

# LESSON 7: MEMORY CHALLENGE

## SUPPLIES

### PENCIL BOX

- Scissors
- Pencils
- Glue


### FOLDER

- Pattern Challenge Student worksheets (15 of each)
- Pattern 1-6 Teacher Worksheet (1 of each)

## OBJECTIVES


- Understand how observation, memory, and communication can help Secret Agents
- Identify strategies for exercising memory

## HOOK

 3 min

- Ask students if they have good memories, or if they are forgetful! Do you use any special tricks to remember things, or do you just hope that your brain will hold onto information and not forget it?
- In today's activity, we will learn some techniques for remembering. They will help us build a memory palace, which is an imagined place in our head where we store memories!

## INTRODUCTION

 3-5 min

Welcome back, agents! In today's class, we'll be training a very important technique in the Secret Agent skillset: memorization! A good spy has the ability to memorize information and then recall it at a later point.

Some humans are very good at remembering things that they see and hear. Other people, however, have more trouble recalling information! The good thing is that memory is something we can actively train in order to improve.

Let's identify some strategies to exercise our memory and test our memory skills! But first, it's time to meet Agent Flashback.

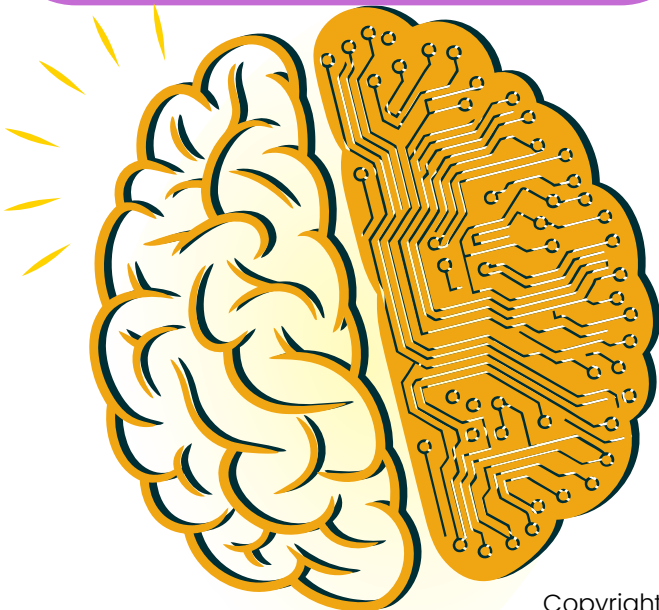
## MEET TODAY'S SECRET AGENT

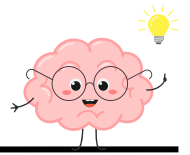
### FLASHBACK



#### Specialty: Information recollection

Agent Flashback possesses the remarkable ability to retain and recollect any information that he sees or hears. This skill can be incredibly useful when an Agent needs to memorize details, recall facial features, or remember locations, plans, and documents. Flashback has trained for years to make his memory as powerful as possible. Let's learn some of his tricks!





## DISCUSSION

🕒 3-5 min

In the fast-paced world of espionage, having a sharp memory is essential for spies and secret agents. The ability to remember faces, codes, locations, and crucial information can make the difference between success and failure on a mission. Discuss with students the memory techniques listed below:

**Visualization:** Create a mental image or story associated with the pattern.

**Acronyms or Mnemonics:** Create a phrase or acronym using the initial letters of the items in the pattern. An example for remembering the Great Lakes could be "HOMES" (Huron, Ontario, Michigan, Erie, Superior)

**Association:** Associate each item in the pattern with something familiar. Does the circle look like a basketball, for example?

