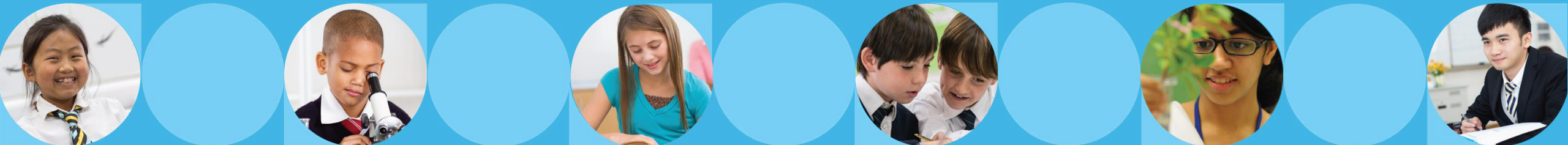


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Seeing the bigger picture: A holistic framework of teacher insights into educational success

Suzanne Crocker, Assessment Products Integration Manager, International Education
Dr Justin Coy, Head of Assessment Strategy North America

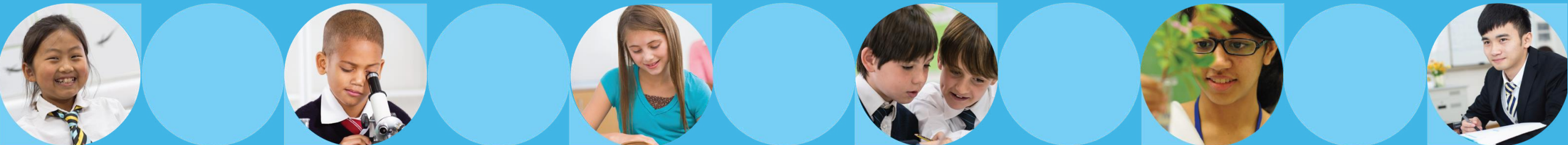
23 June 2023



Today's session

- ▶ A teacher-friendly, evidence-based framework of five interacting areas of teacher insight into students' education journeys.
- ▶ How to identify gaps and overlaps within schools' assessment approaches.
- ▶ Focus on students' needs and the important role holistic education plays in educational success.
- ▶ Supporting resources and easily accessible tools to create a positive learning environment in school

Holistic education and a new framework for understanding insights from different assessments



What does educational success look like?

Qualifications and certificates

Progression to next level of education or employment

High wellbeing
(feeling well and functioning well)

Life competencies/
21st century skills

A good citizen

A holistic view of educational success

Educational success can mean different things in different schools

- ▶ Each school is unique, serving a different community, embedded within different local and national cultures and legal frameworks.



Two key questions for schools

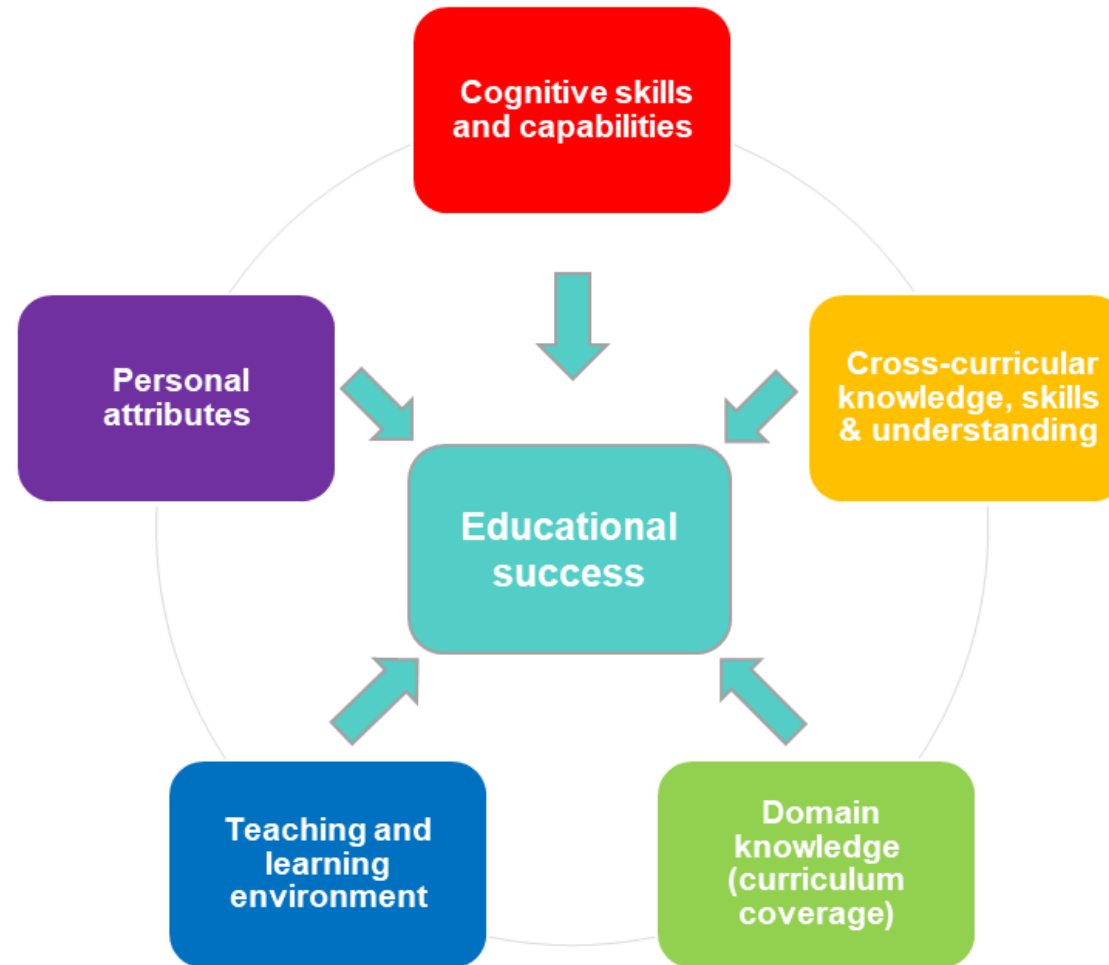
1. What do different types of assessment and evaluation do and how do they fit together

Is there any unhelpful overlap? Where are the gaps?

