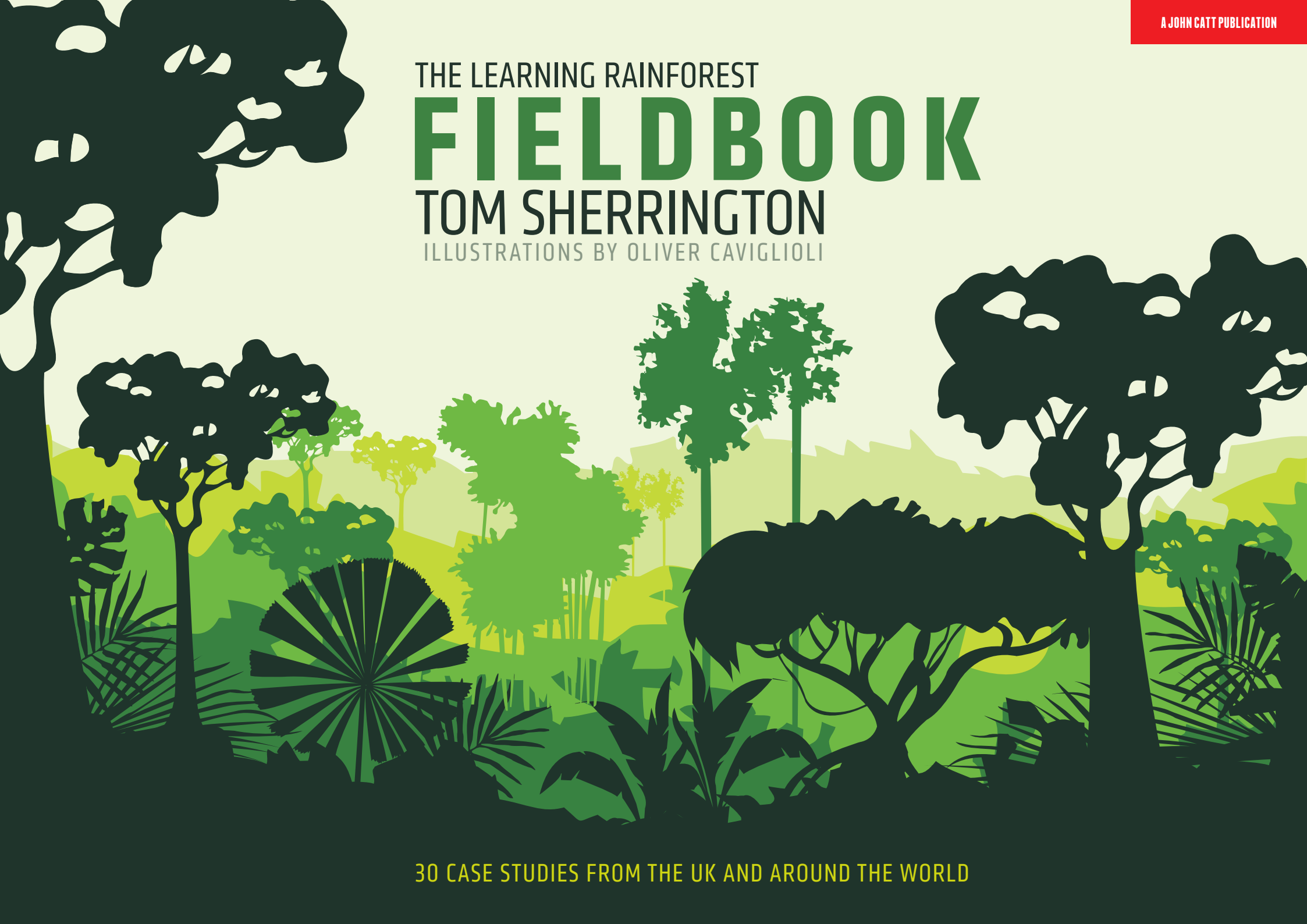


THE LEARNING RAINFOREST

FIELDBOOK

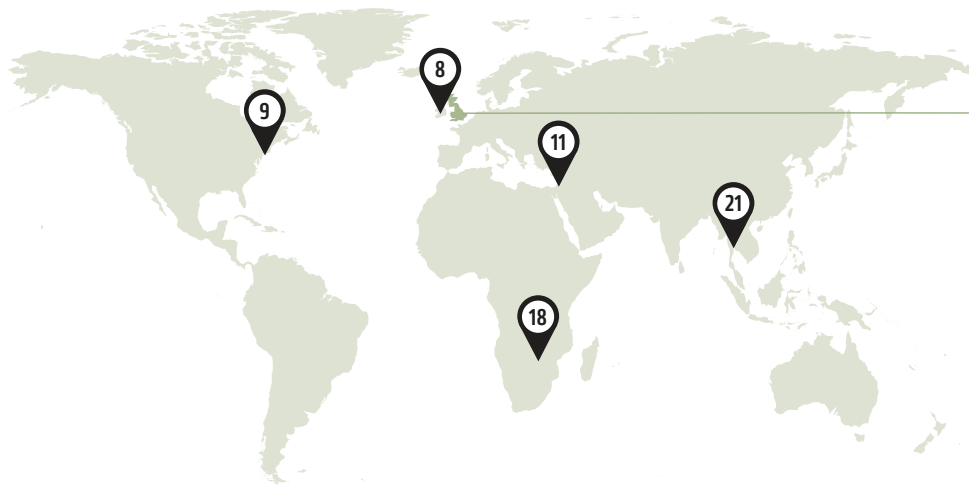
TOM SHERRINGTON

ILLUSTRATIONS BY OLIVER CAVIGLIOLI



30 CASE STUDIES FROM THE UK AND AROUND THE WORLD

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THE RISE SCHOOL, FELTHAM

INTRODUCTION

It meant a lot to me when, back in 2017, I was invited by Helen Ralston and her predecessor Sarah Roscoe, to visit The Rise School to work with their staff on assessment and feedback. It was early in my new career as a consultant, where my Learning Rainforest ideas were still taking shape and I was excited to be invited on the basis of some of the ideas I'd shared via my blog. In common with other schools in the *Fieldbook*, the school has had its fair share of challenging early wobbles – but is also now blessed with some amazing assets. As well as inspiring leaders – Helen's passion for her work never ceases to amaze me – they have impressive new buildings with the kind of specialist multi-sensory and soft-wall rooms and autism-specific equipment that mainstream schools just don't have. The staff are fabulous – and it's no easy task to assemble a team of people with the necessary subject specialisms to deliver a broad secondary curriculum as well as the dispositions needed to thrive in a special school context where classes are very small and students' learning needs are so complex.

(I'm thrilled to hear that Matt Pinkett, co-author of *Boys Don't Try?*, Twitter's @positivteacha, has joined the team.)

I've visited a couple of times now and as a mainstream teacher nearly my entire career, I found it eye-opening to see how I could find a class of five or six Year 8 students studying science or English, each with very individual autism characteristics that would not be remotely discernable to a casual observer. Teachers' knowledge of their students is so subtle. I was fascinated by the range of techniques deployed including, for example, 'deep touch pressure vests' that some students wear very tightly to reduce their anxiety levels.

The discussions I've had with Helen have been wide-ranging – something she alludes to in her case study introduction. The Rise

is 'Rainforesty' through and through. However, I'm very pleased she elected to focus on assessment because it's an area that a lot of schools are currently wrestling with and the Rise perspective throws light onto some complex ideas in a very interesting way. If you have a small cohort-school, where each class and year group has students with a wide range of learning needs and where expectations around following a mainstream curriculum are high, how do you begin to define 'success', 'excellence', 'progress'? There is no neatly solid set of standards to compare with and yet these students are entitled to be taught in a way such that allows them – and their parents – to understand what the standards are, where aspirations are high and challenges are authentic – just like anyone else.

