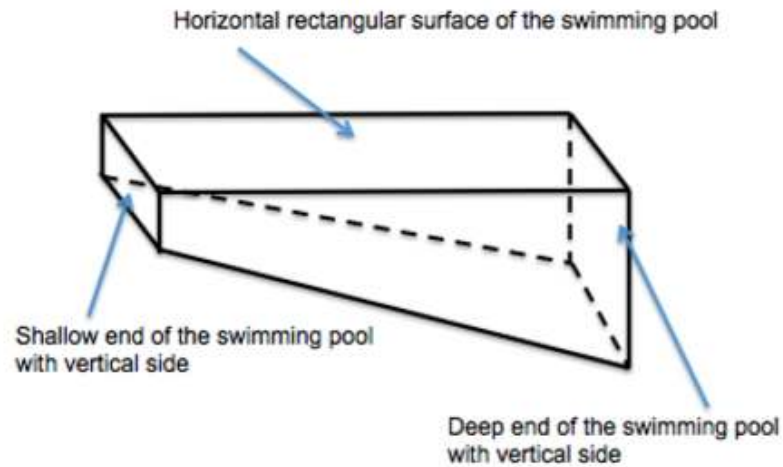


Diagram not drawn to scale

- (a) The pool is 1 metre deep at the shallow end, dropping to 3 metres deep at the other end.
The width of the pool is 10 metres and the length is 20 metres.
The length of the sloping floor of the pool is 20.1 metres.

The four walls and the floor within the pool are to be covered in tiles.
This will cost £20 per m².

The labour cost of fixing the tiles is £150 per day.
It should take 6 days to tile the pool.

Calculate how much it will cost the hotel to tile the swimming pool.

[8]



Discuss in pairs:

- What would the difficulties be for learners in solving the problem?
- Therefore, how would we enable our learners to answer the problem?



Put yourselves in their shoes!!!

Breaking down the barriers:

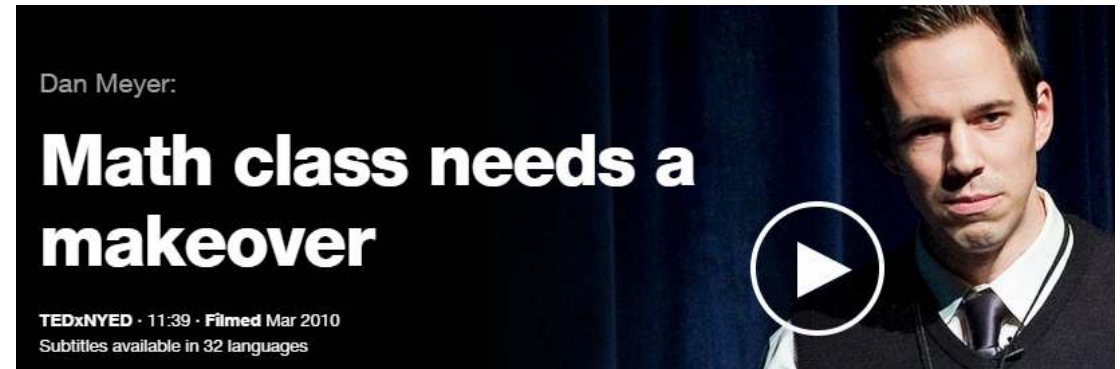


1. Need to develop learner motivation – how?
2. Need to inspire confidence for the learners to try and solve the problem – model, offer tools/strategies/scaffolding – where will these come from?
3. Need to reflect in order to be more confident/know better next time – how can we develop this?

