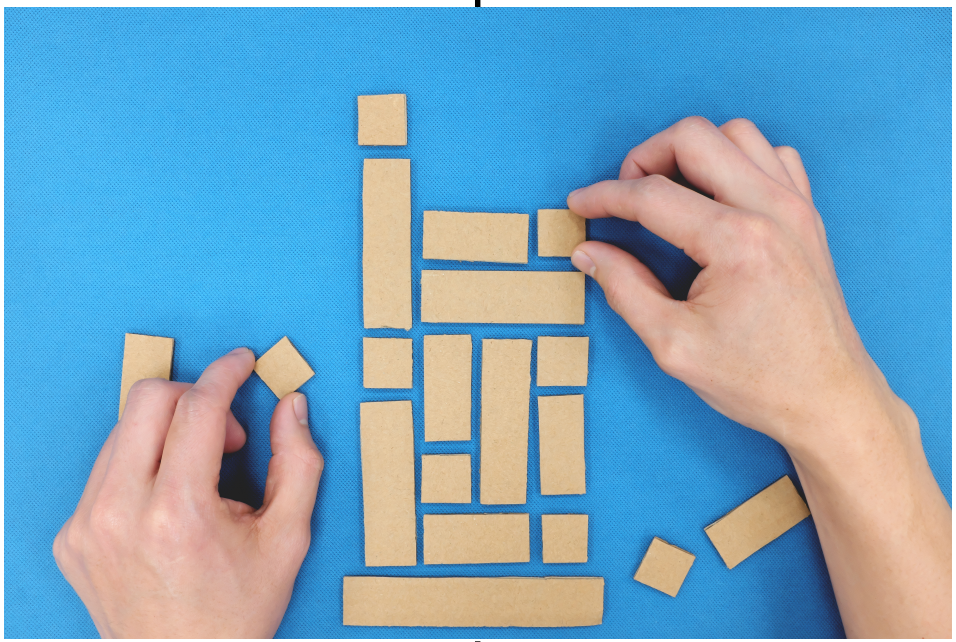
A step towards curriculum growth



If not us, then who?

Alex Bedford

Curriculum Map — **Year 1** — **2020 - 2021**

Autumn 2020		Spring 2021		Summer 2021	
1/9	School planned introduction expectations / behaviour	4/1	**Science** Continue to introduce and revisit / builds on **Animals including humans** (Y1)	12/4	**Art & Design** Revisit and apply **Collage**
7/9	**Design and Technology** Introduce **Mechanisms** - Making a moving story book. Y1	11/1		19/4	**Science** Introduce **Materials** (Y1) Unity Y1
14/9	**Science** Introduce **Seasonal changes / daily weather**	18/1	**Design and Technology** Introduce **Structures** Constructing a windmill	26/4	
21/9	**Art & Design** Introduce **Art skills** Formal elements - shape, line and colour	25/1	**History** Introduce **Lives of significant individuals** David Attenborough and Mary Anning Unity Y1	3/5	**Computing** Introduce **Data**
28/9	**Science** Introduce **Plants** (Y1) Unity Y1	1/2		10/5	**Design and Technology** Introduce Mechanisms: **Wheels and axles**
5/10	**History** Introduce **Changes within living memory** Unity Y1	8/2	**Art & Design** Revisit **Art skills**	17/5	**Geography** Builds on UK countries / continents Introduce **Location of hot and cold climates in relation to the Equator** Unity Y1
12/10		15/2	Half term	24/5	
19/10	**Science** Introduce **Animals, including humans**	22/2 NEW	**Flexible block** for revisiting and retrieval	31/5	Half term
26/10	Half term	1/3	**Design and Technology** Introduce **Food technology**	7/6	**Design and Technology** Introduce Textiles **Puppets**
2/11	**Computing** Introduce **'Getting started'**	8/3	Art Introduce **Sculpture and Collage**	14/6	**History** Build on lives of significant individuals **Introduce more lives of significant individuals** Unity Y1
9/11	**Geography** Introduce **Name / locate UK and countries / capital cities** Geography meeting Unity Y1	15/3	**Science** Revisit and retrieve **Animals, including Humans** Unity Y1	21/6	**Science** Revisit and retrieve Plants, Animals including Humans Unity Y1 **Science** Seasonal changes / daily weather
16/11		22/3	**Computing** Revisit **Programming** Introduce algorithms	28/6	**Computing** Build on programming Introduce **Rocket to the moon -** Debugging and sequencing.
23/11	**Art** Introduce **Art and Design Skills** Drawing, painting, craft and art appreciation	29/3	Easter break	5/7 NEW	**Flexible block** for revisiting and retrieval
30/11	**Computing** Introduce **Programming**			12/7	Art Introduce **landscapes and different media**
7/12	**Science** Revisit and retrieve Plants Y1 Unity Y1			19/7	Break up for summer 20/7
	History Revisit and retrieve changes within living memory Unity Y1				
14/12 NEW	**Flexible block** for revisiting and retrieval				
21/12	Christmas break				