I love Helen's account – blending her leadership thinking with the details around her assessment thinking in her typical reflective and research-informed style. Helen is one of the most well-read school leaders I've met as has been evident in our discussions. 'Ambitious about Autism' is a great name for the trust that The Rise belongs to and I think that comes through loud and clear in the case study.

PROFILE

Location: Feltham, West London

Type of Institution: SEND school for pupils with an EHCP for Autism

Roll/Age Range: 100, aged 4–18

Year Founded: 2014

Motto: 'Be Proud, Be Kind, Be Resilient'

Recent significant sports event/triumph: Carnegie Mental Health – Gold Award



Helen Ralston
Head of The Rise School

The Rise is a pretty unusual school occupying the middle space on a spectrum of provision between mainstream schools and our colleagues in SEND provisions who support young people with more complex or profound needs.

Opened in 2014, The Rise's vision is to deliver the national curriculum to age-expected outcomes and qualifications but within a highly specialist environment to allow pupils with autism to flourish and achieve. We place equal importance on achieving academic and social progress: balancing rigour alongside carving precious time in our curriculum for nine trips per year and lessons on mental health and wellbeing – a particular challenge for people with ASD.

PROFILE

We genuinely believe our school provides 'the best of both worlds!'

If you wandered around our school (and you should, we love visitors!) you would see classes of eight pupils accessing a curriculum you would recognise from mainstream: factorising brackets, analysing *An Inspector Calls* and doing practicals on force and extension in our Science lab. You might wander past a pupil who is taking a self-regulatory break outside the classroom. They might have a sensory toy or a timer. You might overhear a teaching assistant talking through a situation with a frustrated pupil, offering them the appropriate space to process their anger, perhaps our gym or rooftop garden with guinea pigs!

You would certainly witness calm and productive learning environments, The Rise has come on quite the journey to reach this point.

When it opened in 2014 the school faced a 'perfect storm' of challenges. This meant that the initial school development priority between 2015–2016 was to secure safe and respectful behaviour, alongside engaging lessons that pupils wanted to be in. By 2016, lessons as a distinct unit, were now successful. Therefore the focus shifted to joining individual lessons up into coherent terms and years and to begin to focus on assessment. Evaluation revealed that now pupils were experiencing highly successful 'years' but these weren't joining up across years – you might have a superb Year 5, but that wasn't built upon what you had learnt in Year 4, and it wasn't informing what you learnt in Year 6.

This is the point from which our case study is taken.



STUDENT: FINLEY

Age and Year Group: Year 8

Most recent:

School Trip: Clink Prison, London Bridge

Extra-curricular activity: Football and Board games

Science experiment: Balance and Forces

Book/Play studied in English Literature: *A Midsummer Night's Dream*

Arts project: We have been thinking 3D Paper Mache sculpture of food. My group made a large burger with multiple layers that we then painted it to make it look like our design.

Learning:

Subjects Studied: English, Maths, Science, Computing, Weaving Wellbeing, Citizenship, Yoga, PE, Food Tech, Music, Art, Swimming

Recent learning highlight: A recent learning highlight has been basketball in PE because I really enjoy playing basketball. I have good dribbling skills and enjoy working on improving my shooting.
The most stand-out/interesting/challenging topic you've studied at school: I really enjoyed learning about hockey because I'm good at hockey. I am able to control the ball well with the hockey stick and have a good understanding of team play and how to support my team-mates.

One of my favourite teachers: I enjoy lessons with Holger who teaches me Science because Science is one of my strengths.

A favourite feature of the school: One of my favourite things about The Rise is Golden Time (P6 on a Friday) where you get 45 minutes of free choice, if you've completed your homework.



STUDENT: JOJO (JONATHAN)

Age and Year Group: Year 6

Most recent:

School Trip: The last trip I went on was to Windsor Swimming Pool which was great. We also go to Crane Park to learn about nature and conservation every week.

