BRITISH COUNCIL

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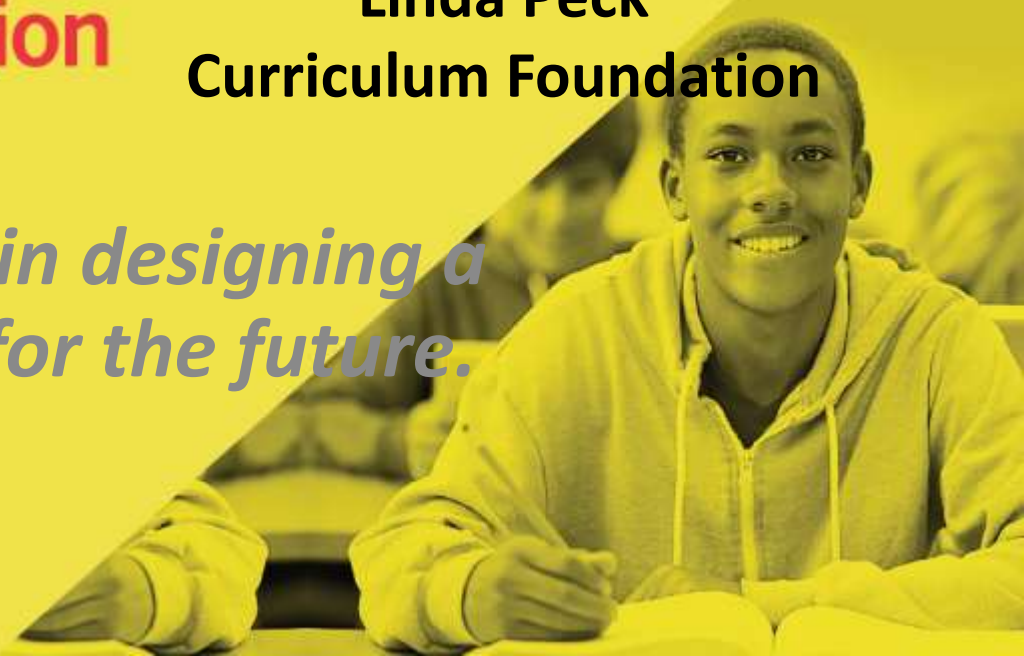
SCHOOLS NOW!
2018

Innovation in Education
(System, School and Classroom)

Innovative Curriculum Design

Linda Peck
Curriculum Foundation

key principles in designing a curriculum fit for the future.



Innovation is

... a fundamentally **different** way of doing things that results in considerably **better** outcomes.

Innovative curriculum design leads to **different** learning experiences that result in significantly and substantially **better** learning outcomes.

Curriculum Innovation Trends

Past 100 years		Fit for the future
Teacher-centred	→	Learner-centred
Knowledge-based	→	Competency-based
Passive learning	→	Active learning
Dependent	→	Independent
Learning for exams	→	Learning for life
Memorisation	→	Higher-order thinking
Shallow learning	→	Deep learning
Diverse subjects	→	Connected learning
‘Alien’ knowledge	→	Relevant learning

What do we mean by the **curriculum**?

UNESCO's International Bureau of Education considers three interrelated dimensions of the curriculum:

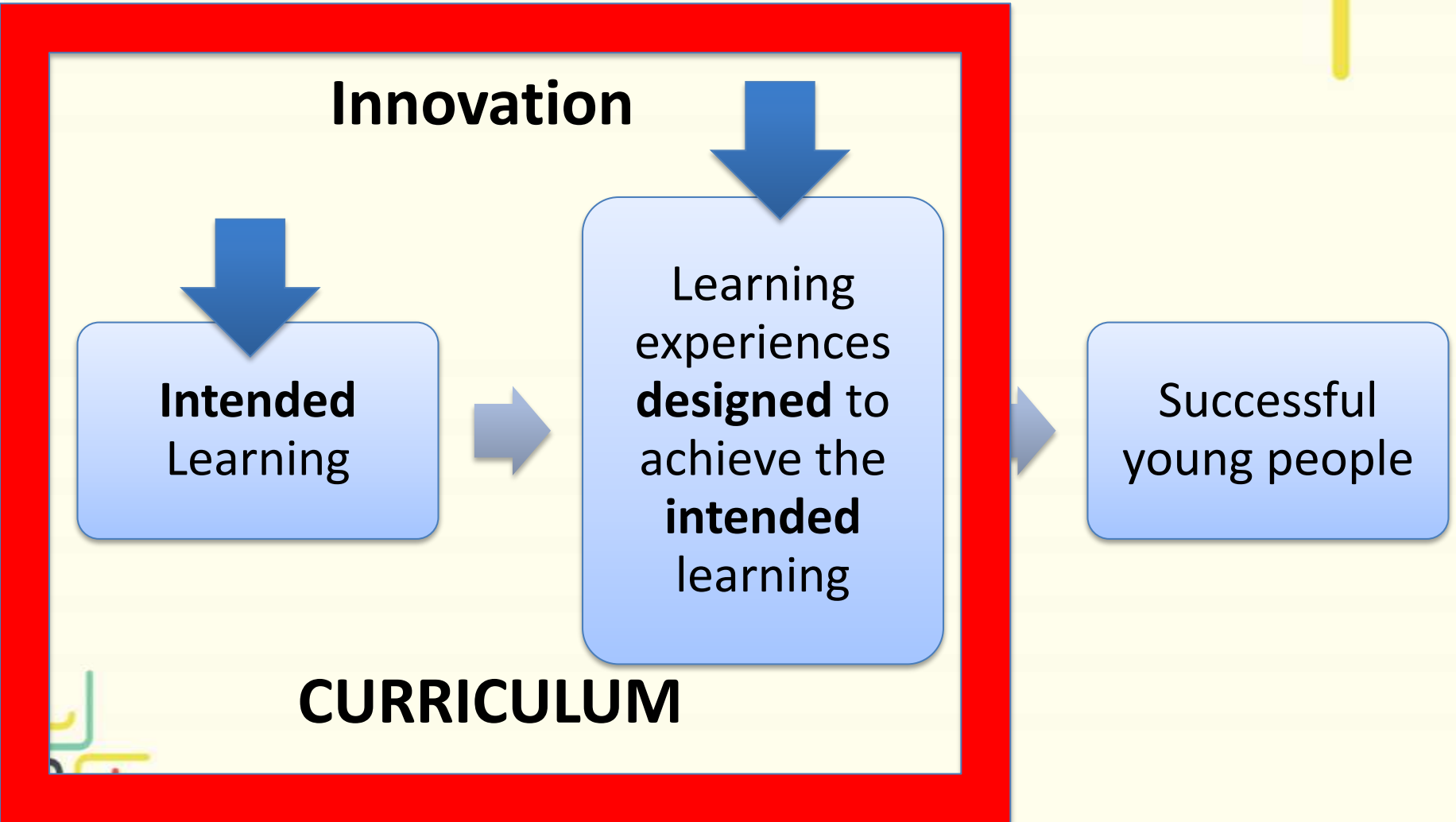
- **the intended** or official **curriculum** as defined in guidelines, frameworks and guides that specify what students are expected to learn and should be able to do;