WHAT CONTENT?

If there is to be a reduced curriculum offer, then you'll need to prioritise

Structures

- time
- subject
- knowledge
- vocabulary

Methods

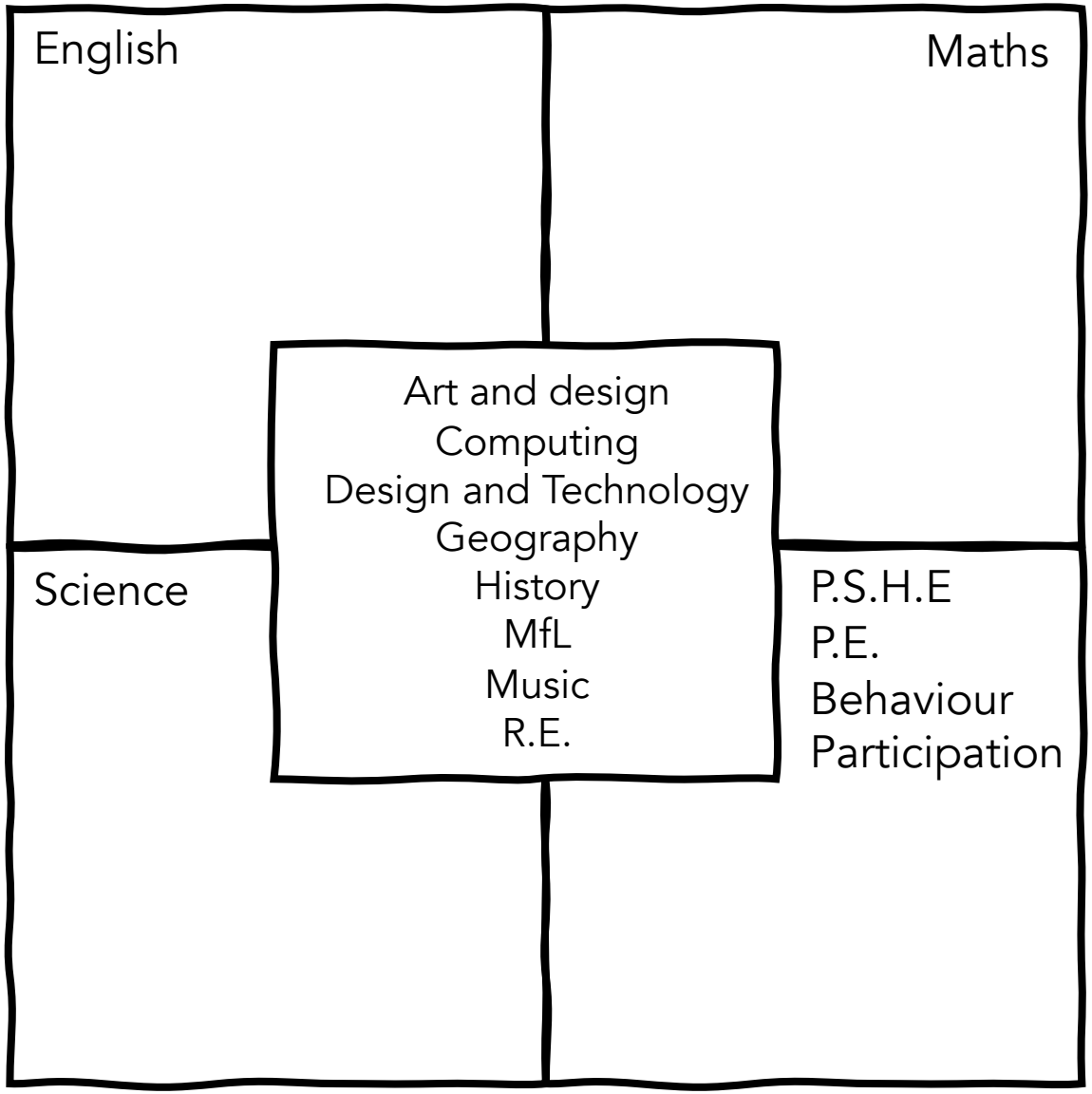
- tasks and types of practice
- retrieval activities
- returning to content though spacing quizzing
- remember and connect

