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# Welcome to the MEI conference 2026

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# Leading collaborative PD in your department

Jo Sibley

# Programme

What are we trying to achieve and what are the challenges?

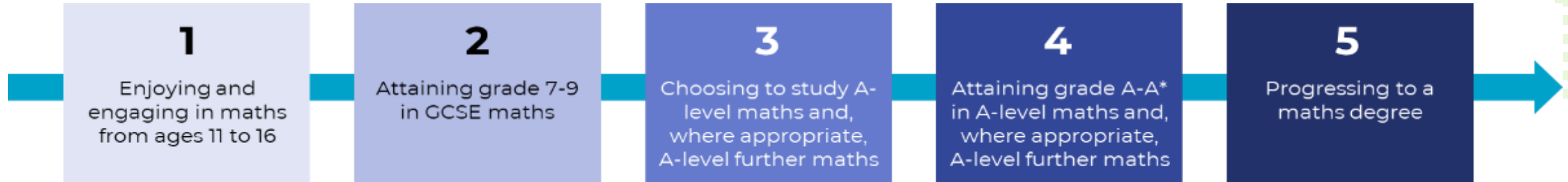
Sample department activities

Feedback and evaluation

Reflections and close

# What are we trying to achieve?

## Student indicative outcomes for the 5-year Birmingham MPP project:



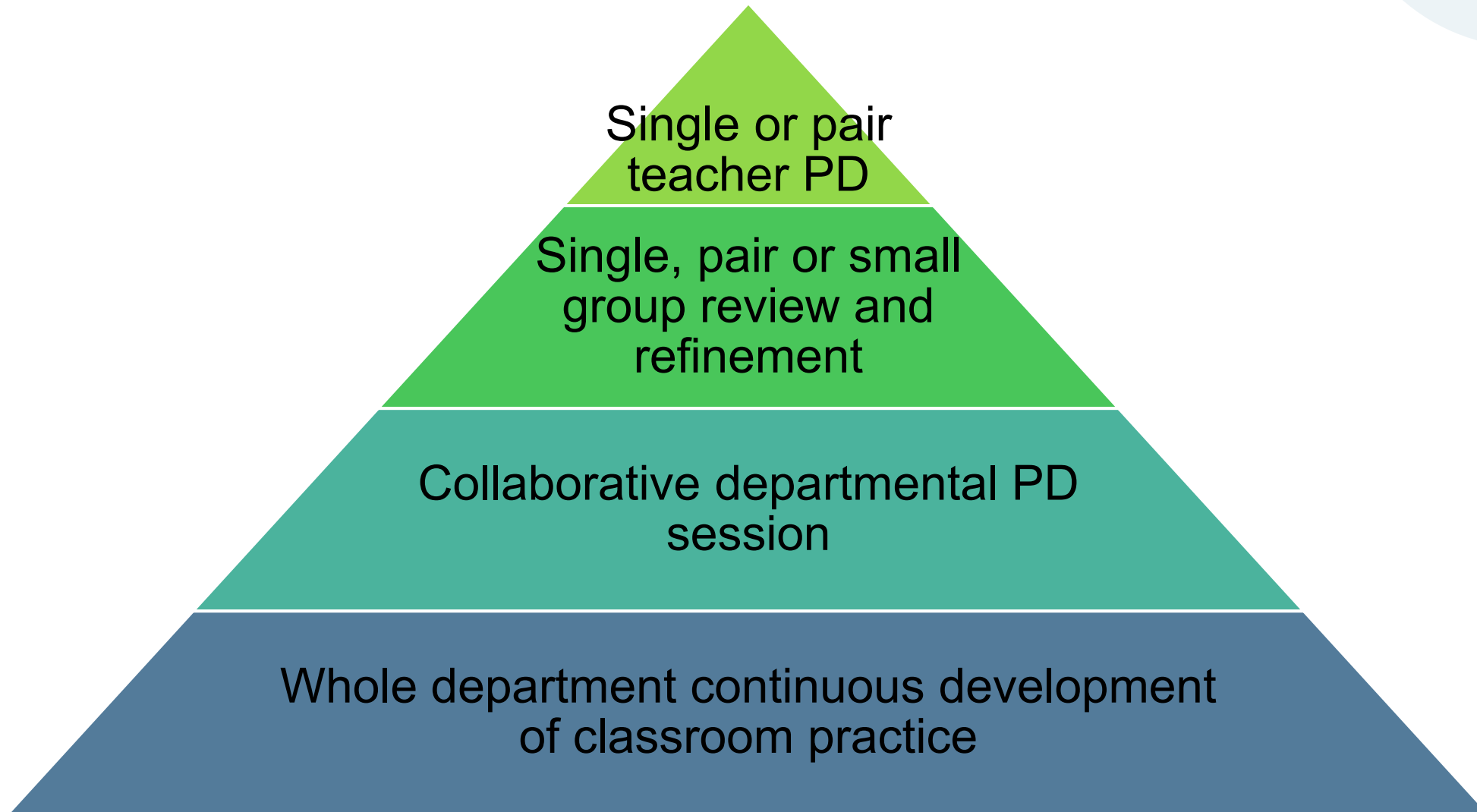
...but the legacy of the project will be in the development we give our teams.

