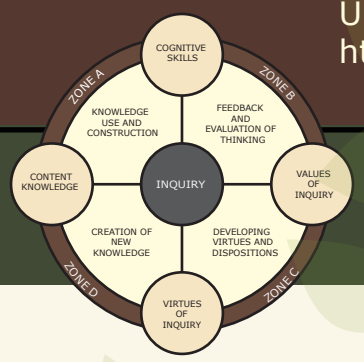
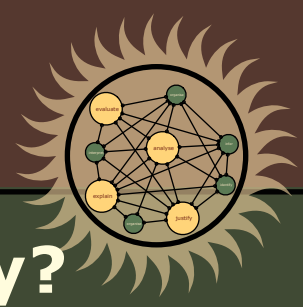
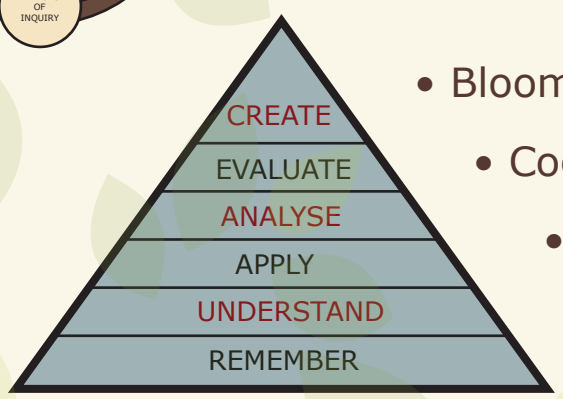
The Golden Tetrad of Cognitive Skills

Dr Peter Ellerton, 2026
University of Queensland Critical Thinking Project
https://critical-thinking.project.uq.edu.au



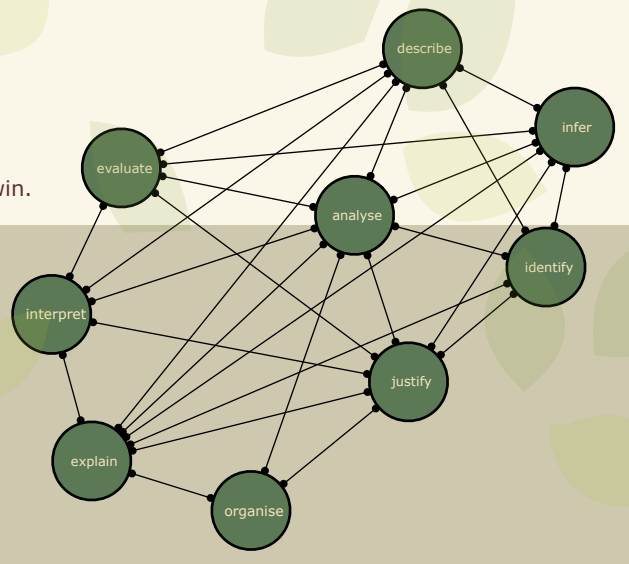


What's wrong with Bloom's taxonomy?



- Bloom's taxonomy is no longer supported by research
  - Cognitive skills have no inherent hierarchy or "order" #
    - Another model of cognitive relationships is needed

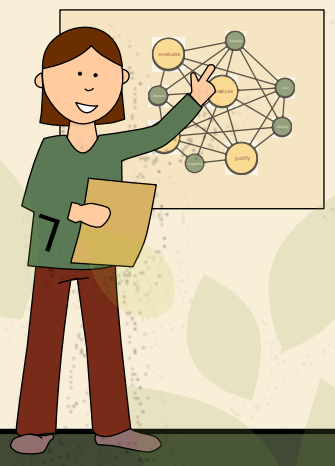
#Marzano, R. J; K., John S. (2006). The New Taxonomy of Educational Objectives (R. J. Marzano, Ed.; 2nd edition). Corwin.



- Cognitions can be better thought of as nodes on a web
- When one cognition is engaged, others are pulled into service
- A cognitive skill is never used in isolation from others

What cognitive skills should I focus on?

