



Teaching and learning:  
evidence-based practice



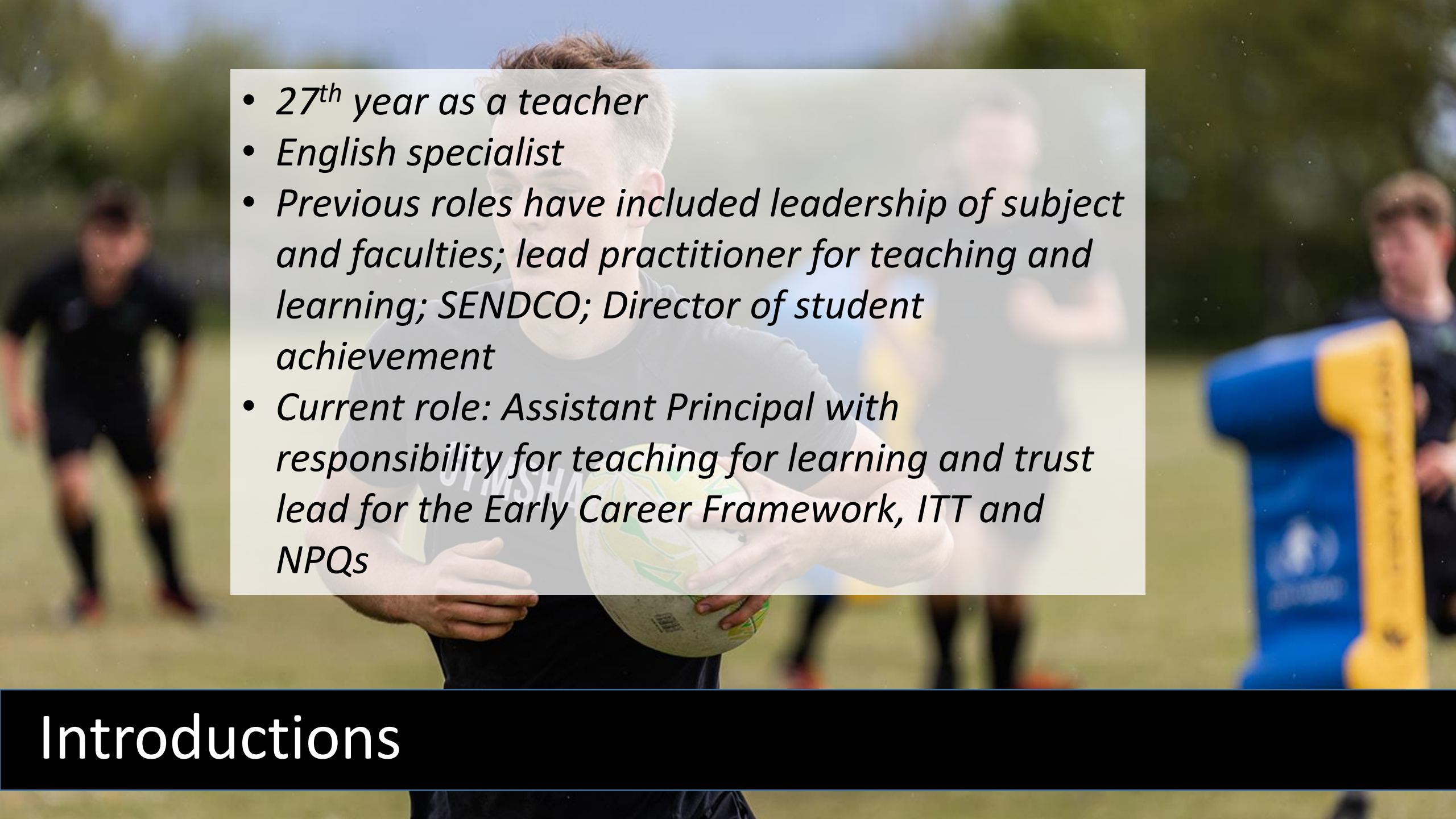
- What are the evidence-informed principles at the heart of our teaching for learning policy?
- How do these principles inform curriculum design?
- How has this policy been implemented to ensure a consistent but subject specific approach?
- How do we monitor and evaluate the efficacy and consistency of our approach?
- How did the inspection team gather evidence on this area?

*What do you feel your school / college does very well in relation to this workshop's focus?*