# What are the challenges to creating this legacy?

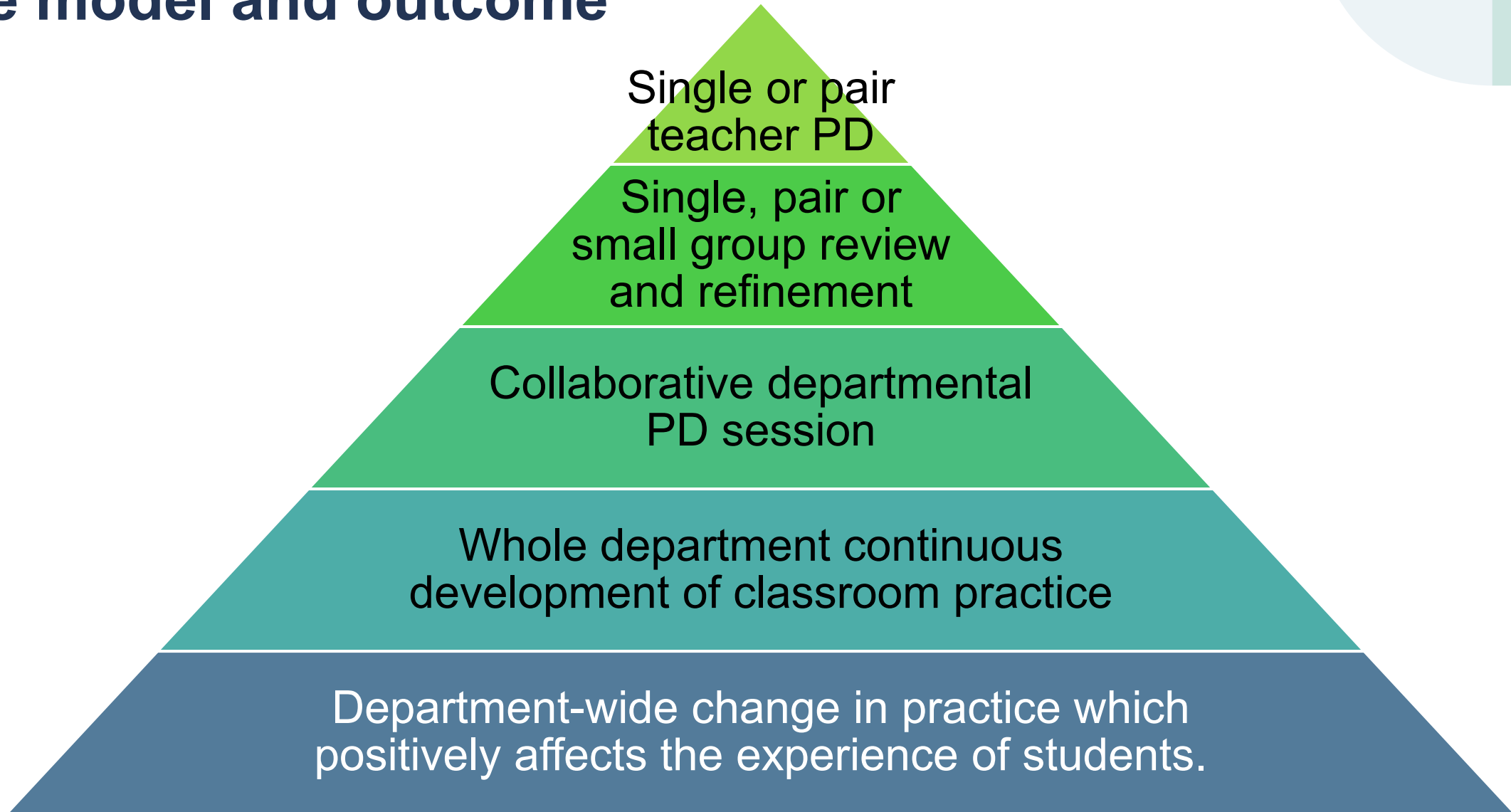
Please discuss briefly with your neighbour