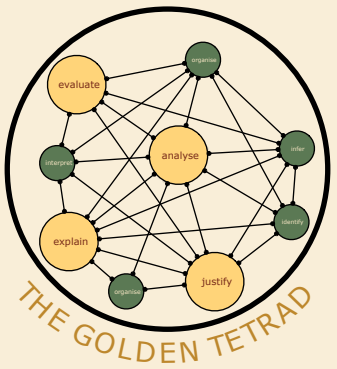
When we infer, we might also need to analyse, speculate, synthesise, hypothesise and justify



The Golden Tetrad is a powerful tool to facilitate argumentation and collaboration in class

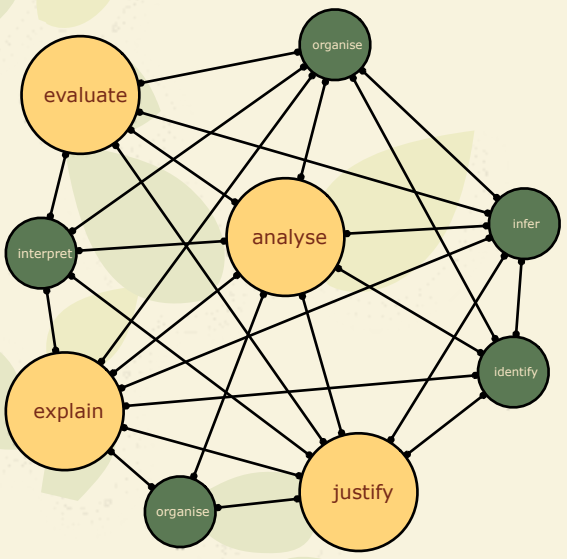
The Golden Tetrad

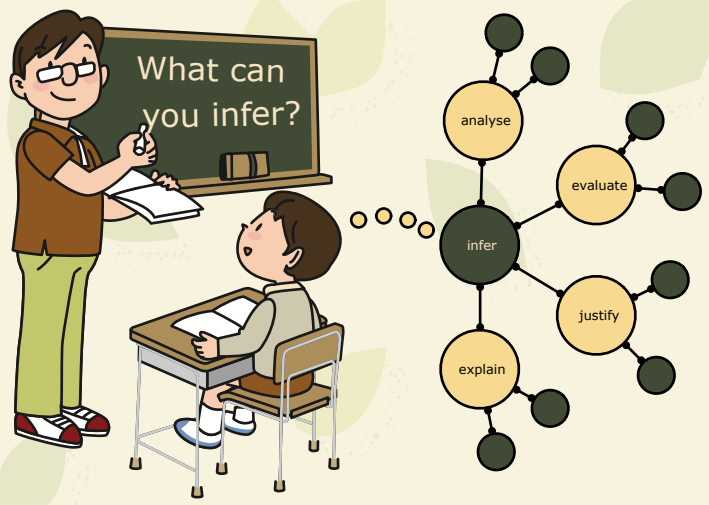
Analyse (a skill necessary for many others)
Explain (associated with 'understanding')
Evaluate (essential for decision-making)
Justify (at the core of reason-giving)

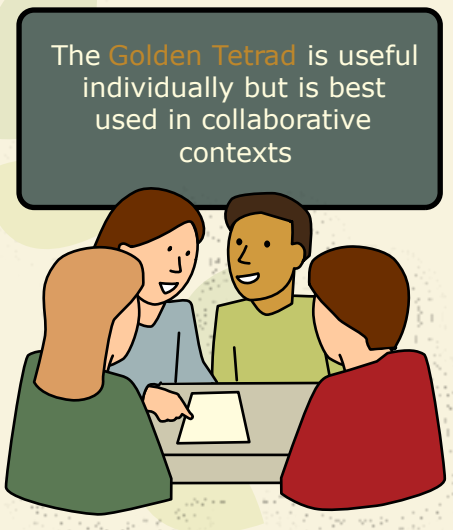


How can I use the Golden Tetrad?

Using the Golden Tetrad pulls in many of the other cognitive skills. Focusing on the Golden Tetrad is an effective way to spread the cognitive requirements of tasks over a broad range of skills.







Poster Set: Teaching for thinking | Values of inquiry | The Golden Tetrad of cognitive skills |
|Tree of knowledge | Teacher questioning | Argumentation | Collaboration |