2. How can we combine and use assessment data and other teacher insights effectively to maximize teaching and learning?



Our framework of five areas of teacher insight



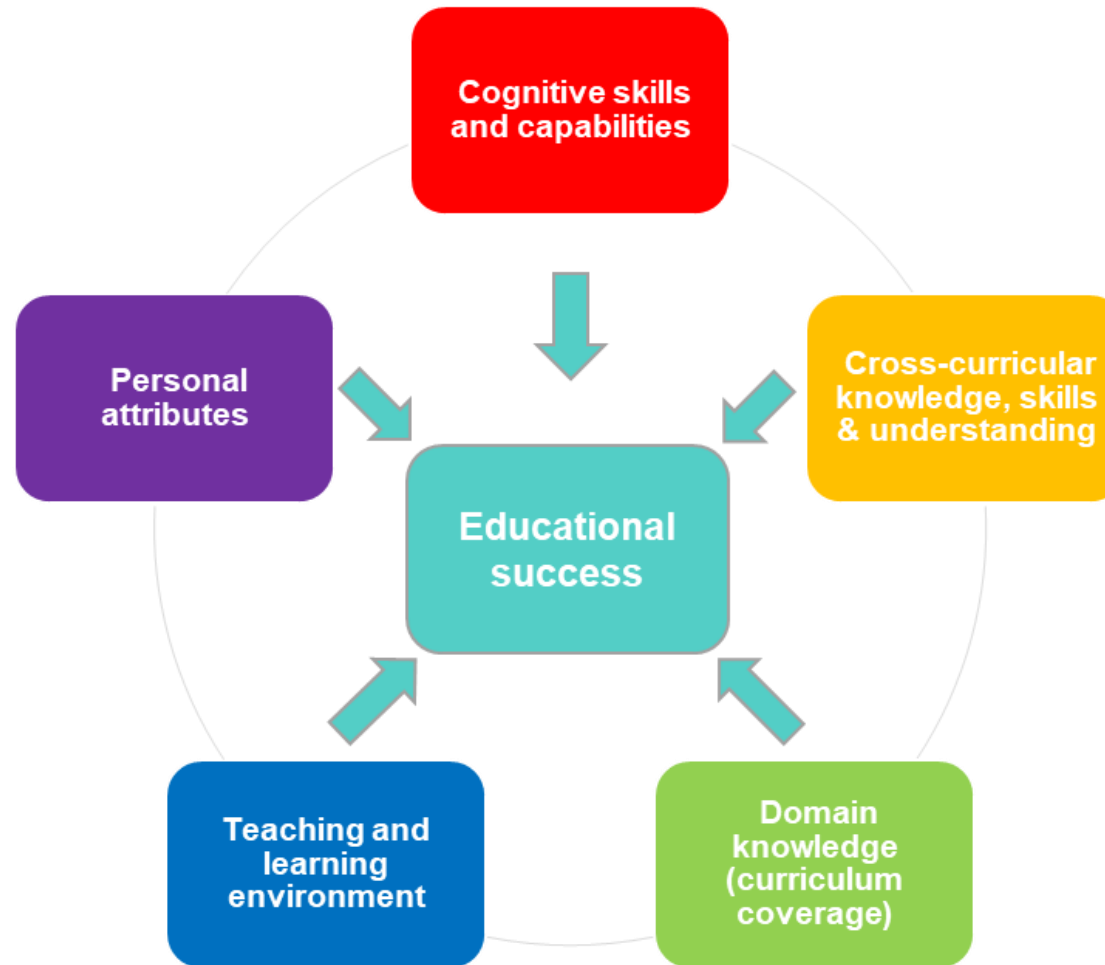
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Our framework of five areas of teacher insight

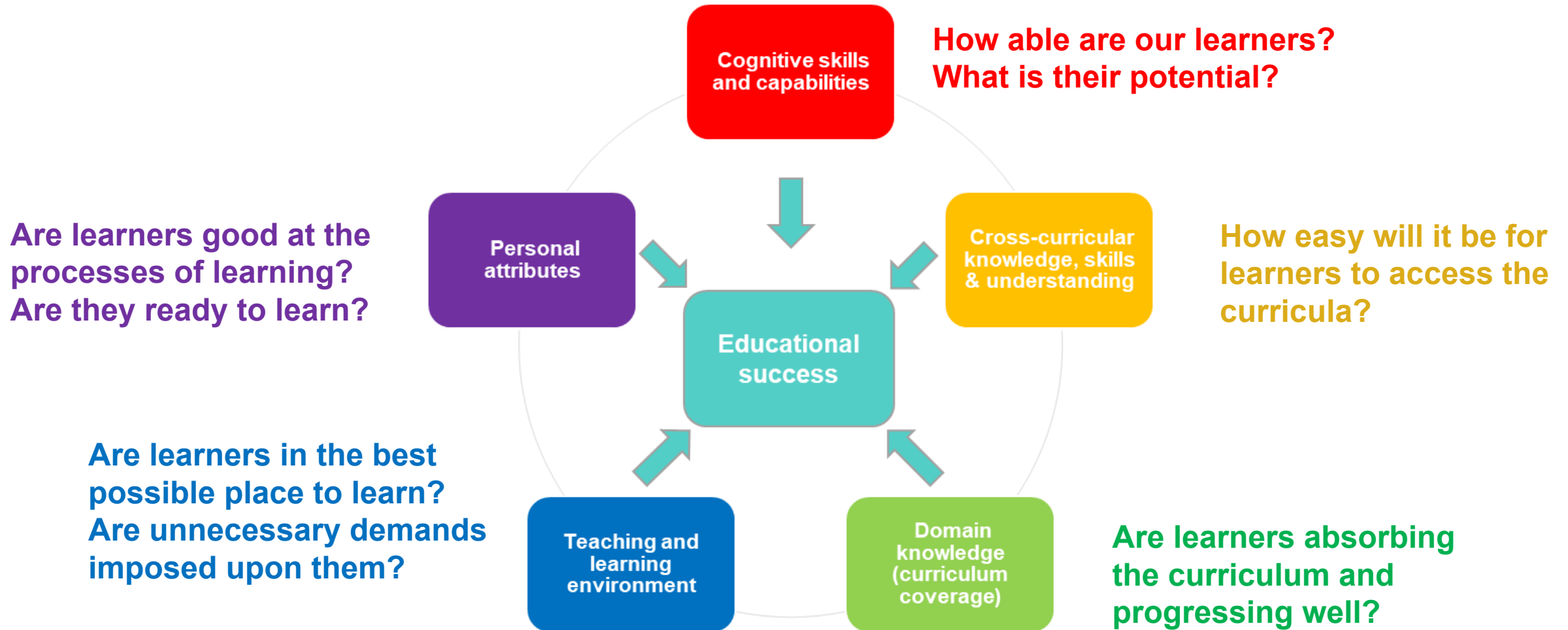
Almost all assessments, evaluations, and teaching resources can be understood in terms of these five areas



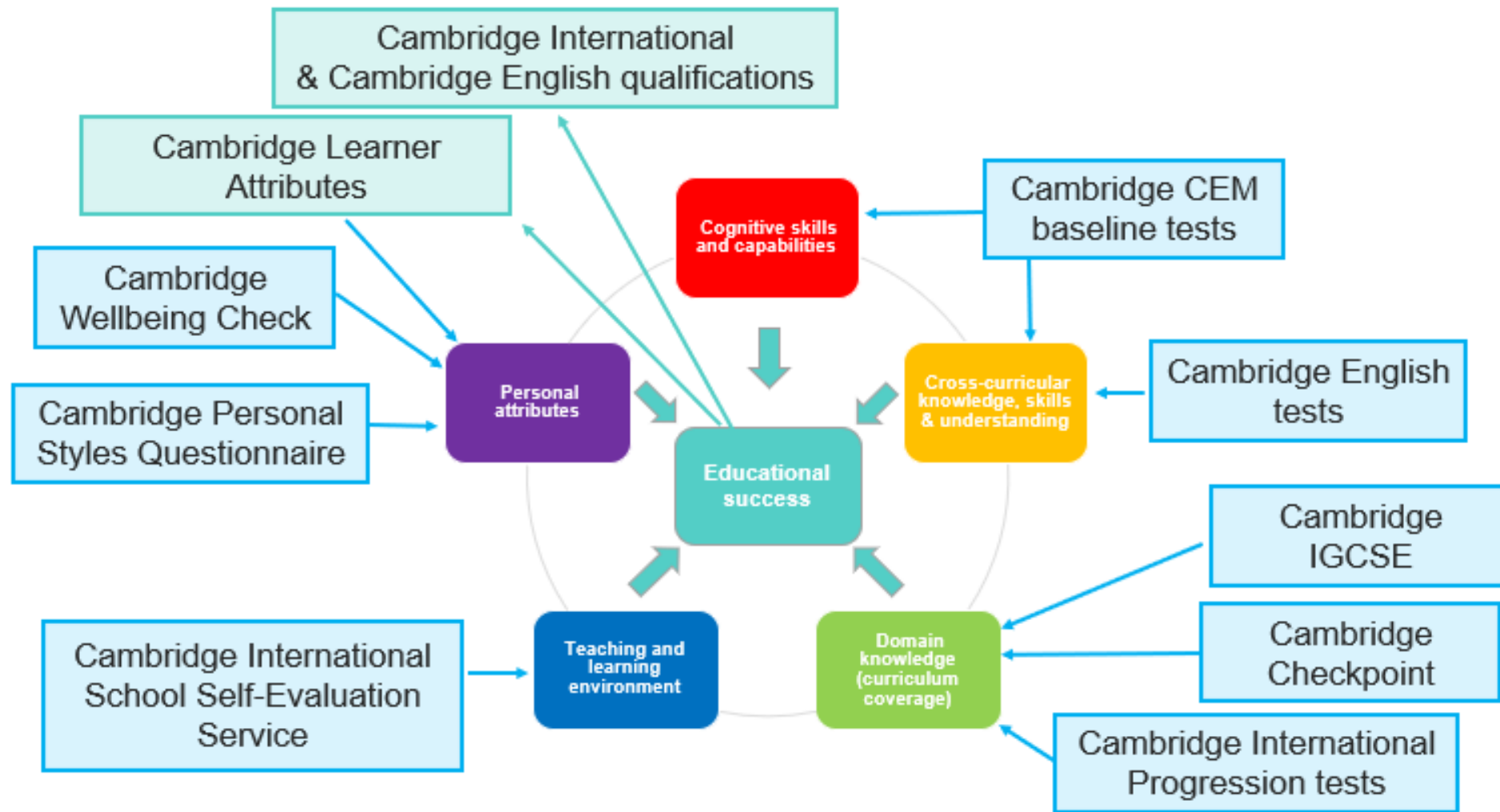
There are many interactions among the areas of insight.

