METACOGNITION AND THE KNOWLEDGE-RICH CURRICULUM

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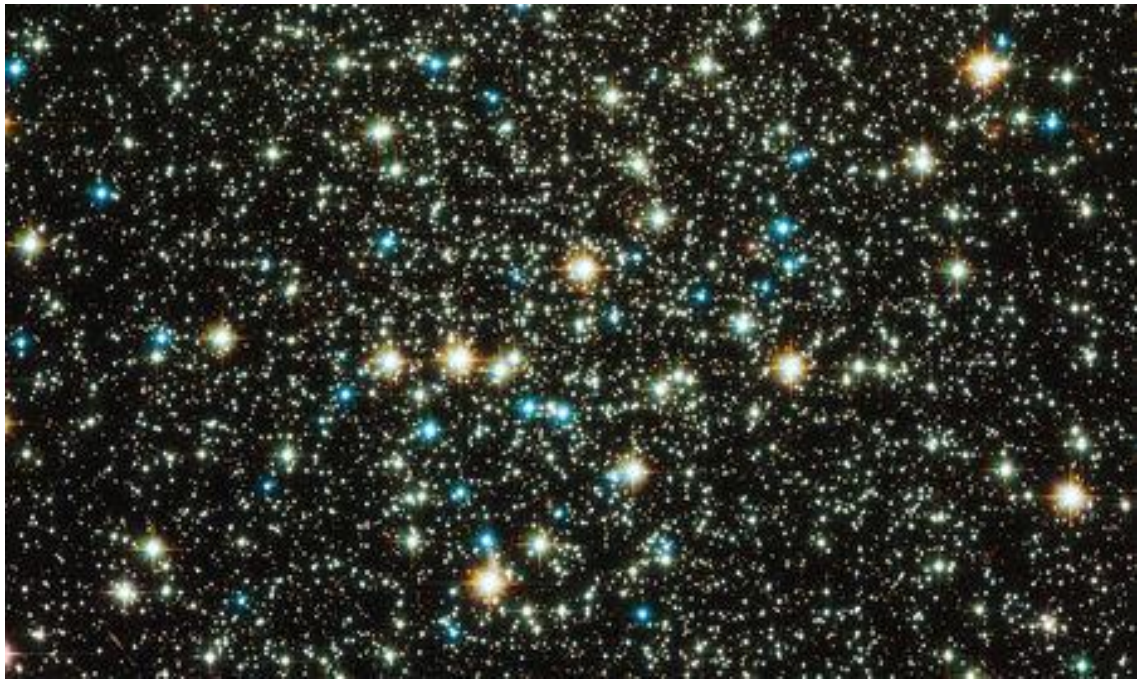
WHAT DO WE MEAN BY CURRICULUM?




WHY KNOWLEDGE MATTERS

Curriculum, pedagogy, assessment

What do we want pupils to learn?
(curriculum)

How do we teach them?
(Pedagogy)

What have they learnt?
(Assessment)

Educational research has long focused on pedagogy – this is important, but it is not sufficient