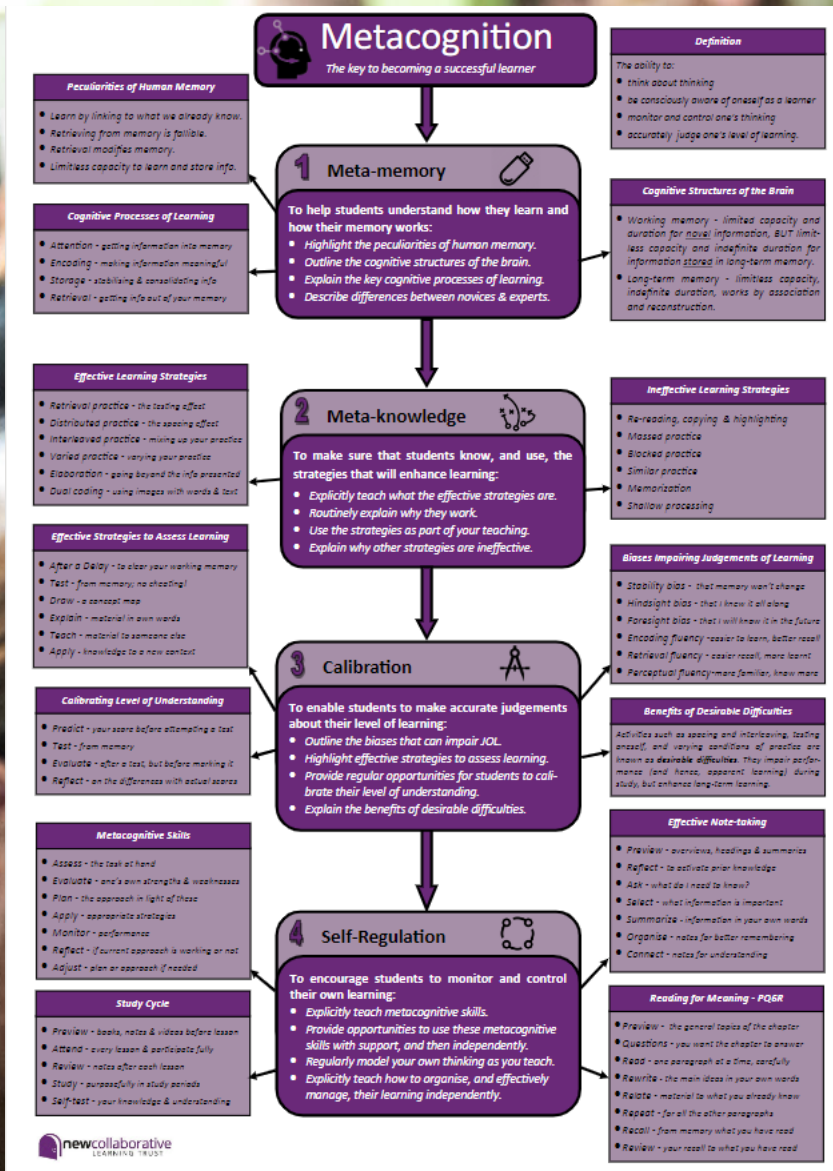
*What do you feel your school / college could improve in relation to this workshop's focus?*

*Is there anything specific that you're particularly keen to find out more about?*

# Introductory Reflections

- 
- A young man with short brown hair, wearing a black t-shirt, is holding a green and yellow ball. He is standing on a grassy field. In the background, there are other people, some in black and some in white, and a blue and yellow structure. The background is slightly blurred.
- *27<sup>th</sup> year as a teacher*
  - *English specialist*
  - *Previous roles have included leadership of subject and faculties; lead practitioner for teaching and learning; SENDCO; Director of student achievement*
  - *Current role: Assistant Principal with responsibility for teaching for learning and trust lead for the Early Career Framework, ITT and NPQs*

# Introductions



How do students learn and remember?  
 What are the most effective teaching and learning strategies to adopt to support this?  
 How can students take ownership for their own learning?

• What are the evidence-informed principles at the heart of our teaching for learning policy?

## 1 High Challenge, Low Stress

*Teach to the top*



Have the same high expectations of all students. Everyone is aiming for the same high level - it's just that some find it harder to reach. Plan everything with the highest attainers in mind but provide appropriate support and time for those who need it. Celebrate mistakes so that students feel emotionally secure & safe.

## 2 Big Picture

*Plan long*



Know the big picture and share it with the students. Plan lesson sequences before you worry about each lesson. Lessons are messy; you need to be responsive. Learning is a long-term process, not a short-term one. A lesson is then just the next part of a learning sequence that you adjust as you go along.

## 3 Varied Practice

*Mix it up*



Varying conditions of practice rather than keeping them constant and predictable can enhance recall at a later date. Mix up where students sit, periodically change the learning environment, incorporate variation in the way students think about material and interleave the teaching of separate but similar topics.

## 4 New Material in Small Chunks

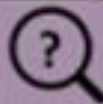
*Chunk it*



New information is stored by relating it to, or linking it up with, what is already known. However, working memory is small, only handling a few bits of information at once. To avoid its overload present new material in small steps, using visuals, analogies and concrete examples. Proceed only when first steps are mastered.

## 5 Know Your Stuff

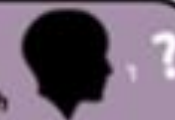
*The subject material, the spec, the mark points*



Expert teachers know their subjects, continually study them, know how questions will be set and what the answers should be. They can explain clearly, precisely and simply, representing ideas in multiple ways. This requires time and effort to keep up to-date.

## 6 Ask Questions

*Plan, pose, pause, pounce, bounce, stretch*



Ask a large number of questions and check the responses of all students. Questions help students practise new information and connect new material to their prior learning. Questions allow the teacher to determine how well the material is learned.

**7**

## Provide Models

*Simple to complex; concrete to abstract*



Students need cognitive support to help them learn complex and abstract concepts. Simple models, worked examples, teacher modelling and thinking aloud while demonstrating how to solve a problem are all examples of effective cognitive support.

**8**

## Deep Processing

*Learning happens when we think hard*

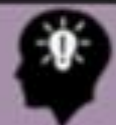


Memory works best when we process material deeply, connecting it with our pre-existing knowledge (interpretation), and to other things we are trying to learn (elaboration). The more effort we expend, the better we remember.

**9**

## Effective Feedback

*Close the gap*



If students do not use feedback to move their learning forward, it's a waste of time. Comments for improvement should be focused and helpful, and provide a recipe for future action. Feedback should be more effort for the student than it is for the teacher.

**10**

## Independent Learning

*Weekly DIL*



Students need additional time to rephrase, elaborate and summarise new material in order to store it in their long-term memory. Independent practice produces "overlearning" - a necessary process for new material to be recalled automatically.

**11**

## Retrieval Practice

*Input less, output more*

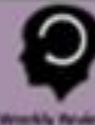


Recalling information from memory makes it more recallable in the future. The more effort involved the more it is embedded into long-term memory. Begin a lesson with a short review of previous learning. Daily review can lead to fluent recall, freeing up working memory for problem solving and creativity.

