

November 2-10

Following Power Point on Memory

The Mysteries of Memory: Memorization Techniques That Work

Overview

A guided tour of a website about memory introduces students to the different kinds of memory (working, long-term, and skill) and to some techniques that can aid in memorizing information, such as visualization and making mental associations. Online memory games illustrate various features of memory and demonstrate the value of specific memory strategies, as students note their results before and after learning the techniques. Class discussion guides students in applying these new skills to improve their schoolwork and reading comprehension. A class memory game encourages students to develop and share their own memory strategies.

From Theory to Practice

Hibbing, A.N., & Rankin-Erickson, J.L. (2003). A picture is worth a thousand words: Using visual images to improve comprehension for middle school struggling readers. *The Reading Teacher*, 56, 758–770.

“Research on mental imagery demonstrates that comprehension of text is enhanced when students are prompted or taught to use mental imagery.” (760).

- Proficient readers naturally create a mental image of what they are reading.
- Nonproficient readers are often too preoccupied with decoding and fail to create an image of what they have read, thus hampering comprehension.

Student Objectives

Students will

- Investigate how the human brain is structured and how memory works by navigating a website
- Practice memory techniques involving visualization and making associations
- Apply memory strategies to remember facts and concepts better and longer
- Apply visualization strategies to improve reading comprehension
- Appreciate the value of memory techniques for practical everyday tasks

Instructional Plan

Preparation

1. Make a copy for each student of the [Mysteries of Memory Worksheet](#) and the [Mysteries of Memory Student Grading Rubric](#).
2. Print out one copy of the [Mysteries of Memory Worksheet: Teacher's Guide](#) as a teacher's reference. Use this guide to familiarize yourself with the website [Exploratorium: The Memory](#)

Exhibition.

3. Make an overhead transparency of the [Graphic Organizer](#) to fill out during class discussion. Print out a copy of the [Graphic Organizer: Teacher's Guide](#) to use as a teacher's reference.
4. Collect 20 small objects appropriate for use in the [Memory Party Game](#) and familiarize yourself with the procedure for playing the game.
5. Schedule access to student computers with Internet access for Sessions 1 and 2, and bookmark the site [Exploratorium: The Memory Exhibition](#) on the computers.

Instruction and Activities

Session 1

1. As a warm-up activity, give students 5–10 minutes to give a written response to the prompt: *Describe your first memory (the first event you remember in your life when you were very young).*
2. Ask a few students to share their first memories. Tell students about your first memory from your childhood.
3. Display the [Graphic Organizer](#) transparency on the overhead projector and fill it out as you lead a class discussion on memory using the following questions:
 - What is memory?
 - How long do we remember certain things?
 - What are the kinds of things we never forget?

Write students' responses around each circle so that the completed transparency looks similar to the [Graphic Organizer: Teacher's Guide](#).

4. Explain that students will be studying some of these mysteries of memory and learning some techniques that can help them remember things better.
5. Give each student a copy of the [Mysteries of Memory Worksheet](#). Allow students a few minutes to read it over and ask any initial questions they might have.
6. Have students go to the computers. Instruct them to access the bookmarked website [Exploratorium: The Memory Exhibition](#) and navigate through the section titled [Sheep Brain Dissection: The Anatomy of Memory](#) (under Features). As they read the information they should write responses to the questions on page 1 of the Mysteries of Memory Worksheet. Circulate among students as they work to make sure they understand the process and are answering the questions adequately. Offer comments and positive feedback for encouragement.

Session 2

1. Explain that students will be continuing their exploration of the website [Exploratorium: The Memory Exhibition](#), learning more about the characteristics of memory and practicing some

strategies that can improve their memory skills.

2. Have students navigate through the Online Exhibits section of the website as directed by the [Mysteries of Memory Worksheet](#). As they complete the online activities, students should fill in page 2 of the worksheet.

Session 3

1. Lead a class discussion on memory using the completed pages of the worksheet. Go through each question, inviting students to read their answers and discuss differences found and questions that arise.
2. After discussing the memory strategies introduced on the website (page 2 of the worksheet), have students brainstorm different ways to remember their homework. (Writing it down in a homework notebook they keep with them is an excellent suggestion, of course, but encourage them also to try other techniques.)
3. Write on the board "When I can use memory strategies" and circle it. Discuss how the strategies students have learned can be applied to other things they need to remember, both practical and academic (e.g., facts for tests, school assignments, work that needs to be done at home, a friend's phone number, song lyrics). Write students' ideas around the circle, creating a graphic organizer like the one in Session 1.
4. Discuss how students' new knowledge of memory can help with reading comprehension (learning to visualize information can contribute to understanding and remembering what we read). Demonstrate the importance of visualizing during reading by reading a short descriptive passage. A possible example would be the opening of a novel, introducing a character or setting. (*The Red Pony* by John Steinbeck starts with a character description that would work well for this.) Ask students if they were able to create a visual image in their minds of what you just read, and if that image might help them to remember the information.
5. Play the [Memory Party Game](#) with the whole class.
 - Place 20 unrelated small objects on a table.
 - Have students gather around the table, with pen and paper in hand, and look carefully at the objects.
 - After two minutes, cover the objects with a cloth and ask students to immediately write down a list of as many of the objects as they can remember.
 - When they are finished writing, ask who remembered more than five objects, who remembered more than ten, and so on.
 - Ask the student who remembered the most to read his or her list and ask others whether the list is correct.
 - Uncover the items so students can see what they missed.
 - Ask students to share any memory techniques they used and ask what other strategies they could have used.

Session 4

This session should be scheduled 2–10 days after Session 3.

1. Ask students what they still remember from the memory lesson and what memory strategies they have used since the lesson. What strategies have worked best for them?
2. Have students complete page 3 of the [Mysteries of Memory Worksheet](#).
3. Pass out copies of the [Mysteries of Memory Student Grading Rubric](#) and instruct students to evaluate their work by going over their worksheets and thinking about their participation and learning in this lesson. Instruct them not to make changes on their worksheets at this point.
4. Collect the completed worksheets and rubrics to review and grade.
5. If time permits, play the [Memory Party Game](#) from Session 3 again, this time using different items.

Extensions

- Offer opportunities for students to practice visualization while you read passages aloud from both fiction and nonfiction.
- Use timelines, maps, story sequence, and other graphic organizers to demonstrate how visual representations can improve comprehension of content area texts.
- Encourage students to explore various links in [Memory Improvement Tools](#) to learn more memory techniques.

Student Assessment/Reflections

- The next time students are preparing for a test, especially one that involves memorizing facts, tell them to use some of the memory techniques they practiced in Session 2. Tell them that the last question on the test will be to describe one of the techniques they used to memorize the information for the test.
- Use the [Mysteries of Memory Student Grading Rubric](#), first for students to assess their own learning, then for you to evaluate their learning and to give appropriate grades based on thoroughness in completing the worksheet, response to the warm-up prompt, and active participation in class discussions.