This is an organizing framework to help teachers to make informed decisions around assessment.

Our framework of five areas of teacher insight



Where do assessments from around Cambridge fit within the framework?

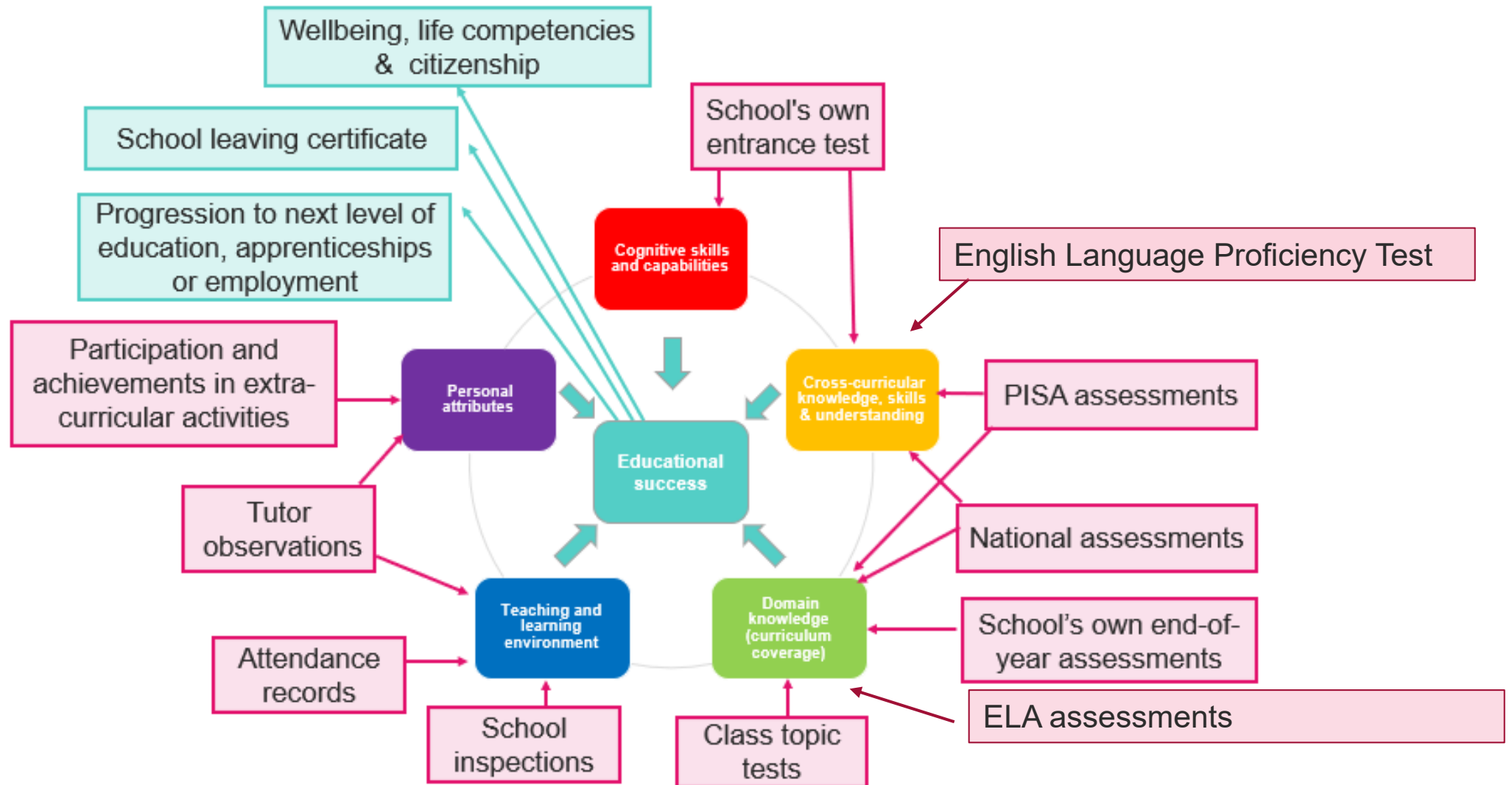


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Looking beyond assessments from CambridgeTest



Cognitive skills and capabilities

- ▶ **How able are our learners? What is their potential?**
- ▶ Often assessed near the start of the school year
- ▶ Include non-verbal reasoning and some types of verbal reasoning
- ▶ "Curriculum free" – not usually taught in school lessons
- ▶ Tend to be stable over time and very difficult to teach
- ▶ Predict later performance in Maths, Sciences, Design & Technology, Geography, Art and Drama
- ▶ Useful in understanding the ability of students with English as an Additional Language (EAL)

Cambridge CEM
baseline tests

Cambridge Centre for Evaluation and Monitoring



Age 4-5

BASE



Age 5-11

CPI



Age 11-14

MidYIS



Age 14-16

Yellis



Age 16-18

Alis
CEM IBE

www.cem.org

Cambridge Centre for Evaluation and Monitoring: baseline & diagnostic tests

Planning &
focusing
teaching

Predictions &
target-setting

Identifying
under-
performing &
over-
performing
students


Evaluating
teaching
strategies

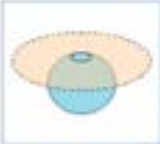










Example of a question

Cognitive skills
& capabilities

Select the shape from the right that has been cut to create this cross section.

Select 'NO MATCH' if the cross section does not have a matching shape.