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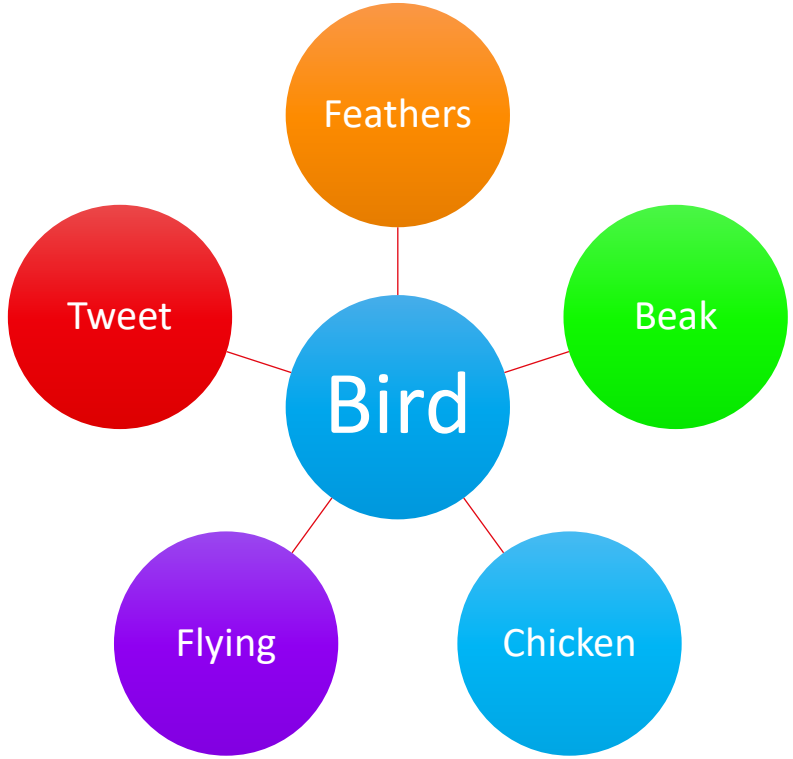
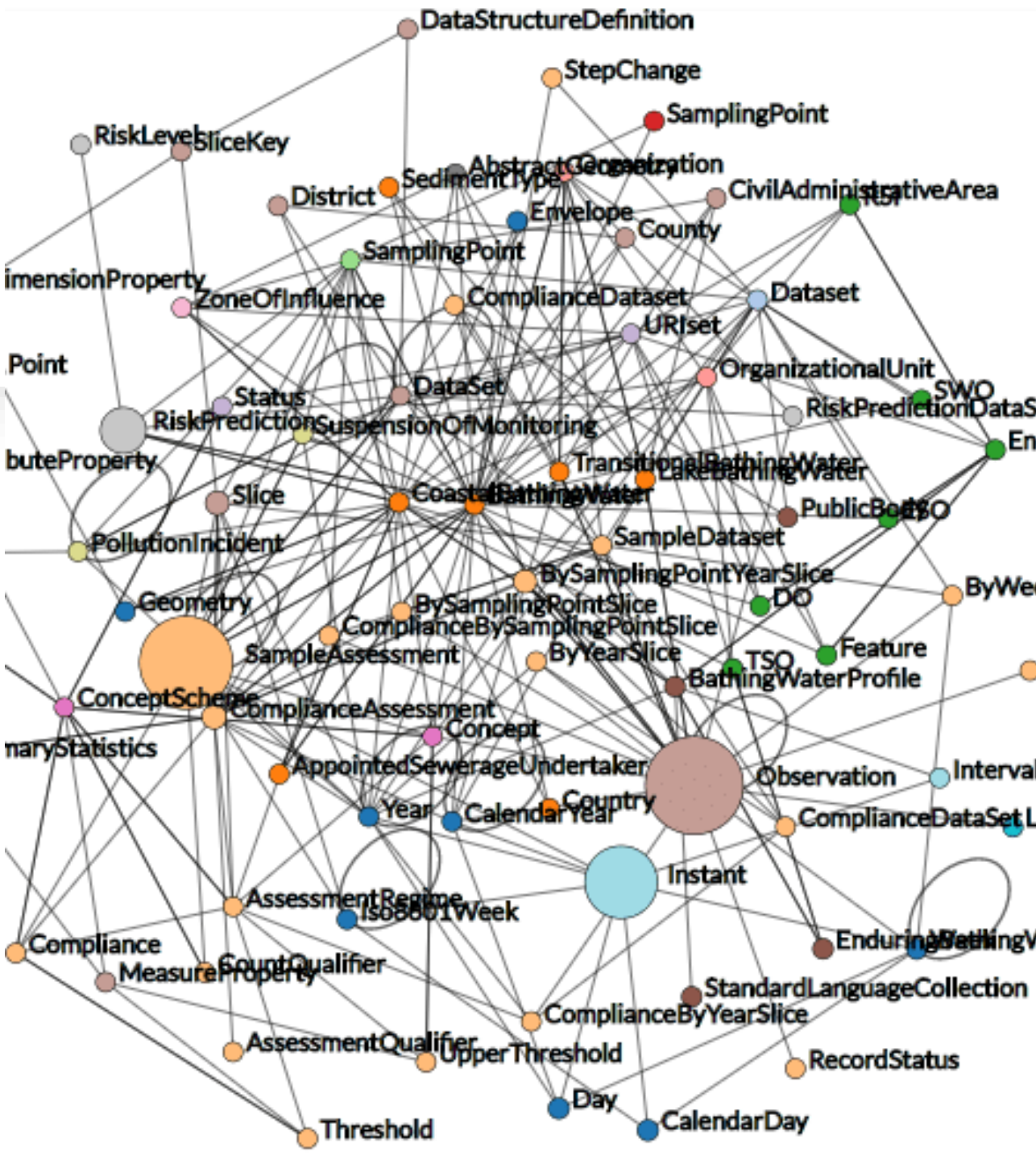
KNOWLEDGE MATTERS





WHY DOES CURRICULUM MATTER?

