



Six Strategies for Effective Learning

www.learningscientists.org

In this series, we provide information so students can learn how to study using..



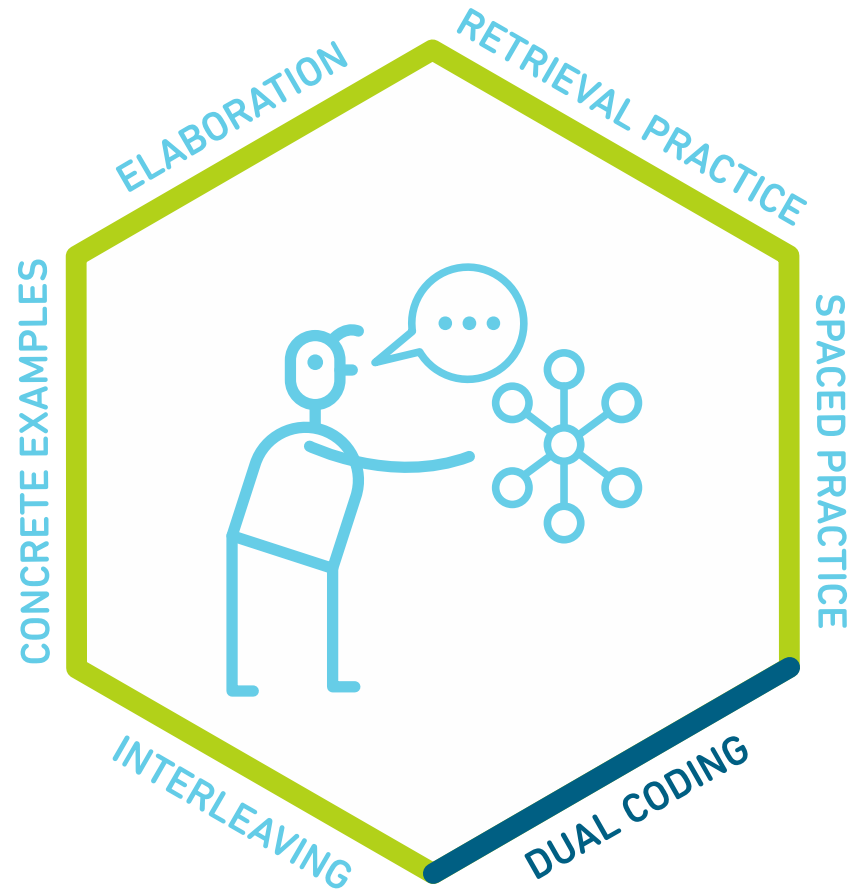
All of these strategies have supporting evidence from cognitive psychology. For each strategy, we explain how to do it, some points to consider, and where to find more information.



LEARN TO STUDY USING...