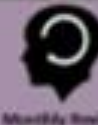
**12**

## Distributed Practice

*Space it*



*Weekly Review*



*Monthly Review*

Information that is practised repeatedly over spaced intervals is learned much better and for longer than information that is repeated without intervals (massed practice). Increasing the spacing between study sessions enhances learning and leads to better long-term retention.



1

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Have the same high expectations of all students. Everyone is aiming for the same high level - it's just that some find it harder to reach. Plan everything with the highest attainers in mind but provide appropriate support and time for those who need it. Celebrate mistakes so that students feel emotionally secure & safe.

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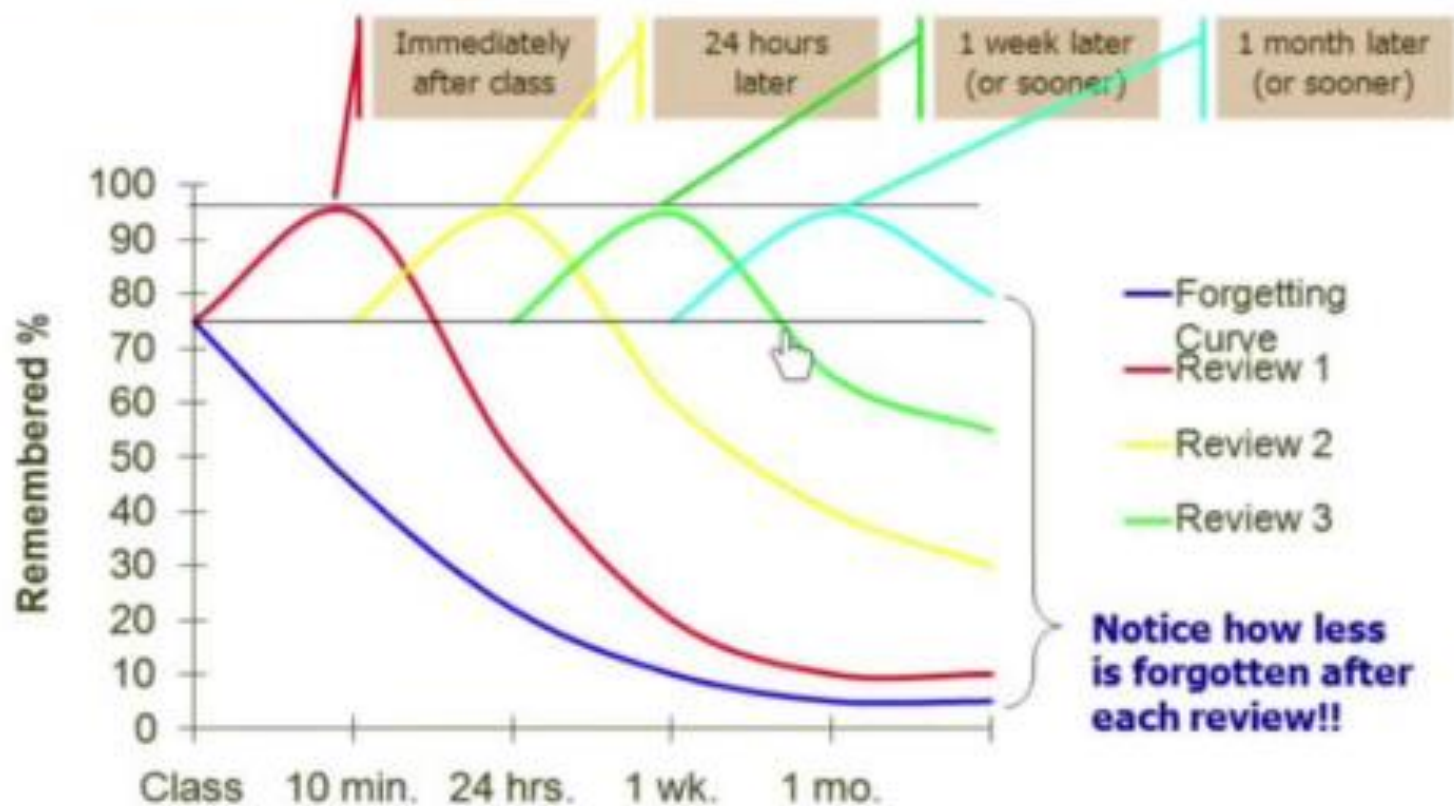
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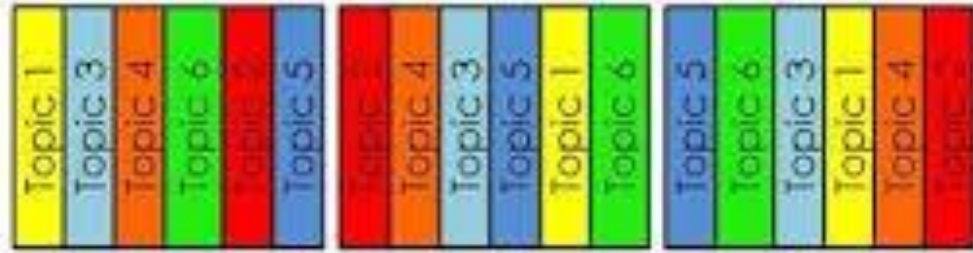


- **How do these principles inform curriculum design?**

# Overcoming the Curve



## Blocking vs interleaving



## A BLOCKED PRACTICE

$\frac{5}{9} \times \frac{1}{8} = ?$	$\frac{1}{6} \times \frac{2}{7} = ?$	$\frac{4}{5} \times \frac{2}{3} = ?$	$\frac{2}{9} \times \frac{3}{5} = ?$
--------------------------------------	--------------------------------------	--------------------------------------	--------------------------------------

