

Imaginary structures

*Building creative space to
reinforce knowledge*

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Catholic
Education
Tasmania

BIG PICTURE

Creativity emerges from:

Knowledge + Constraint + Time + Iteration

A path to creativity?

MODE A ~80%

- You explain
- You model
- They practice
- Check and give feedback
- Test them. And again a bit later

MODE B ~20%

- They Explore; Discover
- Hands-On Experience
- Inspire some AWE
- Go off-trail
- They make things;
Do projects;
- You set open-ended tasks;
- Give choice

Mode A

What is Mode A?

Concept Origin & Purpose

- Mode A vs B first developed by Tom Sherrington, see "The Learning Rainforest" and WalkThru series
- Mode A builds foundation of knowledge
= explicit/responsive teaching

Role of Knowledge

- Creates cognitive space for later thinking, connection, and original ideas

Key Features of Mode A Instruction

Cognitive Science Principles

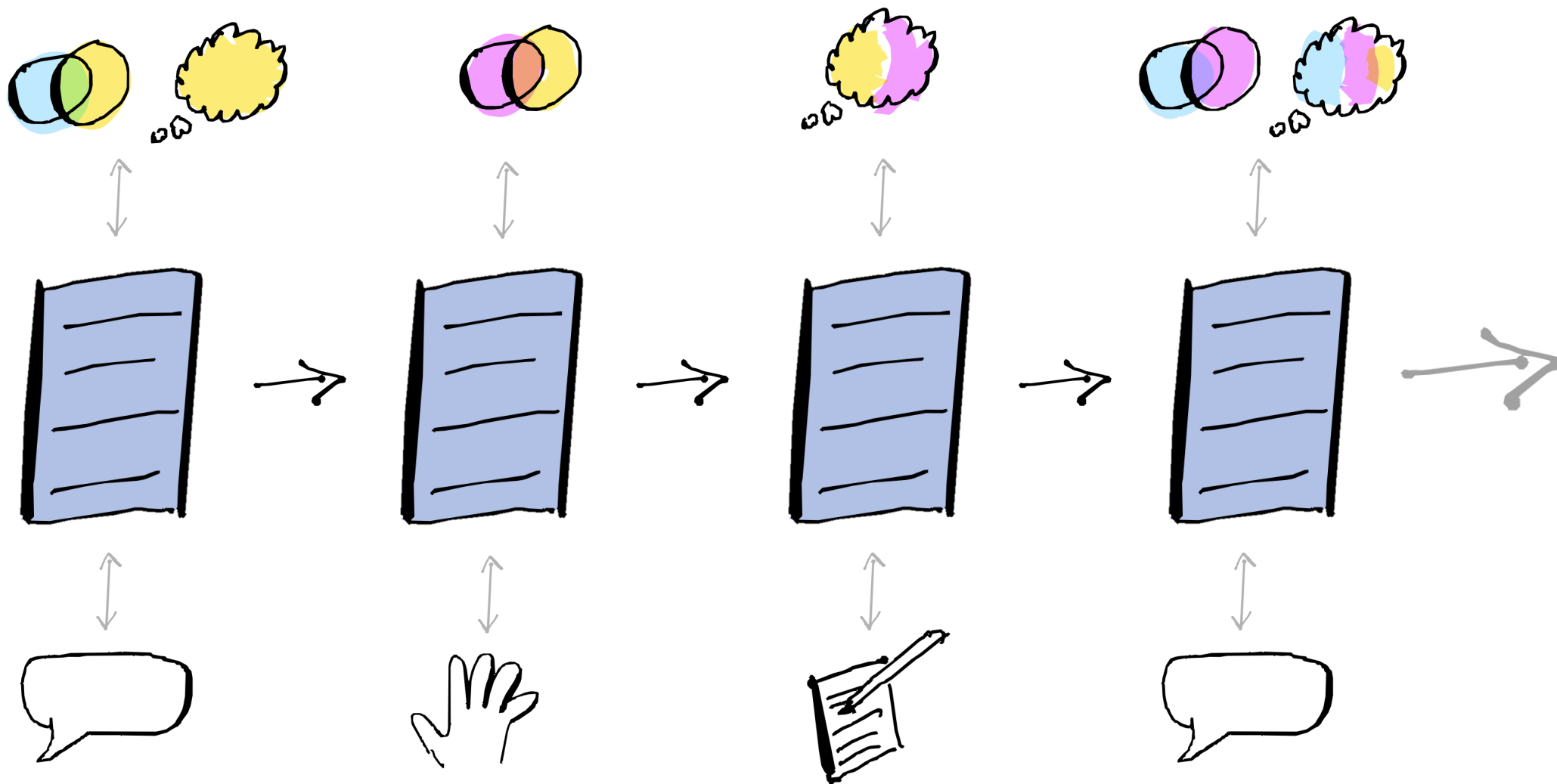
- Schema building, memory, cognitive load

Gradual Release of Responsibility

- "I do – We do – You do"

