

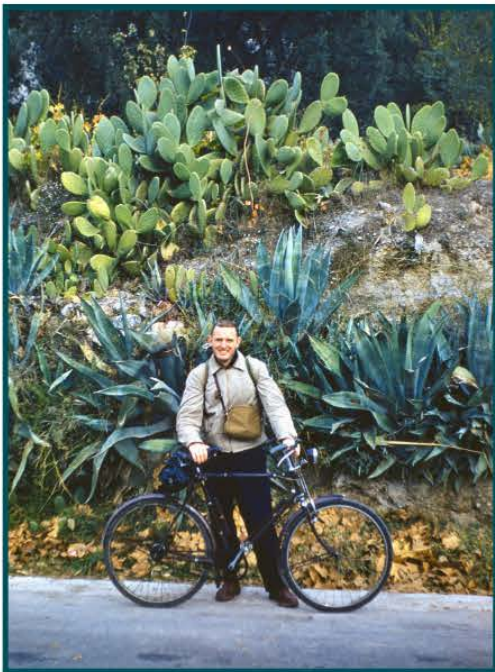
# Introductory Memory Guide for Parents and Teachers



Brenda S Miles, PhD  
Founder of Hippo Camp Kids



**A structure in the brain called the hippocampus is important for creating memories. Hippos at camp learning about memory can help with remembering the name of this brain structure and what it does.**



*My father, 1956*

# WHAT IS HIPPO CAMP KIDS?

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I am a Clinical Pediatric Neuropsychologist who loves all things memory. Hippo Camp Kids reflects a personal passion; helping kids harness strategies that can support remembering, reduce anxiety about forgetting, and boost knowledge about brain science.

I'm sharing what I wish I knew much earlier.

When I was a student in early elementary school, I studied for tests by memorizing paragraphs word-for-word. One day my father asked about my technique. I shared my method proudly. Then he suggested a better way.

"You don't need to remember every word in order," he said. "Try to remember the main ideas in your own words, and be sure you understand them."

That advice changed my life. That day I learned that **there were things I could do to help me remember information more effectively**. I focused on ideas. After that, I created more memory techniques like making up funny stories, pictures, and rhymes. These strategies supported my memory and helped reduce my test anxiety immensely.

Years later in Introductory Psychology at university, I learned about memory strategies called **mnemonics** used by the ancient Greeks. Their strategies were similar to mine!

Kids deserve to know about these techniques much earlier. That's what Hippo Camp Kids is all about.

IMPRESSIVE  
MEMORY ISN'T  
JUST FOR  
MEMORY  
CHAMPIONS.



IT'S A SKILL  
THAT CAN BE  
LEARNED.

# IS THE GOAL TO CREATE “SUPER MEMORIZERS?”

**NO.**

The goal of Hippo Camp Kids is not to turn kids into Super Memorizers. That goal would place unfair expectations on learners and create more anxiety. Super-memorization at the level of memory champions is not necessary for school or job success, and it's not the purpose of these resources.

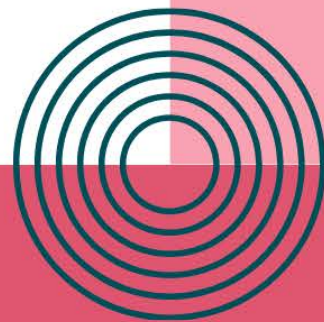
Evaluating knowledge with open book testing is a great way to assess comprehension, in my opinion. But at some point, whether in grade school or graduate school, closed book testing will happen. That means retrieving facts from memory will be necessary.

Kids are expected to study, but most haven't received explicit instruction in strategies that will support them. Research shows that memories for information form best when you 1) pay attention to what you are trying to remember, 2) understand the information, and 3) apply deep processing to that information.

