**The Science of Learning** (Marisa’s notes from The Teaching Course Melbourne 2017)

(presenter Jeff Riddell – US ED physician, FOAMed guru)

11 research proven strategies for learning:

1. Embrace difficulties – more effortful learning (ie working harder to learn something) leads to deeper learning
2. Avoid illusions of knowing – the Dunning-Kruger effect – humans are bad at self-assessment so need external feedback calibration
3. Move beyond your learning style – best to use multiple modalities and match teaching/learning to content (ie visual/practical skill in person or video, facts by reading etc); pitch learning to experience because we learn differently from novice to expert
4. To learn, retrieve – deeper learning occurs if there is assessment
5. Space it out (space repetition), mix it up (interleaving different topics eg cardiology and nephrology) – transfer experiences
6. Increase your abilities – do deliberate practise and get expert feedback
7. Elaborate – explain concepts/ideas in further detail in your own words
8. Generate – retrieve information from memory, answer predicted questions before they’re asked
9. Reflect – we learn from reflecting (not ruminating) on our experiences
10. Calibrate – objectively eg exams is one marker
11. The dual coding theory – verbal & visual processing occurs simultaneously so words and pictures are better than words alone, don’t overload either one

Activity – presenter stopped after point 5 and asked us to discuss with neighbour/s the first 5 points without referring to any notes – using retrieval, generate, elaborate

Stopped again at end of full list and asked to list 10 points – putting learning into practise.

No guarantee that all tips/strategies will work for everyone or that will improve results but nothing to lose!