Mode A = Interactive and Responsive

Mode A is your backbone;
Mode B puts on more flesh



Reflection Questions

- 1. How do you currently structure your “I do – We do – You do” sequence, and what challenges or successes have you noticed?**
- 2. Can you share an example of a time Mode A instruction did not achieve the intended understanding? What might have contributed to that?**

Mode B - Intro

Tom Sherrington's Learning Rainforest

EXPLORING THE POSSIBILITIES

CHAPTER 9

PROJECTS AND HANDS-ON LEARNING

- P 1** HANDSON
- P 2** AMBIGUITY AND UNCERTAINTY
- P 3** PLAY DETECTIVE
- P 4** DEEP END
- P 5** GROUPS: GOALS AND ROLES

- P 6** PROJECTS
- P 7** KEEP IT REAL: AUTHENTIC PROJECTS, PRODUCTS, EXPERIENCES
- P 8** GET CREATIVE: LEARN TO CHOOSE
- P 9** "DAZZLE ME": KEEPING IT OPEN
- P 10** OFF PISTE

FURTHER POSSIBILITIES

- P 11** CLASS FORUM
- P 12** RECIPROCAL TEACHING
- P 13** FLIPPED LEARNING
- P 14** ONLINE TUTORIALS
- P 15** CO-CONSTRUCTION: SIDEKICKS
- P 16** INDEPENDENCE: TOOLS AND TRICKS
- P 17** STRUCTURED SPEECH EVENTS
- P 18** DEBATE
- P 19** THIRD TIME FOR EXCELLENCE
- P 20** EXCELLENCE EXHIBITION

AT A GLANCE

The most important ideas in Unit 2 are:

- Students should be able to locate major geographical features of the Mediterranean and major sections of the Roman Empire.
- The Romans created a legend (Romulus and Remus) to explain the city's founding.
- The Romans adopted and adapted Greek mythology and deities to their own culture.
- The Roman Republic evolved from one dominated by patricians to one in which plebeians also had power.
- The Romans not only defeated but destroyed Carthage in the Punic Wars.
- Julius Caesar was ambitious but also attempted to reform the government of the Roman state.
- The reign of Caesar Augustus ushered in the two-hundred-year *Pax Romana* and marked the end of the republic and the beginning of the Roman Empire.
- The Roman Empire ended for a variety of reasons: military, economic, political, and social.
- The Eastern Roman Empire lasted until 1453 as the Byzantine Empire.
- Roman political ideas, institutions, and works of literature (written in Latin) have had a tremendous impact on European history and culture.

See Core Knowledge

Generative learning

Shorter Generative Tasks

- Quick application: e.g., short responses, concept maps, problem-solving
- Embedded into Mode A; Scaffolded
- Examples: quick writes, brain dumps, 60-second explanations, rich tasks, self-explaining, teaching, self-testing, mapping

Generative learning

Getting students to generate ideas and connections from long-term memory

- Summarizing
- Mapping
- Drawing
- Self-explaining
- Teaching
- Self-testing

See this book -->

*LET'S FOCUS ON
MAPPING:*

DUAL CODING WITH TEACHERS



WHAT?

Discover 12 different
formats and how
they work

HOW?

Develop your skills
with step-by-
step WalkThrus

WHICH?

Take-aways and
principles of effective
visuals

WHO?

Double-page spreads
on dual coding
practice today

WHEN?

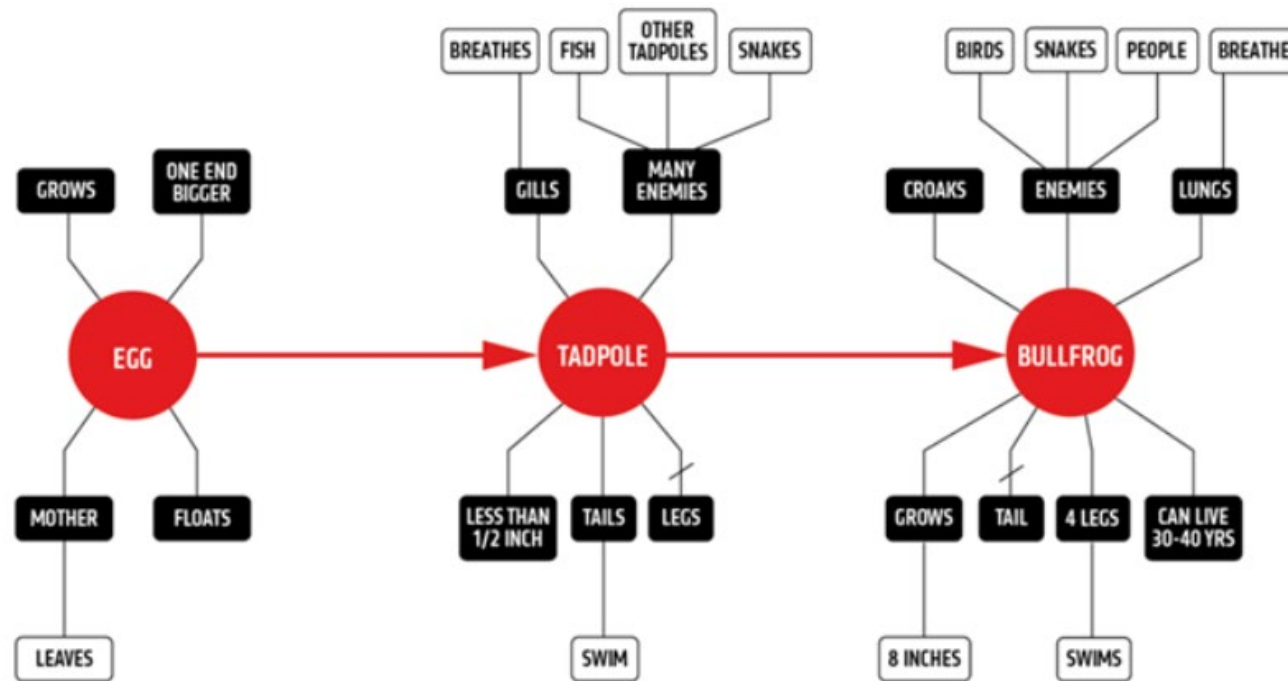
Identify the best
moment dual coding
aids learning