- Cultural capital
- Social cohesion and democracy
- Access to the best of our culture

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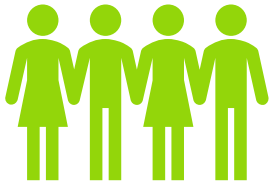
THE RETURN OF KNOWLEDGE

Cognitive science



Societal cohesion

Effective teaching

THE KNOWLEDGE-RICH CURRICULUM

WHAT IS A KNOWLEDGE CURRICULUM?

- Knowledge as the basis for skills and understanding
- Subjects matter
- Content matters
- Concepts matter

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KEY ELEMENTS

- The curriculum is the progression model
- Knowledge clearly laid out
- Building blocks
- Thoughtful sequencing
- Making choices

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WHAT A KNOWLEDGE CURRICULUM ISN'T

- Disconnected facts
- Window dressing
- Encounter rather than learn
- Boring!

WHAT'S THE EVIDENCE?

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EdWorkingPaper No. 23-755

A Kindergarten Lottery Evaluation of Core Knowledge Charter Schools: Should Building General Knowledge Have a Central Role in Educational and Social Science Research and Policy?

David Grissmer, University of Virginia
Thomas White, University of Virginia
Richard Buddin, University of Virginia
Mark Berends, University of Notre Dame
Daniel Willingham, University of Virginia
Jamie DeCoster, University of Virginia
Chelsea Duran, University of Virginia
Chris Hulleman, University of Virginia
William Murrah, Auburn University
Tanya Evans, University of Virginia

Time to Transfer: Long-Term Effects of a Sustained and Spiraled Content Literacy Intervention in the Elementary Grades

James S. Kim, Joshua B. Gilbert, Jackie Eunjung Relyea ✉, Patrick Rich, Ethan Scherer, Mary A. Burkhauser, Johanna N. Tvedt

Author Affiliations

Kim, J. S., Gilbert, J. B., Relyea, J. E., Rich, P., Scherer, E., Burkhauser, M. A., & Tvedt, J. N. (2024). Time to transfer: Long-term effects of a sustained and spiraled content literacy intervention in the elementary grades. *Developmental Psychology, 60*(7), 1279–1297. https://doi.org/10.1037/dev0001710

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Articles

Does Cultivating Content Knowledge during Literacy Instruction Support Vocabulary and Comprehension in the Elementary School Years? A Systematic Review

HyeJin Hwang ✉, Sonia Q. Cabell & Rachel E. Joyner

Pages 145-174 | Received 21 Oct 2020, Accepted 19 Oct 2022, Published online: 07 Nov 2022

Cite this article | https://doi.org/10.1080/02702711.2022.2141397 | Check for updates

WHAT KNOWLEDGE?

Councils call for school lessons on cold water shock

Councils urge schools to alert pupils to the dangers of cold water shock after an increase in accidental drownings

Here's an idea for an educational revolution that's actually useful — let's start teaching sleeping skills

Schools should teach children about Stormzy instead of Mozart

Science and society

- Does knowledge matter = a scientific question with a scientific answer
- What knowledge matters = in part a societal question with a societal answer