- **the implemented curriculum** that is actually taught in the classroom, including how it is delivered and who teaches it;

- and **the attained curriculum** that represents what students have actually learned.

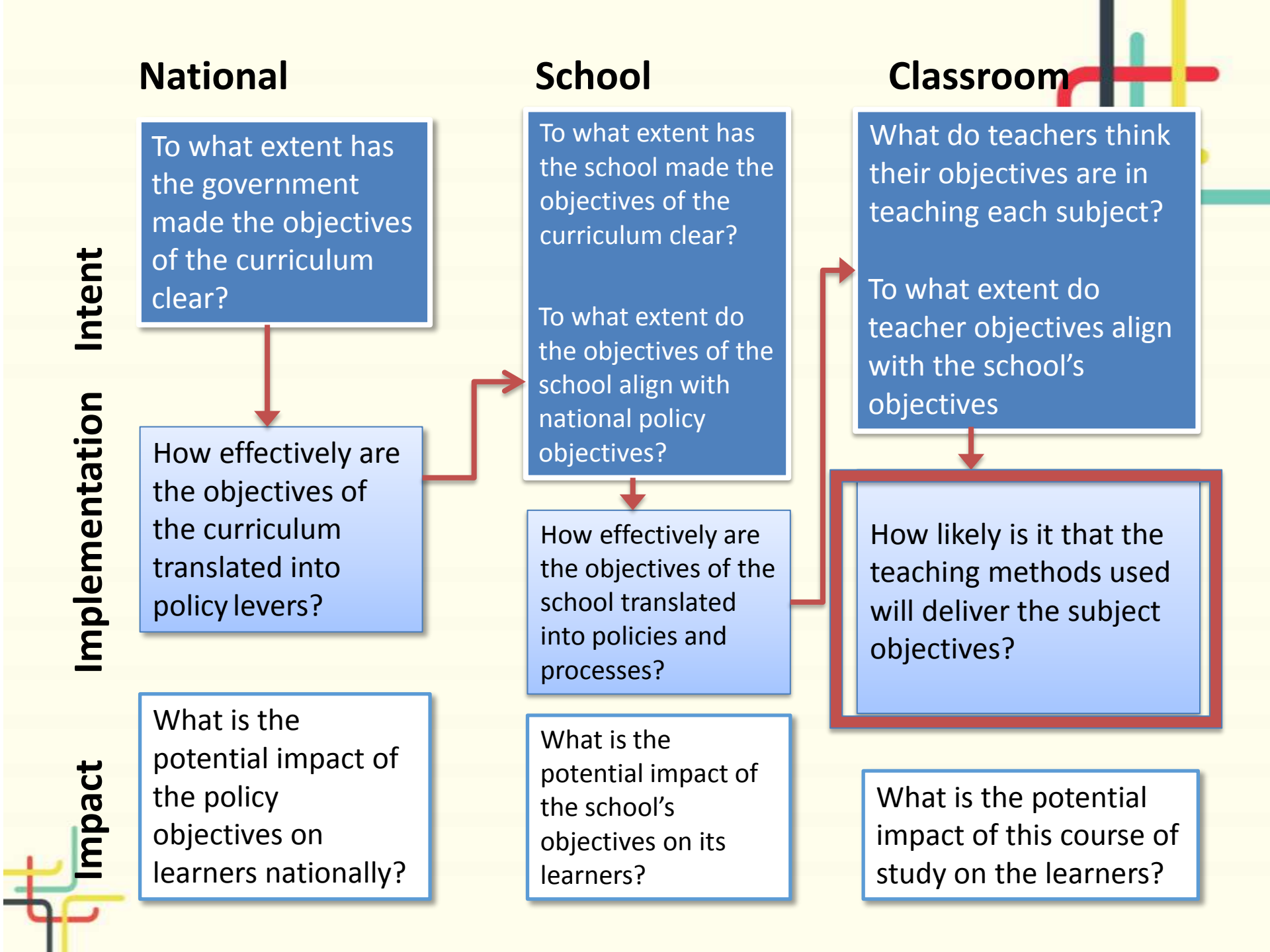
They go on to point out that the challenge is ensuring **coherence and congruence** between curriculum policy documents, the actual pedagogical process and learning outcomes.