Quality assurance

- looking at books
- talking with pupils
- subject feedback and assessment

AUTUMN 2020 - WHAT CURRICULUM?

Breakout Rooms



School / Year group / Class discussion

What knowledge or study can't be left out? Why?

|

What cross-curricular connections are possible through English and maths?

|

Is it possible to do less of some things? Why?

DEFINE THE TIME YOU HAVE

Set out a strategic plan for allocated time for each year group

|

What subjects will you prioritise?

English | Maths | Science | P.S.H.E | P.E… and…

BROAD AND BALANCED

|

If we have a directive, we need to make sure the curriculum is
LESS, BUT EQUAL.

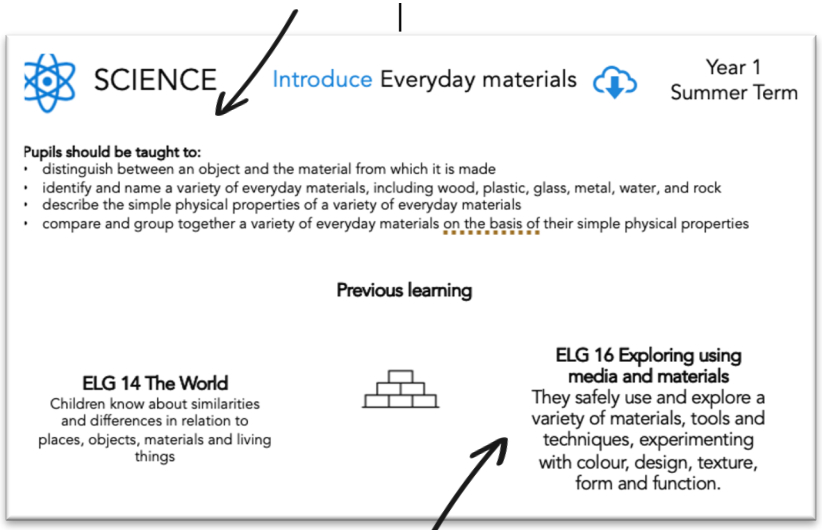
Y2	AM	PM 1.00 – 3.15 (break 10 mins)		
Mon	English and Maths Reading and Phonics	2.15		2.15
Tue		1.0	1.15	2.15
Wed		1.0	1.15	2.15
Thur		1.0	1.15	2.15
Fri		2.15		2.15

WHAT CONTENT?

If there is to be a reduced curriculum offer, then we need to focus on essential content.

