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**Transforming learning &
wellbeing outcomes**



THINKING ROUTINES



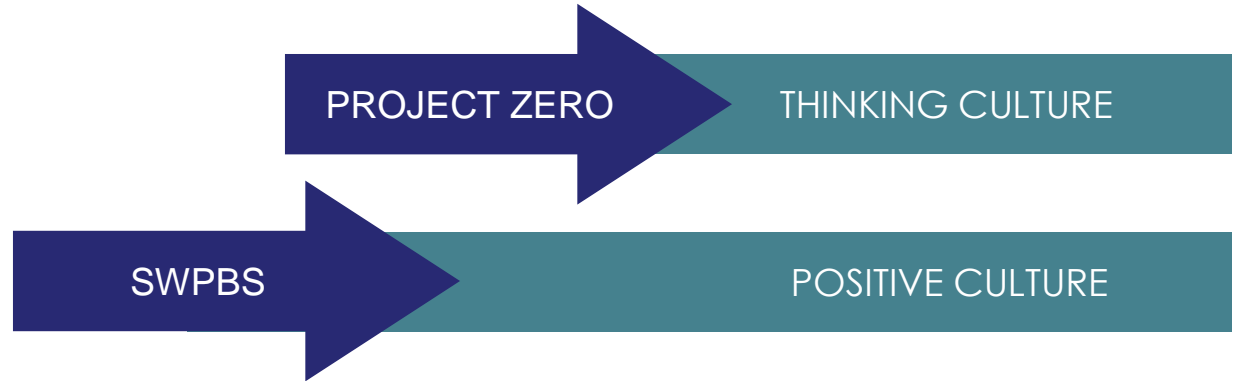
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**Transforming learning &
wellbeing outcomes**

~~**THINKING
ROUTINES**~~

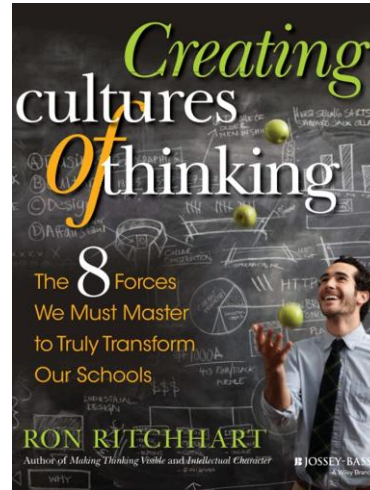
**DESIGNING &
SUSTAINING A
CULTURE OF
THINKING**

CREATING A POSITIVE CULTURE



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8 CULTURAL FORCES



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LANGUAGE

Thinking Language



Working together for a bright future

Understanding		Reasoning		Problem Solving		Fluency	
Articulate		Analyse		Apply		Calculate	
Build On		Argue		Check		Connect	
Challenge		Compare		Create		Estimate	
Compare		Contrast		Design		Expand	
Connect		Elaborate		Experiment		Measure	
Demonstrate		Evaluate		Formulate		Practise	
Describe		Evidence		Hypothesis		Recognise	
Identify		Explain		Imagine		Recall	
Interpret		Generalise		Investigate		Utilise	
Notice		Infer		Model		Show	
Observe		Justify		Order			
Recognise		Persuade		Organise			
Represent		Predict		Plan			
Summarise		Prove		Represent			
Wonder		Reflect		Verify Visualise			



Learner Dispositions

Adaptable		Positive	
Confident		Reflective	
Cooperative		Resilient	
Curious		Respectful	
Determined		Responsible	
Independent		Take Risks	
Persistent		Use Feedback	