Where do we innovate?



Three key questions

- What are we trying to achieve through the curriculum? (**intent**)
- How do we need to organise the curriculum to achieve the agreed intent or aims? (**implementation**)
- How do we measure the **impact** of the curriculum and continuously improve it?


National
School
Classroom
Intent
Implementation
Impact
To what extent has the government made the objectives of the curriculum clear?
How effectively are the objectives of the curriculum translated into policy levers?
What is the potential impact of the policy objectives on learners nationally?
To what extent has the school made the objectives of the curriculum clear?
To what extent do the objectives of the school align with national policy objectives?
How effectively are the objectives of the school translated into policies and processes?
What is the potential impact of the school's objectives on its learners?
What do teachers think their objectives are in teaching each subject?
To what extent do teacher objectives align with the school's objectives
How likely is it that the teaching methods used will deliver the subject objectives?
What is the potential impact of this course of study on the learners?

Dimension 1
The Intended Curriculum

What are we trying to achieve?

The context for curriculum innovation

- **National** expectations and trends
- **Education research**: “The Mystery of Learning” and L2L; The global focus on a competency-based, learner-centred curriculum and values education
- **Demographic, economic and social** change
- The impact of **technology**
- **Employer** and **Higher Education** needs
- The **local community**
- **Parental** expectations
- **School** trends and **inclusion**
- **Young peoples’ own perspectives**

Who	Looking to the future .....
	The school curriculum must prepare young people for an **uncertain future** Nelson Mandela
	The curriculum is **more than a set of subject syllabuses** It is **all the intended learning** that young people receive as they go through school Carla Rinaldi – Emilio Reggio
	When a nation sets out its national curriculum, it is setting out its **ambitions for the future** Mick Waters
	Employers …… want people who can **think intuitively, who are imaginative and innovative, who can communicate well, work in teams, and are flexible, adaptable and self-confident** Ken Robinson
	(Japanese) teachers are asked to **equip students with the competencies they need to become active citizens and workers in the 21st century**….. to **personalise learning** so that **every student** has a chance to succeed Andreas Schleicher
	If my future were determined just by my performance on a **standardised test**, I wouldn't be here. I guarantee you that.

PISA 2018 Global Competence

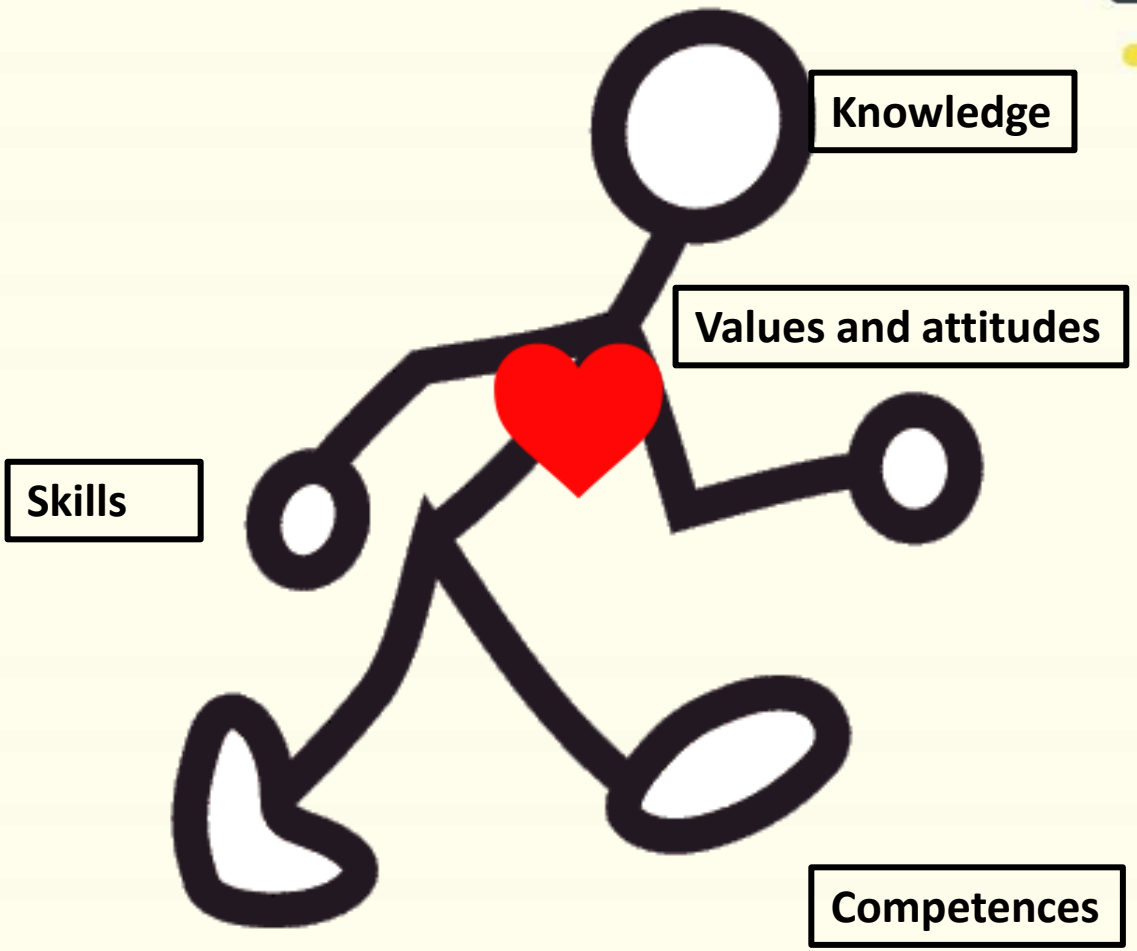
What do young people need to succeed in the 21st century?

