



# ACE THAT TEST

A Student's Guide to Learning Better

Megan Sumeracki, Cynthia Nebel,  
Carolina Kuepper-Tetzl  
and Althea Need Kaminske

Illustrated by Karina Tiller

A David Fulton Book



“The Learning Scientists have done it again! In their new book *Ace That Test* they seamlessly meld scientific research with practical application in an easily accessible manner certain to help students gain agency over their learning. Excellent book.”

**Dr. Jared Cooney Horvath, The Science of Learning Group, Melbourne, Australia**

“*Ace That Test* is the ‘must read’ handbook for students providing current and efficient learning and study habits. Students world-wide deserve the opportunity to learn from this book and employ the evidenced-based practical tips to improve their academic performance and lifelong learning.”

Deanne Clark, Brisbane, Australia

“The Learning Scientists have long been my go-to source for accurate, lively, and useful advice about teaching and learning. In this excellent book, all students have a practical, research-based resource explaining how best (and how not!) to study, remember, and learn.”

**Andrew Watson, author of *Learning Begins and The Goldilocks Map***

“*Ace That Test* delivers multiple evidence-based approaches to learning, including practical examples, and it is engaging and easy to comprehend. The step-by-step approaches, with just the right amount of humor and anecdotes, make this a fantastic resource, encouraging real learning, for students and educators alike.”

**James Barracough, Director of Undergraduate Initiatives, Washburn University, USA**



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## Ace That Test

We know students have more to learn than ever before and there is a lot of pressure to perform well on tests, demonstrating superior learning. However, common study strategies such as cramming, highlighting text, and repeated reading have little impact in the longer term. This exciting new book reveals the effective study strategies that will help you to use your time more efficiently, ace your tests, and retain information over time.

In full color and accompanied by beautifully illustrated graphics, *Ace That Test* offers evidence-based learning strategies that students can use during their study sessions, including dual coding and the power of retrieving what they know. Including concrete examples of the ways students can use each strategy, illustrations to leverage dual coding principles of learning, and questions and activities for retrieval practice, the book covers:

- How to prepare your mind for learning
- Making better decisions about what you study
- Planning study sessions
- Using visuals and words to aid understanding
- Understanding concepts
- Improving learning in the long run
- Reading and note-taking strategies

With QR codes linking to answers to embedded questions and supplemental material, this is essential reading for college, university, and school students as well as educators teaching study skills or learning to learn courses.

**Megan Sumeracki** (@DrSumeracki) earned her PhD at Purdue University and is an Associate Professor of Psychology at Rhode Island College. She is one of the original co-founders of The Learning Scientists and is a co-author of the award-winning book *Understanding How We Learn: A Visual Guide*.

**Cynthia Nebel** (@PsyDocCindy) earned her PhD at Washington University in St. Louis and is a Senior Lecturer in the Leadership and Learning in Organizations EdD program at Vanderbilt University where she both teaches the science of learning and leads doctoral students through their capstone research.

**Carolina Kuepper-Tetzl** (@pimpmymemory) earned her PhD at the University of Mannheim and is a Senior Lecturer in Psychology at the University of Glasgow. She is dedicated to teaching, science communication, and outreach. She founded the Teaching

Innovation & Learning Enhancement (TILE) network that spans across different disciplines and educational sectors.

**Althea Need Kaminske** (@DrSilverFox) earned her PhD at Purdue University and is an Associate Clinical Professor of Surgery and the Senior Director of Student Academic Support and Achievement at Indiana University School of Medicine. She is a co-author of the book *Five Teaching and Learning Myths – Debunked*.

**Karina Tiller** (@by\_karina), our illustrator, earned her BFA in Graphic Design at Webster University and now works as a Creative Director in the modern furniture industry by day and an illustration artist by night. She has given numerous lectures and talks, and her work has been published in both print and digital editorial.