Extra-curricular activity: On Mondays I go to cooking club.

Science experiment: We used light boxes to measure the angles of incidence and reflection.

Book/Play studied in English Literature: In English we have been doing story writing which was fun. We have recently read *Gangsta Granny* by David Walliams and *Hatchet* by Gary Paulse.

History topic: We are learning about the Ice Age.

Arts project: We are learning about the elements of art and different artists such as Picasso and Van Gough.

Learning:

Subjects Studied: English, Maths, Science, Computing, Weaving Wellbeing, PSHE, Yoga, Topic, PE, Music, Art, Swimming

Recent learning highlight: A recent piece of learning that I have really enjoyed was Maths 'Fluent in Five' which is where you need to use different techniques at the start of the lesson.

The most stand-out/interesting/challenging topic you've studied at school: I have really enjoyed learning at Crane Park and learning about the London Wildlife Trust.

One of my favourite teachers: I enjoy learning with Lee, Philly and Adam who are very kind.

A favourite feature of the school: My favourite thing about The Rise school is our school pets (guinea pigs Ginger and Spice) and having friends.



I love my school because I have kind friends and don't get bullied anymore.

ELLIE





STUDENT: ELLIE

Age and Year Group: 8, Year 4

Most recent:

School Trip: Science museum – it’s so fun there

Extra-curricular activity: Cooking and Robots

Science experiment: I made elephant toothpaste

Book/Play studied in English Literature: *The Phantom Tollbooth*

History topic: The battle of Hastings

Arts project: I decorated a picture frame using pasta

Learning:

Subjects Studied: English, Maths, Science, Computing, Weaving Wellbeing, PSHE, Yoga, Topic, PE, Music, Art, Swimming

Recent learning highlight: Looking at the evolution of Mickey Mouse in animation.

The most stand-out/interesting/challenging topic you’ve studied at school: I really enjoyed learning about the Ancient Greeks in topic.

One of my favourite teachers: Sam and Lee because they have the best lessons and are super kind.

A favourite feature of the school: The playground is my favourite place to be at school.



CASE STUDY: AUTHENTIC ASSESSMENT: NOT FORCING SQUARE PEGS INTO ROUND HOLES

Title: Authentic assessment: not forcing square pegs into round holes

General Area: Assessment

Author: **Helen Ralston**, Head of The Rise School

The Learning Rainforest at The Rise

A significant number of Rainforest themes permeate our thinking and subsequent curriculum and assessment model. I could have written a case study on a range of Rainforestry aspects:

- How we went about selecting the content for the intended curriculum – a stimulating but also potentially overwhelming process
- The template we designed in order to capture C15: Specifying the Content
- How we’re implementing K16: Teaching for Memory at The Rise
- The process of ‘Establishing the Conditions’ and ‘Building the Knowledge’ for the staff – the CPD process that has underpinned the entire rebuild

However, the area I wish to explore in greater depth is the issue of authentic assessment: how to allow different subjects to execute formative and summative assessment in ways that respect their unique disciplines but share a common understanding of the evidence; to as Tom puts it, generate ‘feedback in the form most useful for a particular discipline, whatever that looks like’ (p131).

Previous Assessment Procedures at The Rise

As explained above, and by no means a problem unique to The Rise, we realised that there was a lack of coherence between years in terms of the curriculum content we were delivering. This was matched by a fairly haphazard approach to assessment with teachers designing their own assessments to cover the material they had chosen to deliver over the previous half-term.

Authentic Assessment: The Rise’s Journey

To address this, we made it a priority in our school development plan with these targets:

- The curriculum will provide clear pathways from KS1-KS4, enabling access to KS5 opportunities.
- Assessment will be purposeful, and skilfully used as, and to inform, learning opportunities at The Rise.

I engaged in a sustained research phase in order to ensure the model that would be created was ‘evidence-informed.’ The process for sharing with, and engaging, staff is detailed below.