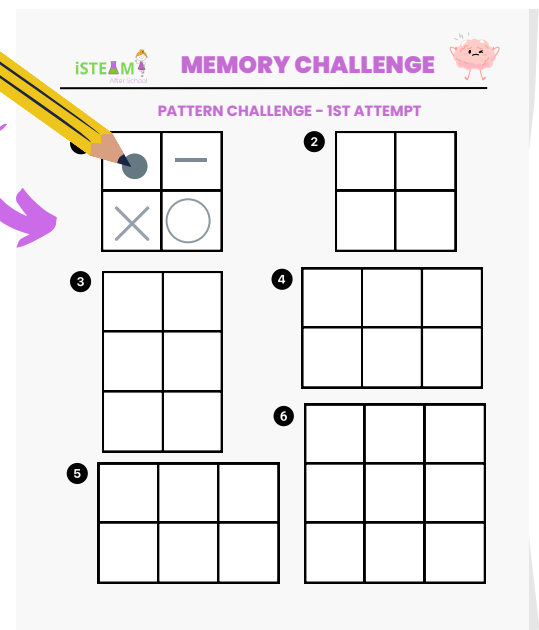
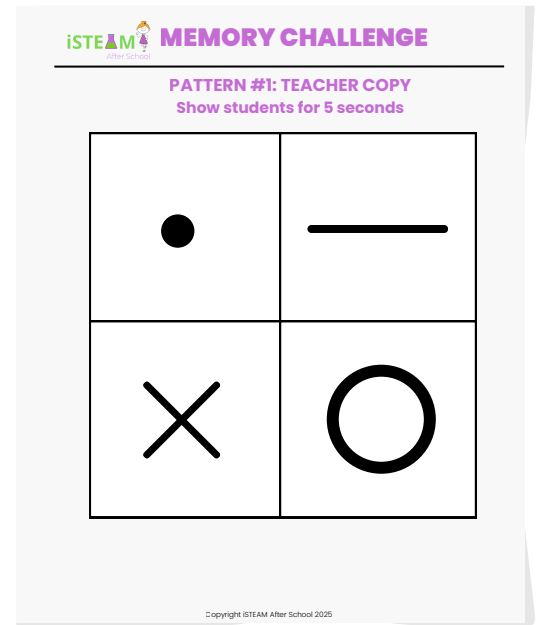
**Repetition and Practice:** Practice recalling the pattern multiple times until it sticks!

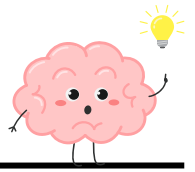
**Find Patterns Within the Pattern:** Sometimes, random patterns actually have underlying structures or sequences.

## ACTIVITY PART 1: MEMORY CHALLENGE

🕒 25 min

- For the first activity, tell students that they will work on their observation and memory skills. You are going to show them six patterns for a limited amount of time. Students will need memorize and recreate the same patterns on their worksheet. While you are showing students the pattern, they are not allowed to write on their worksheet!
- Distribute pencils and the **Pattern Challenge - 1st Attempt** worksheet.
- Display the first pattern for 5 seconds, ensuring all students can see it clearly. Once you have displayed a pattern, put it down and then ask students to draw the pattern in the corresponding square on their worksheet. Give them ~30 seconds to draw before moving on to the next pattern.
- Sequentially show the remaining patterns, following the time listed on each sheet. **NOTE: some patterns indicate 10 or 15 seconds. Allow students to draw the pattern**
- After you have completed all six patterns, review each pattern to assess student accuracy. Have everyone hold up their sheets, and then compare to your display! Ask students to share what was challenging or easy for them. Was it easier to remember the pattern when there were fewer shapes to draw? Were the last patterns harder than the first?






## ACTIVITY PART 1 CONTINUED

- Students will try this exercise again, but first, let's review the above memory aids and introduce the memory palace technique to see if it allows our brains to store and recall more information!

The Memory Palace technique uses familiar places to help you remember things. Basically, you create a mental map of a place you know well, like your house or classroom, and then mentally "place" items you want to remember within that space. For example, the small black dot on the pattern sheet can go under the bed, the X can go in the fridge, the triangle can go on the TV, and so on! When you need to recall the information, you "walk" through your mental palace and "collect" the items you placed there!

- Now that you have reviewed some memory tips, have students turn to the **Pattern Challenge - 2nd Attempt Worksheet**. You will now repeat steps 3-6 using the same patterns.
- Review the results. Did students remember more patterns during the 2<sup>nd</sup> attempt?