		
		
		
		NO MATCH

Question 2 of 16 4:48 Back Next

Cross-curricular knowledge, skills and understanding

- ▶ How easy will it be for learners to access the curricula?
- ▶ Often assessed near the start of the school year
- ▶ Include core mathematical concepts, vocabulary and language comprehension
- ▶ May be taught within multiple subject curricula
- ▶ May also be taught/acquired outside lessons
- ▶ Strong predictors of performance in a wide range of school subjects

Cambridge CEM
baseline tests

Cambridge English
tests

Example of a Linguaskill Question

Cross-curricular
knowledge, skills
& understanding

You to check the tyres before you start on a long car journey.

must

should

ought

better

Domain knowledge (curriculum coverage)

- ▶ Are learners absorbing the curriculum and progressing well?
- ▶ Often assessed throughout the school year
- ▶ Another strong predictor of academic performance
- ▶ Can be assessed in many ways (formal/informal; external/internal)

Cambridge International
Progression tests

Cambridge
Checkpoint

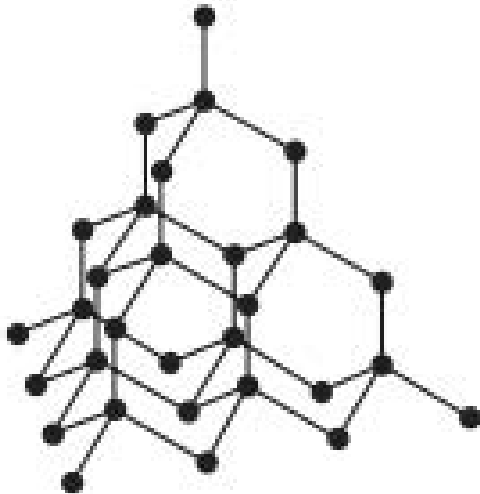
Cambridge
IGCSE

Example of a IGCSE Science question

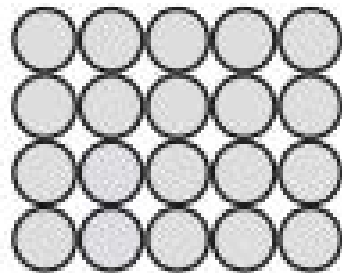
Domain
knowledge
(curriculum
coverage)

7 Which diagram shows the structure of an alloy?

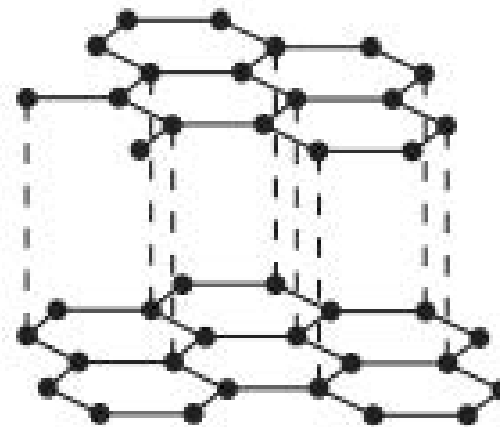
A



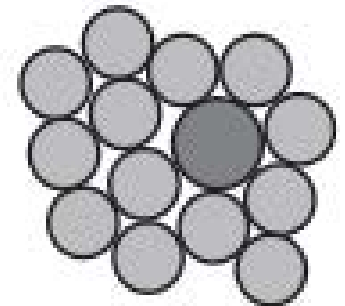
B



C



D



Example of a Checkpoint English Question

Domain
knowledge
(curriculum
coverage)

Part 1

Questions 1–8

Read the text below.

For each number **1–8**, circle the correct word on the next page.

Music

There are **...(0)...** types of music, and we **...(1)...** to them in different ways. Although we

3

Example

0

many

lots

much

loads

1

approach

change

affect

react

[1]

Teaching and learning environment

- ▶ Are learners in the best possible place to learn? Are unnecessary demands imposed upon them?
- ▶ A poor teaching and learning environment makes the task of processing information overly complex.
- ▶ We can reduce 'cognitive load' by removing obstacles to learning (e.g. disruptive classmates, outdated equipment, inadequate teaching methods).
- ▶ Note: this is **not** about reducing the demand of curriculum content ('dumbing down' lessons)

Cambridge International
School Self-Evaluation
Service

Reducing cognitive load, not curriculum content demand

Teaching &
learning
environment

Cognitive load theory

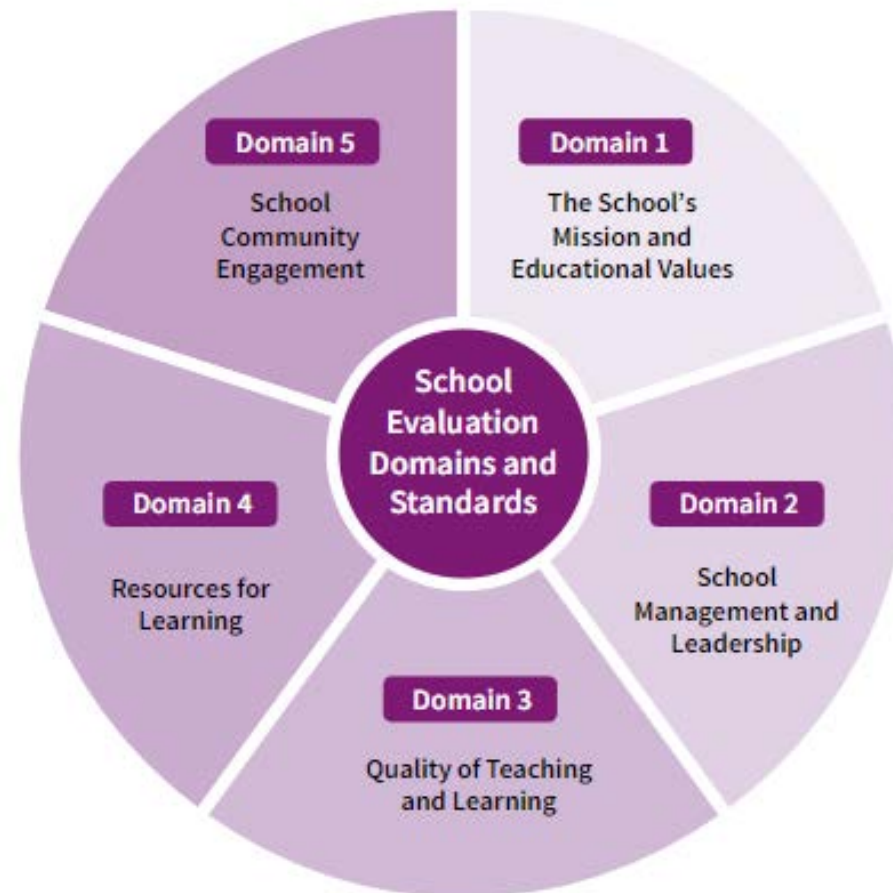
A poor teaching and learning environment makes the task of processing information overly complex.



There are lots of ways to think about the learner's environment, e.g. system level, school level, classroom, and home level factors.

School Self-Evaluation Domains and Standards

Teaching &
learning
environment



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Personal attributes

- ▶ Are learners good at the processes of learning? Are they ready to learn?
- ▶ Every learner possesses a unique combination of personal attributes beyond their cognitive ability, that help (or hinder) their learning
- ▶ Personal attributes include personality traits, 21st century skills, and mental wellbeing
- ▶ Can be long-lasting or temporary
- ▶ Not always easy to assess/evaluate

Cambridge Personal
Styles Questionnaire

Cambridge
Wellbeing Check

Cambridge Learner
Attributes

21st Century skills

Personal attributes

innovation

creativity

critical thinking

problem-solving skills

conscientiousness

concentration

Information literacy skills

learning relationships

citizenship

openness

agreeableness

self-reflection

articulacy

resilience

responsibility

mental fluency

synthesis

flexibility

honesty

motivation

studiousness

tolerance

pragmatism

confidence

oracy

Intellectual engagement

integrity

persistence

inventiveness

strategic awareness

inquisitiveness

responsiveness

- ▶ The rationale for focusing upon a particular combination could depend on school's unique context and culture and vision of holistic education.