- Time
- Lack of appropriate training and/or materials
- Lack of funding
- Restrictions on cover
- Teacher 'duty mindset'
- Inertia
- PD 'islands'
- ...anything else?

# The model



# The model and outcome



# Key themes for this session

## Focussing on the enrolled students:

- Changing classroom practice to support enrolled students to stay 'in the maths pipeline'
- Meeting enrolled students in the middle
- Working towards consistent delivery across the department
- Offering opportunities for teachers to engage joyfully with challenging elements of their subject
- Creating a culture of **continuous, collaborative** professional development



# A note on oracy

Please consider the following during the session:

Where might one of the students we are working with be encouraged to express one of the following:

- A question
- A clarification
- A reflection
- A challenge
- Appreciation





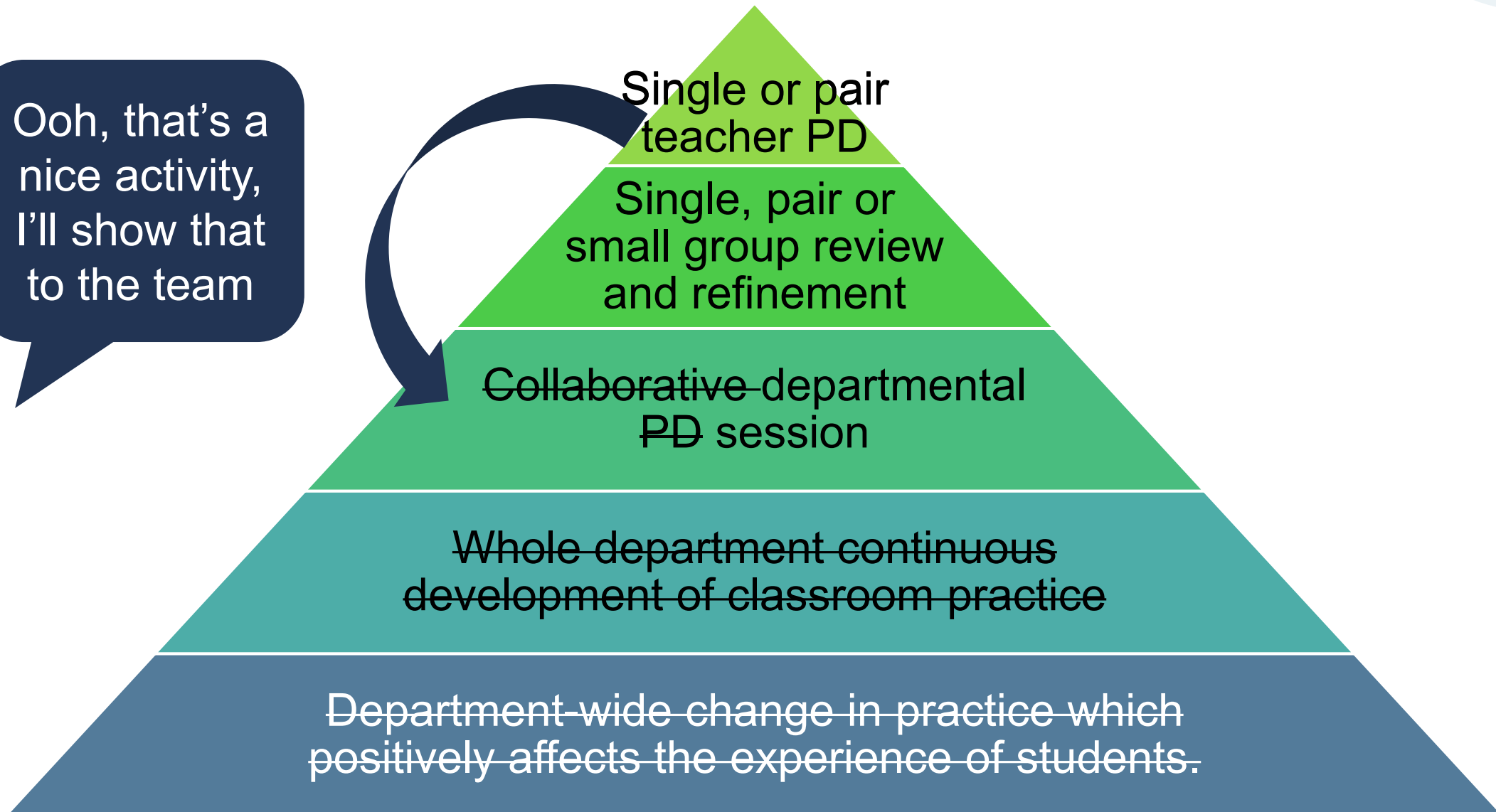
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# Combating NAS