## ACTIVITY PART 2: CIRCLE NAME GAME


 10 min

- Let's play a memory name game! Have the students sit or stand in a circle.
- Select one student to start the game by saying their name and one thing that they like. For example: "My name is Jackie and I like to play soccer."
- The next person needs to add their own statement, but they also need to remember everything that everyone else said! For example, student #2 will say: "My name is Marcus and I love to eat pizza, and her name is Jackie and she likes to play soccer."
- The 3<sup>rd</sup> student continues. For example: "My name is Ginny and I like to play with my dog. His name is Marcus and he loves pizza, and her name is Jackie and she plays soccer." And so the activity continues until everyone has been introduced.
- The name of the game is cooperation, not competition--students can give hints to each other if someone can't remember! By the end, students will need to remember a lot of information.





## OBSERVE & EXPLAIN

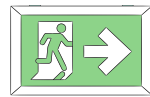
 5-7 mins

Discuss with students if they remembered more patterns the first or the second time. Most students will do better the second time! Ask them why they think that is. Guide them to think about strategies they used to remember. Did they use a memory palace? Did they repeat the pattern aloud? Were they thinking about what the designs looks like? Did they compare the pattern to a design? Was it easier because they were already familiar with the patterns from the 1<sup>st</sup> attempt?

Sharpening your memory skills takes practice. Today, you were able to test out your memory and hopefully improve your ability your brain's processing time and effectiveness.

Ask students to share helpful strategies and tips, as well as things that did not work! In the future, when they need to remember something, what strategies will they use?

Guide students to see that different strategies, such as breaking the pattern into smaller parts or creating mental associations, can aid in memorization. They should also recognize the importance of clear and precise communication when guiding a partner through the recreation of a pattern.

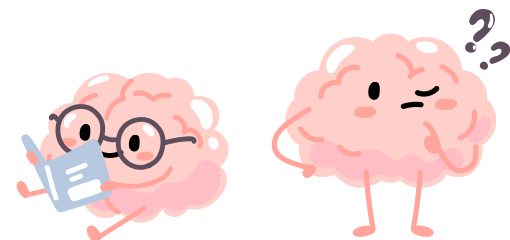
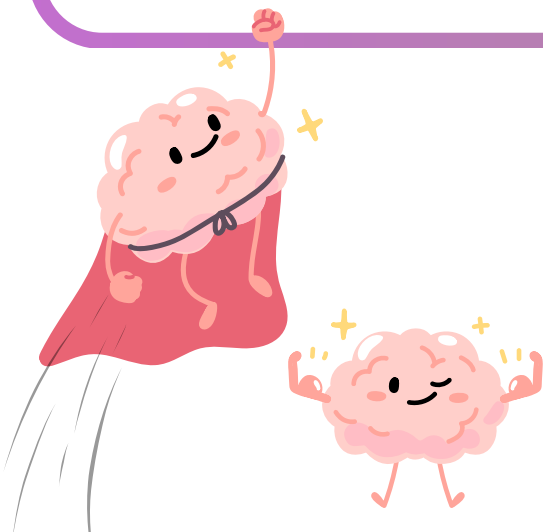


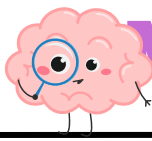
### Exit Ticket



Ask each student the following question as they walk out the door.

- Q: What are some ways to improve your memory?
  - **Visualization:** Create a mental image or story associated with the pattern.
  - **Acronyms or Mnemonics:** Create a phrase or acronym using the initial letters of the items in the pattern.
  - **Association:** Associate each item in the pattern with something familiar to you.
  - **Repetition and Practice:** Practice recalling the pattern multiple times until it sticks
  - **Find Patterns within the Pattern:** Sometimes, seemingly random patterns actually have underlying structures or sequences.