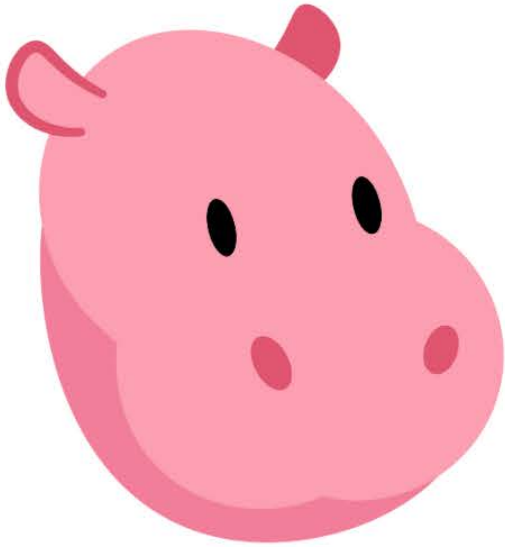
**Deep processing** means being **intentional** about how you approach remembering, and **mindful** about the neuroscience of memory. Understanding how memory works is valuable STEM education that can help support study skills and reduce test anxiety. Learning memory strategies can be fun, too!



*FUN FACT: The term “hippocampus” comes from a Greek word meaning seahorse. The brain’s hippocampus is a curved structure resembling this whimsical sea creature!*



**MINDFUL,  
INTENTIONAL  
PROCESSING**

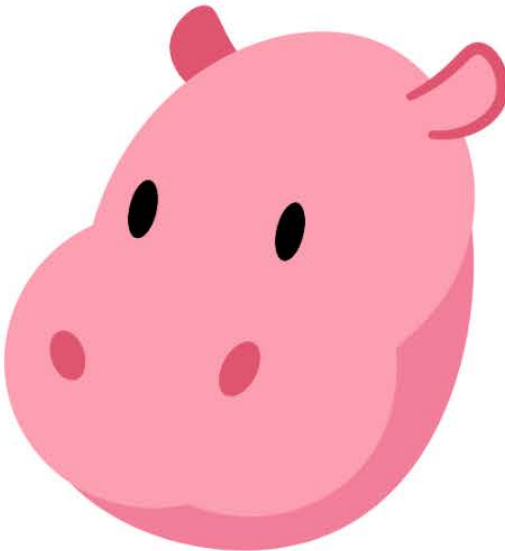


# HAVE FUN!

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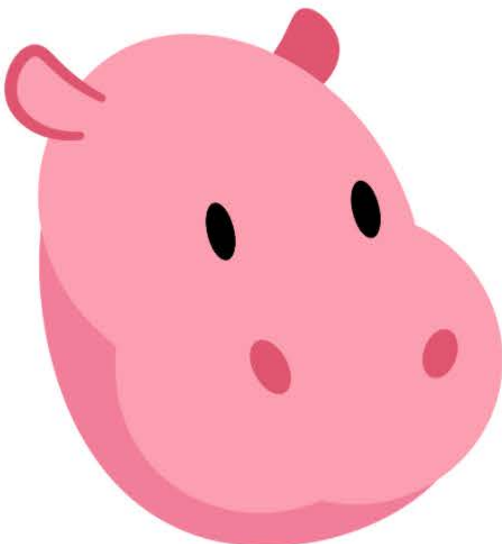
## LEARNING MEMORY STRATEGIES DOESN'T HAVE TO BE BORING

One of the first rules of learning memory strategies is to have **FUN!**



In fact, the brain will remember ideas and images that are **STRANGE** or **FUNNY** way longer than it will remember anything ordinary and boring.

So if you need to remember something that seems boring, add a fun or surprising twist.



A grey hippopotamus is ordinary, but a **PINK HIPPO** is unusual and unexpected, and something you'll probably remember!



# GET STARTED!

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## REMEMBER A GROCERY LIST

Here's an activity you can try at home or in a classroom. Ask your children or students to try and remember all **10 items** on a grocery list as best they can.

**Read the list out loud only once. Say the words slowly, about 1 word every 2 seconds.**

**Donuts**  
**Dog Shampoo**  
**Bananas**  
**Bread**  
**Toothpaste**  
**Cotton Candy**  
**Pencils**  
**Cereal**  
**Pizza**  
**Peas**

Now ask your listeners to tell you all the words they remember. In a classroom, ask students to write down the words they recall on a sheet of paper.