(Nice Activity Syndrome)

# We often see this happening

Ooh, that's a nice activity, I'll show that to the team





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# Springboards

# Springboards - tiny but powerful

- A small but rich example, ideally demonstrating in mastery principles
- Time to discuss as a group
- Time to share with others
- Plenty of time to discuss the pedagogy

# Good sources for springboards

- PD event materials!
- AQA Level 2 Further Maths materials in Integral or All About Maths
- Exam board materials
- Oak National Academy materials
- Department conversations

# Springboard 1 - Mess this up three ways

It seems so right, how could it be wrong?



# Mess this up three ways

Make a statement which on the face of it seems obviously true, and ask students to suggest ways in which it might be falsified.



# Mess this up three ways

Choose three different functions which, when applied to both sides of the inequality, render it invalid:

$$-30 < 60$$

In pairs, can you  
find three? Or  
more?

# Mess this up three ways

Choose three different functions which, when applied to both sides of the inequality, render it invalid:

$$-30 < 60$$

Multiply  
both sides  
by -1

Take the  
log of both  
sides

Square root  
of both  
sides

Take the  
cosine of  
both sides

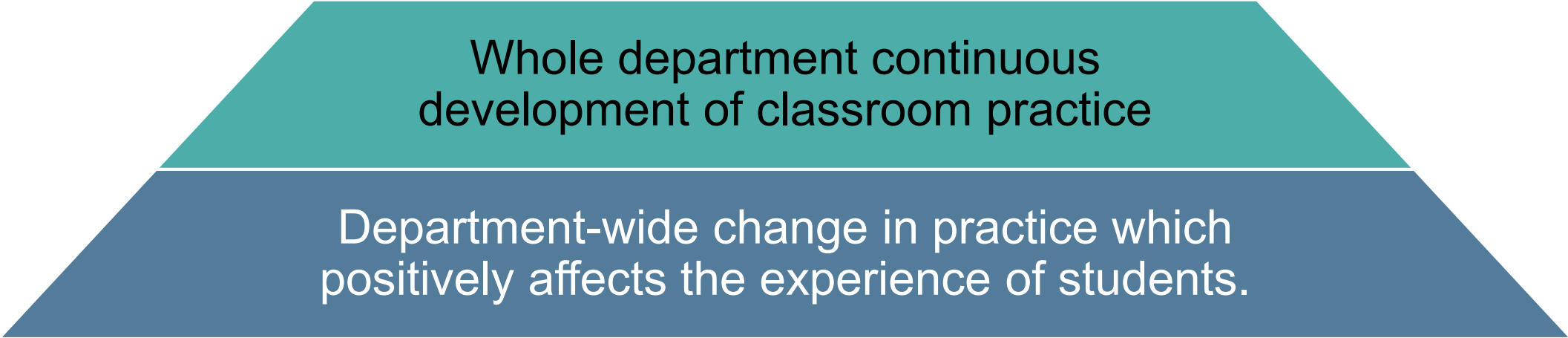
Divide both  
sides by  
zero

# Pedagogical considerations

- Use to emphasise common misconceptions
- Can put a positive spin on former mistakes
- Encourages students to be meticulous when assessing a method