## PATTERN CHALLENGE - 1ST ATTEMPT

1

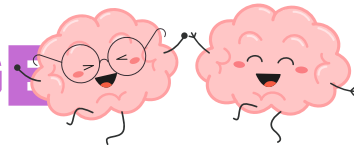

2


3


4


6


5

## PATTERN CHALLENGE - 2ND ATTEMPT

1


2


3


4

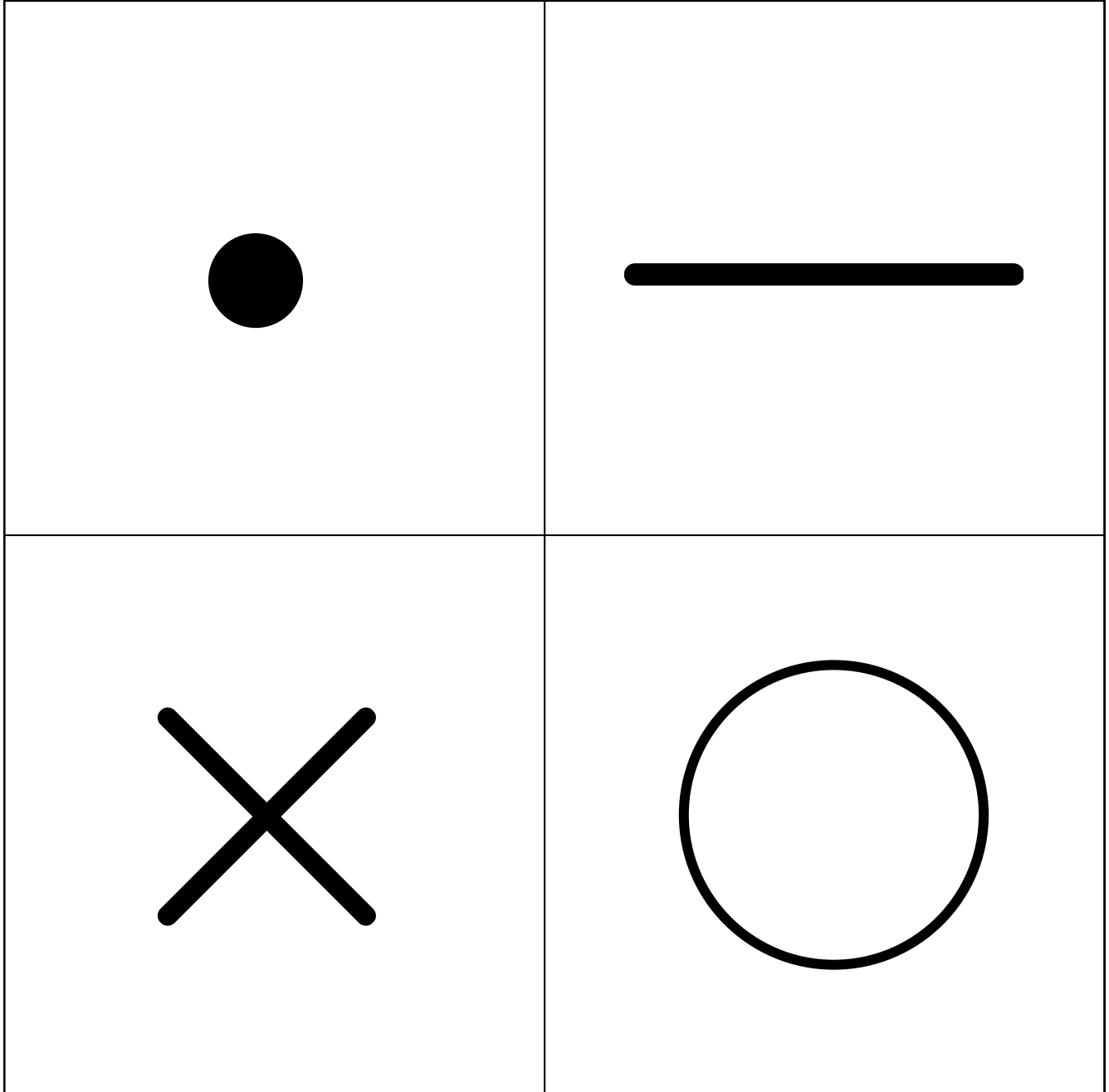

6


5

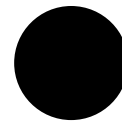
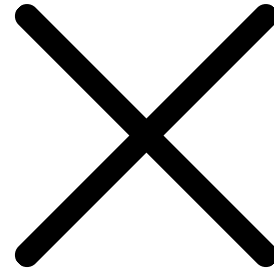
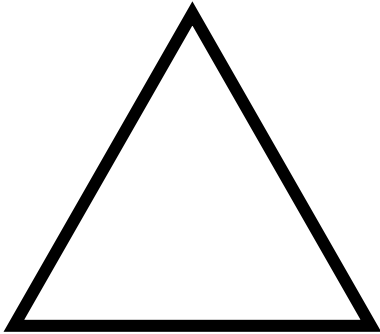