Dual Coding

COMBINE WORDS AND VISUALS

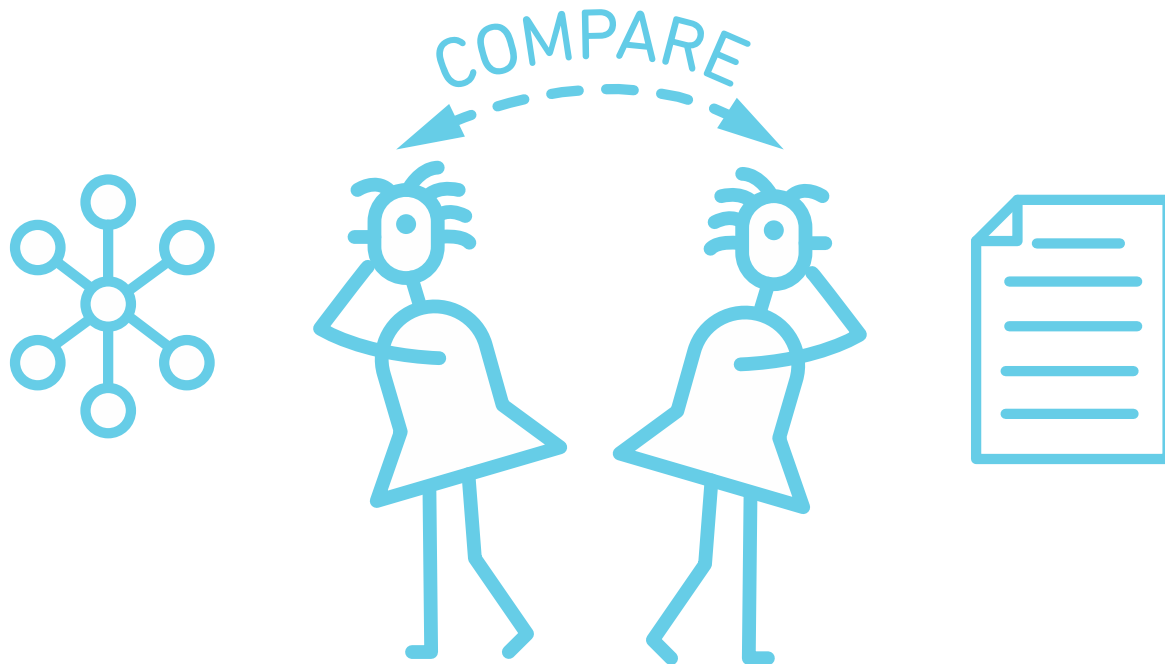




Dual Coding

HOW TO DO IT

Look at your class materials and find visuals. Look over the visuals and compare to the words.

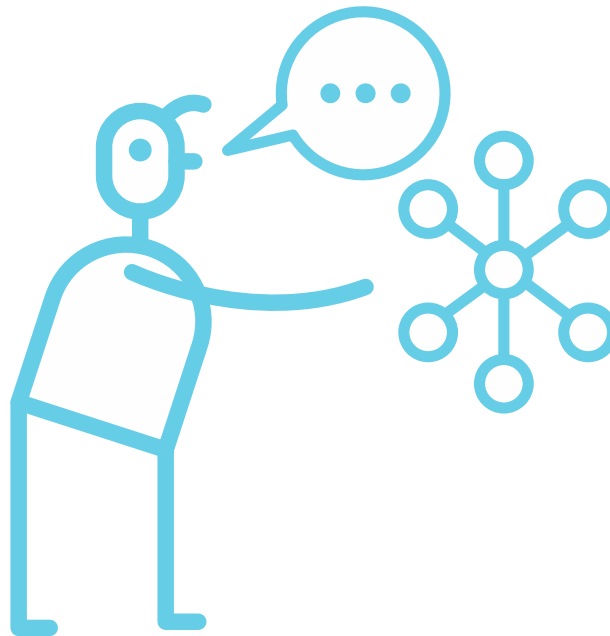




Dual Coding

HOW TO DO IT

Look at visuals, and explain in your own words what they mean.

