Foundational principle: The most effective learning strategies are not intuitive.

Definitions for learning:
Acquiring knowledge and skills and having them readily available from memory so you can make sense of future problems and opportunities;
Picking up new knowledge or skills and being able to apply them later;
Encoding, Consolidation, Retrieval

Key Ideas about learning: 1) Learning requires memory; 2) Learning is an acquired skill.

Memorable Quotes
- Making mistakes and correcting them builds bridges to advanced learning.
- Repeated exposure doesn’t burn information into memory.
- Students studying has 2 liabilities: a failure to know the areas where learning is weak, and preference of study methods.
- Mastery requires both the possession of ready knowledge and the conceptual understanding of how to use it.
- Testing is practicing retrieval of learning from memory, therefore a shift in thinking to with the use of testing as a tool for learning.
- Retrieval ties the knot of memory. Repeated retrieval snugs it up and adds a loop to make it fast.
- A central challenge to improving the way we learn is finding a way to interrupt the process of forgetting.
• My teaching is only a component of students’ learning, how I structure it may have even more to do with it.

• You don’t lose from long term memory most of what you have learned well in life (emphasis mine)

• Good judgment is a skill one must acquire

• Incompetent people lack the skills to improve because they are unable to distinguish between incompetence and competence.

• Everyone has learning preferences

• When instructional style matches the nature of the content, all learners learn better regardless of their differing preferences for how the material is taught.

• Emphasizing effort gives a child a rare variable they can control.

• Becoming expert is not beyond the reach of normally gifted people who have the motivation, time and discipline to pursue it.

• Images cue memory

• Effortful learning changes the brain, building new connections and capability
Key Ideas to incorporate into the classroom:

Spaced repetition of ideas and feedback; Interleaving; Varied methods of practice (Elaboration, Retrieval, Reflection); Desirable Difficulties (Generation); Testing/Dynamic Testing; Attack illusion of knowing.

What is the process? Benefit? Challenge?

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<th>Course/Period</th>
<th>Strategy Implemented</th>
<th>Time</th>
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