Motivation of Learners

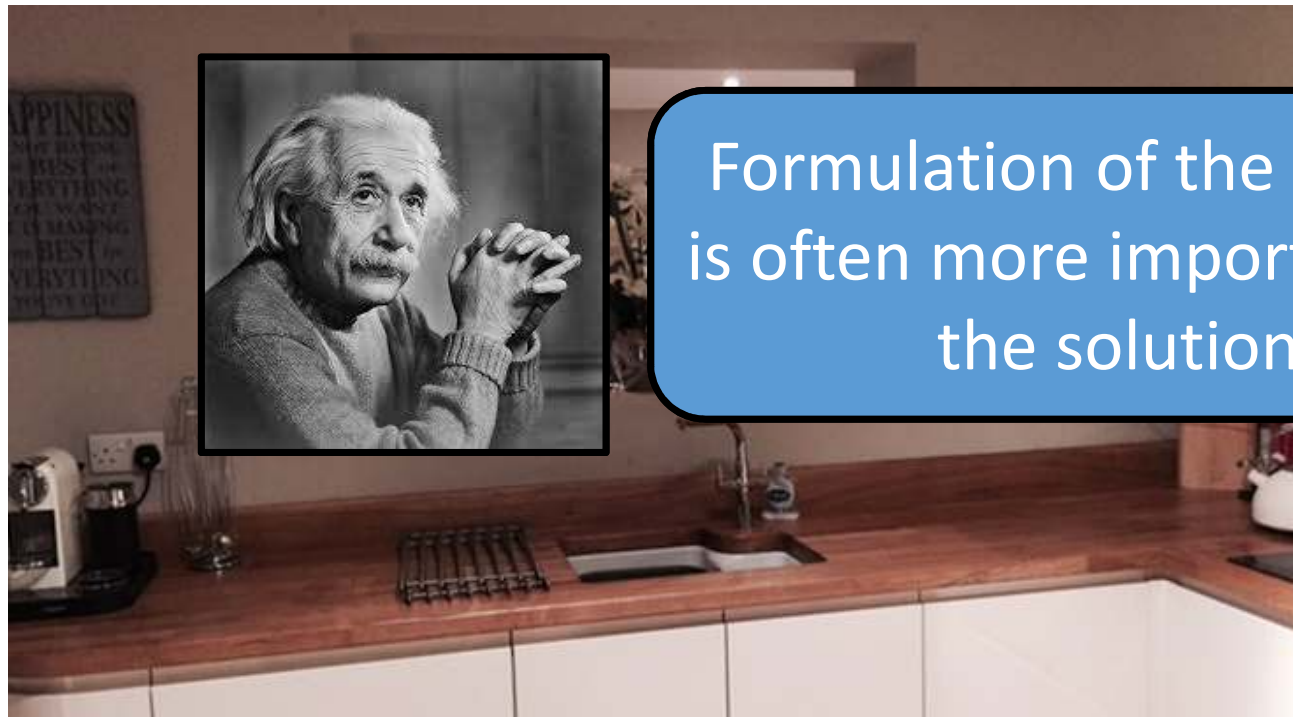
Key messages:

- Rebuild our problems – use real life that relates to the learners, make the problem one that they want to solve – ‘buy them in’.
- Get pupils to formulate the problems – take the words out, hold back on pieces of information, involve all pupils in a conversation about the problem. Encourage patient problem solving.
- Get the real world into the classroom – use multimedia.



Motivation of Learners

- How do we re-build the 'swimming pool' question?



Formulation of the problem
is often more important than
the solution.

Topps Tiles



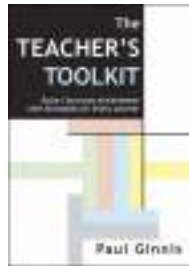
Shibori

from **95p** per tile
[More Info »](#)

Strategies/scaffolding



The teacher needs to promote learners' development by modelling how to unpack or break down the question and model the processes, tools and strategies used.



If a learner wishes to do this independently, it's key that the teacher asks questions as a model to help learners see how to ask the correct questions for themselves.

GwE Support



1. Lesson resources and teacher guidance, including PISA resources.
2. All resources will be available on the GwE website.
3. USB stick has already been given out to schools.
4. Individual school support and support through County Forums.
5. Workshop 2 in the autumn.



Quote.