Mind maps



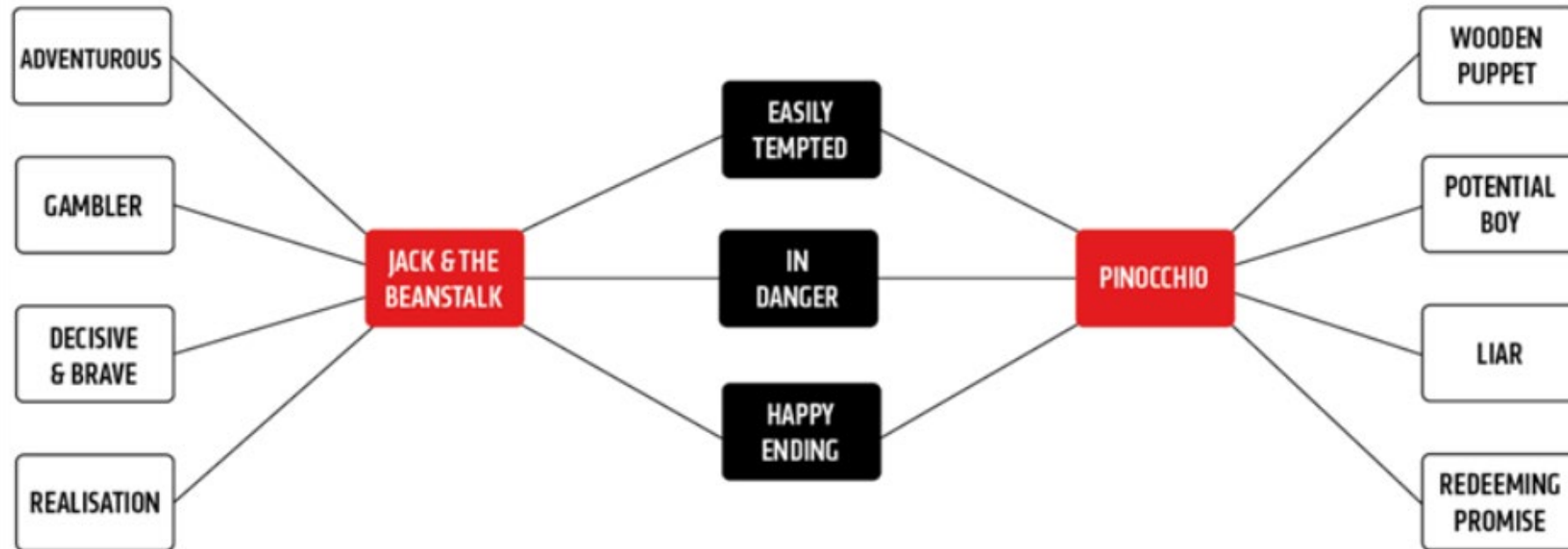
Mind-maps are useful if you want to chunk information or organise it into categories. In this example, the central idea is the 'The Three Pigs' and each branch is a theme within the story

Flow sprays



Flow-sprays are useful if you want to show the events that happen in a particular sequence. In this example, the red boxes show the main event in the lifecycle of bullfrogs, and the order they happen in. The black and white boxes show what factors contribute to these main events