# Ace That Test

## A Student's Guide to Learning Better

*Megan Sumeracki, Cynthia Nebel,  
Carolina Kuepper-Tetzl, and  
Althea Need Kaminske*

*Illustrated by Karina Tiller*

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# Contents

|  |           |
|--|-----------|
| Preface: Who we are and why we wrote this book                           | ix        |
| About the authors and illustrator  | xi        |
| Acknowledgements   | xiii      |
| <br>   |           |
| <b>PART 1</b>  |           |
| <b>Introduction</b>  | <b>1</b>  |
| 1. The science of learning is flexible (and so is this book)             | 3         |
| 2. Science literacy: Why should you trust the advice in this book?       | 11        |
| <br>   |           |
| <b>PART 2</b>  |           |
| <b>Getting ready to learn</b>  | <b>19</b> |
| 3. Assigned work and studying are not the same, and you need to do both! | 21        |
| 4. Your brain is part of your body: Preparing your mind for learning     | 25        |
| 5. The myth of multitasking: Preparing your environment for learning     | 33        |
| 6. How do I know what I (don't) know?                                    | 43        |
| 7. Planning your study sessions is important                             | 51        |

## CONTENTS

|  |           |
|--|-----------|
| <b>PART 3</b>                                    |           |
| <b>Study strategies that work</b>                | <b>59</b> |
| 8. Bring to mind what you can remember           | 61        |
| 9. Find multiple concrete examples               | 69        |
| 10. Use visuals and words to help you understand | 75        |
| 11. Describe and explain how things work         | 83        |
| 12. Jumble it all up                             | 89        |
| 13. Use effective note-taking strategies         | 95        |
| 14. Avoid strategies that don't work             | 103       |
| 15. Conclusion: Believe in yourself              | 109       |
| <br>   |           |
| Sample answers to embedded questions             | 115       |
| Glossary   | 125       |
| Index  | 129       |

## Preface: Who we are and why we wrote this book

This book was written by four cognitive psychologists who work together on a project called The Learning Scientists. The Learning Scientists project emerged from a common passion for improving learning for students, and anyone else who wants to learn. As academic researchers, we work to understand how students learn through research. Then, guided by the science of learning research, we work to foster bi-directional conversations with learners and educators in order to improve both education and science. We have created free resources that can be found on our website ([www.learningscientists.org](http://www.learningscientists.org)), a blog, and a podcast, all focused around helping learners and educators in their pursuit of encouraging learning. In 2019, the book *Understanding How We Learn: A Visual Guide*, was published with content for teachers, students, and parents. While we spend a lot of our time working with teachers and other educators to foster learning, our mission has always been about improving *student* learning. We decided to write this book to focus on exactly this, providing a single resource that students could use to help with studying for exams and improving learning as a whole.

In writing this book, our goal was to explain complicated science in an approachable way, empower students to try something new, encourage students to persist when strategies seem difficult, and help students consider how they might use these strategies in their unique circumstances. It is our hope that this book can be used both in the initial learning of these strategies and also as a reference guide that students revisit throughout their studies in order to continue improving their learning over time.

We also took care to make the book accessible to all students. Students have a variety of identities, backgrounds, experiences, and abilities. Not all students are the same! Across the institutions where we teach, we can see diverse identities, including race and ethnicity, gender identity, age, ability, neurodiversity, level of prior education

## PREFACE

and prior preparation, and many other attributes. We want every student to be able to see themselves in this book, and we want to be able to see the diverse groups of students we teach within this book. Therefore, throughout the book, we tried to provide diverse examples of students studying and learning. We ourselves are always learning and growing in this area, and we sincerely hope that we accomplished this goal.

## About the authors and illustrator

All four authors earned PhDs in Cognitive Psychology, and serve as faculty at academic institutions where they teach, conduct research on how students learn most effectively and efficiently as well as how to encourage students to use evidence-based strategies, publish academic papers and books, and serve their institutions and larger communities. They frequently give talks and workshops around the world about the effective and efficient use of the science of learning in the classroom and other learning settings such as museums, the US State Department, hospitals, corporate settings, and more.