CPD: A Tight Approach

Having pulled my thoughts into a model that approached clarity, I planned to launch it with the teachers on three separate ‘Teacher Away Days’ in March, May and June 2018. These days were a vital component in the rebuild process to ensure that staff had a common, rich CPD basis for this rebuild with time between sessions to complete follow up work and thinking.

A risk was that over the months of research, I had gradually come to an understanding of a range of concepts, ideas, terminology but that I may now ‘blitz’ the staff. Therefore, in February 2018 I began to drip feed short extracts from Dylan Wiliam, Daisy Christodoulou, Peps Mccrea, Andrew Percival, Carl Hendrick and Robin Macpherson – never more than a page or two. I modelled some of the key principles such as ‘retrieval practice’ by setting up low stakes formative quizzes for the teachers on the readings.

The table below summarises the Away Days and the content covered, most detail below is given to Away Day 3 which focused on assessment.

February 2018 onwards	Drip feed key readings with the purpose of familiarising staff with key concepts and terminology that would be explored in greater depth during the teacher away days.
March 2018	Teacher Away Day 1 AM – Share the rationale for why we needed to create a centralised curriculum spine. PM – Work on developing the long term plans for each subject.
May 2018	Teacher Away Day 2 AM – Share, justify and evaluate the long term plans created. AM – Share the rationale for the curriculum overview template that act as medium term plans that specify the key content for each unit. PM – Work on creating the curriculum overview templates.

CASE STUDY: AUTHENTIC ASSESSMENT: NOT FORCING SQUARE PEGS INTO ROUND HOLES

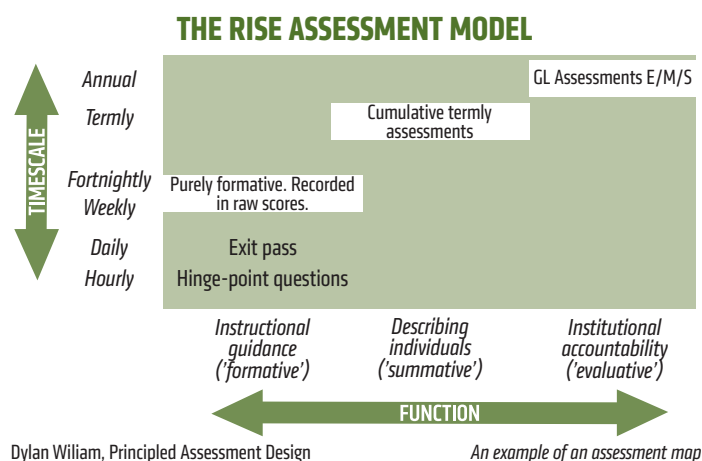
June 2018	<p>Teacher Away Day 3</p> <p>AM – Share the rationale and evidence behind our assessment model, engage in CPD on assessment pillars: purpose, validity, reliability and value.</p> <p>PM – Work on creating formative and summative assessments for Autumn 2018 term.</p>
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CPD: Tight Principles

We began the third teacher Away Day by reading James Pembroke's *Tes* article 'Don't Drown in Data' – essential reading in my opinion. Pembroke's succinctly analyses assessment's place in the educational landscape between 1988 and current day: 'taking into consideration that schools had, since 1988, always been given a methodology of assessment [levels] and thus had no expertise in creating new assessment systems, was it any surprise that [once this methodology was removed] the assessment tools created were so often not fit for purpose?'

This provided a reassuring, non-judgemental platform from which I proposed that we would need to both re-think our assessment practices and engage in assessment-oriented CPD.

