

## LEARNING AND MEMORY

**Activity Objective:** Girls learn and practice memorization skills and assess how memorization can be used in their daily lives.

### Toward Leadership Outcomes:

Through this activity, girls will:

- ✓ Gain practical life skills—Girls have increased confidence in their ability to succeed in math and science. **(Discover)**
- ✓ Seek challenges—Girls develop positive attitudes toward learning, seek opportunities for expanding their knowledge and skills, set challenging goals for themselves, and take appropriate risks. **(Discover)**

### Experience Overview:

2 minutes	<i>Introduction (Talking Points)</i>
10-15 minutes	<i>Freewrite (Journaling)</i>
10 minutes	<i>Memory Game 1</i>
20 minutes	<i>Memory Game 2</i>
10-15 minutes	<i>Reflection/Discussion</i>

### Supplies Needed:

- ✓ Paper and pens or pencils (enough for each girl)
- ✓ A tray with 20 unrelated objects covered with a towel. If needed, you can “improvise” at the meeting, adding objects from the room or girls and using a jacket to cover items.
- ✓ A timer or watch

### Prepare Ahead:

- ✓ Read over the entire activity before meeting with girls.

## SCIENCE & TECH ACTIVITY 1

### DISCOVER:

- » Gain practical life skills
- » Seek challenges in the world

## Step-by-Step Instructions:

### » Introduction (Talking Points) (2 minutes)

- ✓ Say something like: “Today’s activities are all about memory and how memory affects our lives—from our personal feelings, experiences, and stories to how we learn, both in and out of school. Let’s start with our personal memories. Our memories are a rich, private world that we carry within us, and make us who we are.”

### » Freewrite (10-15 minutes)

- ✓ Distribute paper and pens or pencils.
- ✓ Let girls know they will have about three minutes for each freewrite, using the following prompts:

One of my favorite all-time memories is...

If I had the power to remember everything I wanted, I would use it for...

- ✓ Encourage girls to add lots of details and images when writing, and to use their imagination and have fun.
- ✓ If time allows, encourage girls to share a couple of sentences from their freewrite aloud with the group.

### » Memory Game 1 (10 minutes)

- ✓ Say something like: “Everyone learns in different ways. Memorizing, repeating, rewriting, rereading, and imitating are just some of the ways we learn. Learning and memory go hand in hand. Learning is acquiring new information and memory is retaining learned information. Memories are either short term or long term. An example of short-term memory is remembering a telephone number long enough to dial it; long-term memory is being able to recall things that happened months or years ago. Today we are going to play a game to test our short-term memory skills.”
- ✓ Gather 20 unrelated objects, place them on a tray, and cover them with a towel.
- ✓ Uncover the tray and let girls study the objects for about three minutes.

- ✓ Replace the towel over the objects.
- ✓ Set the timer for two minutes.
- ✓ Tell girls they have two minutes to write down as many of the objects as they can remember.
- ✓ When time is up, have girls share with the group the number of objects they were able to remember.
- ✓ Repeat the activity again. When girls study the objects, tell them to create “a mental picture” in their heads for each object, or even a story or a phrase to remember. (Example: On her way to school, a girl looks in her backpack to be sure she has her comb and red pen, and then checks her watch to see if she is on time.)
- ✓ Girls share their results with the group.
- ✓ Ask girls: “How did the results compare between the first and second activity? Was there one item that everyone seemed to remember? Was there one that everyone forgot? Why do you think that is?”

## » Memory Game 2 (20 minutes)

- ✓ Sit together in a circle.
- ✓ One girl starts by saying, “I’m going to the store to buy some shoes” (or whatever item comes to her mind).
- ✓ The next girl repeats what the first girl said and adds one item to it. (Example: “I’m going to the store to buy some shoes and a book.”)
- ✓ Continue this way, with each girl adding an item. See how long the list in the sentence becomes. Remind girls that the trick to remembering is to create a mental picture—so in the game, they can create a distinct mental picture of each person and the item she added. (You might say “Think of a mental picture narrative, or a story in your mind, such as a girl wearing high-top sneakers and carrying the book as she leaves the store.”)

## » Reflection/Discussion (5-10 minutes)

### Ask girls:

- ✓ “Have you ever noticed that it is easy to remember some things such as song lyrics or celebrity dating histories but hard to remember others such as the periodic table of elements or American presidents? That is because it is all about context and relevancy—what feels relevant, or important, to your own life.”
- ✓ “How can you make something you are not interested in more relevant to you? And does anyone use a different memorization technique?”
- ✓ “How can improving your memory help you on a daily basis? How can it help you in school?”
- ✓ “How can you use the ‘mental picture’ memorization technique when you study and take exams?”
- ✓ “Can you think of any jobs that require good memory skills?”