## INTERLEAVED PRACTICE

$\frac{5}{9} \times \frac{1}{8} = ?$	$\frac{7}{8} \div \frac{5}{6} = ?$	$\frac{2}{3} + \frac{1}{5} = ?$	$\frac{2}{9} \times \frac{3}{5} = ?$
--------------------------------------	------------------------------------	---------------------------------	--------------------------------------

## B Interleave



## Block



## Space



## Mass



# How is curriculum planning connected to principles of interleaving and distributed practice?

**A Level, WJEC,  
Programme of Study  
– Year 2 Y13 (2020-21)**

Week	Date	Current Topic The main topic you will cover this week.	Retrieval Topic(s) Your teachers will give you additional tasks or mini-assessments in lessons to support long-term learning of earlier topics	DIL Current Preview Retrieval Your teachers will set DIL to support the learning of current topics, future content and the long-term learning of earlier topics	Formal Assessment
0					
1	7/9			Current Preview Retrieval	Progression exams
2	14/9			Current Preview Retrieval	
3	21/9			Current Preview Retrieval	
4	28/9			Current Preview Retrieval	Progression Exam TRUST Assessment ADD date:28/9/20
5	5/10			Current Preview Retrieval	
6	12/10			Current Preview Retrieval	
				Current	Cedar 1 / ADD date

Week	Date	Current Topic (Lesson 1)	Current Topic (Lesson 2)	Current Topic (Lesson 3)	Retrieval Topic(s) <small>Your teachers will give you additional tasks or mini-assessments in lessons to support long-term learning of earlier topics</small>	DIL <u>Current</u> <small>Your teachers will set DIL to support the learning of current topics</small>	DIL <u>Preview</u> <small>Your teachers will set DIL to support the learning of future content</small>	DIL <u>Retrieval</u> <small>Your teachers will set DIL to support the learning of earlier topics</small>	Formal Assessment
1	12/9	FEEDBACK ON PROGRESSION EXAMS AND GAP TASK PLANNING FOR Y12 CONTENT	INTRODUCTION TO OTHELLO	INTRODUCTION TO OTHELLO	OTHELLO CONTEXT	NEA DRAFTING AND COMPLETION	REREAD ACT 1 OF OTHELLO	STREETCAR ESSAY OR DETAILED PLAN	
2	19/9	OTHELLO ACT 1	OTHELLO ACT 1	OTHELLO ACT 1	OTHELLO CONTEXT	NEA DRAFTING AND COMPLETION	MASSOUT LECTURE SUMMARIES REREAD ACT 2 OF OTHELLO	PROSE ESSAY OR DETAILED PLAN	
3	26/9	OTHELLO ACT 2	OTHELLO ACT 2	OTHELLO ACT 2	PAPER 2-THEMES	NEA DRAFTING AND COMPLETION  Knowledge organiser to include key quotes/dramatic methods/context and critics: Othello	REREAD ACT 3 OF OTHELLO  MASSOUT LECTURE SUMMARIES	UNSEEN POETRY ESSAY OR DETAILED PLAN	
4	3/10	OTHELLO ACT 3	OTHELLO ACT 3	CEDAR ASSESSMENT	PAPER 2-METHODS	NEA DRAFTING AND COMPLETION  Knowledge organiser to include key quotes/dramatic	REREAD ACT 4 OF OTHELLO  MASSOUT LECTURE SUMMARIES	STREETCAR ESSAY OR DETAILED PLAN	

19	6/2	KEATS-ESSAY WRITING	KEATS-ESSAY WRITING	KEATS-ESSAY WRITING	PAPER 3-POETIC STRUCTURE	KEATS ESSAY OR DETAILED PLAN			
Half-term Holiday: Monday 13th February – Friday 17th February inclusive									
20	20/2	DIRT	DIRT	DIRT	PAPER 3 -POETIC LANGUAGE	KEATS ESSAY	REREAD ANTHOLOGY POEMS	PROSE ESSAY PLANNING OR TIMED ESSAY	
21	27/2	MOCK EXAMS	MOCK EXAMS	MOCK EXAMS	PAPER 3 -RHYME AND RHYTHM	UNSEEN POETRY ESSAY	REREAD ANTHOLOGY POEMS	OTHELLO ESSAY PLANNING OR TIMED ESSAY	MOCK EXAMS
22	6/3	UNSEEN POETRY ANALYSIS AND ANTHOLOGY REVISION	UNSEEN POETRY ANALYSIS AND ANTHOLOGY REVISION	UNSEEN POETRY ANALYSIS AND ANTHOLOGY REVISION	PAPER 3-KEATS CONTEXT	KEATS ESSAY	REREAD ANTHOLOGY POEMS	STREETCAR ESSAY PLANNING OR TIMED ESSAY	
23	13/3	KEATS ESSAY WRITING	KEATS ESSAY WRITING	KEATS ESSAY WRITING	PAPER 3-REVERSE ESSAY PLANNING	UNSEEN POETRY ESSAY	REREAD ANTHOLOGY POEMS	PROSE ESSAY PLANNING OR TIMED ESSAY	
24	20/3	DIRT	DIRT	DIRT	PAPER 3 -REVERSE ESSAY PLANNING	KEATS ESSAY	REVERSE PLAN OTHELLO ESSAY	ADDITIONAL GAP TASKS	ADD 4 20/3
25	27/3	OTHELLO EXAM PREPARATION	OTHELLO EXAM PREPARATION	OTHELLO EXAM PREPARATION					
Easter Holiday: Monday 3 <sup>rd</sup> April – Friday 14 <sup>th</sup> April inclusive									
26	17/4	OTHELLO EXAM PREPARATION	OTHELLO EXAM PREPARATION	PAPER 1 SECTION A ASSESSMENT	PAPER 1-DRAMATIC METHODS	OTHELLO ESSAY	REVERSE PLAN STREETCAR ESSAY	INDEPENDENT REVISION	
27	23/4	STREETCAR EXAM PREPARATION	STREETCAR EXAM PREPARATION	PAPER 1 SECTION B ASSESSMENT	PAPER 1-GENRE	STREETCAR ESSAY	REVERSE PLAN PROSE ESSAY	INDEPENDENT REVISION	
28	30/4	PAPER 1 DIRT	PROSE EXAM PREPARATON	PROSE EXAM PREPARATON	PAPER 2-NARRATIVE METHOD	PROSE ESSAY	REVERSE PLAN PROSE ESSAY	INDEPENDENT REVISION	
29	8/5	PROSE EXAM PREPARATION	PAPER 2 ASSESSMENT	PAPER 2 DIRT	PAPER 2-GENRE	PROSE ESSAY	REVERSE PLAN UNSEEN POETRY ESSAY	INDEPENDENT REVISION	
30	15/05	UNSEEN POETRY AND ANTHOLOGY EXAM PREPARATION	UNSEEN POETRY AND ANTHOLOGY EXAM PREPARATION	PAPER 3 SECTION A ASSESSMENT	PAPER 3-METHODS AND TERMINOLOGY	UNSEEN POETRY ESSAY	REVERSE PLAN KEATS ESSAY	INDEPENDENT REVISION	
31	22/05	KEATS EXAM PREPARATION	KEATS EXAM PREPARATION	PAPER 3 SECTION B ASSESSMENT	PAPER 3- METHODS AND TERMINOLOGY	KEATS ESSAY	REVIEW ALL ASSESSMENT FEEDBACK AND	INDEPENDENT REVISION	



