USE WORKED EXAMPLES

Why do worked examples work?
- “Sweller (2004) proposed a “Borrowing and Reorganizing Principle” of human learning. He suggests that the main path to building new knowledge in long-term memory is through imitating others—in other words to borrow knowledge that others have acquired and to reorganize it into workable knowledge in long-term memory. Worked examples offer an especially efficient opportunity to borrow knowledge from others” (Clark & Mayer, 2011, p. 227)

The Highlights (with references)
- Worked examples that fade from a full worked example into a full problem assignment

- Worked examples accompanied by self-explanation questions

- Worked examples in which learners collaborate on solving a problem while viewing a tutor-tutee dialog about that problem (that is, active observation)
  - still early in research

- Worked examples that offer instructional explanations of the worked steps when the learning goal involves conceptual knowledge and when no self-explanation questions are included

- Worked examples that minimize cognitive load by applying appropriate multimedia principles (see Clark & Mayer, 2011, chapters 4–10)
  - Use relevant visuals
  - Explain visuals with audio or text—not both
  - Integrate explanatory text close to relevant visual
  - Segment worked examples into chunks that focus attention to underlying principles
  - Present complex examples under learner control of pacing
  - Offer pretraining of technical context that is unfamiliar to learners or use a familiar context
- Multiple varied-context worked examples for far transfer learning

- Interactions that encourage learners to actively compare sets of varied context examples for far-transfer learning
  ● Gentner, D., Loewenstein, J., & Thompson, L (2003). Learning and transfer: A general role for analogical encoding. *Journal of Educational Psychology, 95*(2), 393–408.