Cambridge Learner Attributes

Personal attributes

Cambridge learners	Cambridge teachers
Confident in working with information and ideas – their own and those of others.	Confident in teaching their subject and engaging each student in learning.
Responsible for themselves, responsive to and respectful of others.	Responsible for themselves, responsive to and respectful of others.
Reflective as learners, developing their ability to learn.	Reflective as learners themselves, developing their practice.
Innovative and equipped for new and future challenges.	Innovative and equipped for new and future challenges.
Engaged intellectually and socially, ready to make a difference.	Engaged intellectually, professionally and socially, ready to make a difference.

Example questions

<https://www.cem.org/wellbeing>

Personal
attributes

When I am at school I feel happy

never

not often

sometimes

often

always

When I am at school I feel sad

never

not often

sometimes

often

always

Creating Cambridge Learner Profiles

Name	Cognitive skills & capabilities (CEM NVR)	Cross-curricular KSU (CEM Vocab)	Curriculum coverage (Class Biology test)	Teaching & learning environment (Parental engagement)	Personal attributes (Wellbeing)	Target IGCSE Biology Grade
Learner A (overachieving)	105	103	85%	Good parental engagement	High wellbeing	C
Learner B (achieving)	98	96	60%	Good parental engagement	Medium wellbeing	C/D
Learner C (underachieving)	133	127	64%	Medium parental engagement	Low wellbeing	A

Creating Cambridge Learner Profiles

Name	Cognitive skills & capabilities (CEM NVR)	Cross-curricular KSU (CEM Vocab)	Curriculum coverage (Class Biology test)	Teaching & learning environment (Parental engagement)	Personal attributes (Wellbeing)	Target IGCSE Biology grade – ON TRACK?
Learner A overachieving	105	103	85%	Good parental engagement	High wellbeing	C - Yes++
Learner B (achieving)	98	96	60%	Good parental engagement	Medium wellbeing	C/D - Yes
Learner C underachieving	133	127	64%	Medium parental engagement	Low wellbeing	A - No

Creating Cambridge Learner Profiles

Name	Cognitive skills & capabilities (CEM NVR)	Cross-curricular KSU (CEM Vocab)	Curriculum coverage (Class Biology test)	Teaching & learning environment (Parental engagement)	Personal attributes (Wellbeing)	Target IGCSE Biology grade – ON TRACK?
Learner A overachieving	105	103	85%	Good parental engagement	High wellbeing	C - Yes++
Learner B (achieving)	98	96	60%	Good parental engagement	Medium wellbeing	C/D - Yes
Learner C underachieving	133	127	64%	Medium parental engagement	Low wellbeing	

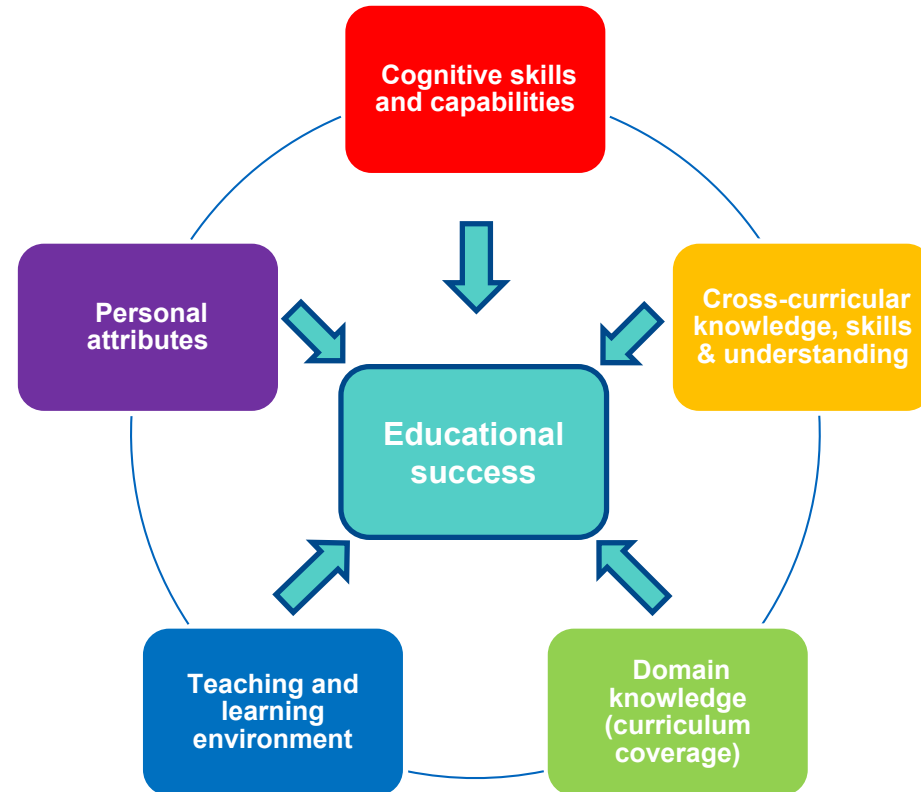
Pastoral support with shyness, friendships & teamwork in class

Key messages for teachers and tutors

- It is good to gain insights in all five areas of the framework.
- Combining baseline results (CEM) with information from internal assessments and evaluations can be really powerful. It can guide next steps to supporting learners to reach their potential.



Using the Cambridge Learner Profile framework



A mystery class – what we know so far

- ▶ In an expanding international school in South East Asia
- ▶ 30 children in Stage 7
- ▶ 10 nationalities,
- ▶ From 4 local primary schools, plus 7 new to the country
- ▶ Some children have no English
- ▶ Following Cambridge curriculum
- ▶ We have used CEM baseline tests for several years

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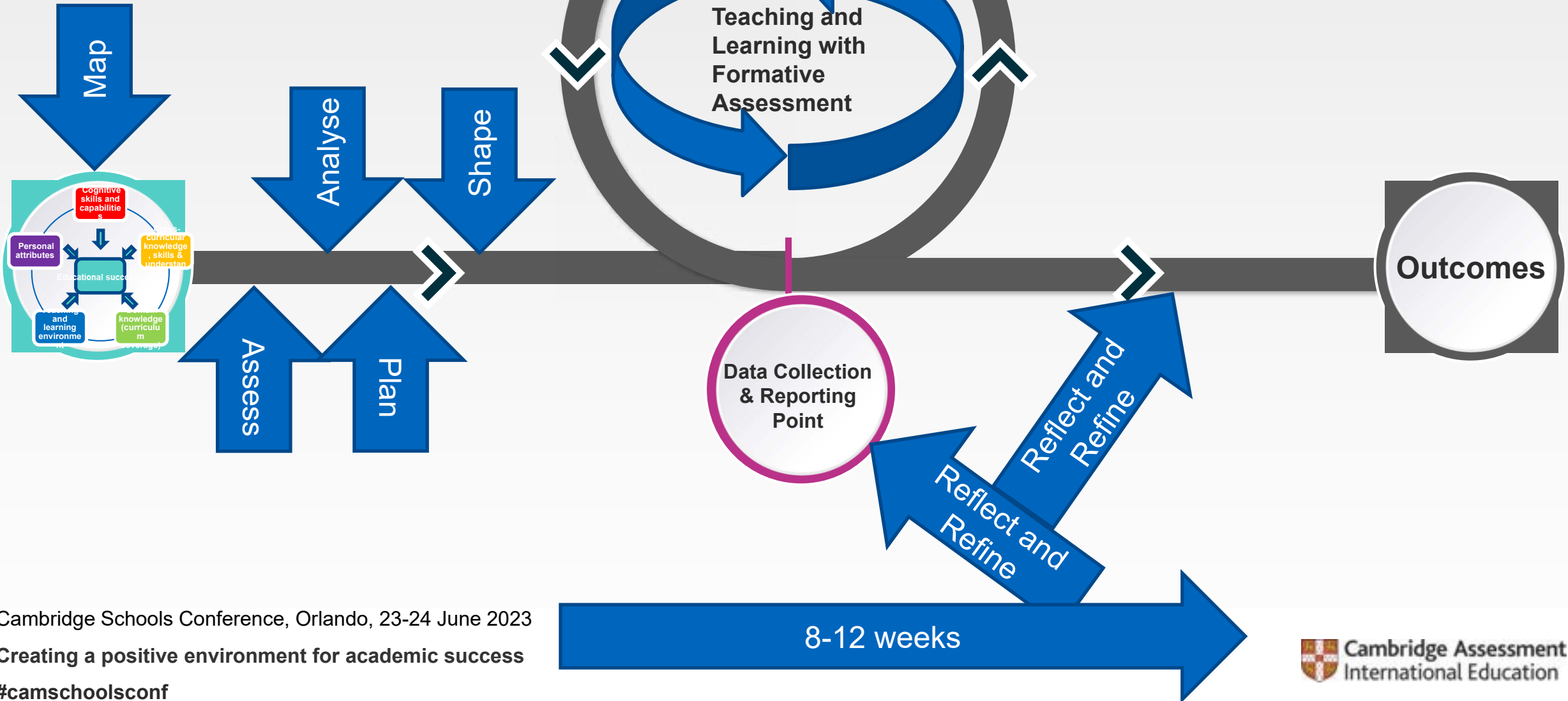
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An introduction to the steps in the Education journey