# How does distributed practice work?

- Effective distributed practice in education follows four steps:
  - **Initial mastery** — Students are introduced to the material and achieve a baseline understanding of the topic.
  - **Spacing** — A considerable amount of time passes after the material is first learned.
  - **Retrieval** — Students must retrieve the previously learned information from memory during a new learning session.
  - **Repetition** — The process is repeated and material is re-learned over several sessions.
- Essentially, the learning process looks like this:
  - **Short term retention → spacing → retrieval → long term retention.**
  - You need a break in between to gain the full benefits, reduce fatigue and develop skills.

# Metacognitive advantages:

- **1. Priming**
- **2. Long-term memory consolidation**
  - **3. Contextual differences**
    - **4. Complex thinking**
    - **5. Procedural memory**

# DIL TO IL!

- DIRECTED INDEPENDENT LEARNING



- INDEPENDENT LEARNING

# Spaced/distributed practice

Unit 4 Spaced Practice (Metacognition)														
(Spacing your studying is the opposite of cramming. It increases your confidence. Trust it; it's backed by science.)														
LO1: Understand the criminal justice system in England and Wales	√ = 30 minutes of studying completed (Date and Initial)				LO2: Understand the role of punishment in the criminal justice system	√ = 30 minutes of studying completed (Date and Initial)				LO3: Understand measures used in social control	√ = 30 minutes of studying completed (Date and Initial)			
AC1.1 <u>Describe</u> processes used for law making					AC2.1 <u>Explain</u> forms of social control					AC3.1 <u>Explain</u> the role of agencies in social control				
										AC3.2 <u>Describe</u> the contribution of agencies to achieving social control				
AC1.2 <u>Describe</u> the organisation of the criminal justice system in England and Wales					AC2.2 <u>Discuss</u> the aims of punishment					AC3.3 <u>Examine</u> the limitations of agencies in achieving social control				
AC1.3 <u>Describe</u> models of criminal justice					AC2.3 <u>Assess</u> how forms of punishment meet the aims of punishment					AC3.4 <u>Evaluate</u> the effectiveness of agencies in achieving social control				

Name:

Subject:

Priority revision topics based on y13 content:

•	•
•	•
•	•
•	•

Priority revision topics identified by reviewing topics covered since the start of Y12:

•	•
•	•
•	•
•	•

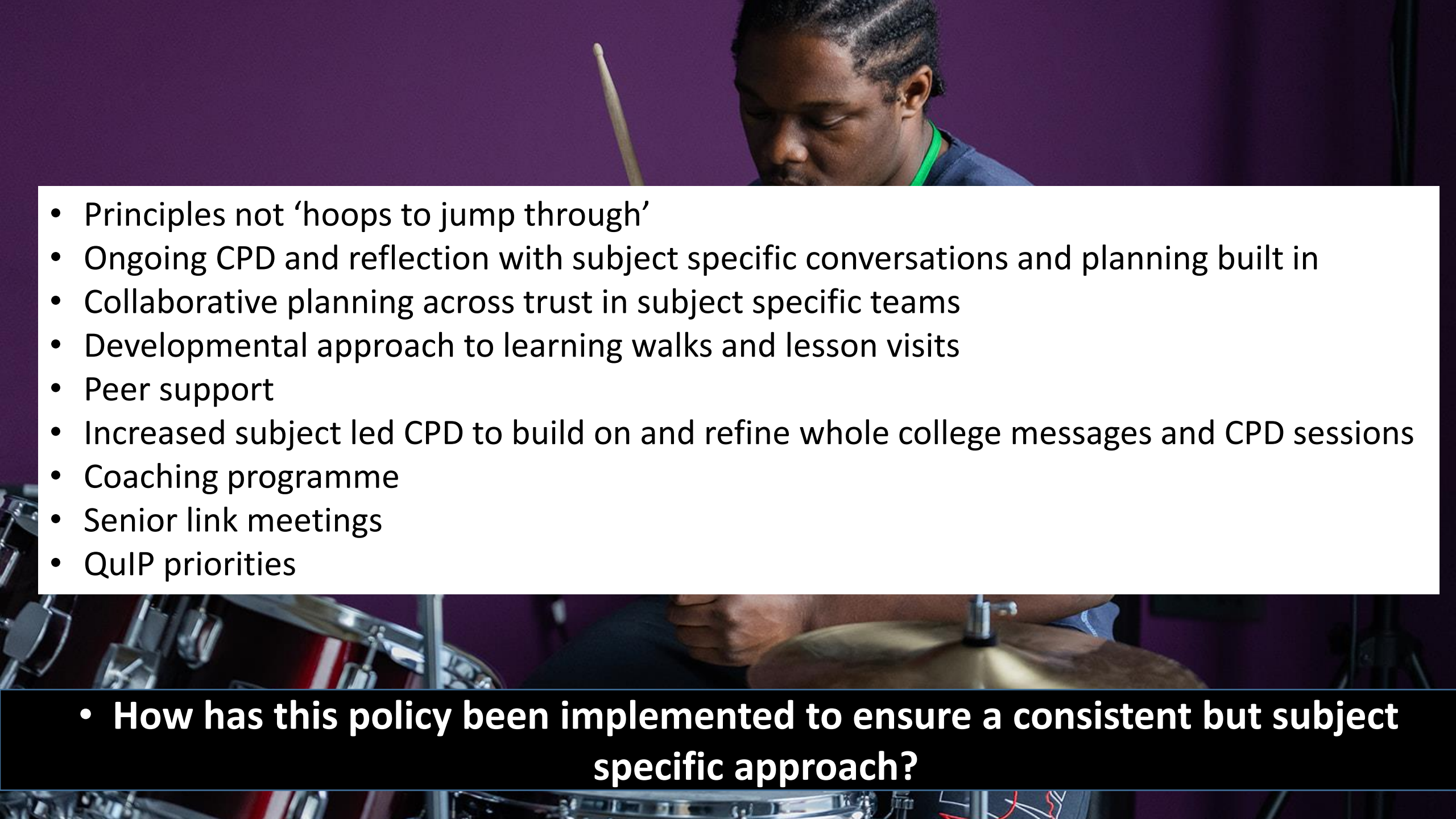
Dates of my exams:

Date	Unit	Additional exam information

When	Planning your revision - topic by topic, week by week	
	Topics I will revise from Y12	Topics I will revise from Y13
11 November 10 weeks to go	Topic:  Topic:	Topic:  Topic:
	Additional topics to revise identified through ongoing DIL / additional assessments / lessons:	
18 November 9 weeks to go	Topic:  Topic:	Topic:  Topic:
	Additional topics to revise identified through ongoing DIL / additional assessments / lessons:	
25 November 8 weeks to go	Topic:  Topic:	Topic:  Topic:
	Additional topics to revise identified through ongoing DIL / additional assessments / lessons:	
2 December 7 weeks to go	Topic:  Topic:	Topic:  Topic:
	Additional topics to revise identified through ongoing DIL / additional assessments / lessons:	

# How can we encourage this?

- Spaced curriculum-blocks of knowledge and skills
- Planners/revision timetables
- Assessments spaced and interleaved
- Cumulative assignments
- Spaced and interleaved home learning tasks

- 
- Principles not 'hoops to jump through'
  - Ongoing CPD and reflection with subject specific conversations and planning built in
  - Collaborative planning across trust in subject specific teams
  - Developmental approach to learning walks and lesson visits
  - Peer support
  - Increased subject led CPD to build on and refine whole college messages and CPD sessions
  - Coaching programme
  - Senior link meetings
  - QuIP priorities

**• How has this policy been implemented to ensure a consistent but subject specific approach?**

Teacher development learning walk form 2021-22 - Saved

Preview

**Questions**

Identify which of the 12 principles of Tfl were demonstrated in the lesson. It is not an expectation that all of these would be demonstrated during a single learning walk/lesson visit.

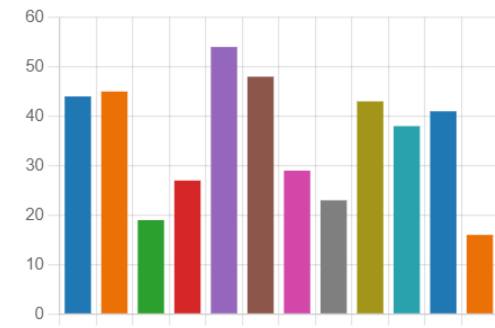
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- Big Picture
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- Ask Questions
- Provide Models
- Deep Processing
- Effective Feedback
- Independent Learning
- Retrieval Practice
- Distributed Practice

Responses **73**

## 6. Tfl Principles

[More Details](#)

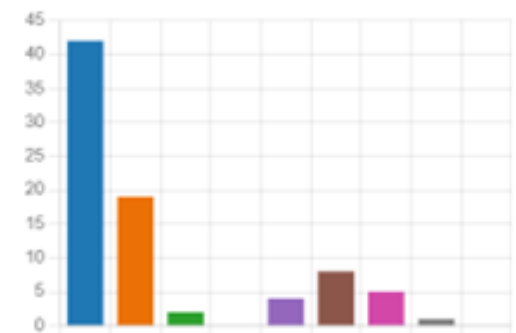
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## 14. Next steps:

[More Details](#)