# How does it reach the final level?

If I visited your department six months from now, where would I see the impact of this activity?



Whole department continuous  
development of classroom practice

Department-wide change in practice which  
positively affects the experience of students.

# Springboard 2 - Mathematical problem solving

## Deeper understanding – hands-free starter

For the first five minutes on the next activity, you may not write and you may not point.



Describe your strategy to your neighbour using as much descriptive mathematical language as you can.

# A rich exercise

You are given that:

$$\frac{x^2 - 36}{x^2 - 11x + 30} \times \frac{25 - x^2}{Ax^2 + Bx + C} \times \frac{6x^2 + 7x - 3}{3x^2 + 17x - 6} \equiv \frac{x + 5}{6 - x}$$

Find the value of the constants  $A$ ,  $B$  and  $C$ , where  $A$ ,  $B$  and  $C$  are all integers

# Pedagogical considerations

- What is the impact on student learning when considering factors that are negative and/or fractional?
- Is this an example of variation?
- Does it encourage deeper understanding? What evidence might we see?

# Feedback on your experience this time

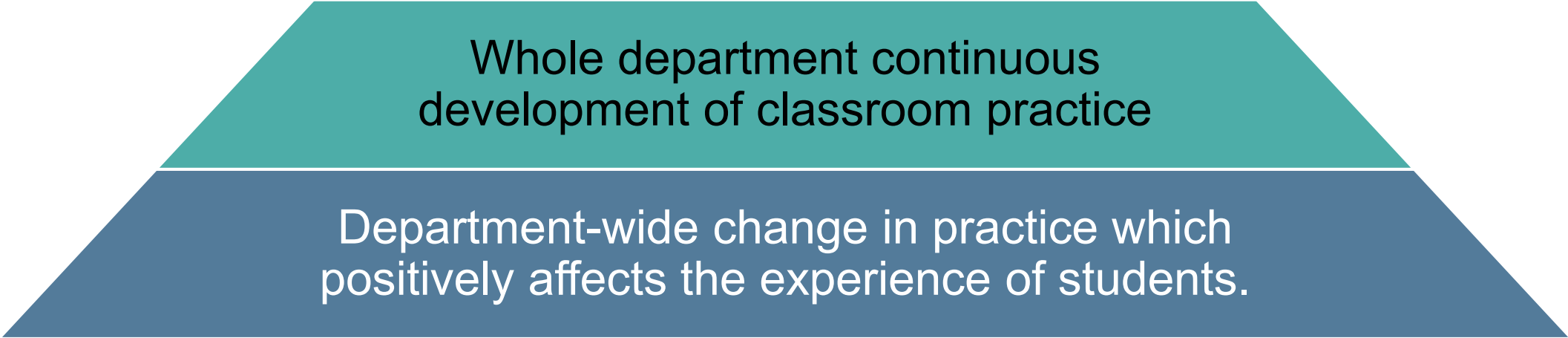
The maths

The talking



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# A Core Maths example

“In a testament to the true human spirit, beachgoers formed a human chain in Panama City Beach in Florida to help save a family pulled in to the water by strong tides.”



# A Core Maths example

An eye witness said “There were 70 to 80 people in the chain!”

