



# THE SCIENCE OF LEARNING

Understanding how we learn is essential for maximizing our educational experience.

- 1. **Attention:** Focus is the gateway to learning. Minimize distractions.
- 2. **Encoding:** Information must be processed into a form that can be stored in memory.
- 3. **Storage:** Information is held in memory until it is needed.
- 4. **Retrieval:** Information is brought back into conscious awareness.
- 5. **Interleaving:** Mixing different subjects or topics improves long-term retention.
- 6. **Spaced Repetition:** Reviewing material over time strengthens memory.
- 7. **Elaboration:** Connecting new information to what you already know.
- 8. **Practice:** Active engagement with the material is crucial.
- 9. **Rest:** Adequate sleep and breaks are essential for cognitive function.
- 10. **Metacognition:** Thinking about your own thinking.



The diagram illustrates the flow of information from input to processing and output, with a feedback loop.



Spaced repetition involves reviewing material at increasing intervals to improve long-term retention.