ONE WAY (not THE way)

Be clear about the curriculum content to be taught



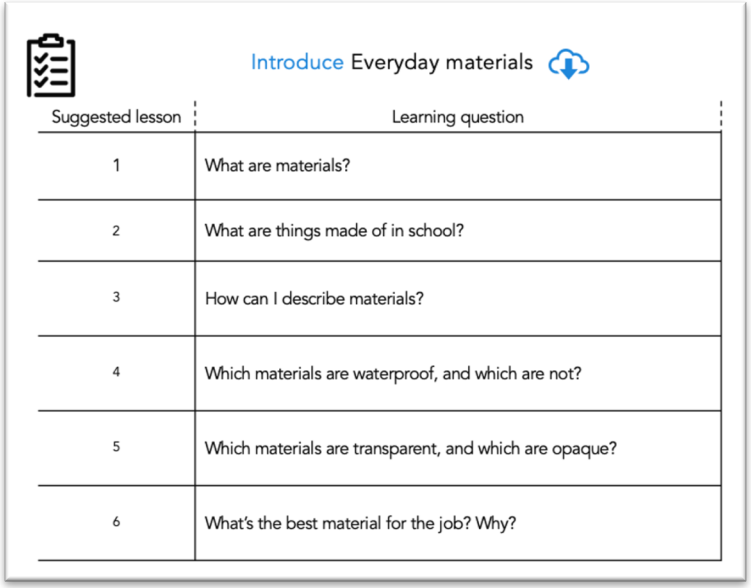
What previous experience can be drawn on?

Activate previous learning through questions, cued reminders, flick-back techniques or retrieval practice.

WHAT SEQUENCE?

Selecting the essential content and sequencing is important.

Here is an example of the full learning sequence



Introduce Everyday materials

Suggested lesson	Learning question
1	What are materials?
2	What are things made of in school?
3	How can I describe materials?
4	Which materials are waterproof, and which are not?
5	Which materials are transparent, and which are opaque?
6	What's the best material for the job? Why?

If we had to reduce the sequence because of necessary priorities, what content would you choose?

How would you choose the content?

What ways would you go about choosing the content?

WHAT SEQUENCE?

Don’t leave it to chance, personal preferences or luck – use a system

To keep it consistent, you could use Shimamura’s approach around knowledge acquisition:

- categorise 
- compare 
- contrast 

MY TURN - WHAT SEQUENCE?

Introduce Everyday materials

Suggested lesson	Learning question
1	What are materials?
2	What are things made of in school?
3	How can I describe materials?
4	Which materials are waterproof, and which are not?
5	Which materials are transparent, and which are opaque?
6	What's the best material for the job? Why?

Pupils should be taught to:

- distinguish between an object and the material from which it is made
- identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
- describe the simple physical properties of a variety of everyday materials
- compare and group together a variety of everyday materials on the basis of their simple physical properties

Start by looking at how the knowledge connects and think about how to teach that using examples and non examples.

Categorise specific materials – transparent and opaque.

Bring the concept of waterproofing into working scientifically.

Now you have a refined sequence:

- What are materials and where do we find them in school? (Retrieve and Categorise)
- What materials are transparent, and which are opaque? (Categorise and compare)
- What materials are waterproof and what's the best material for the job? (Categorise, compare and contrast)

YOUR TURN- WHAT SEQUENCE?

Breakout Rooms

Suggested sequence of learning:

Suggested lesson	Learning question	Cumulative questions from quiz					
1	Where is London? When was the Great Fire of London?						
2	How did the fire start? Why did the fire spread so quickly? *Study Sunday 2nd September 1666*						
3	Where did the fire spread to? *Study Monday 3rd and Tuesday 6th September 1666*						
4	Where did the fire spread to? *Study Wednesday 5th and Thursday 6th September 1666*						
5	How do we know about the Great Fire of London? *Study sources of evidence, including artefacts, newspapers and diary entries from Samuel Pepys and John Evelyn.*						
6	What effect did the fire have on London? *As a result of the fire, what changes were made to London?*						

Pupils should be taught about:
- events beyond living memory that are significant nationally or globally.