There is no right answer but your description would probably include some of the following:

questioning
thirst for knowledge
makes connections
healthy
Confident
risk aware
independent
listens and reflects
Analyses and evaluates
numerate
Digitally literate
gets on well with others
persevering
generates ideas
critical
self-editing
literate
flexible
shows initiative
communicates well
compassionate
acts with integrity
self-esteem
shaper
loves learning
respectful
learns from mistakes
curious
skilled
'can do' attitude
thinks for themselves
creative

How would you describe a young person who is equipped for life?

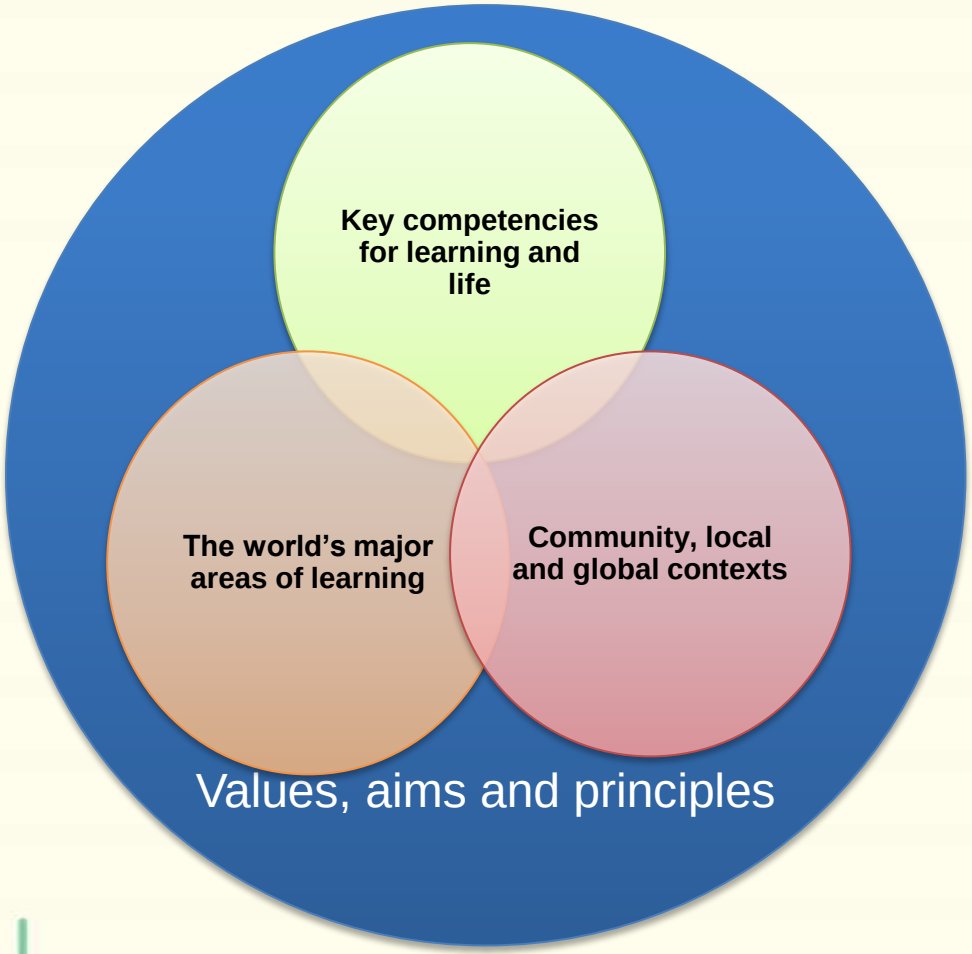
What do young people need to succeed in the 21st century?



How would you describe a young person who is equipped for life?

A World Class Curriculum

The four domains



There is more about this on our website, including a curriculum audit **http://www.curriculumfoundation.org**

Curriculum Foundation

A World-Class Curriculum should...

Values, aims and principles

- Be based upon clear, **shared values, aims and principles** which put **learners at the heart of the curriculum** and recognise their role as **citizens of the world**
- Provide exciting opportunities for the **intellectual, physical, emotional, social, scientific, aesthetic and creative** development of every learner

Key competencies for learning and life

- Ensure the development of **competencies for learning and life** and a sense of hope and agency in every learner
- Encourage **independence** of mind and action and the development of **individual interests and talents**
- Excite the **imagination**, encourage **curiosity** and develop **creativity**

The world's major branches of learning

- Secure learners' knowledge, skills and understanding of the **world's major branches of learning** and subjects
- Ensure understanding of how learning in different disciplines is **interconnected** and **relevant to life**, global issues and world events past, present and future
- Provide clear and relevant **pathway**s for learning and the **flexibility** to respond to developing needs, interests and contexts

Community, local, national and global contexts

- Locate learning in the **context of the learner's life** and **local community**, and also within a **national and international dimension**
- Address **contemporary issues** as well as the **big ideas** that have shaped the world

We want our young people to be

Responsible citizens
Lifelong learners
Creative
Confident
Productive
Environmentally aware

Subject knowledge

Values and attitudes

Culture and heritage

Competencies and skills

We can only achieve all of these aims...

...if we offer a curriculum that includes all this learning

International Trends

Where	Vision, values, aims
	The curriculum must respond to the changing knowledge and skills needs in society and in the world economy…..It must develop the capacity for high quality life-long learning *Finland*
	An engaging curriculum that inspires every student, every day *Vision 2030, Alberta*
	A confident person, a self-directed learner, an active contributor, a concerned citizen *Desired outcomes for students – Singapore*
	…..helping students find out who they are, where they want to go in life, and how they will get there, in a rapidly changing and increasingly uncertain world *Curriculum focus - China*

Dimension 2
The Implemented Curriculum

How do we need to organise the curriculum to achieve the agreed intent or aims?