8 Cultural Forces that Define our Classrooms

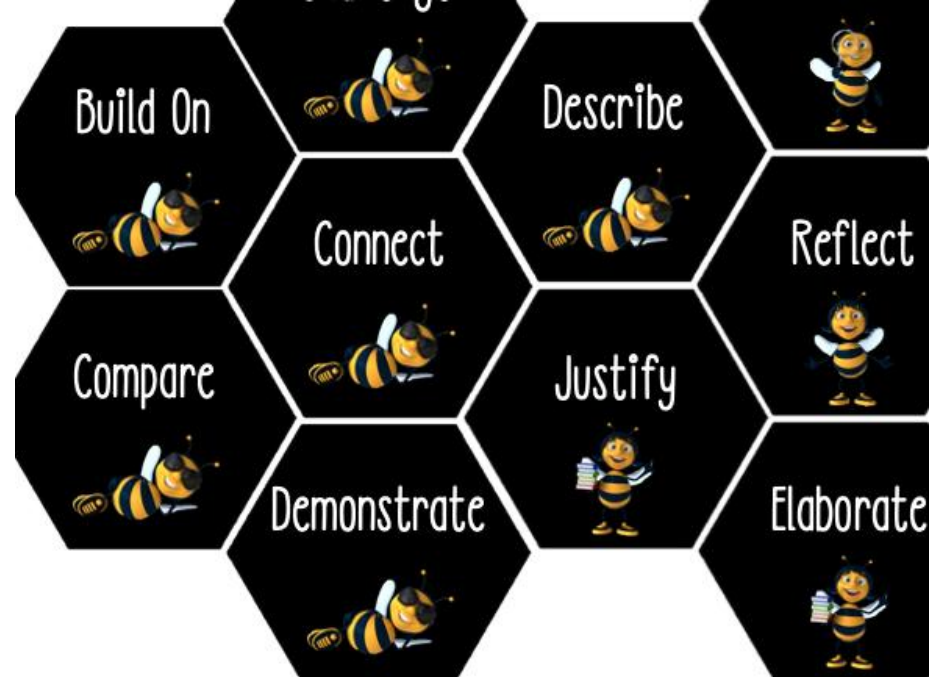
Using language of thinking that provides students with the vocabulary for describing and reflecting on thinking.