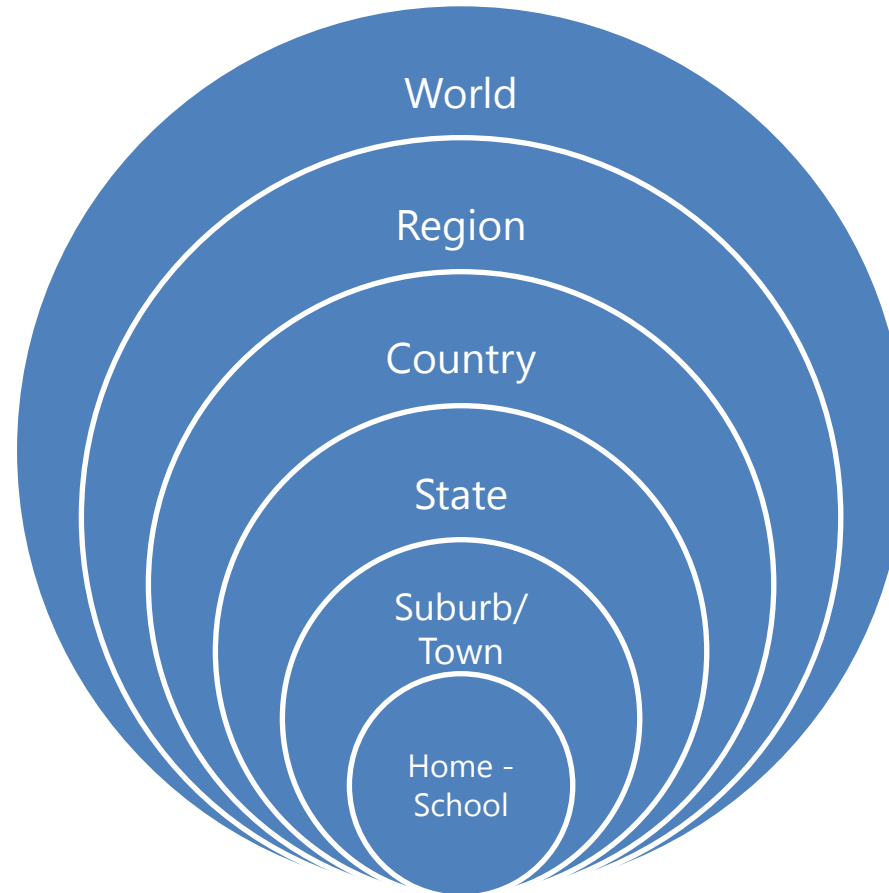
Double sprays



Double-sprays are useful if you want to show similarities and differences of information. In this example, the black boxes show what 'Jack & the Beanstalk' has in common with 'Pinocchio'. The white boxes show what is different about the two stories.

Curriculum Considerations

The limits of the expanding horizons approach



RETHINKING THE CURRICULUM

The problem with the expanding horizons model for history curricula

The predominant model for teaching history lacks coherence and is built on incorrect assumptions about what young children are able to learn.

By **Kevin S. Krahenbuhl**



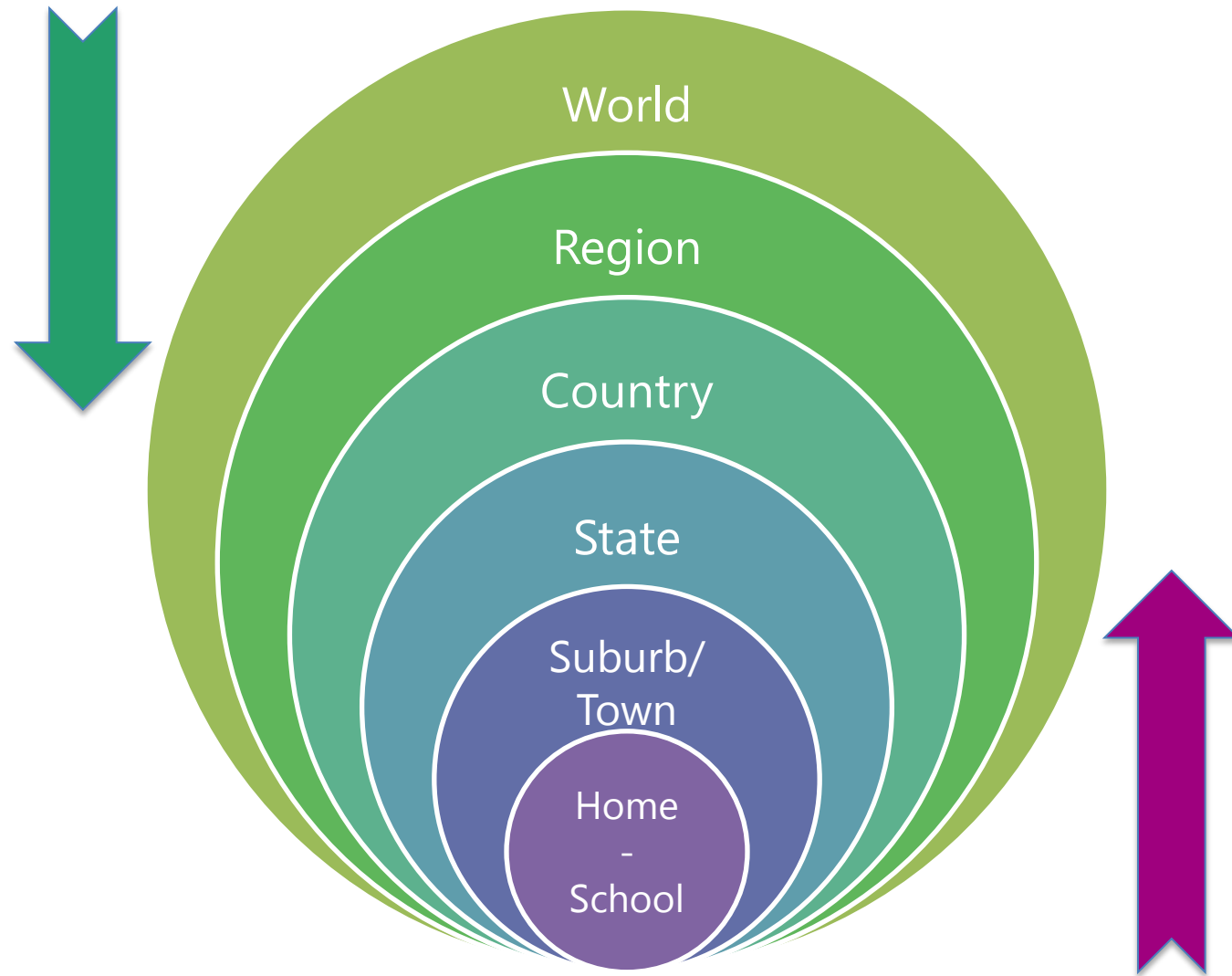
Krahenbuhl, K. S. (2019). The problem with the expanding horizons model for history curricula. *Phi Delta Kappan*, 100(6), 20-26.