- ▶ Step 1 – Map
- ▶ Step 2 – Assess
- ▶ Step 3 – Analyse the data and insights
- ▶ Step 4 – Plan
- ▶ Step 5 – Shape teaching & learning
- ▶ Step 6 – Reflect and refine

The Education Journey

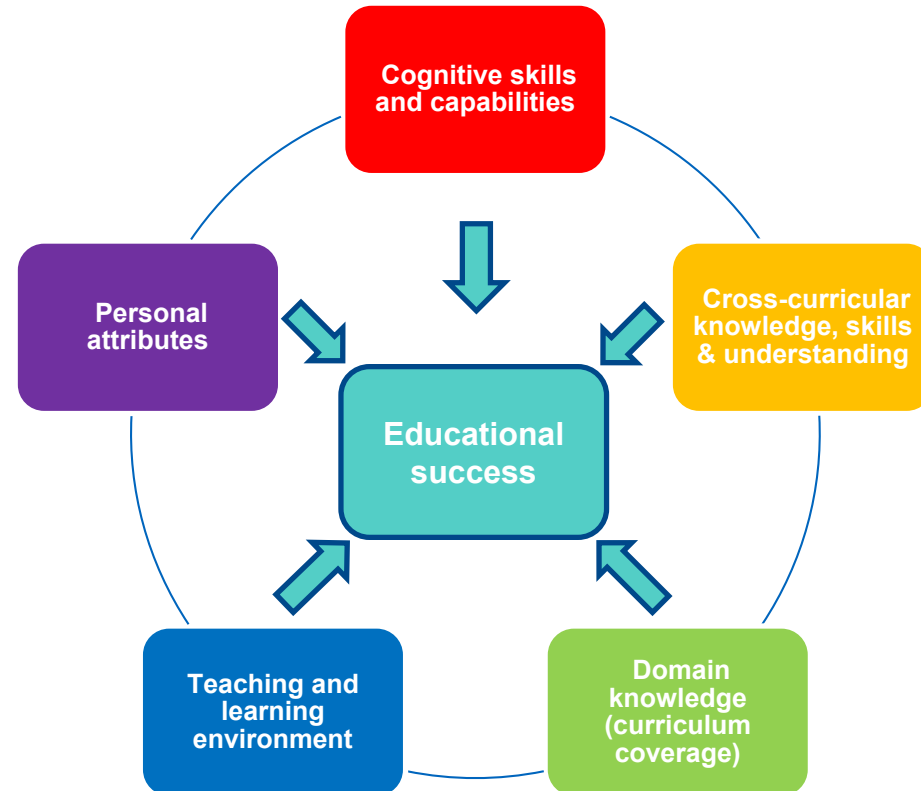


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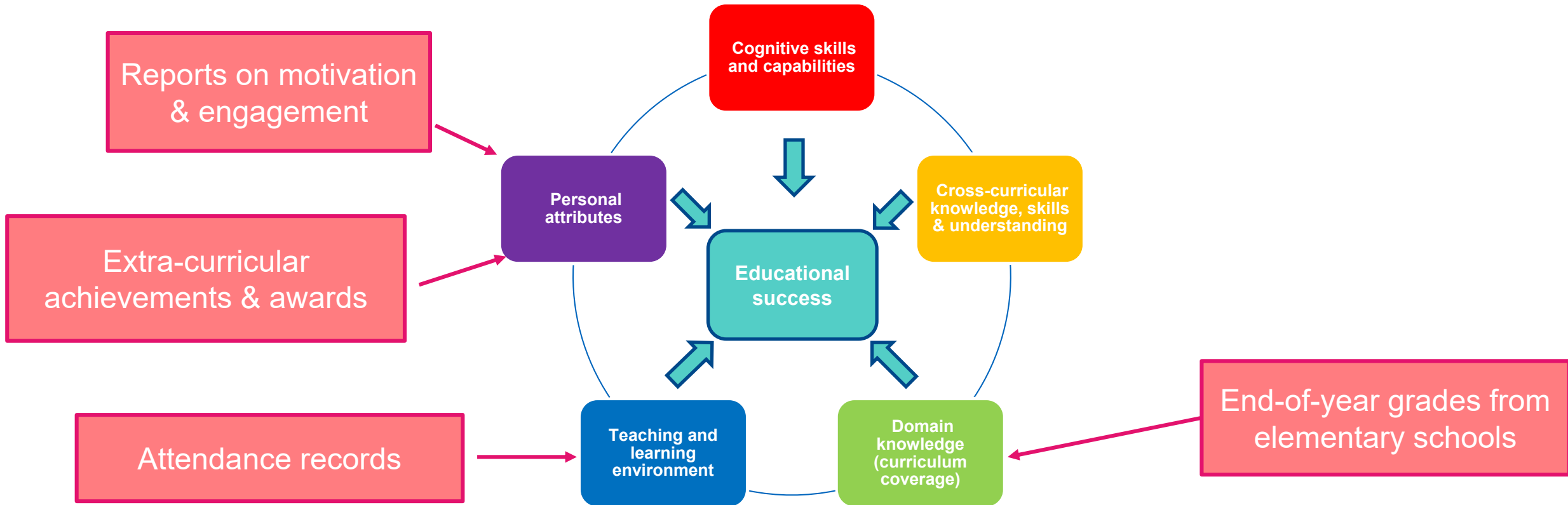
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Step 1: Map current data and insights