Most listeners won't remember all of the items; that's true for kids and adults! **But a pattern will likely emerge.**

You'll notice that a few items at the **beginning** of the list will probably be remembered quite well. This memory phenomenon is called the **primacy effect**. It happens because brains can practice a few of the first words mentally within your 2 second pauses early on ["donuts... dog shampoo/donuts...dog shampoo...bananas"]. But this repetition becomes impossible as more words are presented further down the list without you providing longer pauses.

A few words at the **end** of the list will probably be remembered pretty well, too. This phenomenon is called the **recency effect**. Traces of what you just heard can linger in your **echoic memory**, meaning the sounds the ear just registered remain for a few seconds in your sensory system after the list ends.

Words in the **middle** won't be remembered so well, unless a **favorite** item is there that the brain really loves, like **cotton candy**. **Motivation** and **high interest** support memory. We like to remember the good stuff!

Examine the items recalled with your eager listeners and talk about these **memory effects**.



# READY TO REMEMBER MORE?

Many children and teens I work with can feel discouraged quickly when they can't remember everything on the grocery list. I explain that the **brain is designed to forget**. It can't possibly remember everything! **But making choices about how to process information can make a big difference for remembering.**

Simply listening to the list and trying to remember the items is a form of **shallow processing**. Sure, a few words at the beginning of the list might be rehearsed with some mental repetition. But beyond that, the brain isn't doing lots of extra work.

To make information stick, you need to take a deep dive below the surface, and that means working hard with the information. Memory researchers call this effortful work **deep processing**. Deep processing builds much stronger memories than shallow processing.

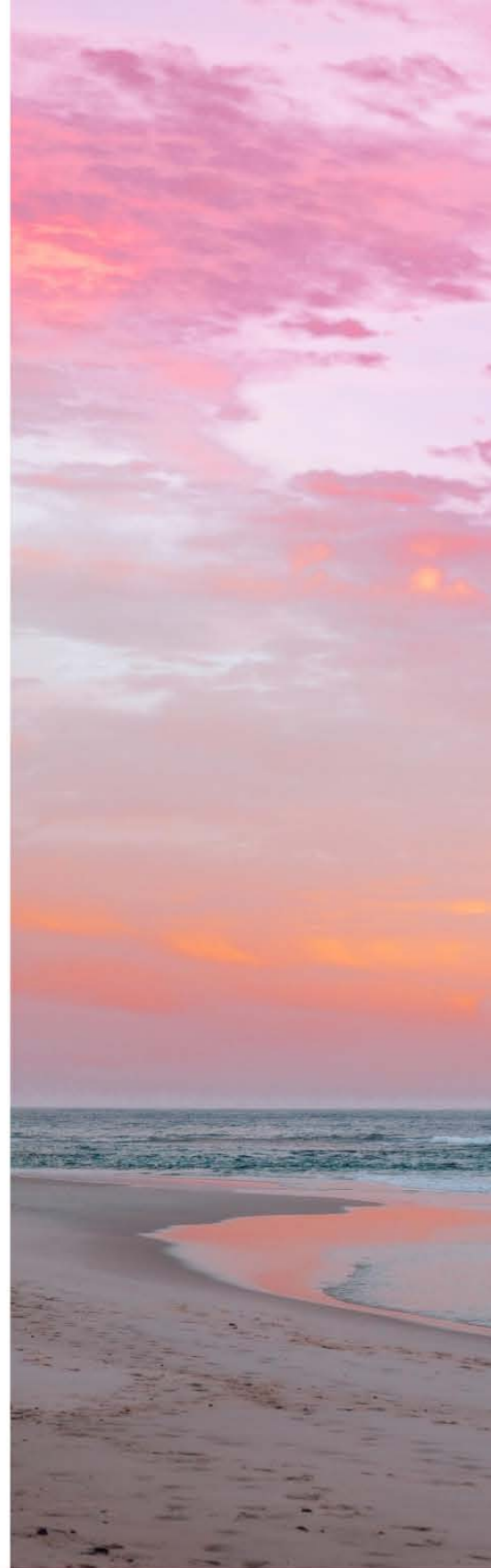
So how can the grocery list be processed more deeply?