LANGUAGE

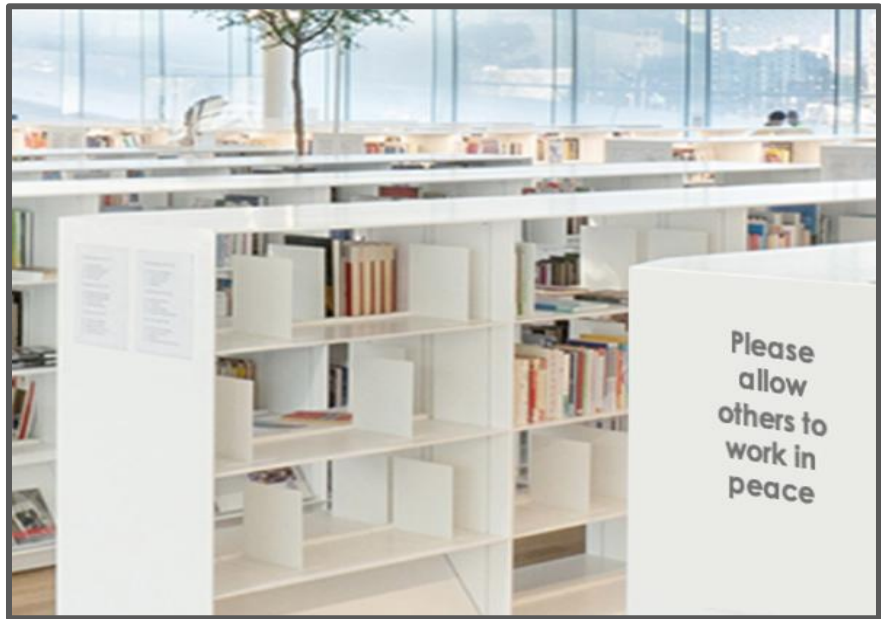


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Focus: Language		Teacher: Date of discussion:	
Thinking Moves:	Demonstrated by students:	Teachers use of thinking language:	
Observing closely and describing what's there		Argue	
		Build on	
		Conclude	
		Connect	
		Consider Perspectives	
Building explanations and interpretations		Deep Dive	
		Describe	
		Evaluate	
		Evidence	
		Examine	
Reasoning with Evidence		Expand	
		Explain	
		Generalise	
		Hypothesis	
		Interpret	
Making connections		Justify	
		Observe	
		Predict	
		Reason	
		Sceptical	
Considering different viewpoints and perspectives		Summarise	
		Viewpoint	
		WMYST (What Makes You Say That?)	
		Wonder	
Capturing the heart and forming conclusions		Feedback: (strengths and challenges)	
Wondering and asking questions			
Uncovering Complexity		Feedforward: (goals, suggestions)	



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How are the two messages received?
What is the impact on culture?



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INTRODUCING A NEW TOPIC:



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FAMINE

- What does the term Famine mean?
- Which groups of people might be affected by famine?
- Name a country you know of where a famine has occurred?
- In 30 seconds, share what you know about famine with people at your table

...



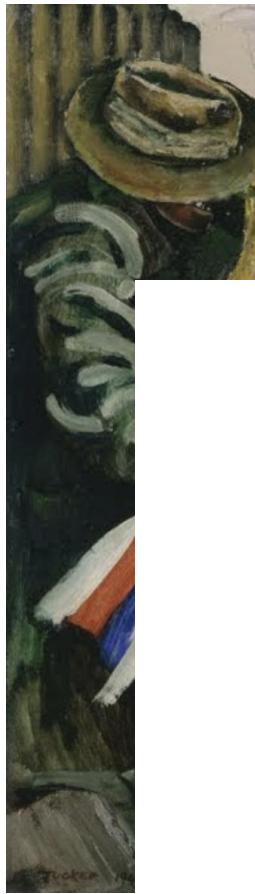
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What do you notice
about what you see?



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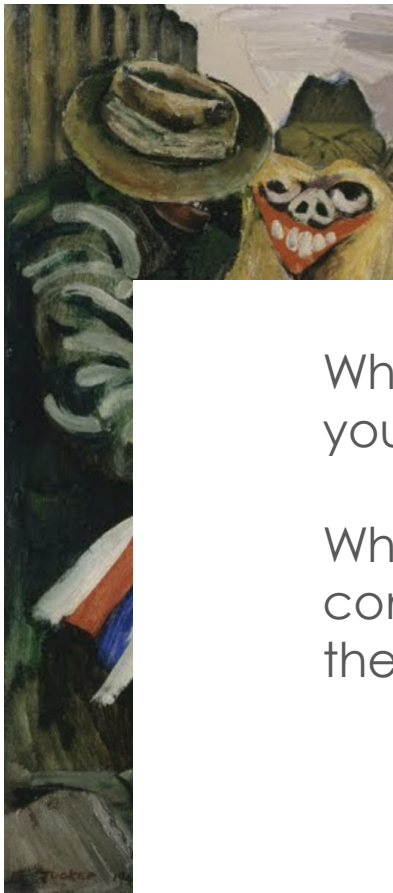


Is there anything you recognise in what we've just revealed to you?

What is your hypothesis or interpretation of what you're seeing?