Insights from the learners' elementary schools



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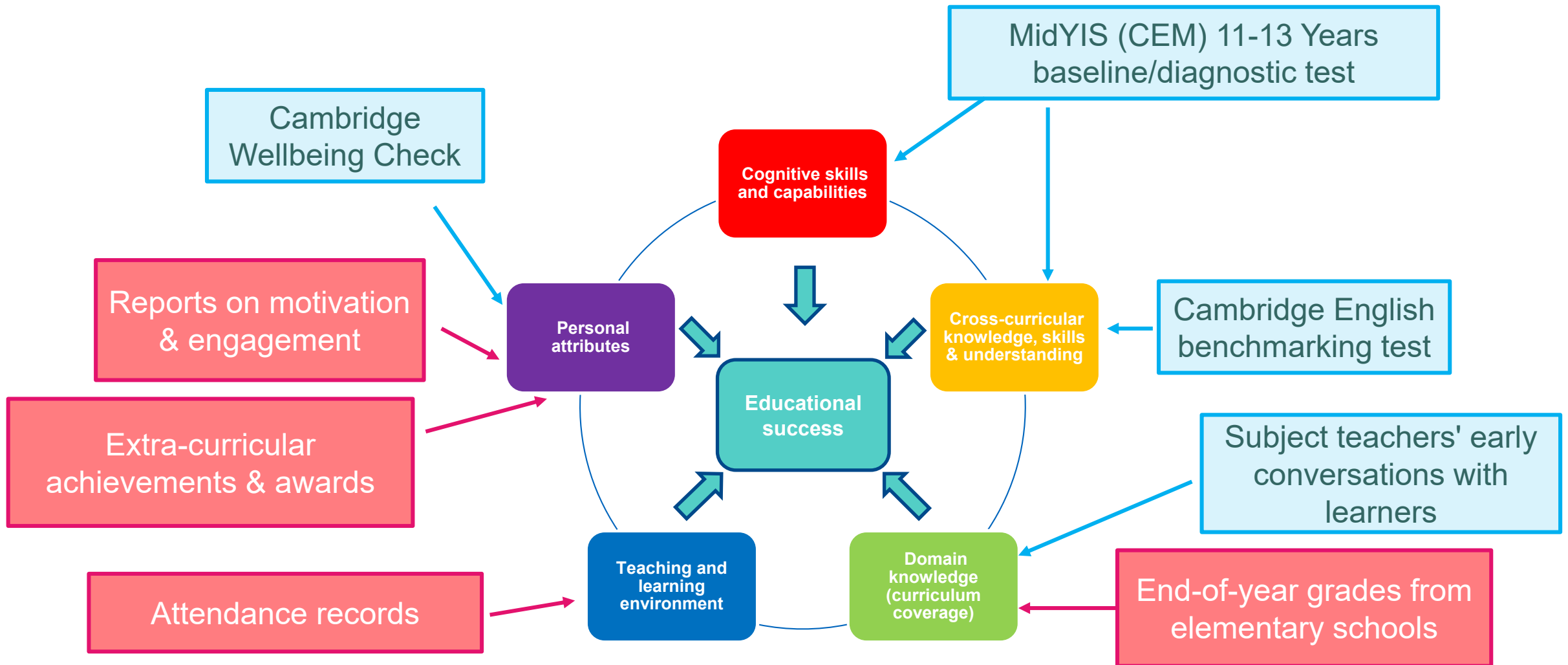
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Step 2: Assess

- Identify any gaps or any data that is inconsistent or out of date
- Be methodical – every learner is important
- Be consistent – structure the teacher conversations
- The assessments are **not** competitive



Gather data and insights and place onto framework



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Step 3: Analyse the data and insights

- ▶ Schools generate lots of data and there could be information overload.
- ▶ It is important for each person using the data to consider what they are using it for.
- ▶ A Maths teacher will want to view a different subset of data to a teacher in a pastoral role.

The views are interconnected but each role has a different focus and responsibility.

Two different lenses

▶ The Maths teacher (subject role)



▶ The Class tutor (pastoral role)



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The Maths teacher's focus



Step 3: Interested in prior domain knowledge and Maths potential

**MidYIS (CEM)
baseline data**

**Subject teachers'
early conversations
with learners**

**End-of-year grades
from elementary
schools**



Creating Cambridge Learner Profiles: the Maths teacher

Name	MidYIS Non-verbal reasoning	MidYIS		Conversations with learners	Checkpoint Stage 6 grades from elementary schools			
		Maths	Vocab					
Learner 1 (overachieving)	107	112	106	Loves Maths/ Does extra at home	5.5			
Learner 2 (achieving)	99	95	98	Enjoys Maths, finds shapes difficult	4.8			
Learner 3 (underachieving)	129	106	100	Finds Maths 'ok' Doesn't like school at all	3.7			
Learner 4 (underachieving)	113	111	100	Tries really hard. Frustrated when does not understand the discussion	3.5			
Learner 5 (underachieving)	137	150	148	Does not like Maths. It's 'too hard'	4.5			

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The (pastoral) class tutor's focus

Interested in **personal attributes**



Cambridge
Wellbeing Check

Reports on motivation
& engagement



Creating Cambridge Learner Profiles: the Class tutor

Name					Cambridge Wellbeing Check				Reports on motivation & engagement	
					Life satisfaction	Absence of negative emotions	Competence	Inter-personal relationships		
Learner 1					4.5	4.1	4.2	3.1	high	
Learner 2					2.9	3.1	2.9	2.1	medium	
Learner 3					4.9	4.6	3.9	3.5	high	
Learner 4					3.1	2.8	3.0	2.0	medium	
Learner 5					2.0	1.9	2.1	1.3	low	

Step 4: Plan



- ▶ **Maths teacher** focus gaps in Maths knowledge and skills
- ▶ If support and interventions worked for past cohorts then reuse them

- ▶ **Class tutor** focus on transition into new school
- ▶ Focus on interpersonal relationships
- ▶ Plan activities to improve them – within class, peers, school

> Glossary

advantages	the good points
anticlockwise	turning in the opposite direction as the hands
area	the amount of space covered by a flat shape
axes	number lines drawn in a coordinate grid
bimodal	when a set of data has two modes
brackets	symbols used to enclose items that are to be seen in an expression

> 7.1 Rectangles and triangles

Worked example 1

Estimate the **area** of this triangle.

Centimetre squared paper. $\square = 1 \text{ cm}^2$

INTERPERSONAL SKILLS

- verbal communication
- non-verbal communication
- listening skills
- negotiation
- problem solving
- decision-making
- assertiveness

© Stu 263 x 148

Step 5: Teaching with formative assessment



	Formative Assessment	Summative Assessment
Informal	Questioning Feedback Peer assessment Self-assessment	Essays in uncontrolled conditions Portfolios Coursework Teacher assessment
Formal	Further analysis or tests, exams, essays Target setting	Tests Exams Essays in controlled conditions

Self-Assessment Cards

What went well... _____

Even better if... _____

★ ★ ★




I do not completely understand the learning today.