What concepts underpin this study?
- Chronology
- Causation
- Sources of evidence

Now you have a refined sequence:

1.

2.

3.

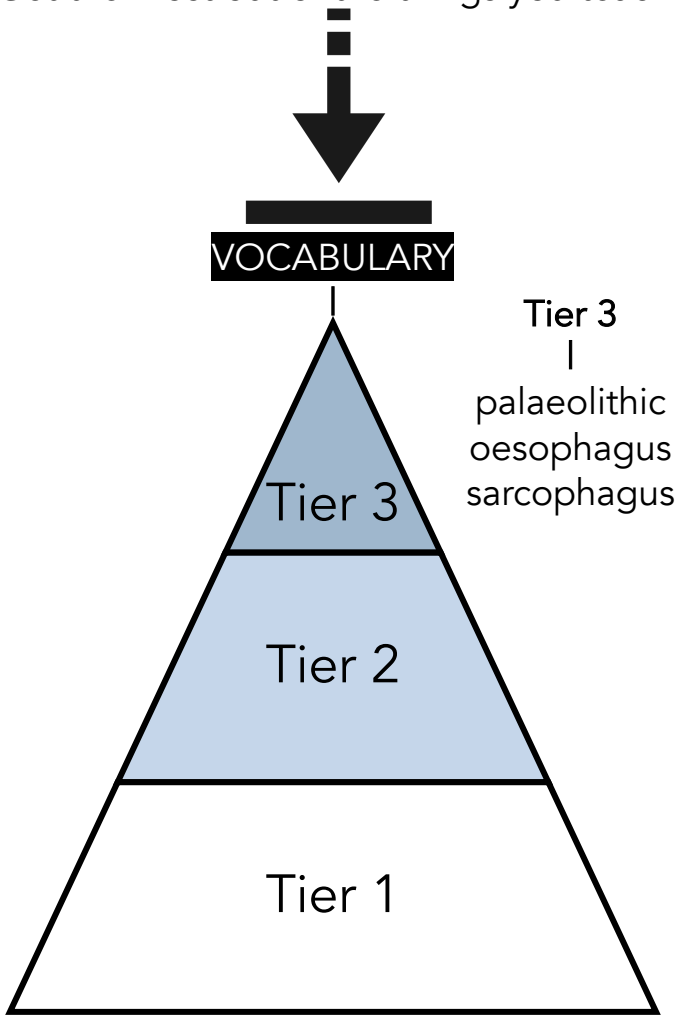
PRECISION

Get the most out of the things you teach

Tier 3
|
Low frequency, context-specific vocabulary
|
language that is taught as part of a specific subject or domain

Tier 2
|
High frequency and multiple meaning vocabulary
|
often found in adult conversation and literature.

Tier 1
|
Basic vocabulary needed to function in daily life.