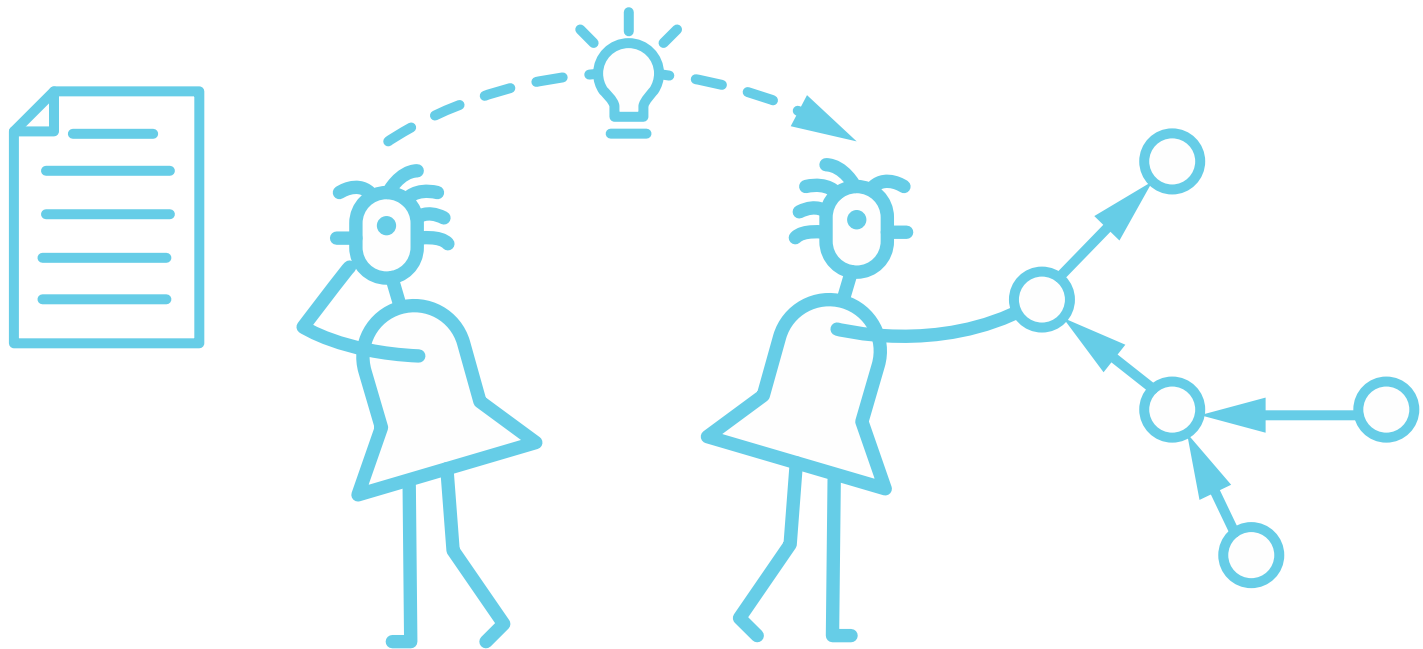




Dual Coding

HOW TO DO IT

Take information that you are trying to learn, and draw visuals to go along with it.





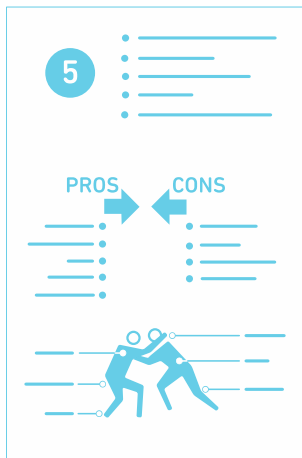
Dual Coding

HOLD ON!

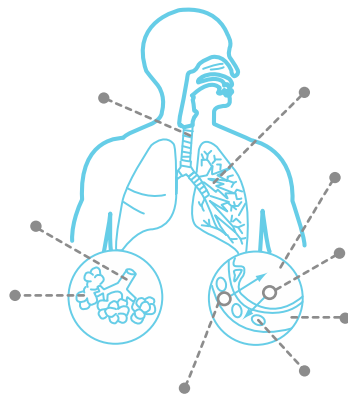
Try to come up with different ways to represent the information visually, for example an infographic, a timeline, a cartoon strip, or a diagram of parts that work together.



INFOGRAPHIC



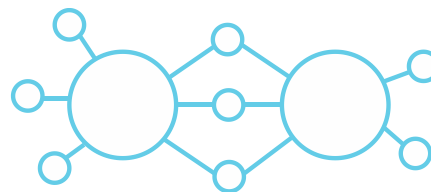
DIAGRAM



CARTOON STRIP



GRAPHIC ORGANIZER



TIMELINE

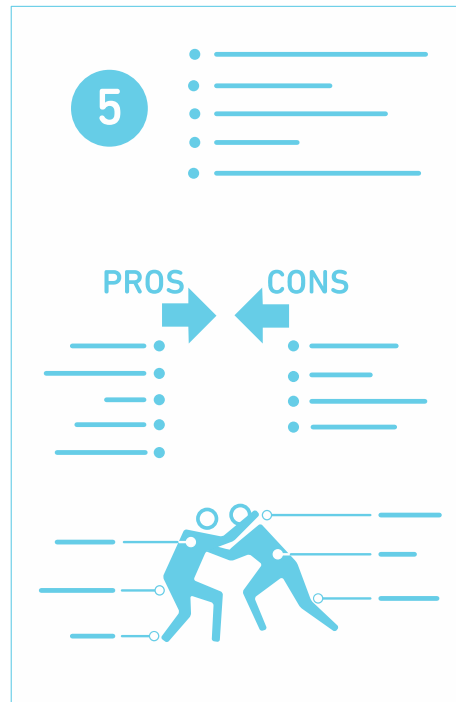
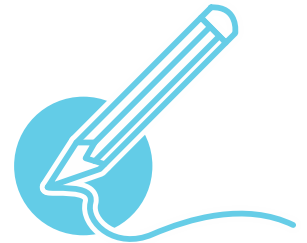




Dual Coding

HOLD ON!

Try to come up with different ways to represent the information visually, for example...
an **infographic**.