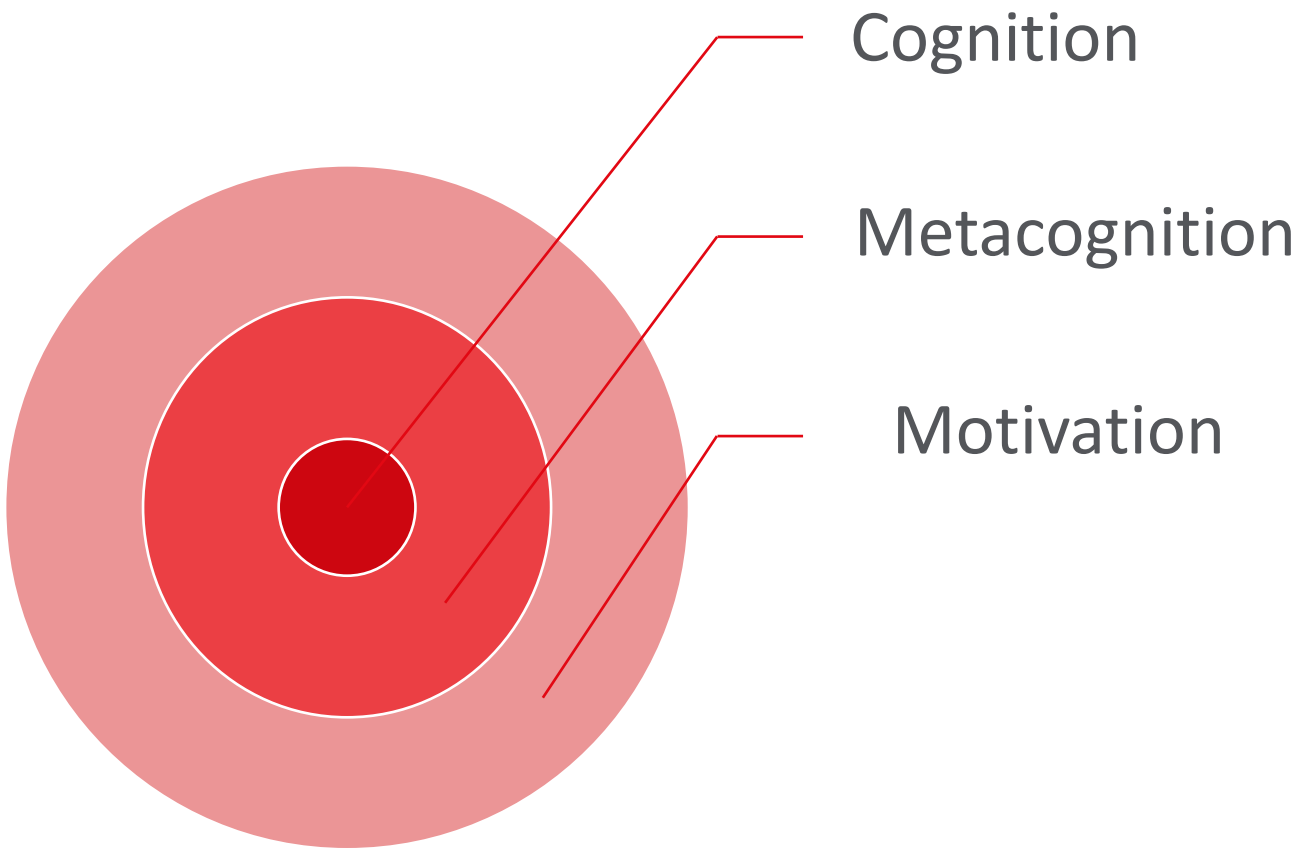

METACOGNITION

NOT JUST KNOWLEDGE…

Skills matter!

Self-regulation and metacognition are key skills for lifelong learning

SELF-REGULATION



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METACOGNITION

- Knowledge of cognition:
  - Knowledge of myself as a learner
  - Knowledge of strategies and processes such as retrieval practice
  - Knowledge of how and when to use a particular strategy

- Regulation of cognition:
  - Planning, for example, activating prior knowledge, selecting strategy, deploying resources
  - Monitoring, for example by self-testing
  - Evaluating

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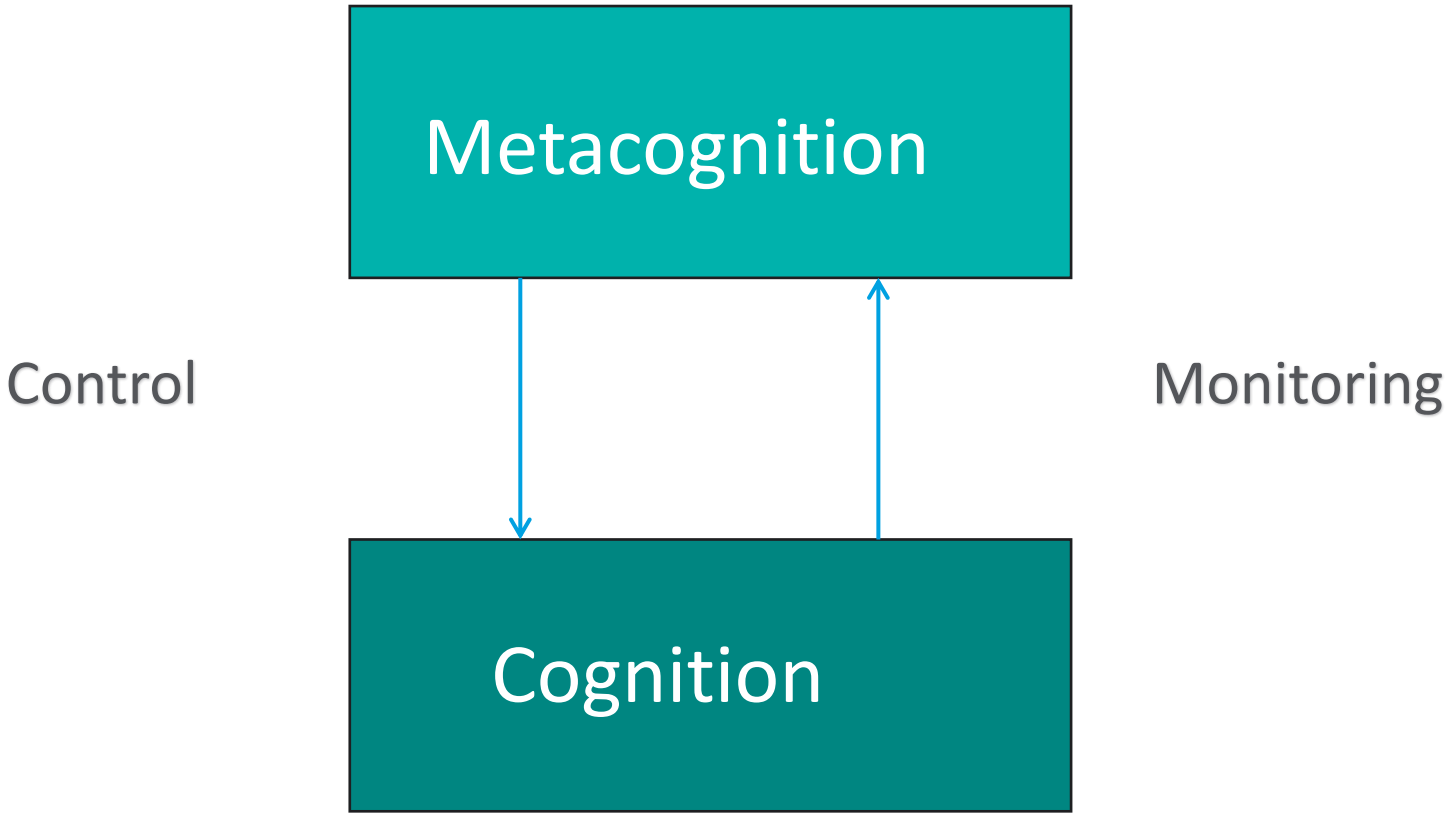
Metacognition
Control
Monitoring
Cognition