The Rise's approach to assessment is summarised in this diagram, which is 'on top' of a helpful diagram in Wiliam's Principled Assessment Design pamphlet:



There were some aspects of 're-thinking' that I had done in the creation of the above model. Therefore, I relatively quickly shared these changes and the rationale:

- We were ditching objective based tracking
- We were ditching the use of descriptors that are overlaid on top of raw performance such as 'beginning, developing, secure, extended'
- We weren't going to use a flight-path model

A central principle underpinning our new model was the deliberate divorce of summative and formative assessment products. Christodoulou argues hugely persuasively that by trying to get one assessment product to generate a useful formative consequence and a useful, reliable summative consequence it does neither well. Staff spent time on the Away Day reading extracts from *Making Good Progress*.

Furthermore, we spent time broadening our understanding of the functions of formative assessment:

1. To check something has been learnt/understood correctly in the first place
2. To prevent it from being forgotten over time
3. To become increasingly fluent/automatic in the execution of this piece of knowledge or skill

This third function links to another valuable point made by Christodoulou: getting pupils to repeatedly produce the complex 'end product' (mock-paperitis!) is not necessarily the most helpful form of practice in order to help them progress. Formative assessment can lend itself well to deliberate practice whereas summative assessments are more appropriately *generic* practice. Nick Wells summarises this clearly: 'There are, therefore, times when we need to drill our students in the really granular elements

of our subjects to be able to provide them with high impact, immediate feedback, and I believe, times when we need to allow them to play something more akin to the full match.'

Having unshackled formative and summative assessment, but understanding the burden that a summative assessment now shoulders (to produce a shared meaning across multiple contexts and audiences) then it is necessary our summative assessments are up to the job.

This meant introducing the team to the 'four pillars of effective assessment:' purpose, value, validity and reliability.

Three middle leaders had undertaken the Assessment Lead online CPD programme from Evidence Based Education over the course of 2017–2018 and therefore selected key messages to share with the wider teaching team.

In terms of improving our design of summative assessments, they zoomed in on the pillars of purpose and validity.

With regards to the latter, my colleague introduced the team to new learning on the concepts of 'construct irrelevant variance' and 'construct underrepresentation' – both of which put the validity of the inference you're trying to draw from the assessment at risk:

- Construct irrelevance is when the test assesses things that are not relevant to the construct – and example would be where overly wordy questions are hindering pupils from demonstrating their ability on the maths construct that you're intending to assess and draw inferences about.
- Construct underrepresentation is where the test is not assessing a wide enough range of the construct – this is why GCSEs are often conducted over multiple papers... six for the new combined Science!



CASE STUDY: AUTHENTIC ASSESSMENT: NOT FORCING SQUARE PEGS INTO ROUND HOLES

The teachers were given this checklist to aid the design of more robust summative assessments:

ASSESSMENT VALIDITY CHECKLIST:

1. Identify and write down the purpose/the end use of this assessment.
2. List the constructs/outcomes to be included in the assessment.
3. Decide the best tool:
 - 3.1 Identify if you're using a difficulty or quality model of assessment (or a mixture).
 - 3.2 Identify potential activities/questions for the construct you're assessing which are able to effectively measure a pupil's ability.
 - 3.3 Review the validity of your assessment by checking the above for construct irrelevance – is there anything that would distract/obscure their performance?
 - 3.4 Structure your assessment to capture a pupil's ability through a reasonable and ethical assessment with a balance of low and high order questions/accessible open wording for essay questions.

The afternoon, as well as subsequent directed meeting time, was dedicated to creating relevant formative and summative assessments.

Subject-specific execution: a loose approach

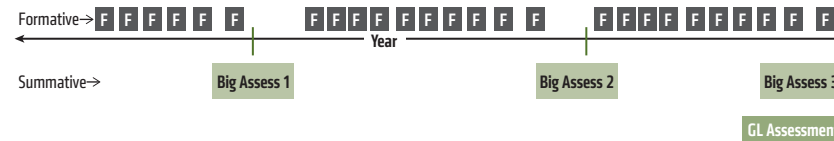
A generous allocation of tightly designed CPD time had generated shared understanding of the fundamentals of effective assessment. Whilst, of course, this would need to be revisited and deepened over time, I was pleased with the confidence with which staff were now talking about assessment and raring to apply it.