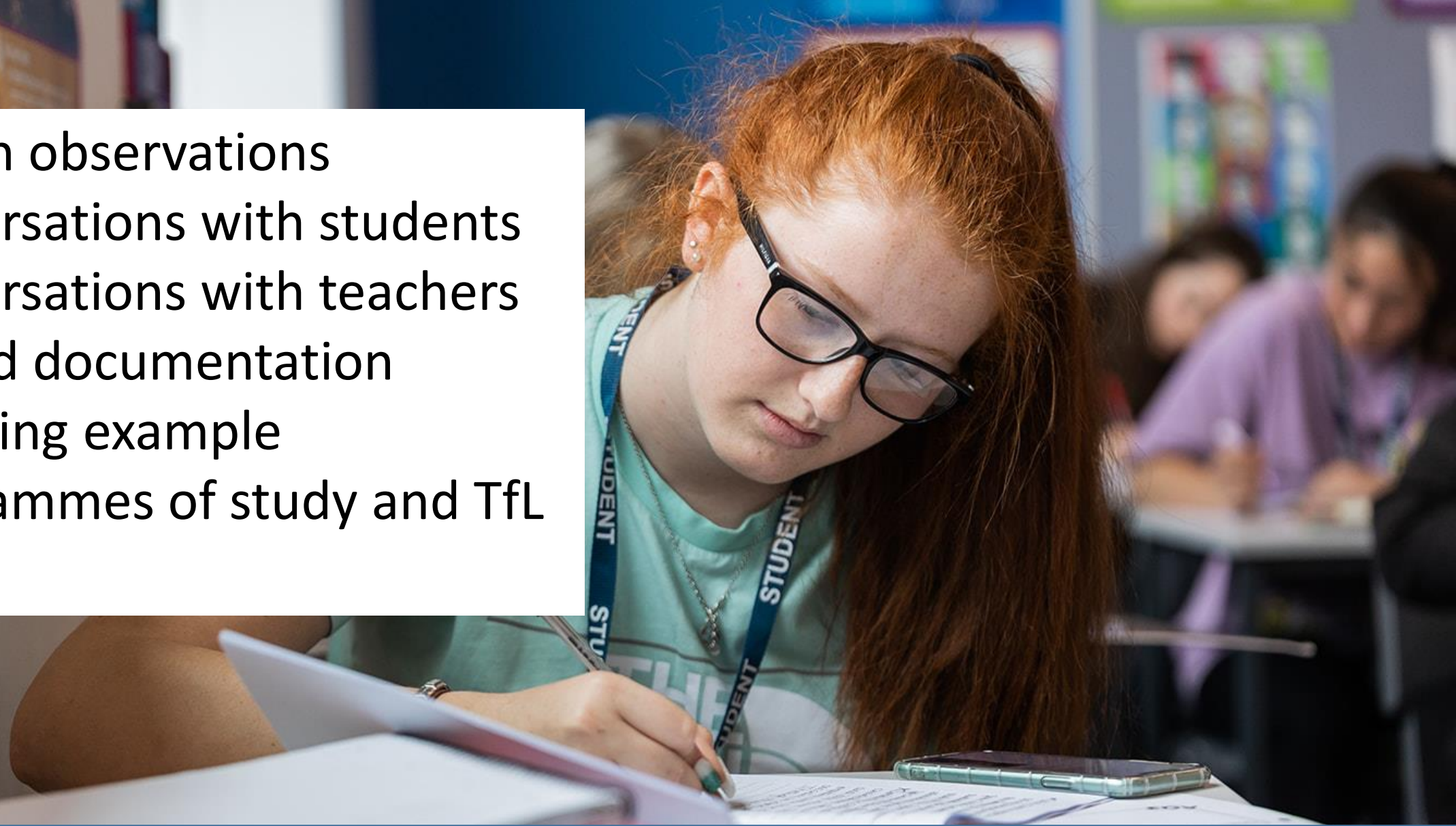
share good practice	42
Tfl discussion with the teacher	19
Tfl CPD needs discussion	2
external CPD identified	0
learning walks	4
peer observation	8
re-observation	5
Tfl action plan	1
other	0



• How do we monitor and evaluate the efficacy and consistency of our approach?



- Lesson observations
- Conversations with students
- Conversations with teachers
- Shared documentation including example programmes of study and TfL policy



- **How did the inspection team gather evidence on this area?**

A blurred background image of a person with dark hair and glasses, wearing a dark shirt, sitting in a classroom or meeting room. There are posters on the wall behind them.


### Portal upload:

- SAR and QUIP
- Teaching for learning policy

### During lessons visits and meetings:

- Programmes of study
- Assessment and feedback schedule
- Assessment wrappers
- Examples of DIL(directed independent learning) tasks to exemplify CPR approach
- Revision campaign materials
- Student communication schedule
- Tutorial programme
- Study advice booklet
- Study cycle poster
- OPTIC posters (employability skills)
- SPOC (student voice) questions and summary of responses
- Parental and student surveys
- Student folders-in lessons and work scrutiny

What information did we provide?

- 
- Lesson visits
  - Student interviews
  - Teaching staff conversations
  - Middle and senior leadership meetings
  - Tutor team conversations
  - Folder and feedback reviews
  - CEDAR reviews
  - Paperwork reviews
  - Student and parent survey

What activities did inspectors undertake?

### LEARNING CULTURE

- What does it feel like to be a student at this college?
- Do your teachers have high expectations of you?
- Has the course got harder? How have you been prepared for this?
- Do you have to think hard in here? Is that the same in your other subjects?
- Are you becoming a better learner at college? How?
- Do you feel ready to study at university? How has college helped with this?

### SUPPORT

- How do you know how well you are doing?
- Do you know how to improve?
- Are you set work to do outside of lessons?
- Do you receive feedback on this?
- Why are you attending TAP (teacher access period)? Is it helping?
- How did college help you make the transition between school and college?
- How were you supported during lockdown? What were lessons like? Do you feel you are behind because of it? How has this been addressed?
- Are you expected to self and peer assess? Do you know how to do this? Is it useful?