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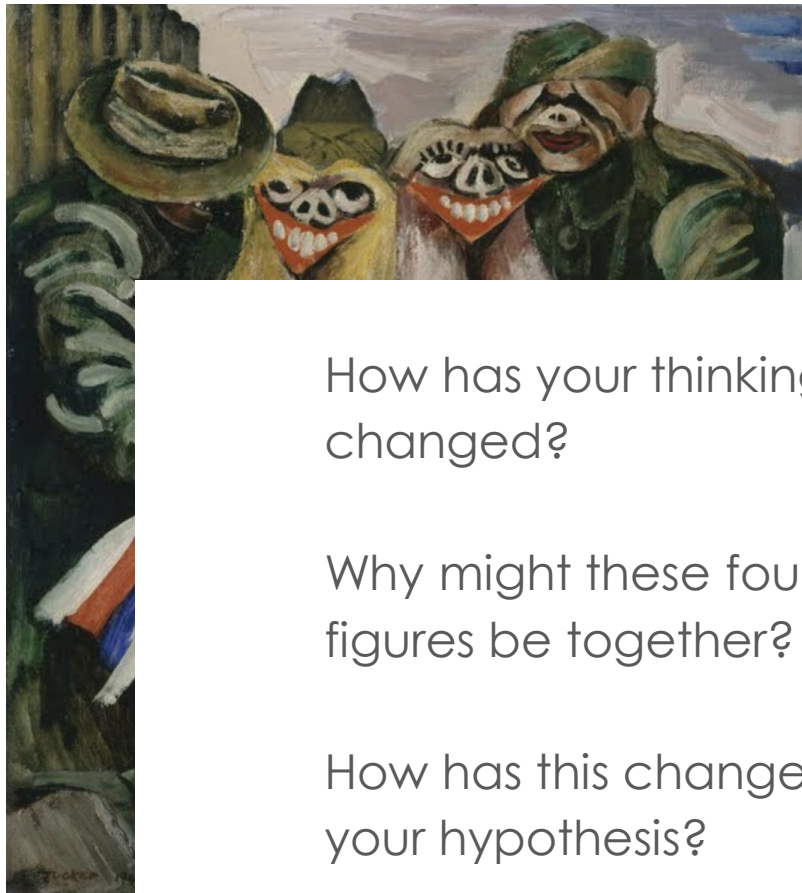


What new things do
you see?

What do you think the
connection is between
these two figures?



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How has your thinking changed?

Why might these four figures be together?

How has this changed your hypothesis?



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How has this changed
your hypothesis?

What new things are
you wondering?



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What lingering questions remain for you about this image?



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‘Victory Girls’

Albert Tucker 1943



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ZOOM IN

<https://pz.harvard.edu/thinking-routines>

Zoom In



Look closely at the small portion of image that is revealed.

- ☐ What do you see or notice?
- ☐ What is your hypothesis or interpretation of what this might be, based on what you are seeing?



Reveal more of the image.

- ☐ What new things do you see?
- ☐ How does this change your hypothesis or interpretation?
- ☐ Has the new information answered any of your wonders or changed your previous ideas?
- ☐ What new things are you wondering about?



Repeat the reveal & question until whole image is revealed.

- ☐ What lingering questions remain for you about this image?

purpose

This routine is a variation of See-Think-Wonder and asks learners to observe a gradual portions of an image closely and develop a hypothesis each time.

Introducing
& Exploring
Ideas



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QUICK DISCUSSION

How were these two experiences different for you?



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BUILDING UNDERSTANDING



8 THINKING MOVES



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PLANNING PROCESS AT VRPS

What do we want for our
students as they leave school?



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4 Key Qualities of Powerful Learning Opportunities:

For deeper understanding to be achieved **all four** of these opportunities must be accessible to students at some point throughout the learning experience.

Novel Application Applying, organising, interpreting, evaluating or synthesising prior knowledge to solve novel problems or form new judgements	Meaningful Inquiry Develop new understandings and insights that go beyond the obvious and extend ones current understanding	Effective Communication Expressing, representing, justifying, supporting and communicating ones ideas, understandings, methods, and processes effectively using disciplinary tools, symbols and language	Intrinsic Value Having value and purpose beyond merely doing work for the teacher. At the high end, the efforts may have utilitarian, aesthetic or personal value and connect learning to the larger world.
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Thinking Moves & Thinking Routines to use:

Observing closely and describing what's there <ul style="list-style-type: none"> See-Think-Wonder Zoom In Explanation Game Design Hunt 	Making connections <ul style="list-style-type: none"> Chalk Talk 321 Bridge Generate-Sort-Connect-Elaborate: Design Hunt 	Capturing the heart and forming conclusions <ul style="list-style-type: none"> Compass Points Headlines CSI: Colour, Symbol, Image Word-Phrase-Sentence 	Uncovering Complexity <ul style="list-style-type: none"> What makes you say that? Connect-Extend-Challenge The 4 C's Tug of War Design Hunt
Reasoning with evidence <ul style="list-style-type: none"> Think-Puzzle-Explore Claim Support Question Tug of War Red Light, Yellow Light What makes you say that? 	Considering different viewpoints and perspectives <ul style="list-style-type: none"> I used to think The 4 C's Step Inside Circle Viewpoints Claim Support Question Connect-Extend-Challenge Tug of War Design Hunt 	Wondering and asking questions <ul style="list-style-type: none"> See-Think-Wonder Zoom In The 4 C's Chalk Talk 321 Bridge Connect-Extend-Challenge Think-Puzzle-Explore Red Light, Yellow Light 	Building explanations and interpretations <ul style="list-style-type: none"> See-Think-Wonder Zoom in Explanation Game 321 Bridge CSI Colour, Symbol, Image Compass Points Generate-Sort-Connect-Elaborate: I used to think

Thinking Routines Matrix

Routine	Key Thinking Moves	Notes
Routines for INTRODUCING & EXPLORING IDEAS		
See-Think-Wonder	Description, Interpretation & Wondering	Good with ambiguous or complex visual stimuli
Zoom In	Description, Inference, & Interpretation	Variation of STW involving using only portions of an image
Think-Puzzle-Explore	Activating prior knowledge, wondering, planning	Good at the beginning of a unit to direct person group inquiry and uncover current understandings as misconceptions
Chalk Talk	Uncovers prior knowledge and ideas, questioning	Open-ended discussion on paper. Ensures all voices heard, gives thinking time.
321 Bridge	Activates prior knowledge, questioning, distilling, & connection making through metaphors	Works well when students have prior knowledge, instruction will move it in a new direction. Can be over extended time like the course of a unit.
Compass Points	Decision making and planning, uncovers personal reactions	Solicits the group's ideas and reactions to a pro plan or possible decision.
Explanation Game	Observing details and building explanations	Variations of STW that focuses on identifying part explaining them in order to build up an understanding of the whole from its parts and their purposes

Routines for DIGGING DEEPER INTO IDEAS

What makes you say that?	Reasoning with evidence	A question that teachers can weave into discussion to push students to give evidence for their assertions.
Circle Viewpoints	Perspective taking	Identification of perspectives around an issue or problem.
Step Inside	Perspective taking	Stepping into a position and talking or writing from that perspective to gain a deeper understanding of it.
Red Light, Yellow Light	Monitoring, identification of bias, raising questions	Used to identify possible errors in reasoning, overreaching by authors, or areas that need to be questioned.
Claim Support Question	Identifying generalizations and theories, reasoning with evidence, counter arguments	Can be used with text or as a basic structure for mathematical and scientific thinking.
Tug of War	Perspective taking, reasoning, identifying complexities	Identifying and building both sides of an argument or tension/dilemma
Word-Phrase-Sentence	Summarizing and distilling	Text-based protocol aimed at eliciting what a reader found important or worthwhile. Used with discussion to look at themes and implications.

PLANNING DOCUMENTS

Routines for SYNTHESIZING & ORGANIZING IDEAS

Headlines	Summarizing, Capturing the heart	Quick summaries of the big ideas or what stands out
CSI: Colour, Symbol, Image	Capturing the heart through metaphors	Non-verbal routine that forces visual connections
Generate-Sort-Connect-Elaborate: Concept Maps	Uncovering and organizing prior knowledge to identify connections	Highlights the thinking steps of making an effective concept map that both organizes and reveals one's thinking
Connect-Extend-Challenge	Connection making, identify new ideas, raising questions	Key synthesis moves for dealing with new information in whatever form it might be presented: books, lecture, movie, etc.
The 4 C's	Connection making, identifying key concept, raising questions, and considering implications	A text-based routine that helps identifies key points of complex text for discussion. Demands a rich text or book.
Micro Lab	A protocol for focused discussion	Can be combined with other routines and used to prompt reflection and discussion
I used to think	Reflection and metacognition	Used to help learners reflect on how their thinking has shifted and changed over time.



