Brain Health: It's SPECtacular

Why Can't I Remember? ( A Cognitive Health Story) ( $3^{\text {rd }}$ Grade $-8-9$ yrs.)<br>Experiment: Refresh Your Memory

## STORY CONNECTION - SLIDE 5 (Approx Time for all 3 activities: $\mathbf{3 0 - 3 5}$ mins)

Usually when you cannot remember something, it is because you did not learn it well enough. To show that you learned something...you need to be able to remember it. The information you learn must go into your brain and get stored so you can use it later. So, learning and remembering go together. There are LOTS of ways to learn something, so that you can remember it.

## Materials needed:

- Pencil
- Paper
- Stopwatch or timer
- 25 objects link: (memobjects.jpg (1564×2024) (washington.edu))
- Equipment to display online picture
- Number Strings (included below)
- Mnemonic Devices Chart (included below- optional)
- Mnemonic Devices Chart Answer Key (included below)


## Preparation needed:

- Determine which (or all) activities students will complete.
- Activities in this experiment can be completed at the same time/day, completed at different times/days, or can be a standalone experiment.
- Activity \#2- Determine student groups
- Activity \#2- Print number strings (1 per pair/group; 4 per page)
- Activity \#3- Print chart (1 per student; 2 per page) or prepare to display


## Instructions:

In this experiment, student(s) will have the opportunity to test their memory and see how well they remember things over time. There are several different activities below. Feel free to use one or more of them with your student(s).

Activity \#1: (Approx Time: 5-10 mins)

1. Tell student(s) that they are going to see 25 different items for only 30 seconds. After 30 seconds, the items will be taken away and they will have to write down as many as they can remember.
2. Ask student(s) if they have any questions or need any clarification. Clear up any misunderstandings.
3. Here are the 25 objects. Begin timer when you click.
4. When the timer goes off, hide the objects.
5. Give student(s) paper and an allotted amount of time to write down as many objects as they can remember. Remind them they should not talk to anyone else.
6. When the time is over, have all pencils/pen put down. Display the objects again. Ask the following questions.

- How many items did you remember?
- What items did you remember? (List them and keep track of the number of student(s) who remembered each item.)
- Why were some items easier or harder to remember?
- What strategies did you use to help you remember?
- Are there any items that no one remembered?
- Why do they think that no one remembered certain items?

7. Discuss the student(s) answer to wrap up the activity.
**Suggestion: You could repeat this activity later the same day or the next day to see if student(s) can improve.**

Activity \#2: (Approx Time: 5-10 mins)

1. In the second activity, student(s) will use the chunking strategy to help them remember strings of numbers.
2. Ask them if they ever wondered why phone numbers are really one 3-digit number and one 4-digit number and NOT one 7-digit number. It is 999-9999, not 9999999. Or if they ever wondered why social security numbers are grouped the way they are. It is 999-99-9999, not 999999999. They are a lot easier to remember in small chunks. Remembering things is easier when they are in pieces.
3. Explain to student(s) they will be working with a partner/group for this activity.

- One person will be the reader and the other person will be the recorder.
- The reader will say a string of numbers at a steady pace of about one number per second.
- They should not tell their partner how many numbers they are going to read or what the range of numbers is.
- They should only read the number string one time.
- When the reader is finished, the recorder can pick up their pencil and writes down as many as many numbers as they can remember.
- They will do this task two different times. They will keep their roles. They do not switch jobs.

4. Ask student(s) if they have any questions or need any clarification. Clear up any misunderstandings.
5. Partner/group student(s).
6. Allow student(s) to choose their role.
7. Have everyone begin at the same time.

The first string of numbers is: 915112461510371312814.
8. After each student has completed their task, have the recorder reflect. They may share out loud.

- How many numbers were they able to remember?

9. Have everyone begin round 2 at the same time.

The second string of numbers is: 11121312314158910789456
10. After each student has completed their task, have the recorder reflect. They may share out loud.

- How many were they able to remember this time?
- Was it easier with this string of numbers? Why or why not?

11. Discuss the reflections as a closure to this activity.

## Activity \#3: (Approx Time: 10-15 mins)

1. In the last activity, student(s) will practice using mnemonics to help them remember something that is tricky for them.
2. Give each student a copy of the mnemonic devices chart and/or display mnemonic devices for student(s) to see.
3. Go over each one while asking them what they mean to them or what they know about them. Student(s) can record the meanings on their chart.
4. Have student(s) share any other mnemonics they are familiar with.
5. Ask student(s) why these are helpful when trying to remember certain pieces of information.
6. Now ask student(s) to think of something that is hard for them to remember. It can be a word that is hard to spell, the steps to completing a math problem, something from their science units, etc.
7. Explain that they are going to create a mnemonic device to help them remember what is giving them trouble.
8. Give them ample time to complete. They can use the back of their chart paper.
9. When time is over or student(s) have finished, ask if any student(s) want to share their creations.
10. To warp up this activity, discuss with student(s) if they think their mnemonic device would be a useful strategy for remembering information? Why or why not?

Experiment Closing: In closing all activities, remind student(s) that in order for them to learn something they must be able to remember the information. Remembering and learning go hand in hand. The strategies from today's activity will allow them to remember information better so they can store it and use it later when they need it.

Activity Ideas Credit: https://faculty.washington.edu/chudler/chmemory.html

| First String of Numbers | 915112461510371312814 |
| :---: | :---: |
| Second String of Numbers | 11121312314158910789456 |


| First String of Numbers | 915112461510371312814 |
| :---: | :---: |
| Second String of Numbers | 11121312314158910789456 |


| First String of Numbers | 915112461510371312814 |
| :---: | :---: |
| Second String of Numbers | 11121312314158910789456 |


| First String of Numbers | 915112461510371312814 |
| :---: | :---: |
| Second String of Numbers | 11121312314158910789456 |

NAME:
Mnemonic Devices

| Mnemonic | What does it help us remember? |
| :---: | :---: |
| ROY G. BIV |  |
| My Very Excellent Mother Just Served Us Nine |  |
| Pizzas |  |$\quad$| Big Elephants Can't Always Understand Small |
| :---: |
| Elephants |$\quad$| Clever Zebras Eat Cold Hash on Soggy Lettuce or <br> Visit a King's Island Animal |
| :---: |
| Never Eat Soggy Waffles |

NAME:
Mnemonic Devices

| Mnemonic | What does it help us remember? |
| :---: | :---: |
| ROY G. BIV |  |
| My Very Excellent Mother Just Served Us Nine <br> Pizzas |  |
| Big Elephants Can't Always Understand Small <br> Elephants |  |
| Clever Zebras Eat Cold Hash on Soggy Lettuce or <br> Visit a King's Island Animal |  |
| Never Eat Soggy Waffles |  |

Mnemonic Devices (Answer Key)

| Mnemonic | What does it help us remember? |
| :---: | :---: |
| ROY G. BIV | Colors of the rainbow (red, orange, yellow, green, <br> blue, indigo, violet) |
| My Very Excellent Mother Just Served Us Nine <br> Pizzas | Order of the planets (Mercury, Venus, Earth, Mars, <br> Jupiter, Saturn, Uranus, Neptune, Pluto) |
| Big Elephants Can't Always Understand Small <br> Elephants | How to spell "because" |
| Clever Zebras Eat Cold Hash on Soggy Lettuce or <br> Visit a King's Island Animal | How to spell "Czechoslovakia" |
| Compass directions (north, east, south, west) |  |
| Never Eat Soggy Waffles |  |