This stage was the danger zone – the moment when as a school leader I needed to stare down my (quite normal I think) urge for 'consistency' and allow teachers the space to apply the principles in a way that respected their subjects. It's clearly ridiculous to think that authentic, useful assessment will look the same in Art, History and Food Tech. It's clearly a source of frustration to be stifled by a system that is clearly incongruent with the core business of your subject... but nevertheless the school leader's thirst for consistency can be insatiable.

I remained steadfastly flexible and was subsequently pleased with how our different subject leads have created assessment models that are each different, but each clearly exhibiting an understanding of the principles we had covered in our training.

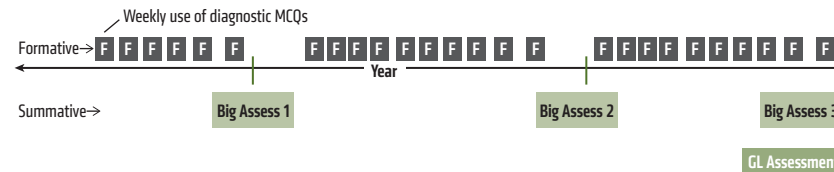
I take five different subjects as examples below. Please note that this 'formalised' formative assessment is, of course, in addition to the wealth of ongoing, organic formative assessment that you would expect to see in any classroom via questioning, instant feedback etc.

ENGLISH/HISTORY ASSESSMENT MODEL



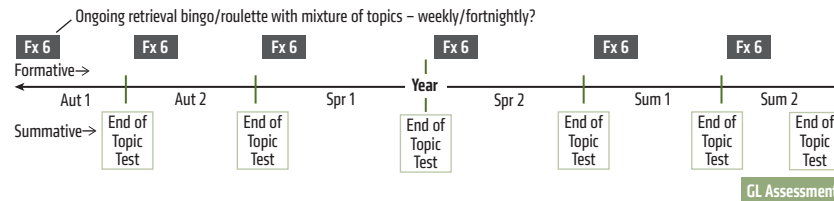
English and History – both subjects that assess with a qualitative model – have adopted a largely similar approach: weekly/fortnightly formative assessment that can take any format in order to generate genuinely useful, diagnostic information; summative assessments that are termly, each covering a larger domain of material so that they are cumulative. The assessment year concludes with a standardised assessment from GL which will allow us to do some benchmarking of our small, SEND cohorts against national age-related performance.

MATHS ASSESSMENT MODEL



Maths differs from English in their formative use of Craig Barton's incredible diagnostic multiple choice questions every week. Equally, the design of their summative assessment will use the difficulty model.

SCIENCE ASSESSMENT MODEL



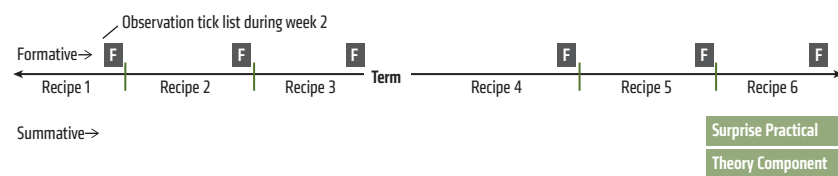
Assessment doesn't look consistent across each subject. What is consistent is the understanding of the evidence underpinning each subject's assessment decisions.

HELEN RALSTON

CASE STUDY: AUTHENTIC ASSESSMENT: NOT FORCING SQUARE PEGS INTO ROUND HOLES

I was originally uneasy about Science's use of 'end of topic' tests which I felt could provide the unhelpful *illusion* of long term learning because pupils performed well in a test immediately after having spent 5–6 weeks on that material. However, they have pre-planned weekly retrieval practice using a combination of Adam Boxer's retrieval roulette and Kate Jones's retrieval grids. Therefore they are mitigating against pupils forgetting material over the long term in their formative, rather than summative, assessments.