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MODELLING & EXPECTATIONS

Thinking about thinking first

Year Level:				
	Learning Intention and Stepped Success Criteria	Focus of Warm Up and Main Lesson	Reflection Eg – Exit slip, discussion.	Learning Opportunity Thinking Move Thinking Routine
Monday				Learning Opportunity (Y in box below)
				Thinking Moves: (Y in box below)
				Y Y Y
				Y Y Y
				Thinking Routine:



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“Children grow into the intellectual life around them”
Vygotsky

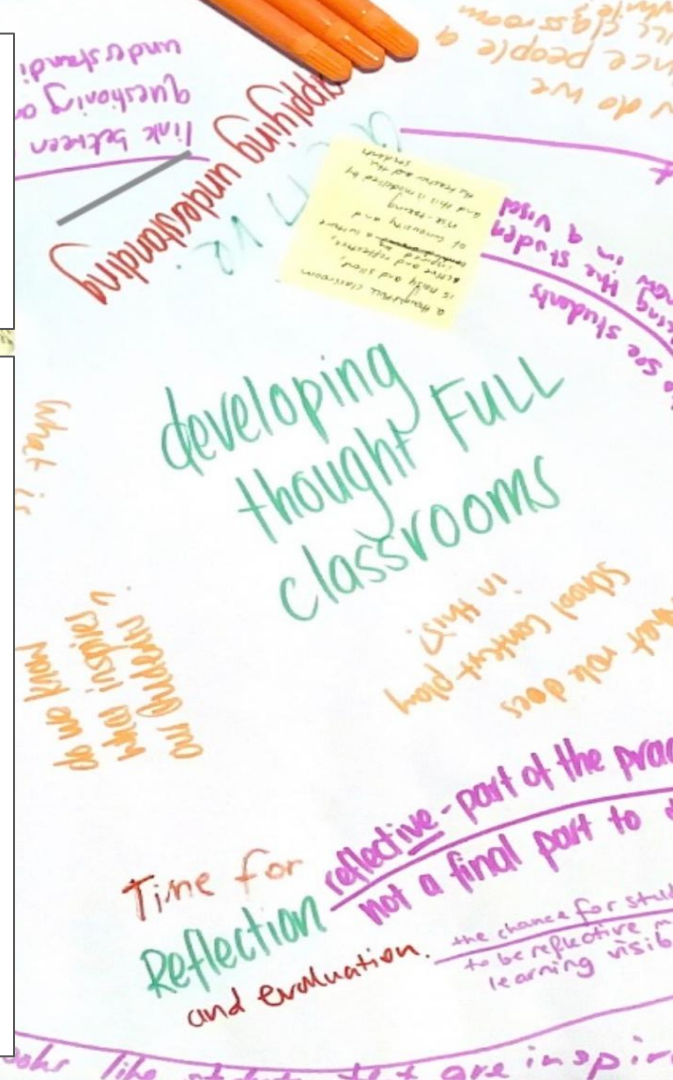
MAKING MEANING

A routine for constructing collective meaning of words, ideas, concepts or events