# MEMORY CHALLENGE

## PATTERN #1: TEACHER COPY

Show students for 5 seconds

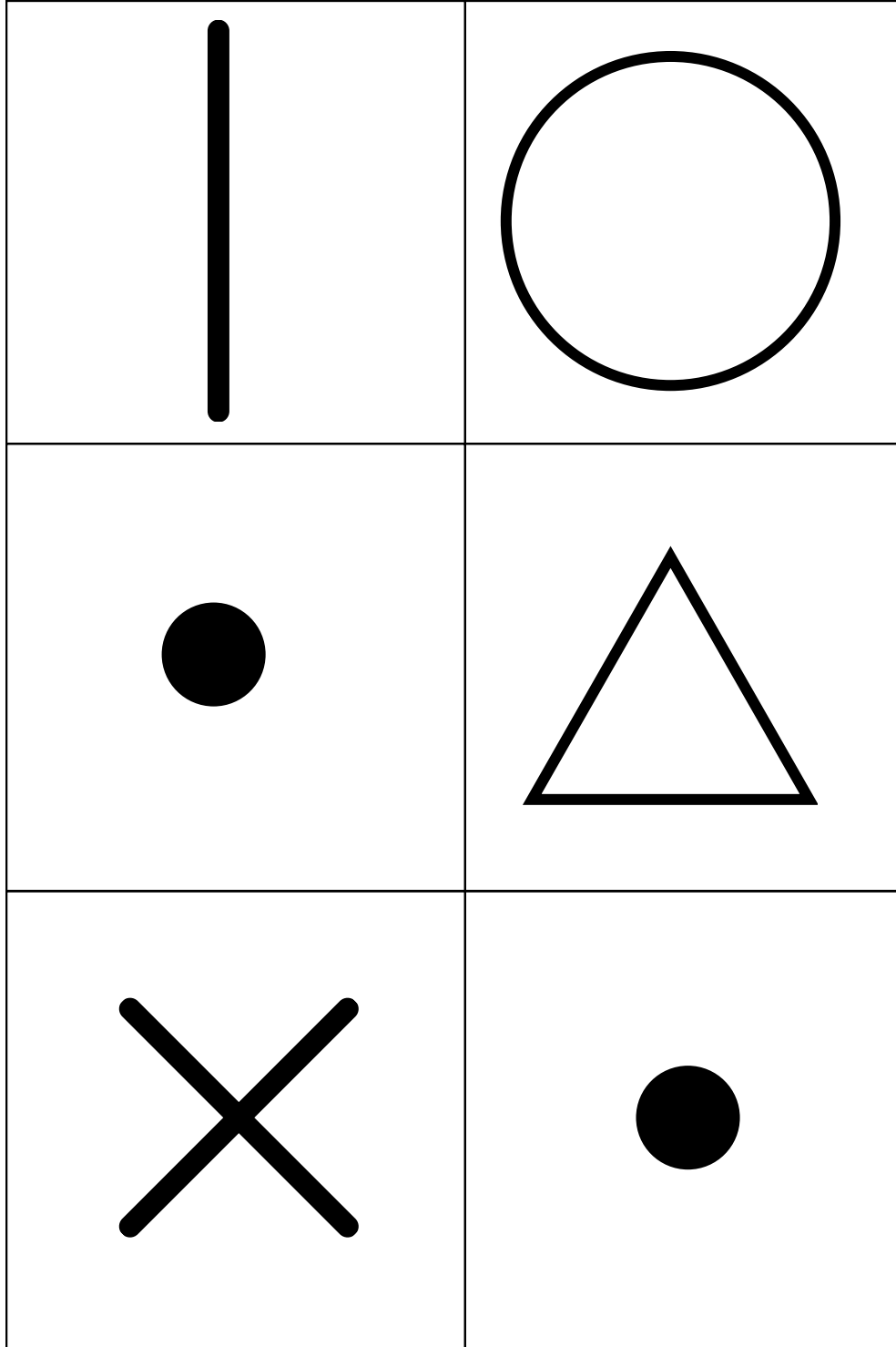


Show students for 5 seconds