## How far out did it reach?

- You must take turns
- Everyone comments when it is their turn
- The person in the group with the closest birthday makes the first statement.
- Every following statement may only begin:
  - “Yes, and...”
  - “Respectfully, I disagree, because...” or
  - “Jo, we have our answer”



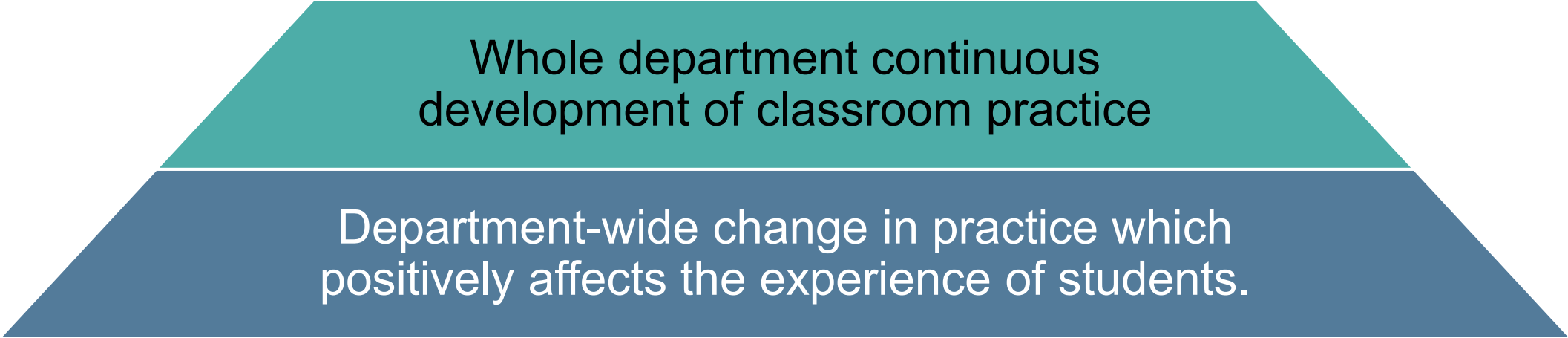
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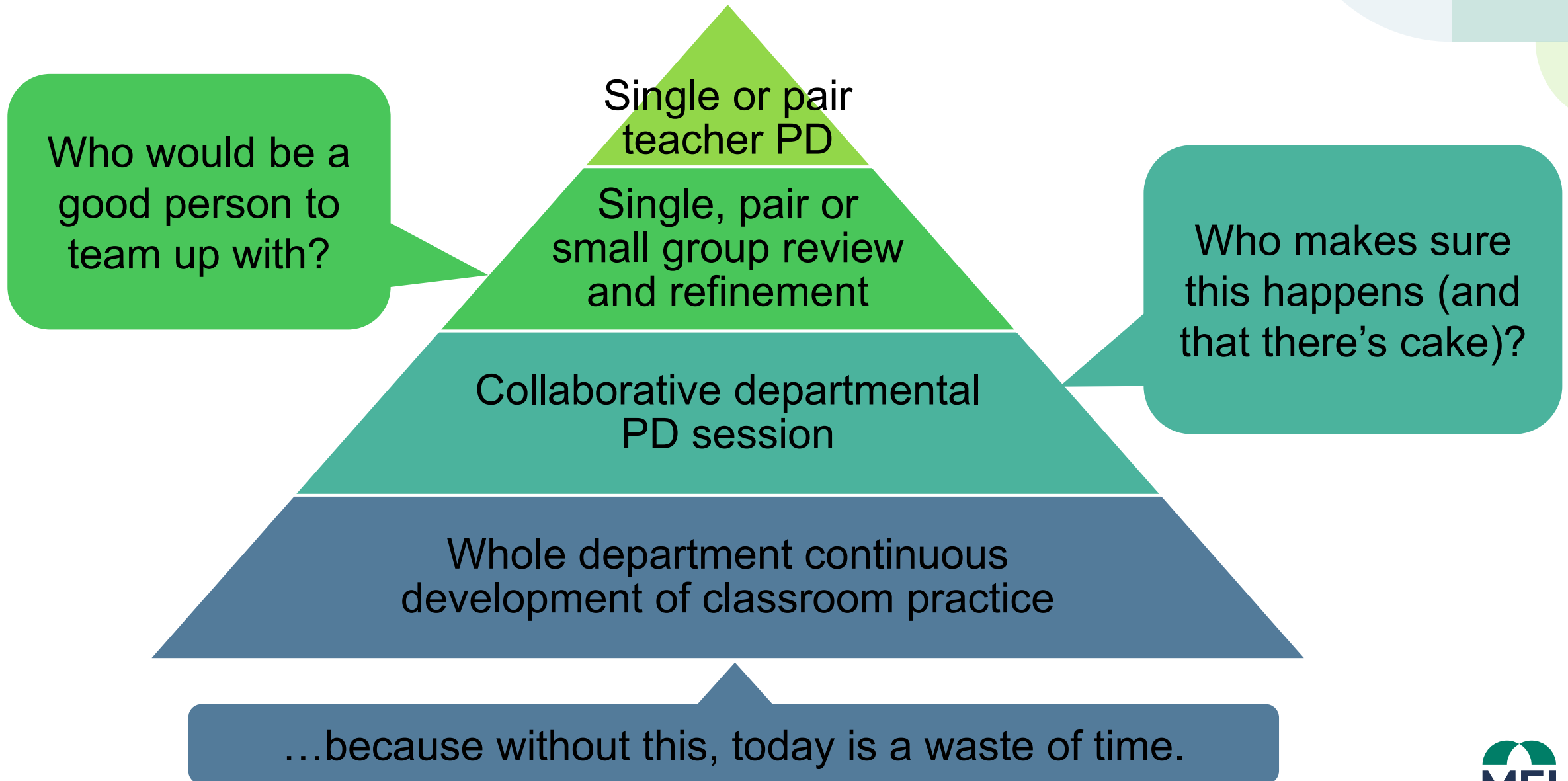
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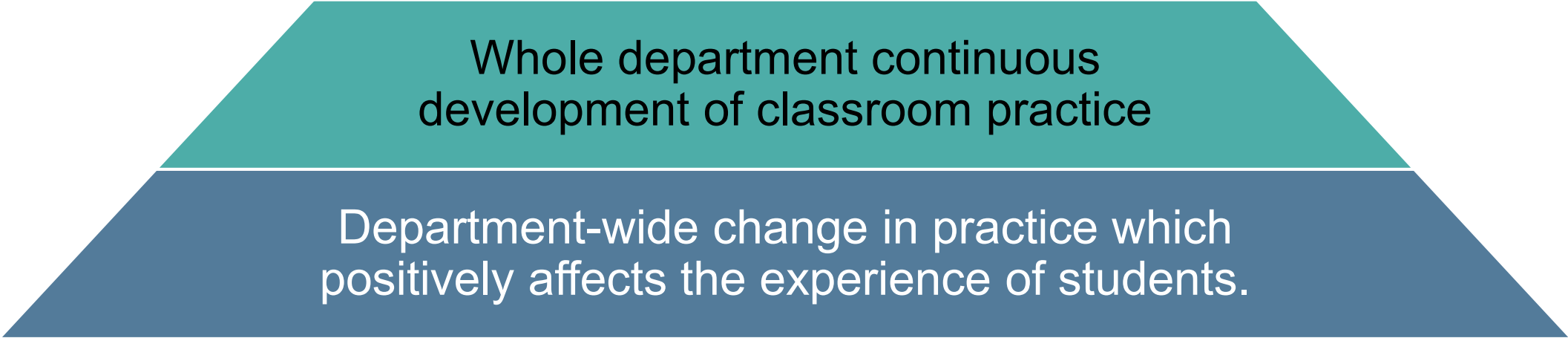
# Reflections and next steps

# The Birmingham MPP model for teacher development



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# What will you do with your team?

Share and discuss the PD model and outcome

Design a Springboard task

Turn a 'nice activity' into a Pedagogy Power Pack

Form a pedagogy study trio

# What further PD might follow from this?

## Maths Hubs:

- NCETM Professional Development Lead Programme
- NCETM School Development Lead Programme
- Developing Core Maths Pedagogy Work Group
- Developing A Level Pedagogy Work Group

## In your department:

- Start your own Cake and Calculus Club
- Find out who is responsible for ring-fencing subject-focussed PD in your school – and secure at least two hours per term for next year for your team!

# Anything to add? Next steps

## Session E - Leading collaborative PD in your department

Please jot down two actions you will take as a result of today's input.  
Share them with your neighbour.