I understand the learning today





I do not understand and need some help



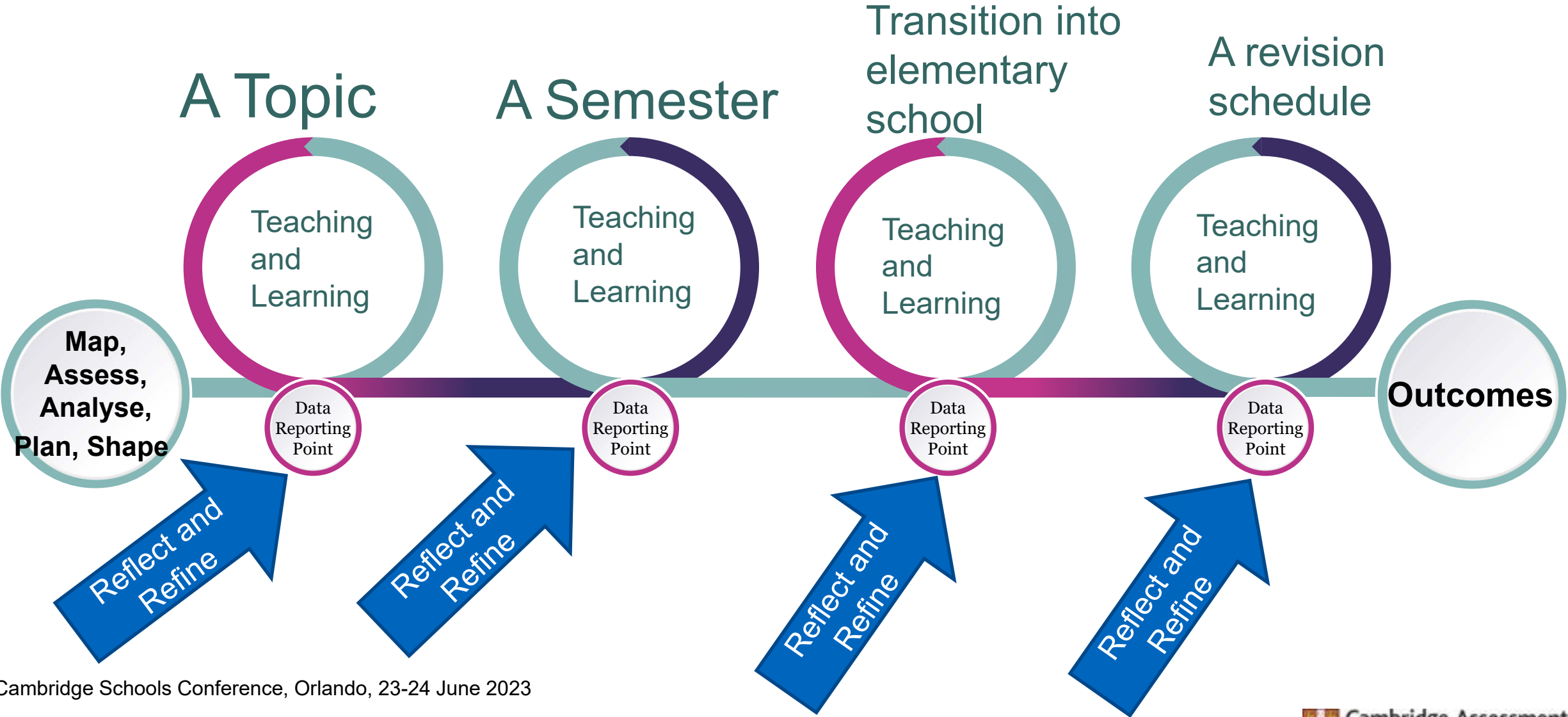
ink saving Eco

Step 6: Reflect and refine



- Look back at a cycle of learning and interventions
- Gather data and insights from the cycle such as formative assessment and end-of-topic tests (using Cambridge Learner Profile framework)
- Review the data
- Take Scheme of Work or teaching plan and refine it for the next 8-12 weeks

Examples of what could be in a cycle

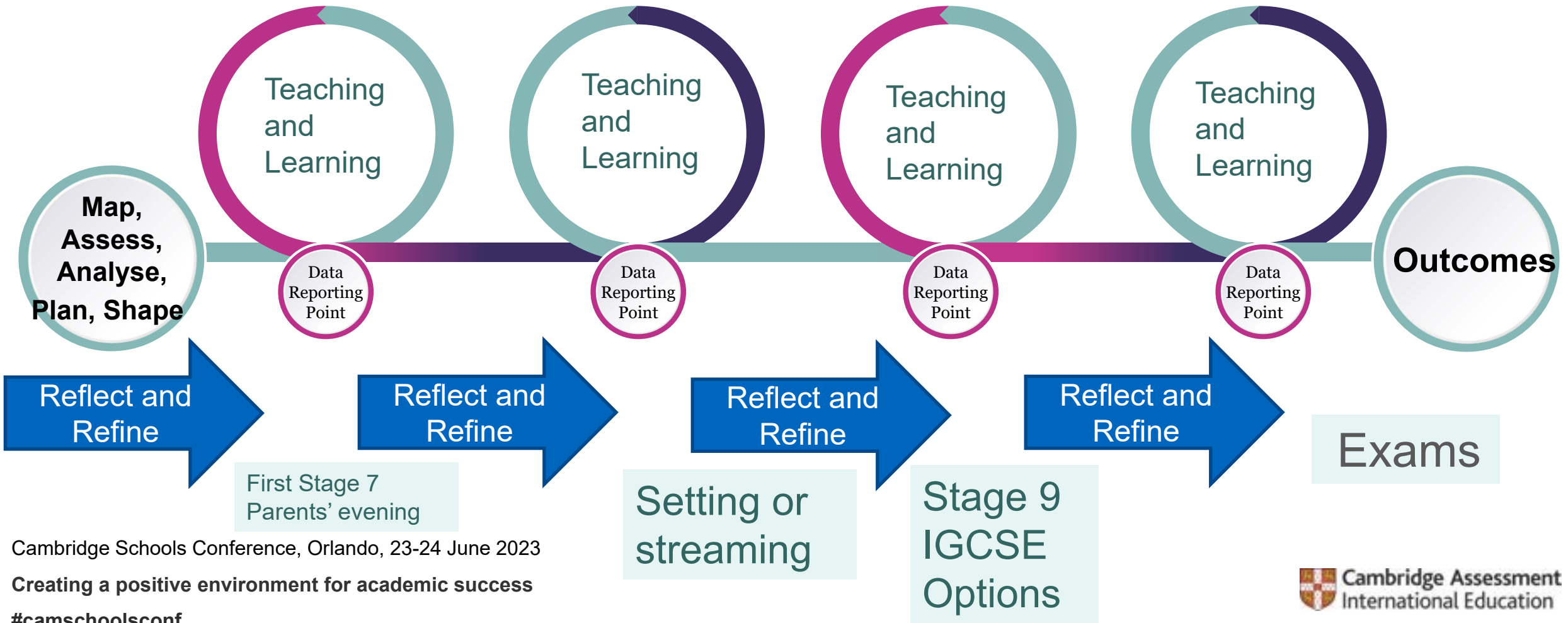


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Examples of what the data reporting point could be used for



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Feedback previous workshop attendees

“It makes sense because I do think that educational success depends on much more than the curriculum coverage.” *Teacher in Indonesia.*

“The areas are very clear and easy to understand. I was able to map out how different assessments can work together. Also, the learners’ profile is a great idea that I would love to implement at our school. The framework shows that we haven’t covered some areas that can help students make progress.” *Teacher in Thailand.*

To learn more about the framework...

<https://www.cambridgeassessment.org.uk/Images/research-matters-35-spring-2023.pdf>



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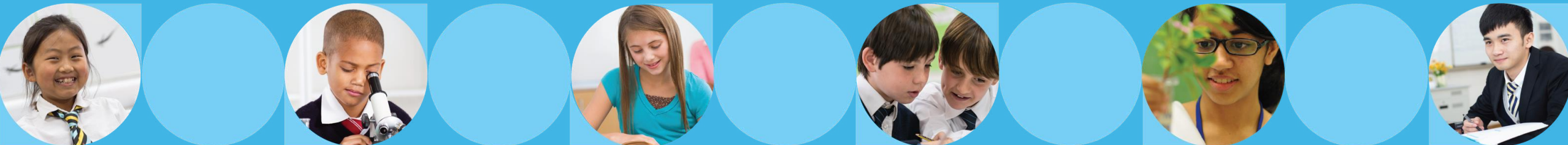
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<https://www.cem.org/positive-learning>



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Thank you
Any questions?



Your feedback

- ▶ Please let us know your views on this session
- ▶ Scan the QR code and share your feedback with us



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