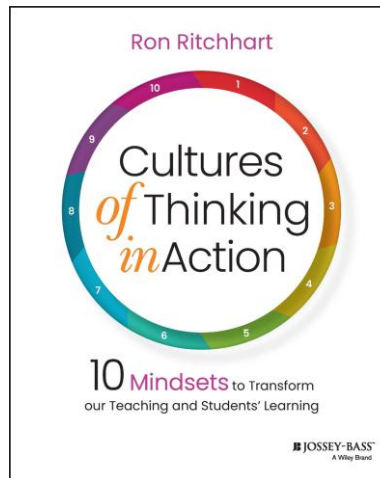
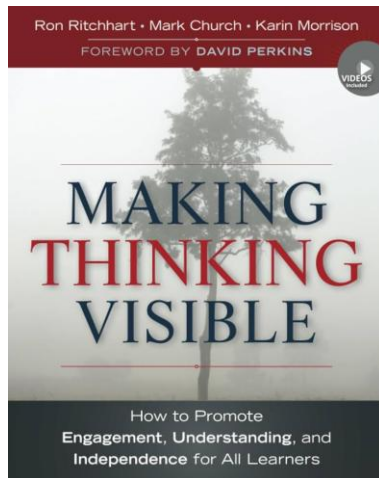
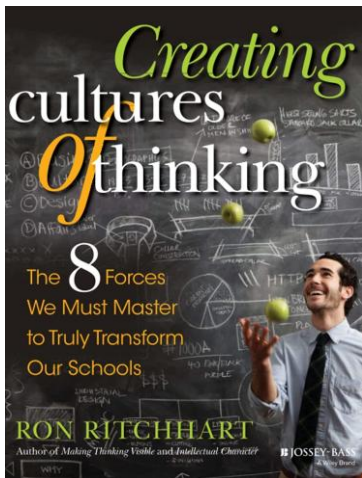
A word, concept, or event is identified as the focus for this routine. Groups then work through each of the following prompts, recording their responses on chart paper to make collective meaning:

- Taking turns, each person **responds** to the chosen focus with a single word. Each person's word must be unique so that it adds to the collective meaning.
- Each person **adds on** to someone else's word with an additional word or phrase so as to elaborate in some way.
- Each person **makes a connection** between ideas that are already written on the chart paper, drawing lines and writing those lines to illuminate the connections.
- Each person **records a question** that arises about the topic of focus based on what is emerging.
- Based on the groups 'Making Meaning discussion' on chart paper, each individual now **writes their own definition** of the word, topic, concept of event being explored.

Cultures of Thinking – Ron Ritchhart, 2017

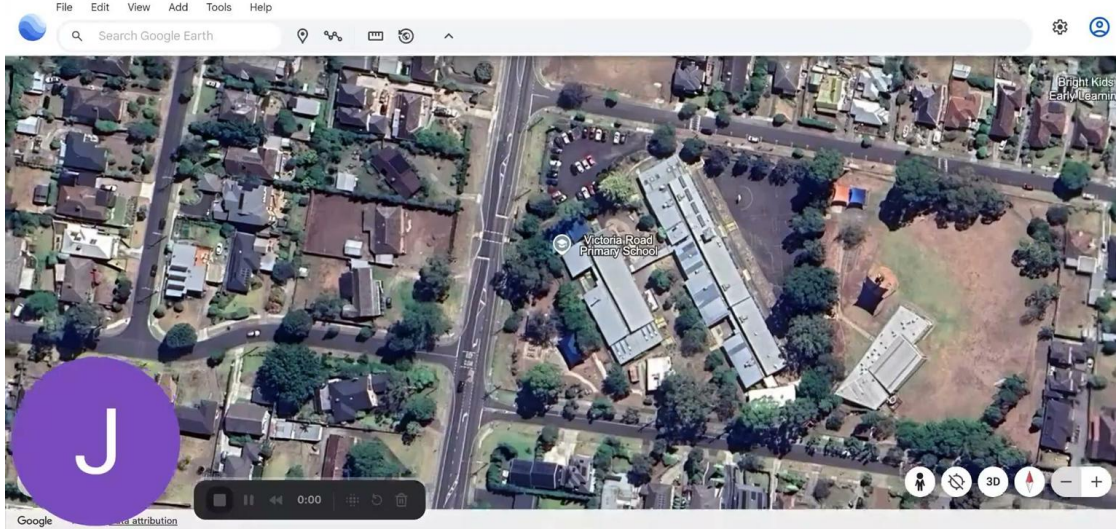


READINGS



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THINKING ABOUT THINKING



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QUESTIONS?



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THANK YOU!



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