

the learning sciences

10 KEY PRINCIPLES

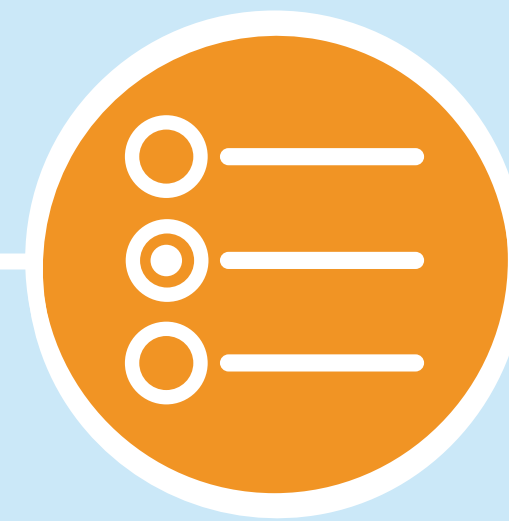
Students are more motivated to learn when they are interested, have a sense of autonomy, and understand the purpose behind what they are learning.



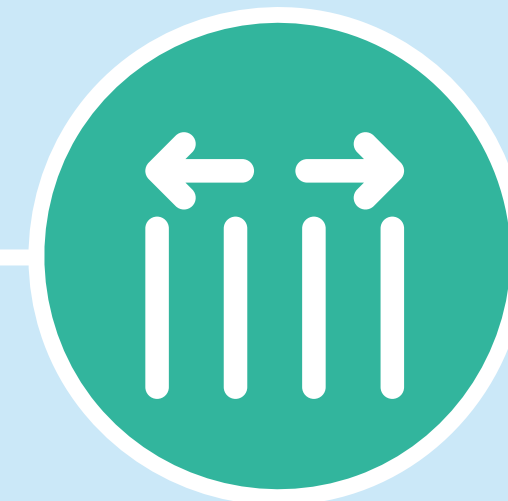
Thinking deeply about the to-be-learned material helps students pay attention, build memories, and make meaning out of what they are learning.



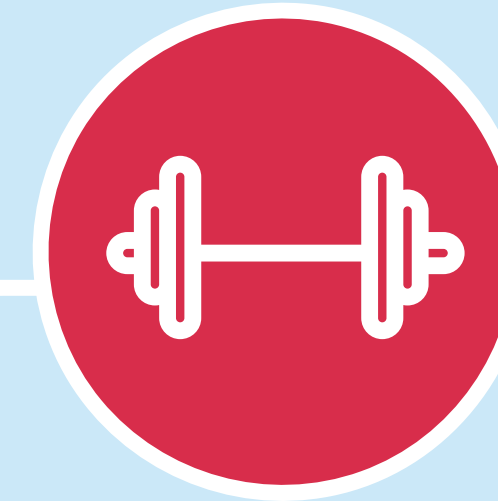
Retrieval practice strengthens memory and helps students flexibly apply what they learn.



Spacing out learning, and interweaving different content, strengthens learning.



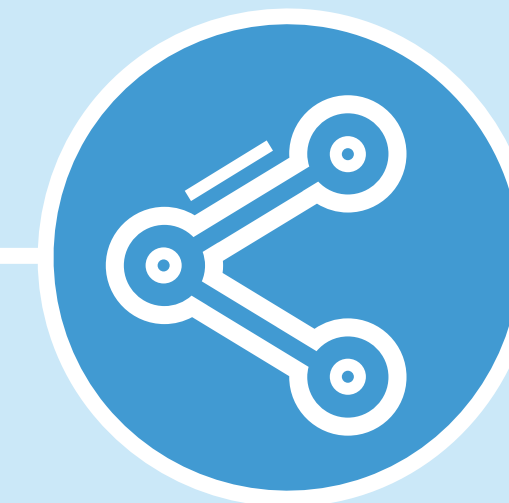
Communicating high expectations and keeping learners at the edge of their mastery helps each student reach their potential.



Students learn well when they feel safe and connected.



Collaboration and social interaction can be powerful learning experiences because they encourage deeper processing and engage the 'social brain.'



Learning is a process that involves effort, mistakes, reflection, and refinement of strategies.



storage

The entire environment, from space to temperature to lighting, can affect learning.



Students' physical well-being, including nutrition, sleep, and exercise, impacts learning.



encoding

retrieval