Curriculum Design Principles

- Teachers need to see the curriculum as **more than just subjects**
- Every teacher has responsibility for learners' **knowledge and understanding, skills, attitudes and values, competencies, culture and heritage – MINDSET!**
- Learners need **regular exposure to/practice in all elements of the curriculum across the whole curriculum**
- **Integration: None of the elements is an add-on**
- **Skills** and competencies need to be developed in the **context of knowledge**
- To **apply skills and knowledge**, learners need **practical experiences** that have **meaning for them.**
- **Assessment** should **embrace all elements of the curriculum**

Implementation Challenges

- Guidance
- Resources
- Training / CPD
- Assessment

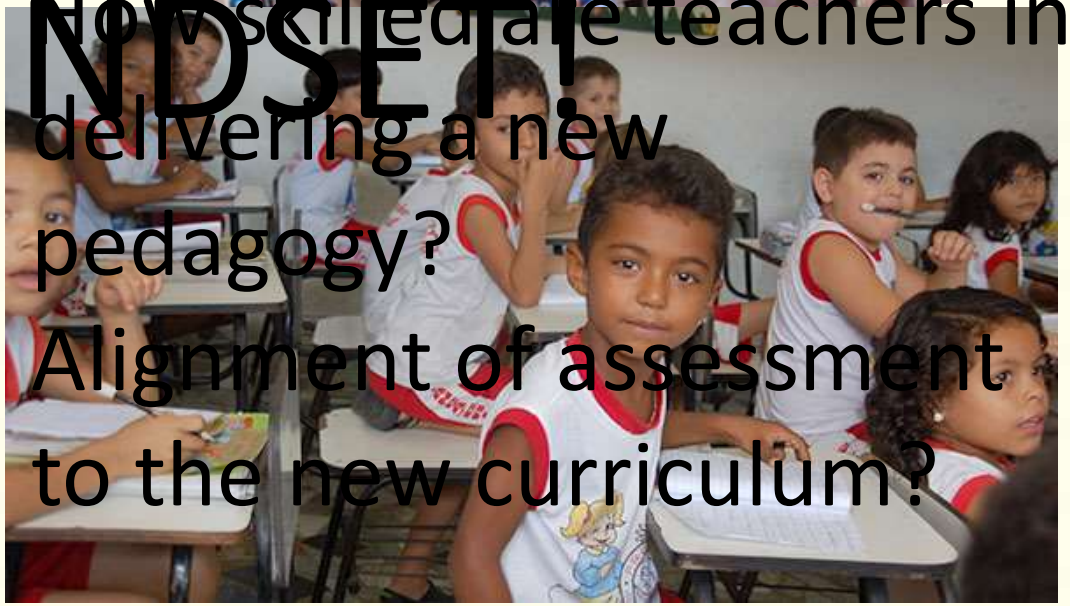
What guidance?

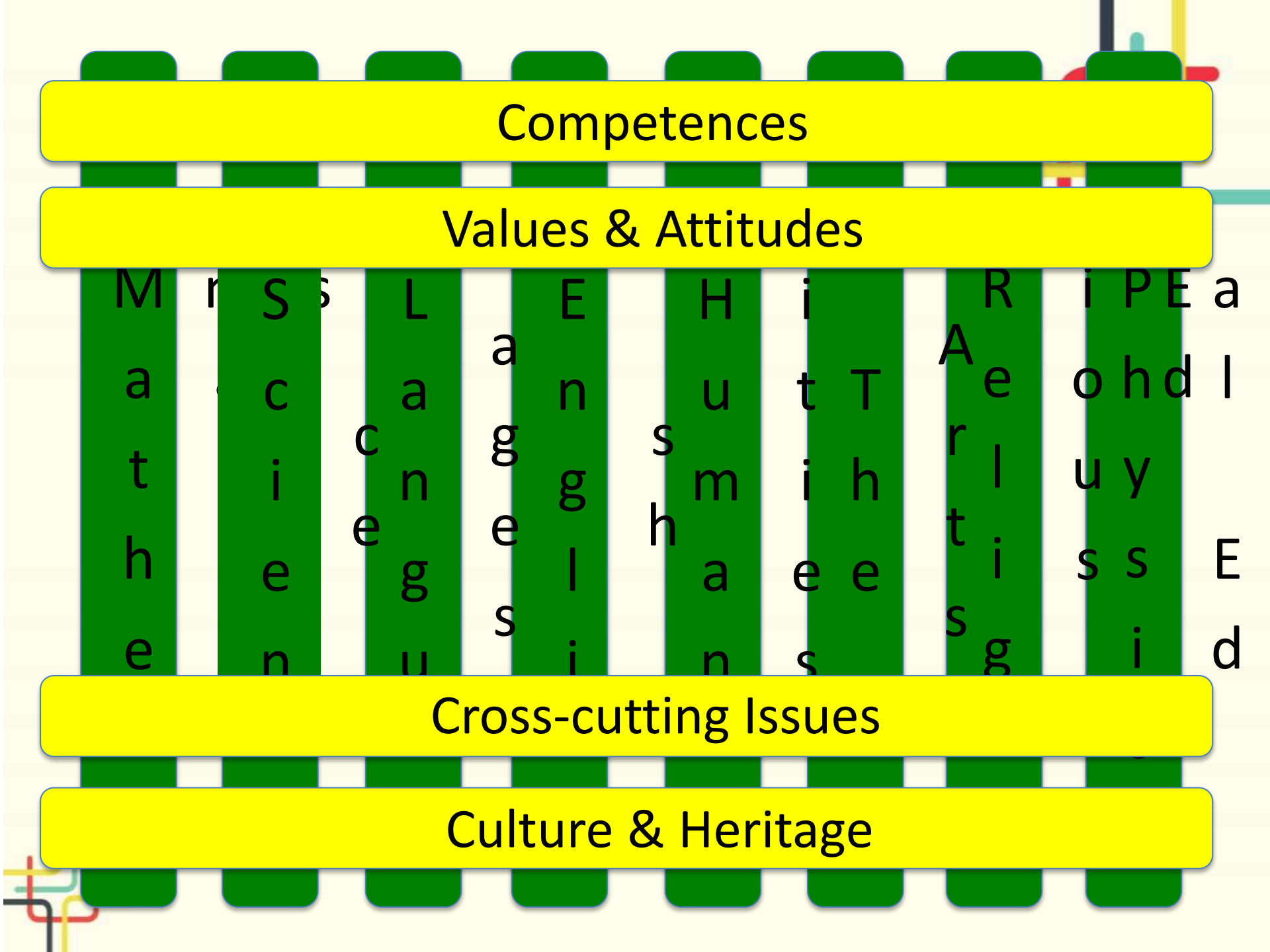
Are different resources required?