### CURRICULUM DESIGN

- How does this work build on what you have done previously?
- Can you make links between your subjects?
- How is this helping you learn/remember more?
- Do you review previous content?

What common questions did inspectors ask students?



**To staff:**

- How do you provide feedback to your students?
- How do you feedback on spelling and grammar?
- How do you assess student progress?
- How do you identify any learning gaps?
- How do you help students to remember more?
- How do you structure your curriculum? Why?
- How do you adapt your teaching for your SEND students?
- How do you decide what resources to use?
- What skills do students gain from this course?
- Do the students arrive with gaps in knowledge? How do you address this?
- How do you know the students have developed the knowledge/skills you wanted them to today?

**Key areas:**

- Planning and adaptations
- Feedback and support
- Knowledge and skills development

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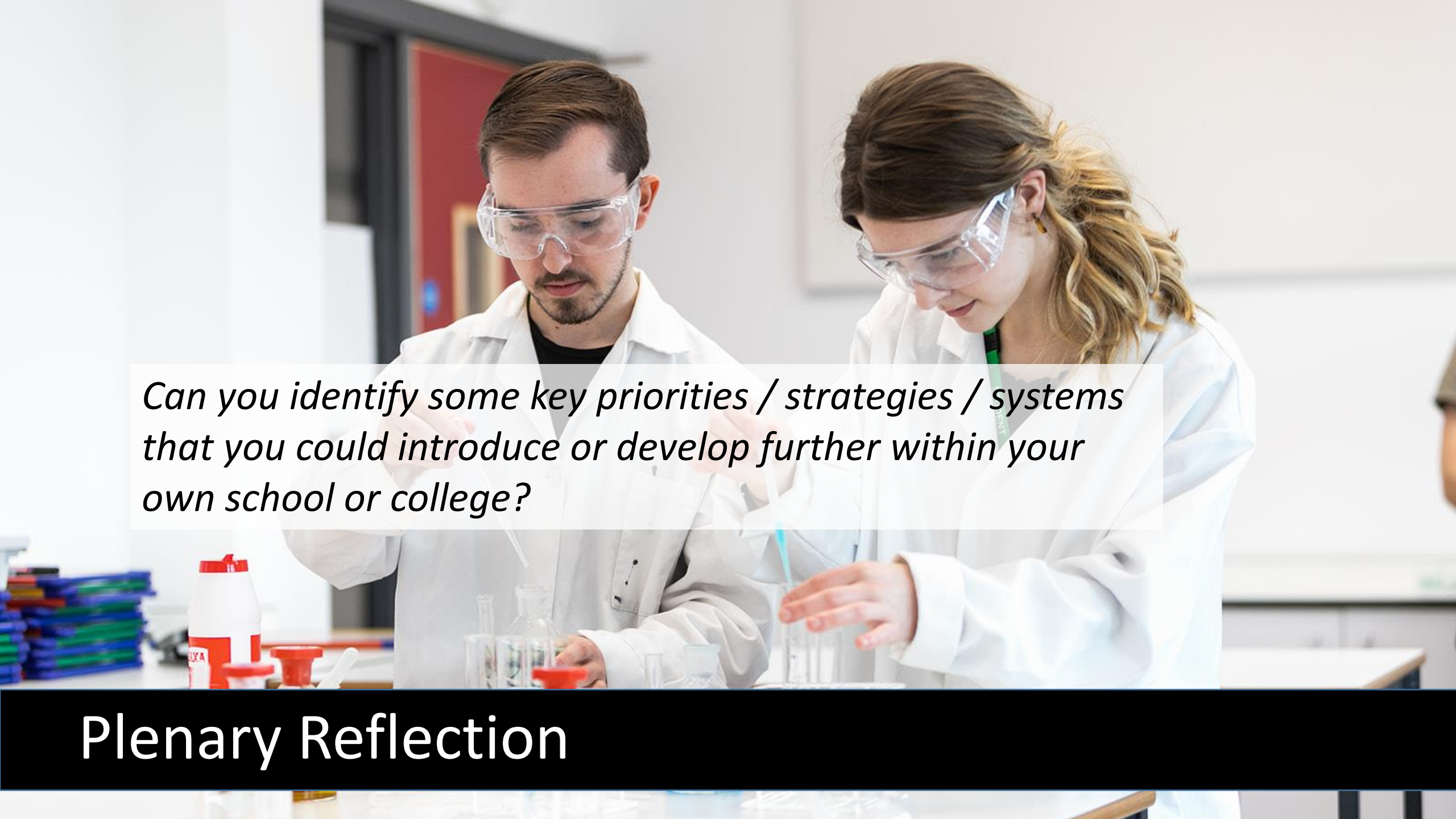
**To leaders:**

- What are the key teaching and learning priorities for the college? How are these communicated and monitored?
- How do you design your curriculum to develop knowledge and skills?
- What is the approach to learning outside of the classroom?
- How do you track achievement/underachievement?
- Are all groups of learners progressing equally in your area?
- Do you know where your strengths and weaknesses are?
- Give an example of how you respond to any gaps in progress?
- What role do middle leaders play in improving teaching and learning?
- How successful is the curriculum in your area?
- How do you make sure teachers have strong subject knowledge?

**Key areas:**

- Tracking of progress
- Consistency of approach
- Awareness of evidence-based pedagogy
- Subject knowledge

What common questions did inspectors ask leaders?

A photograph of two scientists, a man and a woman, working in a laboratory. They are both wearing white lab coats and clear safety goggles. The man is on the left, looking down at a piece of glassware. The woman is on the right, also looking down and holding a pipette. The background shows a typical lab setting with various pieces of equipment and a red door.

*Can you identify some key priorities / strategies / systems that you could introduce or develop further within your own school or college?*

**Plenary Reflection**