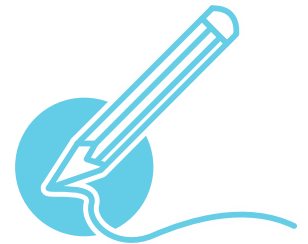




Dual Coding

HOLD ON!

Try to come up with different ways to represent the information visually, for example...
a timeline.

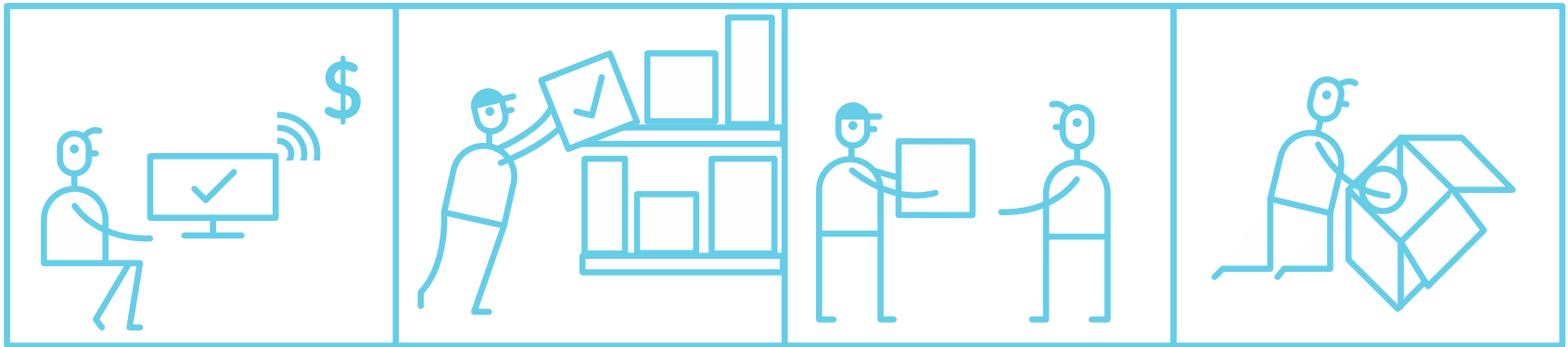
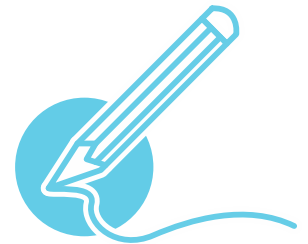




Dual Coding

HOLD ON!

Try to come up with different ways to represent the information visually, for example...
a cartoon strip.

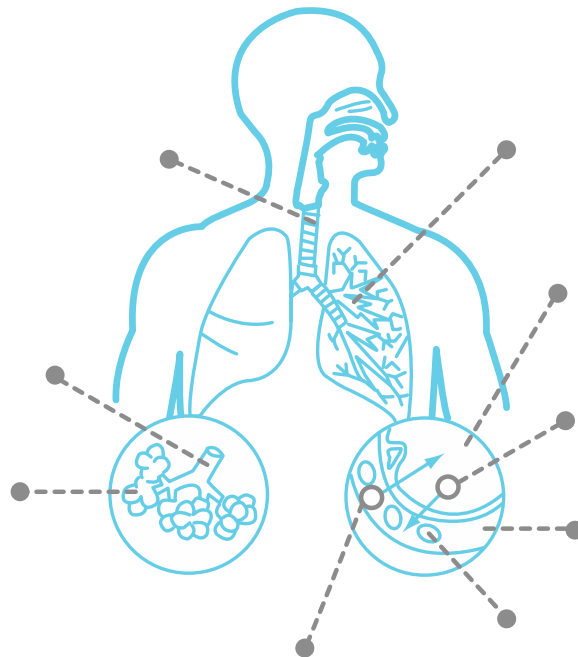
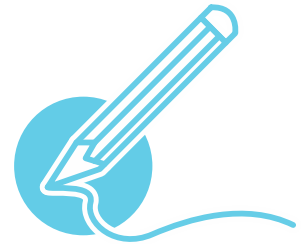




Dual Coding

HOLD ON!

Try to come up with different ways to represent the information visually, for example...
a **diagram** of parts that work together.