How skilled are teachers in delivering a new pedagogy?

Alignment of assessment to the new curriculum?

MINDSET!



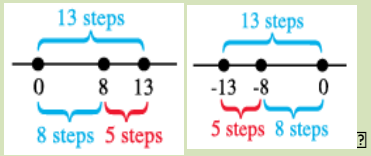
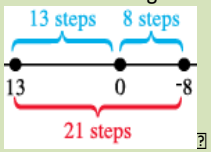

Competences
Values & Attitudes
Cross-cutting Issues
Culture & Heritage

Schemes of learning

Primary 4 Mathematics	Unit 2: Positive and negative integers	No. of lessons: 14

Key Unit Competency: To be able to solve problems related to comparing, ordering, and finding distance between negative and positive integers.

Learning Objectives

Knowledge and understanding	Skills	Attitudes and values	Contents	Learning Activities
• Explain how to locate positive and negative numbers on the number line. • Explain that when two numbers are placed on the number line, the number to the right is greater than the number to the left.	• Locate positive and negative numbers on the number line • Apply knowledge of position on a number line to determine which of two numbers is greater. • Computing distance between integers.	• Appreciate the importance of using negative numbers in practical contexts	• The meaning of negative, positive numbers in contexts like temperature • Location of positive and negative numbers on a number line • Comparison/ordering of negative, positive numbers using number line • Solve problems involving integers, including computing distance between integers: If two numbers are on the same side of zero, the distance between them is the difference of their magnitudes.  If two numbers are on opposite sides of zero, the distance between them is the sum of their magnitudes. 	• In groups, learners can use numbers on cards and place them on a number line backward and forward (on the board or using other material made in hard paper). • Game: In a large play area (schoolyard or field), mark a number line from -24 to 24 (for a 48-child class, or -30 to 30 for a 60-child class, to allow all children to play). Each player is "named" and labeled for a number (not including 0) and stands on his or her number on the line. The teacher calls out a command like "Negative 8, run to 2" or "Twelve, run to four." The child runs, and then says how far, and which direction, positive or negative. • Mental activities: learner picture the number line and tell the distance between numbers on either side (e.g., distance between -3 and 10, or -30 and -10, or -25 and 20). • Puzzles: A number gives clues about where it is (e.g., "I am exactly 10 steps away from 7. I am odd. I am more than 5 steps away from 12. Where am I?") and learner must find the number on the number line. 10 steps away from 7 could be in either direction, so it could be 17 or -3, but only -3 is more than 5 steps away from 12. So the number is -3.

Contribution to generic competencies: The running game requires focused attention and **communication.** All games and activities are **cooperatively** social and involve **problem solving.**

Links to other subjects: Introduction of negative numbers in the context of temperatures in different locations links with science and geography.

Assessment criteria: Accurately compare pairs of numbers like 3 and -7 & say which is greater & why. (-3 is greater because it's to the right of -7)