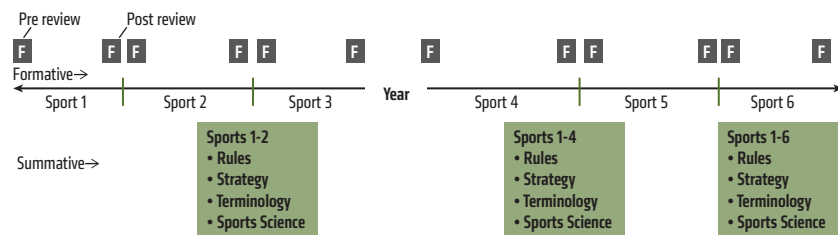
FOOD TECH ASSESSMENT MODEL



Over the course of a full term, pupils study 5–6 recipes spending two weeks on each recipe. Therefore the formative assessment is an ongoing observation ticklist that is used during the second week as pupils more independently execute the recipe. Carefully sequenced recipes allow pupils to revisit and consolidate similar concepts and skills.

The termly summative assessment has two components: a theory component and also a 'surprise practical' in which the teacher will select any of the previous recipes covered to be independently produced.

PE ASSESSMENT MODEL



Each half-term there is a different focus sport. The formative assessment takes place through a pre and post review of pupils' competency at a range of sport specific components, knowledge and skills.

The summative assessment is paper based and covers rules, strategy, terminology and sports science questions. Each term it grows to become cumulative with questions on all preceding terms.

To conclude, assessment doesn't look consistent across each subject. What is consistent is the understanding of the evidence underpinning each subject's assessment decisions – the very act of creating these subject specific models demonstrates this. And that, for me, is enough. More than enough.

This approach to assessment isn't perfect; the more you open the Pandora's box of assessment the more you realise that perfection isn't an attainable goal. It's easy to be daunted by the complexity of the task and find yourself wishing for the good ol' days where you uncritically used the national curriculum levels. However, what I do know is that The Rise teachers are more thoughtfully, purposefully and skilfully using assessment to support pupils' learning. I do know that we're spending less time on the 'data decisions' (guess work!) that serve the needs of stakeholders beyond teachers; for parents and governors, we're keeping the time cost-benefit firmly in mind and being honest about what we can and can't infer from our data.

We will spend the next few *years* (at least) regularly refining our decisions about curriculum content and assessment; it's a long journey and we've only just begun – but it feels like the right direction of travel.

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1. Memorable Teaching – Peps Mccrea
2. Why Educate – Dylan Wiliam
3. Assessment Validity and Reliability
4. Memories are Made of This – Dylan Wiliam
5. Confessions of a Curriculum Leader – Andrew Percival
6. Extract from Memory & Recall Chapter of What does This Look Like in the Classroom – Carl Hendrick & Robin Macpherson.

Link to Learning Rainforest:

Chapter 5 – Assessment

THE LEARNING RAINFOREST FIELDBOOK

Tom Sherrington's 2017 book *The Learning Rainforest* won rave reviews for its brilliant weaving of research evidence into a powerful vision of how education can transform lives, even in the most challenging settings. In this follow-up book, Tom explores how these ideas take shape in the real world of education, referencing the journeys that a range of schools and colleges have been on in recent years.

15% of revenue from the sales of *The Learning Rainforest Fieldbook* will go to St Stithians Thandulwazi Maths and Science programme, created in 2005 to improve the quality of Maths and Science teaching and learning in public high schools. The money raised will have a direct impact on the education of a great many children in Johannesburg.



I love teaching; I love being a teacher; I love working in schools. It's the relationship between a love of teaching and the quest for great teaching that informs a lot of what I hope to convey through the idea of the Learning Rainforest.



By the end of this year I will have visited well over 200 schools, travelled to the many corners of the UK and the Channel Islands, and delivered training in 20 countries. It's been an incredible experience. I feel that I have been on a global adventure – I've seen the Learning Rainforest made real.

£16

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