**Building visual images in surprising ways is a form of deep processing.**

Share the grocery list with your listeners in writing and start doodling a big picture of all the items together. Mix the elements in **funny, strange** and **surprising** ways to make the memory more "sticky" and easily remembered.

For example, you might draw a dog standing up covered in frothy shampoo to remember the dog shampoo. Pieces of chunky cereal are stuck in the shampoo. A donut is wedged on the dog's nose. The dog is wearing a belt of bananas. Instead of shoes, slices of bread are on his hind legs. He has pink cotton candy hair. He walks with giant pencils as walking sticks. The floor is slippery because it's covered in toothpaste. The dog is sliding as he walks. He is going to crash into a giant pizza covered with peas that is on the floor.

Whatever picture you draw, have everybody study it briefly. Then cover it up and ask what items were on the list. Thanks to deep processing, and a whole lot of fun, **many more items** will probably be remembered!



DEEP PROCESSING  
BUILDS STRONGER  
MEMORIES

# TIPS FOR PUTTING THINGS TOGETHER\*

\*because it's easier to remember **one fun picture** than lots of separate things

1

## Make combinations surprising and fun

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The brain remembers unusual images better than ordinary ones. So if you need to remember dog and donut, imagine the donut is stuck around the dog's nose, or even around the dog's waist like a life preserver. These images are strange, and will probably be remembered better than a dog eating a donut (which is pretty ordinary).

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## Make sizes unusual, too

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You can use the size of items to make fun and surprising pictures in your mind, too. For example, if you have to remember pizza, make it **HUGE**, like a pizza as big as a house, or a pizza that covers a whole road. Consider making big things small and small things big to create unusual images your brain will remember.

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## Add action to your items

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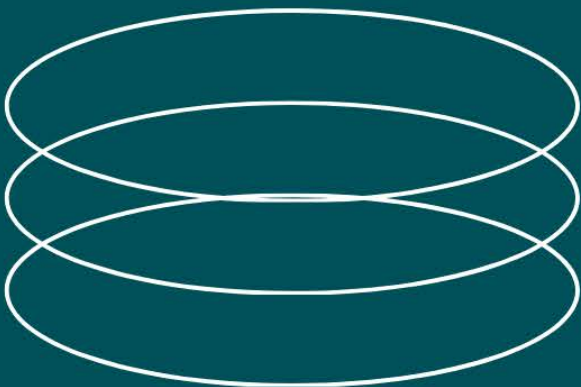
Add action to the items you are imagining to make things more interesting for your brain. For the grocery list, the dog is sliding on the slippery toothpaste that is all over the floor. Peas are rolling off the pizza. Action grabs your attention, and attention is important for remembering.

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## Use your senses and add some "ick"

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Imagine the items you see in your mind by engaging all of your senses. Think about the smell of the dog shampoo and the foamy bubbles you would see and hear popping. Imagine the taste of the pizza and the smell of the cotton candy. Add some "ick" to make images stick. Maybe the dirty dog smells very bad, and the bananas are rotting. Ick!





# HIPPO CAMP KIDS IS JUST GETTING STARTED!

STAY TUNED FOR MORE  
RESOURCES AND  
STRATEGIES INCLUDING  
ACTIVITY SHEETS  
AND AN EXPLANATION OF  
HOW TO REMEMBER  
MANY THINGS WITH A  
**MEMORY PALACE!**





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## BIO AND MORE INFO

I am a Clinical Pediatric Neuropsychologist who received my undergraduate and graduate degrees at the University of Toronto, Canada. My goal is to share the wonders of neuroscience with children and teens, and with the caring adults who work hard to support them. Exciting possibilities happen when the brain's capacity to change through a process called neuroplasticity is leveraged with new learning. I've written picture books on various mental health topics published through the American Psychological Association's Magination Press. I am also the Founder of Hippo Camp Kids and share information about brain science and memory with students, parents, and teachers. I'm just getting started so watch for announcements when new resources are available. This guide is an introduction to the wonders of memory. I hope you enjoy it!

For more information, please contact me at [info@brendamiles.com](mailto:info@brendamiles.com).