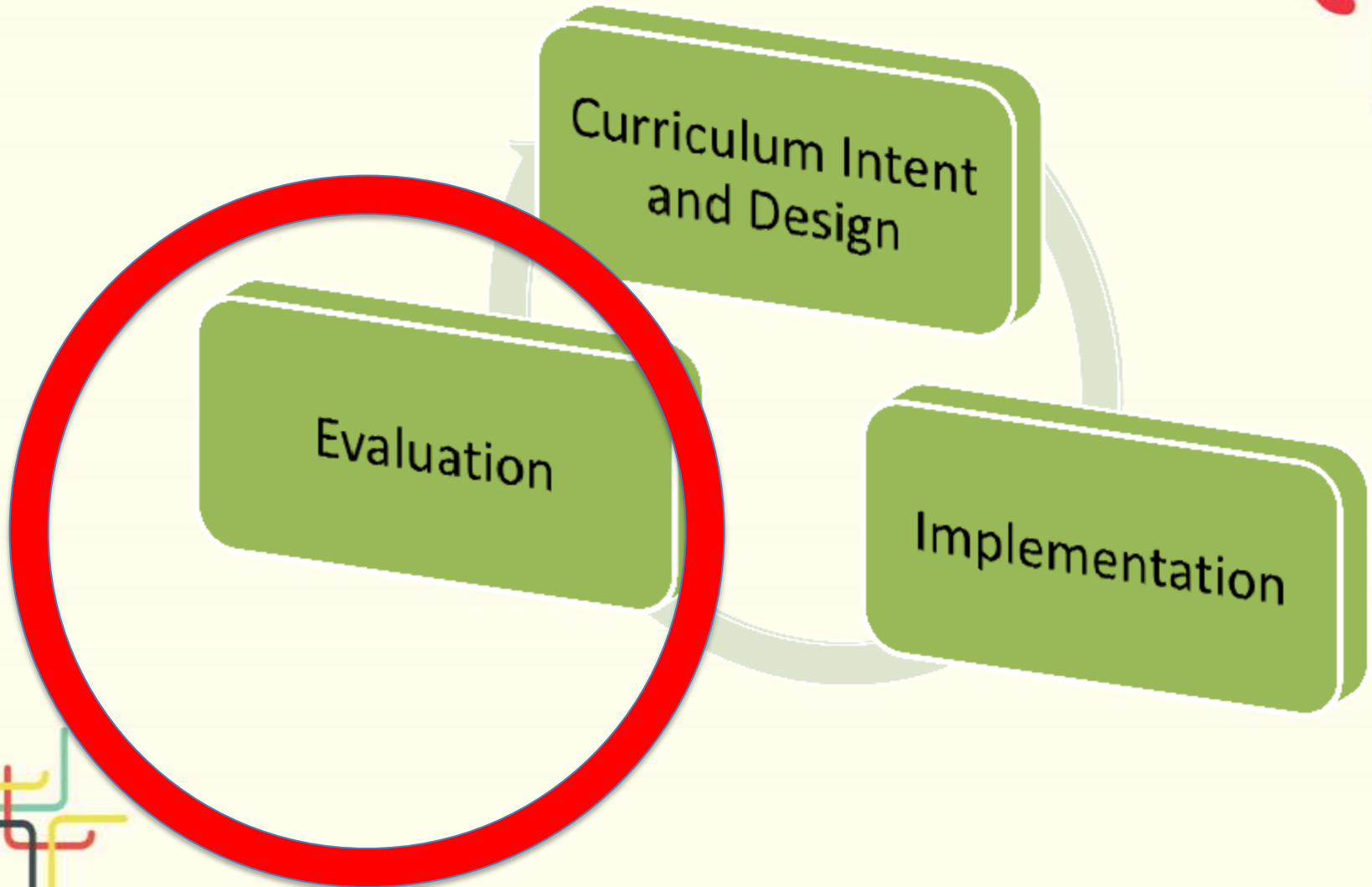
Co-ordinated products

Language and communication	Numeracy	Other
Three pieces of extended writing Four letters – two real Three power-point presentations (two individual, one group) Two reports - one about a current phenomenon Two humorous pieces of writing for a magazine or journal Three campaign posters Three maps (two real) Four charts for different purposes Three annotated photo sheets One quiz	Four measuring tasks – two precise, one near enough Two estimations – one big numbers, one small Two weigh-ins Two shape activities Two speed measurements	Two working models (made with others) Two still lifes (one in the style of ..) Two portraits One thing bigger than me Two dances One composition One meal cooked with a group of five Five experiments Three experiences of real artefacts or places

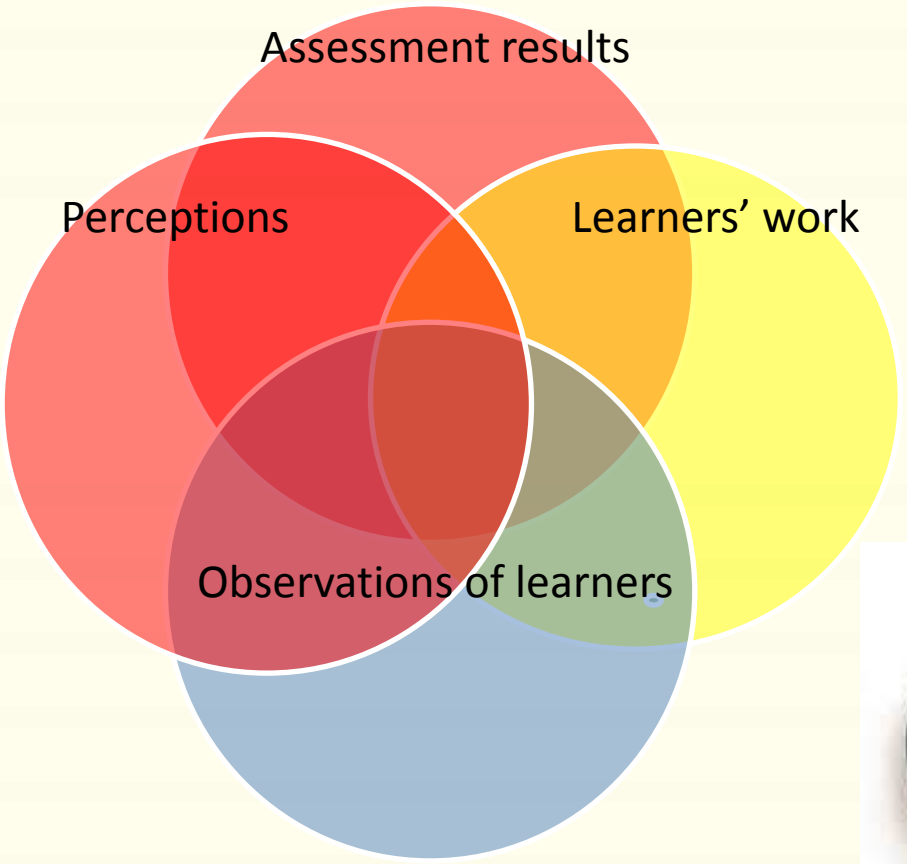
Dimension 3
The attained curriculum

How do we measure the **impact** of the curriculum and continuously improve it?