NSW Syllabus → Pulling us forward

People use stories, images, objects and sites to understand the ancient past

- Read and recount stories, myths or legends from ancient peoples, places and cultures in **China**, **Egypt**, **Greece** and **Rome**
- Identify and compare ancient objects from China, Egypt, Greece and Rome
- Identify and describe designs, sites and structures from ancient times that endure today
- Locate places identified in ancient stories, myths and legends from China, Egypt, Greece and Rome using maps, globes and images
- Recognise that archaeologists locate and study objects and sites as sources of evidence of a time and place

Zoom in & Zoom out





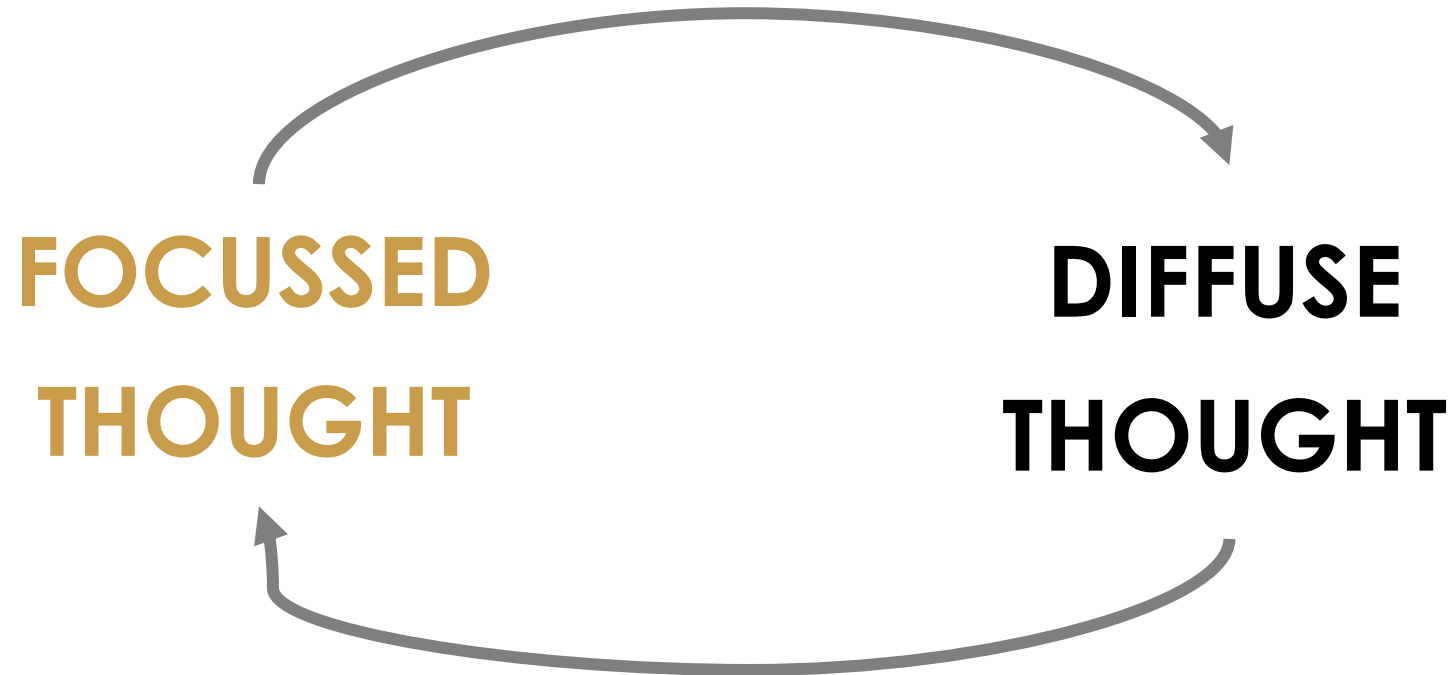
OBVIOUS
SURPRISING FACT

Knowledge can never be outsourced

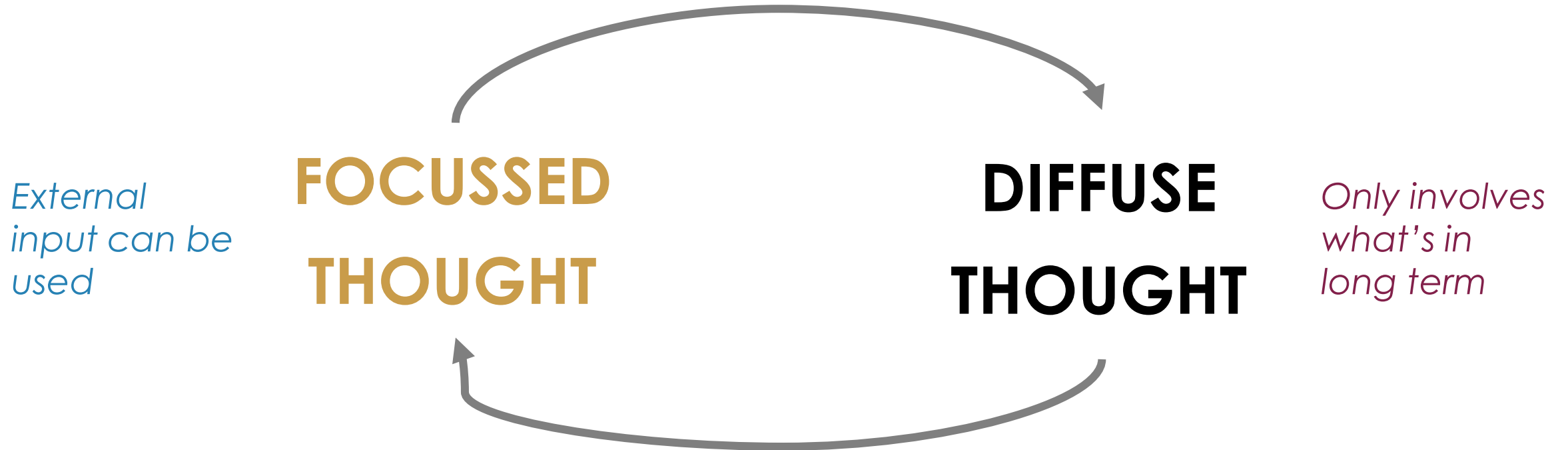
The creativity process involves ...

**FOCUSSED
THOUGHT**

The creative process involves ...



The creative process involves ...



Mode B - Continued

Mode B – Extended Tasks/Projects

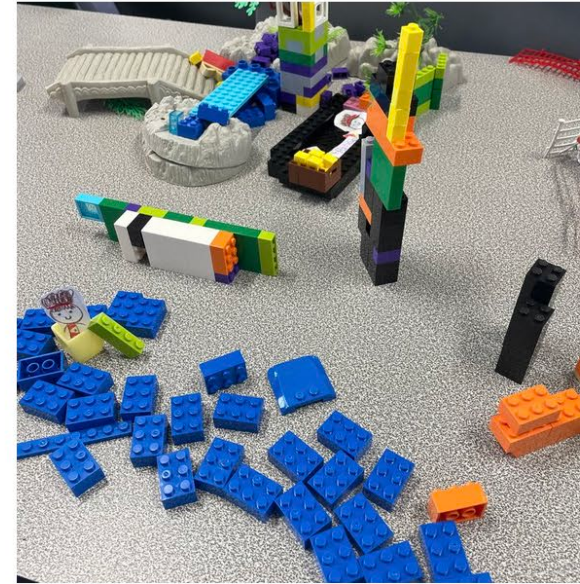
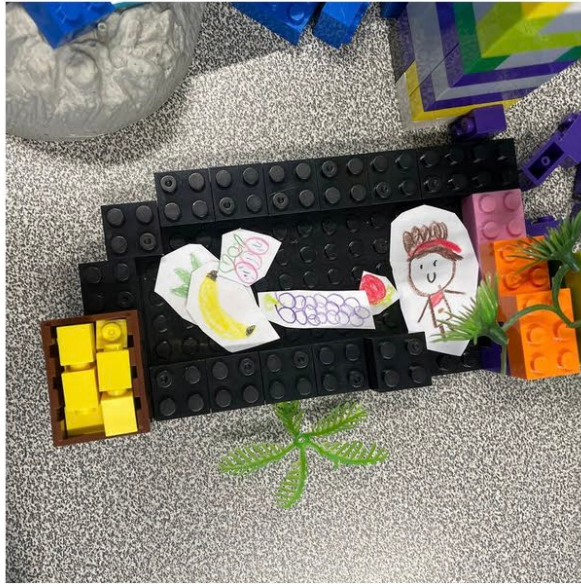
FEATURES