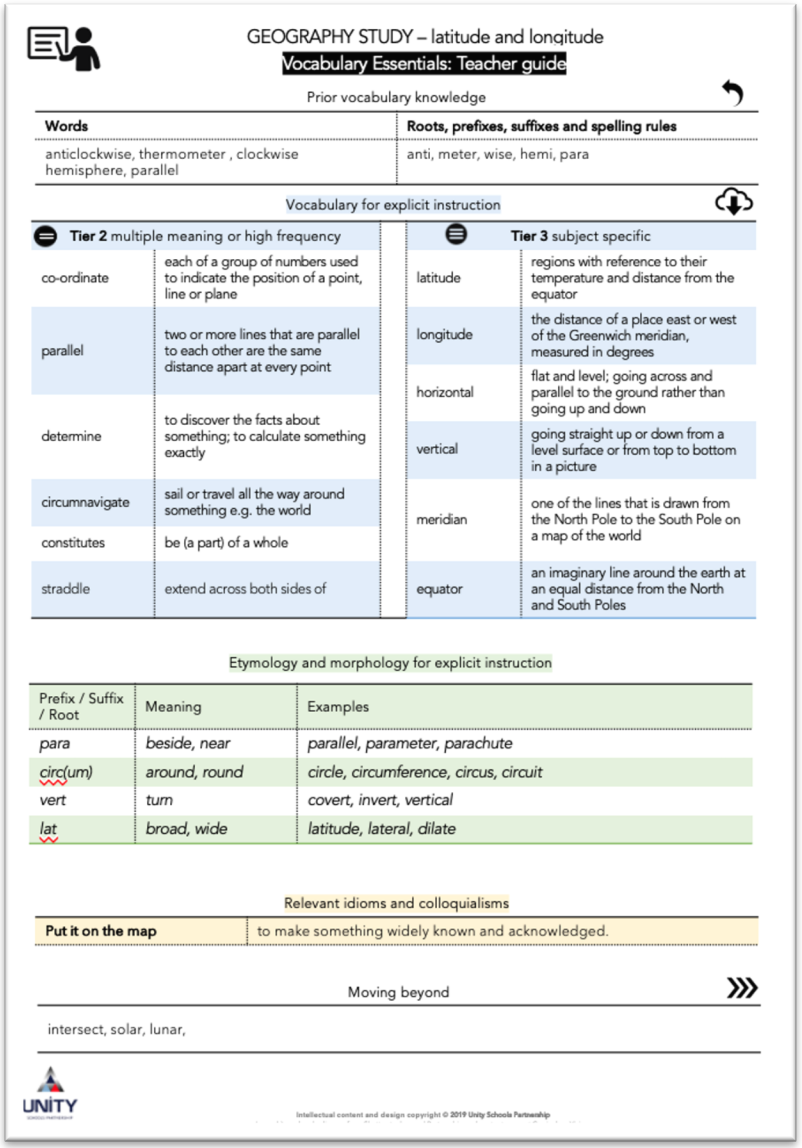
Tier 3
|
palaeolithic
oesophagus
sarcophagus

Tier 2
|
society
absorb
flourish

Tier 1
|
book
girl
run

WORKING ON THEM NOW – formally available SPRING 2021

Teacher guides for explicit vocabulary instruction



GEOGRAPHY STUDY – latitude and longitude

Vocabulary Essentials: Teacher guide

Prior vocabulary knowledge

Words	Roots, prefixes, suffixes and spelling rules
anticlockwise, thermometer , clockwise hemisphere, parallel	anti, meter, wise, hemi, para

Vocabulary for explicit instruction

Tier 2 multiple meaning or high frequency		Tier 3 subject specific	
co-ordinate	each of a group of numbers used to indicate the position of a point, line or plane	latitude	regions with reference to their temperature and distance from the equator
parallel	two or more lines that are parallel to each other are the same distance apart at every point	longitude	the distance of a place east or west of the Greenwich meridian, measured in degrees
determine	to discover the facts about something; to calculate something exactly	horizontal	flat and level; going across and parallel to the ground rather than going up and down
circumnavigate	sail or travel all the way around something e.g. the world	vertical	going straight up or down from a level surface or from top to bottom in a picture
constitutes	be (a part) of a whole	meridian	one of the lines that is drawn from the North Pole to the South Pole on a map of the world
straddle	extend across both sides of	equator	an imaginary line around the earth at an equal distance from the North and South Poles

Etymology and morphology for explicit instruction

Prefix / Suffix / Root	Meaning	Examples
para	*beside, near*	*parallel, parameter, parachute*
circ(um)	*around, round*	*circle, circumference, circus, circuit*
vert	*turn*	*covert, invert, vertical*
lat	*broad, wide*	*latitude, lateral, dilate*

Relevant idioms and colloquialisms

Put it on the map	to make something widely known and acknowledged.