End point – a virtuous circle



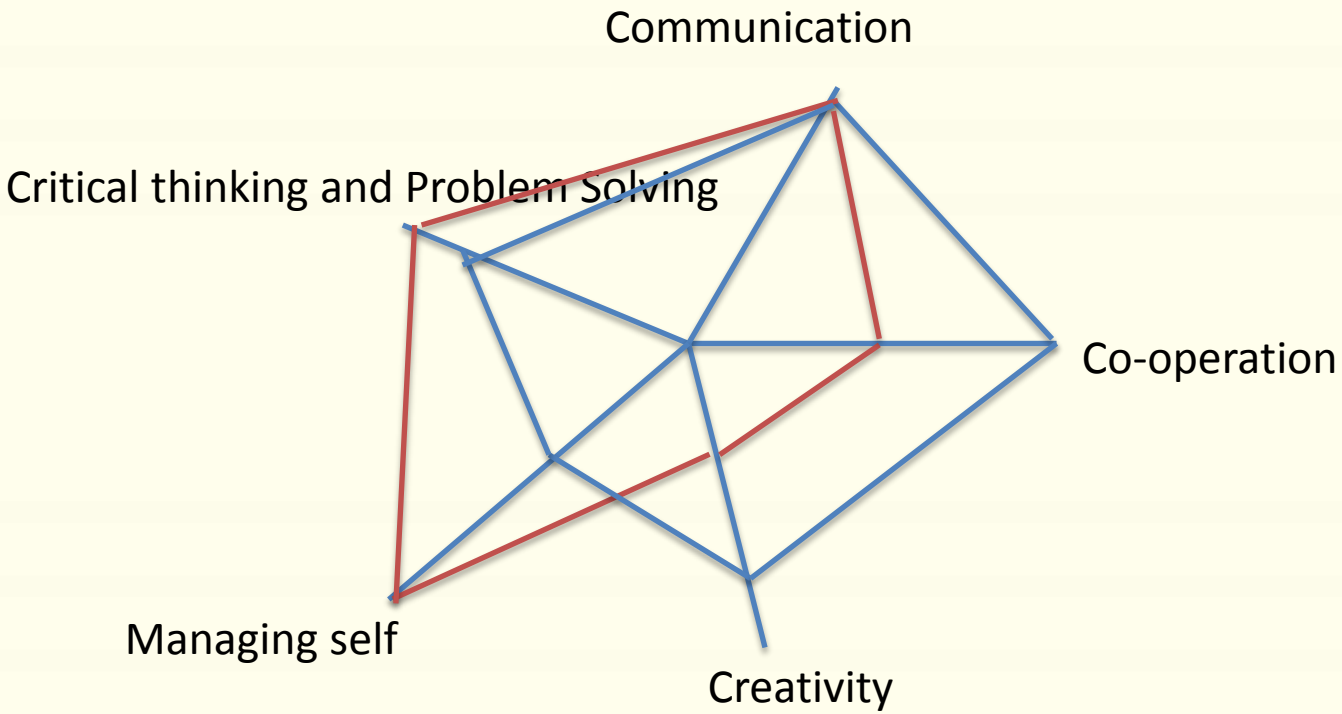
Monitoring and evaluating innovation - Different Lenses



What do we want to achieve? (intent)	How will we organise learning and teaching? (implementation)	How well are we achieving our intent? (Impact)
If....	**then we need to...**	**And how we will know when we have been successful...**
we want young people to be **good communicators**	• give them opportunities to present information in different contexts for different purposes • involve them in group discussion and debate • promote concepts such as learners as presenters, learners as campaigners	• Learners speak confidently and articulately in a range of situations • They present an argument effectively, express and justify opinions orally and in writing
we want young people to have **enquiring minds and to think for themselves**	• give them reasons to find things out • know what interests them and build on that • connect learning to issues that impact analysis and critical thinking • promote concepts such as learners as researchers, learners as reporters	• Learners have a thirst for learning • They select appropriate information independently nge of sources yse, explain and evaluate orally and in writing
We want young people to be **team players**		

Co-ordinated products

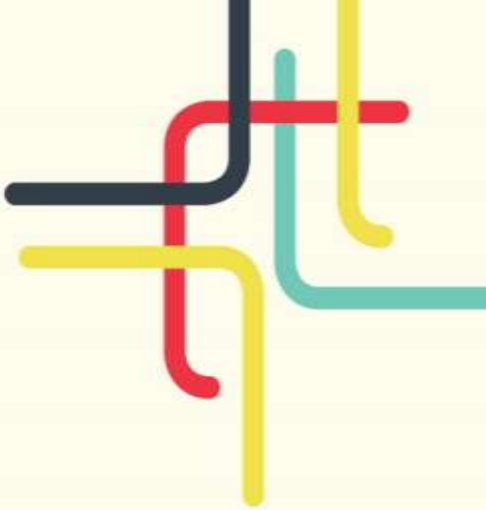
Tracking Progress - Assessment isn't just about tests



In a nutshell

Schools undertaking significant curriculum innovation should:

- Use **research and analysis** to persuade the whole community of the need for innovation and its **intended** benefits
- **Engage all key stakeholders** in the process of curriculum design and development
- Ensure there is **strong leadership** at all levels to support **implementation** and keep **staff motivation** high
- Provide **high-quality professional development** and support matched closely to the requirements of the **new pedagogy** and the needs of staff
- Undertake rigorous and regular **evaluation**, based on **clear criteria**, focusing on the **impact** on learner outcomes and use the information to improve the new approaches



Thank you for listening