- Apply and extend knowledge authentically
- Higher cognitive demand: plan, synthesise, create, evaluate
- Often integrate multiple knowledge strands

HOW TO DESIGN

- Build directly on Mode A knowledge
- Explicitly teach task-specific skills
- Include checkpoints and scaffolds
- Ensure clear purpose aligned to learning outcomes

HIGHLIGHTS FROM A MESOPOTAMIAN CITY BY SOME OF OUR YEAR 2 STUDENTS. FEATURING RIVERS, CANALS, FARMERS, PRODUCE, INFRASTRUCTURE, LIVESTOCK AND TRANSPORTATION



Mar 24, 2022

"I LOVE reading...
Now" - Content that
gets kids hooked on
literacy

There is a tributary going to the river. →

The rocks are to show peoples houses. →

Irrigation of crops next to the river →

There is fish in the ocean →



Well done!



← The source of the river is at the base of the mountain.

← trees and bushes along the river.

← There is a bridge. There is a boat made from leaves next to the bridge.

← People here somewhere. Why do people settle close to rivers?

← river going in to the ocean.

← The mouth of the river where the river goes out to the ocean.

PRODUCE, INFRASTRUCTURE, LIVESTOCK AND TRANSPORTATION



May 24, 2022
"I LOVE reading... Now" - Content that gets kids hooked on literacy

Brandon Park
Primary School, 2022
Year 4 Student of
Mrs Georgia Pattie

Connect Mode B to Big Questions

- Link tasks to unit themes and overarching questions
- Opportunities for consolidation, connection, challenge (3C's)
- Ensure students know what a good one looks like!
 - Have you shown an example and non-example of a successful project/task/performance?

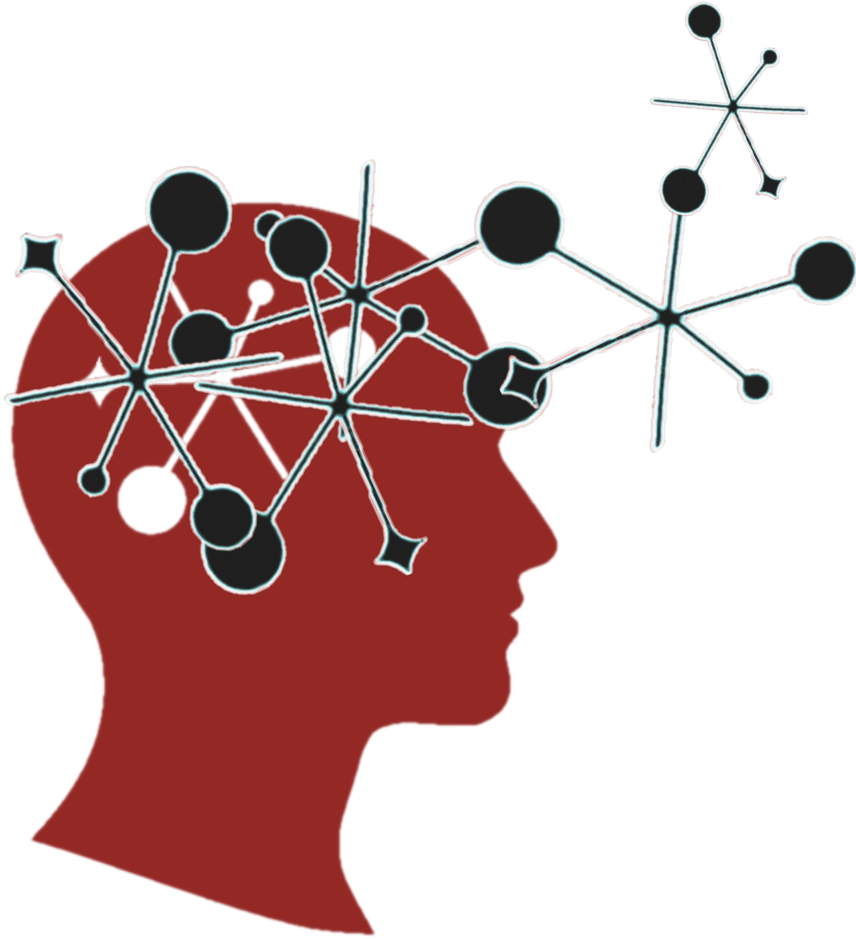
Avoid the 'Busywork', or 'Product' over Learning