**Megan Sumeracki** earned her PhD at Purdue University and is an Associate Professor of Psychology at Rhode Island College. She is one of the original co-founders of The Learning Scientists and is a co-author of the award-winning book *Understanding How We Learn: A Visual Guide*. In her free time, Megan enjoys crocheting, scrapbooking and general crafting, and traveling to new places to hike and go wine tasting. She lives in Rhode Island in the US with her husband Sam, daughter Molly, and two cats Ellie and Teddy. You can follow her work on Twitter @DrSumeracki.

**Cynthia Nebel** earned her PhD at Washington University in St. Louis and is a Senior Lecturer in the Leadership and Learning in Organizations EdD program at Vanderbilt University where she teaches both the science of learning and also leads doctoral students through their capstone research. In her free time, Cynthia enjoys spending time with her family, especially exploring new outdoor parks and hiking trails. She lives in the greater St. Louis area in the US with her husband Steve, three children Lindsey, Teddy, and Annabelle, and puppy Bailey Rose. You can follow her work on Twitter @PsyDocCindy.

**Carolina Kuepper-Tetzl** earned her PhD at the University of Mannheim and is a Senior Lecturer in Psychology at the University of Glasgow (US equivalent: Associate Professor). She founded the Teaching Innovation & Learning Enhancement (TILE)

## ABOUT THE AUTHORS AND ILLUSTRATOR

network to bring together different disciplines and educational sectors to overcome issues in education with research-informed approaches. In her free time, Carolina enjoys spending time with family and friends, listening to vinyl records, reading books, and watching movies and series. She lives in Glasgow, Scotland, with her husband Patrick and son Emil. You can follow her work on Twitter @pimpymemory.

**Althea Need Kaminske** earned her PhD at Purdue University and is an Associate Clinical Professor of Surgery and the Senior Director of Student Academic Support and Achievement at Indiana University School of Medicine. She is a co-author of the book *Five Teaching and Learning Myths – Debunked*. In her free time, Althea enjoys going on walks with her family, reading science fiction, fantasy, and romance, and playing Dungeons & Dragons. She lives in Indianapolis, Indiana, in the US with her husband Tim, son Calvin, dog Bree, and cat Sushi. You can follow her work on Twitter @DrSilverFox.

Together, they make up the Learning Scientists Team ([www.learningscientists.org](http://www.learningscientists.org)). You can follow them on Twitter @AceThatTest.

**Karina Tiller**, our illustrator, earned her BFA in Graphic Design at Webster University and now works as a Creative Director in the modern furniture industry by day and an illustration artist by night. She has given numerous lectures and talks, and her work has been published in both print and digital editorial. In her free time, Karina enjoys picnics in the park with friends and family, endless true crime podcasts, volunteering at a local animal shelter, and collecting tropical plants despite residing in the Midwest. She lives in St. Louis, Missouri, in the US with her beagle, Penelope. You can follow her work on Instagram @by\_\_karina.

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Megan would like to thank her husband, Sam, for his love, support, and encouragement while writing this book and throughout her career as a whole. She would also like to acknowledge her children, Spencer who left this world far too soon but will never be forgotten, and Molly, who started as just a few cells when this book was only a few outlined ideas on a page. She developed, grew, and kicked throughout the entire writing process! She thanks her mom, Sandy, and sister, Alyssa, for their constant empowerment while pursuing academic endeavors.

Cindy would like to thank her husband, Steve, for his love, patience, and support as she struggled to find work-life balance, and her children, Lindsey, Teddy, and Annabelle, from whom she has learned the most. She would also like to thank her parents, Ed and Jayne Wooldridge, for laying the foundation for her own love of learning, and her dear friends Emily, Mary Jo, and Stefanie who have been a constant source of support these 25 years. And, finally, she thanks her colleagues and students at Lindenwood and Washburn, who taught her to be a student-centered teacher and scholar.

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