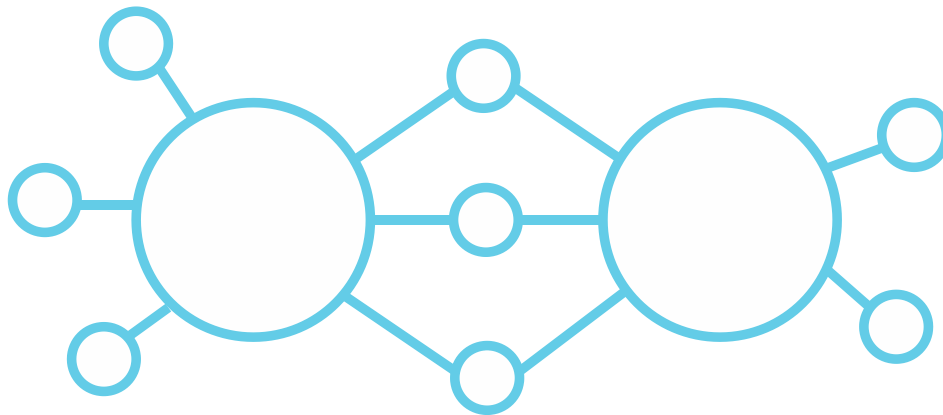
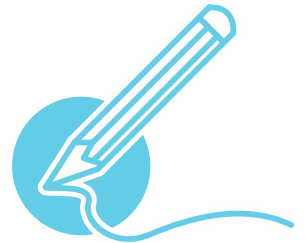




Dual Coding

HOLD ON!

Try to come up with different ways to represent the information visually, for example...
a **graphic organizer**.

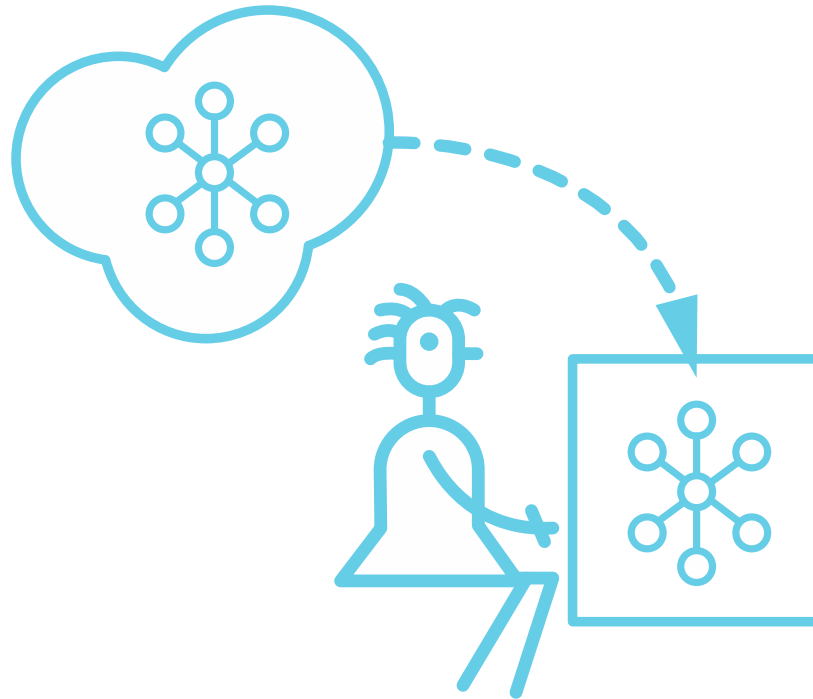




Dual Coding

HOLD ON!

Work your way up to drawing what you know from memory.





Dual Coding

RESEARCH

Read more about dual coding as a study strategy

- Use dual coding

<http://www.learningscientists.org/blog/2016/9/1-1>

- Use dual coding

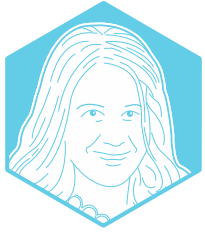
<http://www.learningscientists.org/blog/2016/5/12-1>

- Mayer, R. E., & Anderson, R. B. (1992). The instructive animation: Helping students build connections between words and pictures in multimedia learning. *Journal of Educational Psychology*, 4, 444-452.



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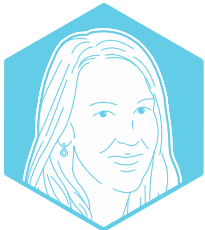
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CREATOR

Yana Weinstein

University of Massachusetts Lowell



CREATOR

Megan Smith

Rhode Island College



ILLUSTRATOR

Oliver Caviglioli

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