METACOGNITION IN THE KNOWLEDGE-RICH CURRICULUM AND CLASSROOM

The Flemish knowledge-rich curriculum Goals 2025 – P4

9.2.1
Pupils know cognitive learning strategies that help them actively practise and reinforce knowledge over time.

9.2.2
Pupils can apply both taught and provided cognitive learning strategies in a functional (purposeful) way.

9.2.3
Pupils can organise their learning environment effectively, in line with the learning activity and learning goal.

The Flemish knowledge-rich curriculum Goals 2025 – P6

9.2.1
Pupils know a simplified explanation of how the brain works: the role of prior knowledge and practice, taking in and processing information, storing knowledge, and retrieving it.

9.2.2
Pupils know cognitive learning strategies to actively process information.

9.2.3
Pupils know the different phases in a learning process: a preparatory phase, an execution phase, and a reflection phase.

9.2.4
Pupils can apply learned and practised cognitive learning strategies, taking their prior knowledge into account.

9.2.5
Pupils can organise both their learning environment and themselves in relation to the learning activity and learning goal.

9.2.6
During a learning activity, pupils can use metacognitive strategies that have been introduced and taught by the teacher.

9.2.7
During a learning activity, pupils can reflect on the cognitive, metacognitive, and motivational strategies they have used.

9.2.8
During a learning activity, pupils can reflect on aspects related to their motivation for their own learning process.

INTEGRATING METACOGNITION IN KS2 LESSONS

Example	Focus	Objective	Key Strategies
KS2 History: Viking Invasions	Metacognition in topic learning	Develop historical understanding & self-awareness	Visual aids, reflective prompts, creative tasks
KS2 Maths: Word Problems	Metacognition in problem-solving	Solve multiplication problems with awareness of thinking	Think-aloud modelling, guided practice, reflection, feedback

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KS3 GEOGRAPHY: METACOGNITION IN PLATE TECTONICS

Lesson	Objective	Key Metacognitive Focus
Lesson 1: Intro to Plate Tectonics	Understand Earth structure & tectonics	Think–Pair–Share + Study planning
Lesson 2: Plate Boundaries	Explore divergent, convergent, transform boundaries	Metacognition journal reflections
Lesson 3: Earth's Features	Link tectonics to mountains & oceans	Concept maps + reflective modelling
Lesson 4: Historical Perspectives	Learn history & scientific development	Socratic seminar reflection
Lesson 5: Assessment & Application	Demonstrate and evaluate understanding	Reflection on learning strategies

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CONCLUSION

Knowledge matters

Thinking matters

And yes, then twain can meet…

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MORE INFO

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