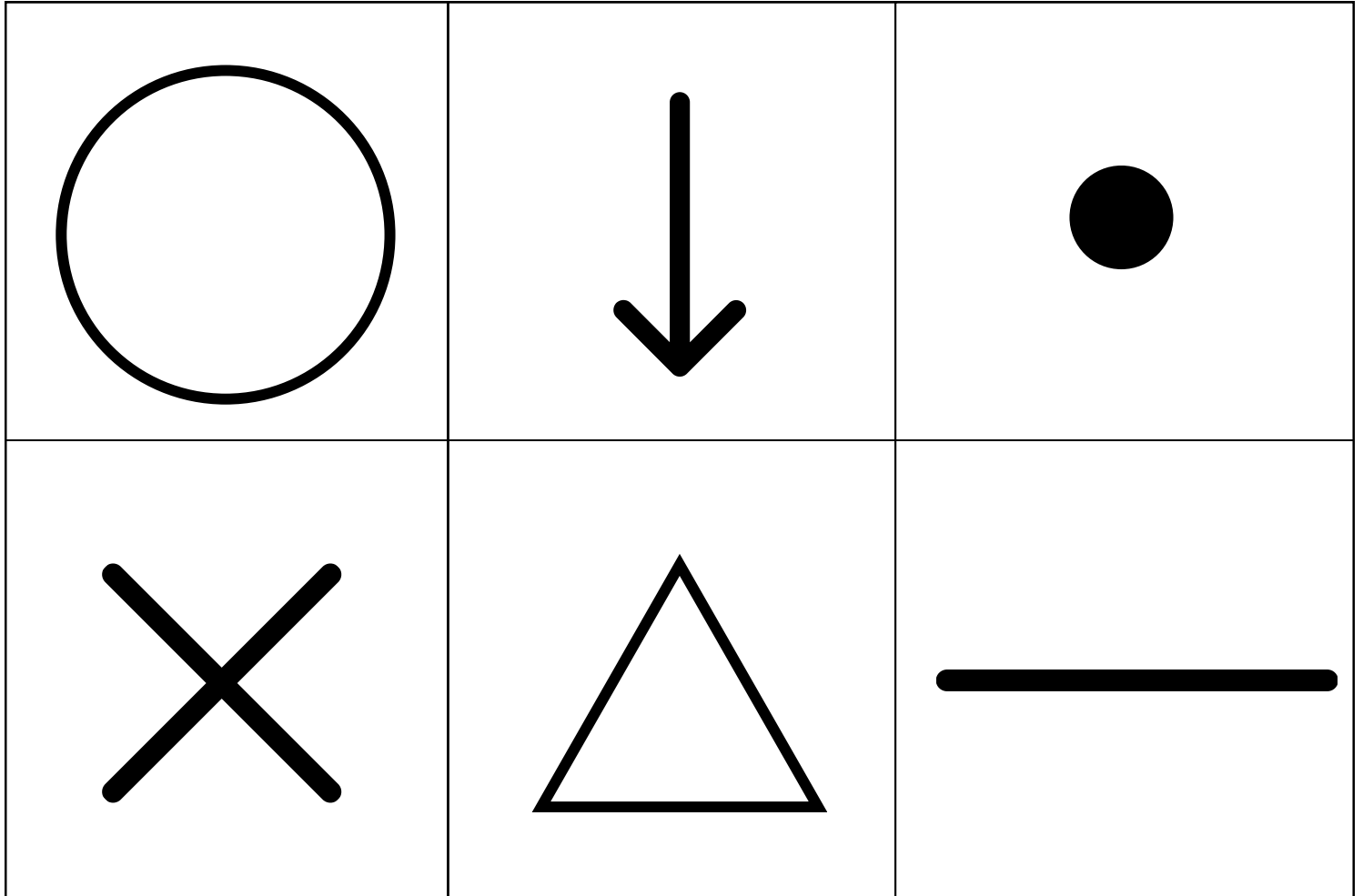
# PATTERN #3 TEACHER COPY

Show students for 10 seconds



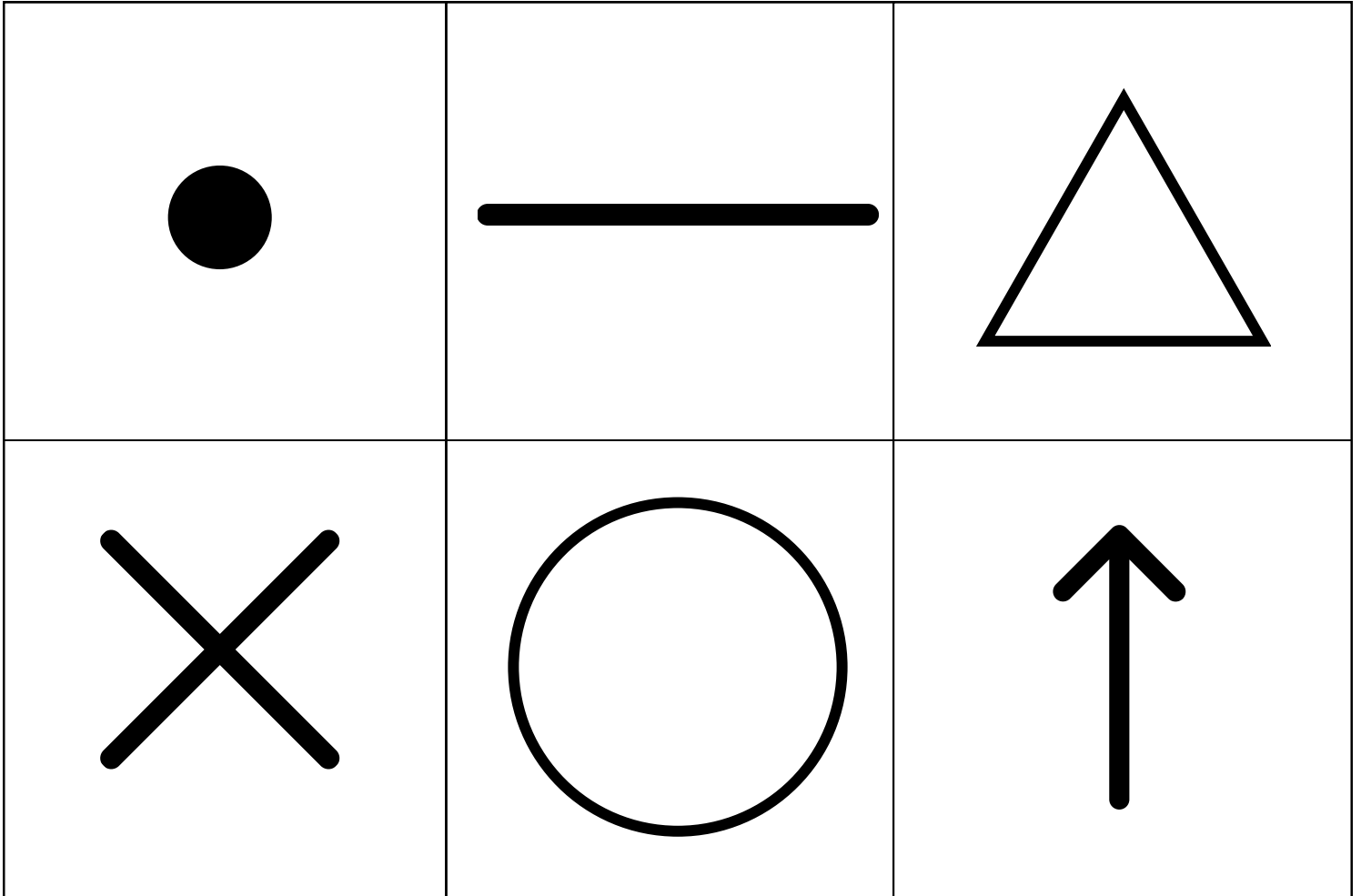
# PATTERN #4 TEACHER COPY

Show students for 10 seconds



# PATTERN #5 TEACHER COPY

Show students for 10 seconds



# PATTERN #6 TEACHER COPY

Show students for 15 seconds