Moving beyond

intersect, solar, lunar,

UNITY

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What purpose does this task serve?

(Ask yourself this before planning tasks)

What are children learning?

- What previous learning?
- What knowledge?
- What vocabulary?

How will they remember?

- vocabulary
- practise (oracy, rephrasing, remembering)
- recording (speaking, reading, writing)
- revisiting
- questions and quizzing

1a. What are lines of latitude?

Lines of latitude

- parallels
  - measure location north and south of the Equator
  - 180° of latitude in total

5 major parallels

- Arctic Circle
  - 66.5° north of the equator

Arctic

- origin from Greek arktikos meaning 'of the north'
- extremely cold

North Pole

Tropic of Cancer

- 23.5° north
- Equator 0°
- Tropic of Capricorn
- 23.5° south

Tropics

- hot and wet climate

Antarctic Circle

- 66.5° south of the equator

Antarctic

- not north
- opposite the north
- tremendously cold

South Pole

UNITY

Knowledge and meaning

Vocabulary

Tasks

Questions

Breakout Rooms

Don't forget PE

Don't forget additional PSHE time

Don't forget lots of reading opportunities

Alex will point those using CUSP towards what to cover from Summer units, during the Autumn/Spring to enable that learning to be built upon.

The Reading/Writing tasks within CUSP units will start in January, following CPD late Autumn.

We will have arrangements for Art training in the next week and the new curriculum being written will follow the initial training which will take place in October (date to be confirmed)

To confirm - Kapow is in the curriculum map to enable schools to teach effective or better computing. However, some schools may have less confident teachers, and in those year groups a computing lead may need to adjust the Kapow unit to one written by Nick Templeton.

Not for now

|

pages to get start thought provoking discussions with staff

PROFESSOR ARTHUR SHIMAMURA'S

A WHOLE-BRAIN LEARNING APPROACH FOR STUDENTS AND TEACHERS

M
MOTIVATE

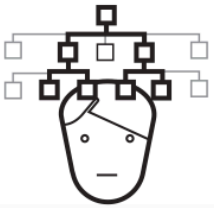
We need to be motivated to use energy to keep focused on the learning process. Designed well, motivation can be intrinsic to learning, for example, by generating curiosity, framing new material as a quest to answer big questions, organising ideas within a wider schema, story-telling and asking the 'aesthetic question': *"What do you think? How does it make you feel? Why is it good?" "The aesthetic question engages emotional brain circuits and forces us to attend to and organize our knowledge."*

A
ATTEND

Academic learning is a 'top-down' activity whereby we consciously attend to the information needed to build our schema from all the stimuli we're exposed to. This is hard so 'mind wandering' is common and teachers need to expect it. Ideally students will consciously attend to the learning goals and consciously make connections – but sometimes an instructor needs grab attention, acting as their students' prefrontal cortex to direct their top-down processing.

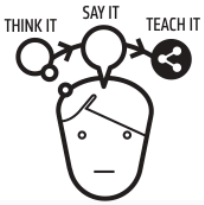
R
RELATE

Shimamura offers numerous biological insights about how we store and connect information through memory consolidation. The practical strategies include deploying elaborative-interrogative questioning – asking how and why – using mental images, analogies, constructing concept maps as schematic representations of sets of connected ideas and training students to make notes organised in hierarchical structures.



G
GENERATE

Shimamura suggests: *"Think it, say it, teach it! These are the simplest things to do to improve your memory"*. He details multiple ways in which our memories are strengthened when we generate information from our memory, not simply restating it but using our own words. If we tell someone what we've learned we can improve our memory by 30-50%. Explained in terms of brain functions, Generate reinforces the widely known retrieval practice concept.