- Ensure the learning is the focus, not just the product or performance
- Emphasise learning outcomes over aesthetics
- Teach both content and task skills
- Include checkpoints, scaffolds, and support for all learners

Reflection Questions

1. **Have you tried a large Mode B task that was less successful?**
2. **What were the key challenges with previous projects and how might they be addressed?**

Meaningful $\leftrightarrow$ Generative learning



See Fiorella and Mayer

BIG PICTURE

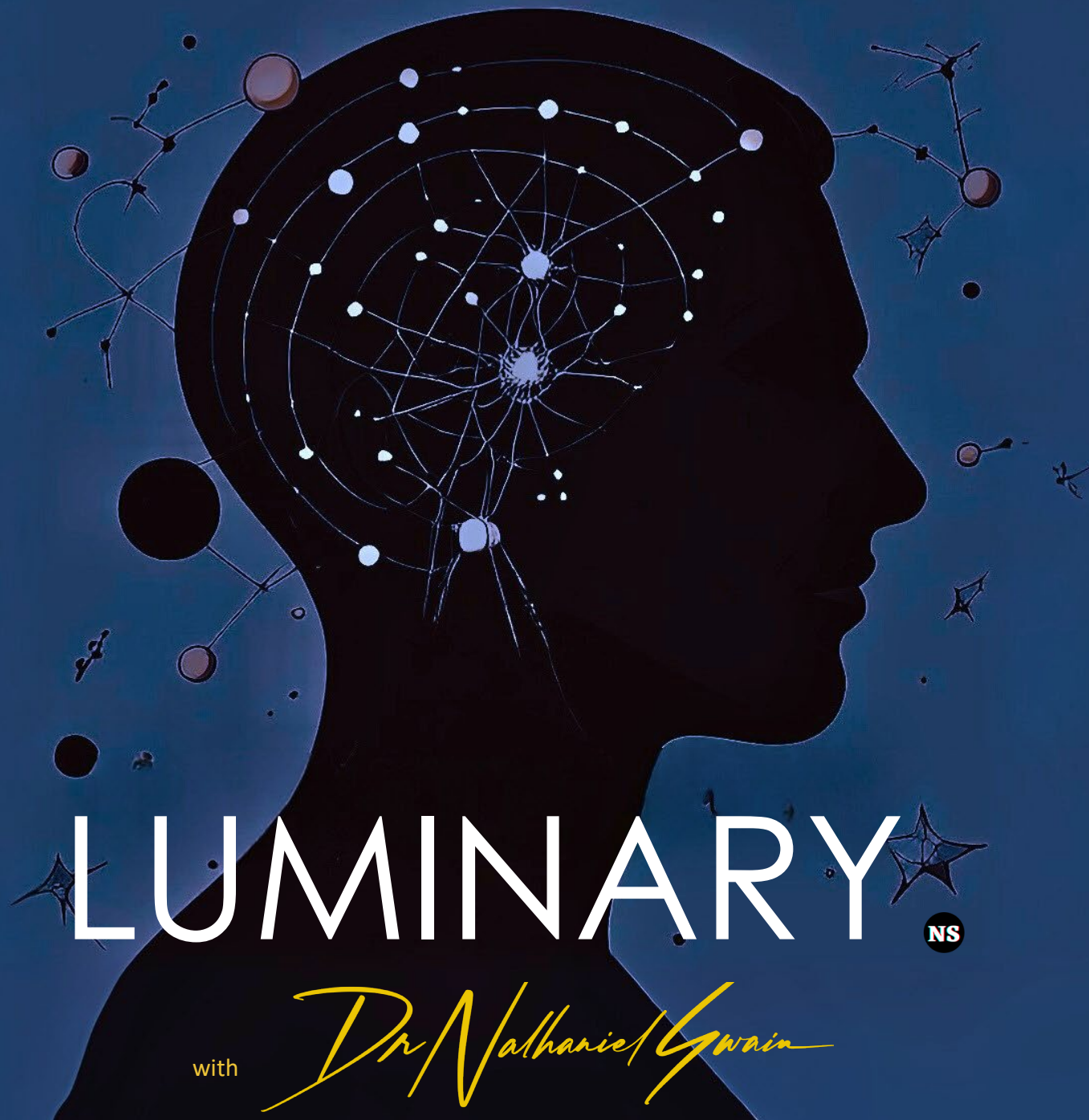
Creativity emerges from:

Knowledge + Constraint + Time + Iteration

A PODCAST

CHALK DUST

WITH REBECCA BIRCH
& DR. NATHANIEL SWAIN



LUMINARY

NS

with *Dr Nathaniel Gwain*

**DR
NATHANIEL
SWAIN**

@NathanielRSwain



Success Stories to Help Kickstart
Your School Improvement



HARNESSING THE SCIENCE OF LEARNING

NATHANIEL SWAIN, PhD





Catholic
Education
Tasmania