E
EVALUATE

This is the territory of metacognition with a nice metaphor of the prefrontal cortex acting as the conductor of the orchestra of brain functions. There's a problem with the illusion of knowing when we are familiar with information even when we cannot fully recollect it. We stop trying to learn more if we kid ourselves into thinking we already know it. Students should, therefore, be taught to check their understanding using spaced retrieval practice, generating information by explaining their learning to others as a form of self-test.

Designed by Oliver Caviglioli | @olicav olicav.com
Summarised by Tom Sherrington | @teacherhead teacherhead.com
Download the full document at: https://shimamurapubs.files.wordpress.com/2018/09/marge_shimamura.pdf

PRECISION

Get the most out of the things you teach

VOCABULARY

One of the essential components that complements our recovery curriculum will be the focus on vocabulary.

"If words convey meaning, then we need to teach more than word recognition – we need to make rich associations with language."

AVOID

Just providing words in a list or
overwhelming pupils with a vast bank of language.

DO MORE OF THIS:

Decode and **define**.

|

Use and **apply** in context.

|

Associate and **link** with **connected** words.

|

Deconstruct
by teaching word origin, etymology, morphology, roots, prefixes and suffixes.

WHEN CONTENT IS NEW OR UNFAMILIAR

|

cognitive science tells us that **discovery learning is NOT** the most effective method to use

free and unstructured play to acquire new knowledge

|

using discovery learning to acquire new content

|

pupils left to find new information out from a wide range of sources

HIGH COGNITIVE LOAD ON THE WORKING MEMORY
LACK OF PRECISION AND VOCABULARY
LACK OF CLARITY
LACK OF MEANINGFUL PRACTICE

(As pupils become more knowledgeable, skilful and fluent then there is a place for the expert-reversal effect)

BELONGING

How will pupils feel a sense of genuine and authentic belonging?

Vygotsky

"We are social learners"

2 criteria

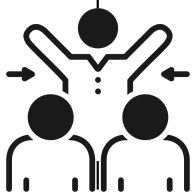
Baumeister RF, Leary MR. 1995.

Individuals must have
relatively frequent positive interactions
with at least a few people.

These interactions must take place within a framework of
long-lasting affective concern
for each others' welfare.

Therefore, social and emotional education must be a priority within the curriculum offer.

EMOTIONAL PARTICIPATION



Pupils are cognitively and actively engaged.
Pupils socially and emotionally invest in learning.

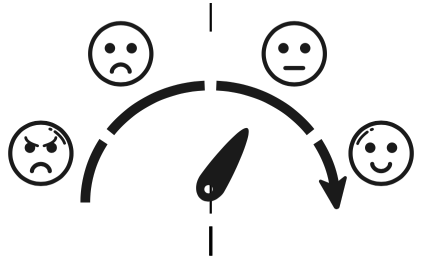
Participation is higher when:

- Relationships are consistent, positive and respectful with all adults.
- Social environments are low threat. Views are valued and put downs are not tolerated.
- Interesting content is taught.
- Prior knowledge is factored in.
- The physical environment is conducive to engagement. (not distracting)

Participation is lower when:

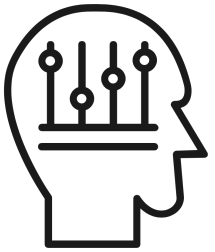
- Pupils have negative attitudes.
- Parents support pupils' negative attitudes.
- Teaching is weak and disorganised.
- Pupil self-esteem is low.
- Environments are disorganised and unwelcoming.
- Expectations are low

SELF-REGULATION



"The process by which individuals influence which emotions they have, when they have them, and how they experience and express their feelings. Emotional regulation can be automatic or controlled, conscious or unconscious.
Gross et al, 1998

If we know self-regulation is learnable, then we must teach it.



- Least help first
- Modelling and regulation of our own emotions.
- Co-regulation: warm and responsive relationships
- Empathy to acknowledge emotions
- Talk about emotions:
- Teach impulse control through games
- Breaking the continuum with space and relaxation through mindfulness practice

www.behaviourmatters.org.uk