

Psychology

Lesson 7 Memory

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Lesson 7

Memory

Objectives

- To explore psychological principles that improve memorization skills
- To consider some methods for improving memorization and recall of information
- To use psychological principles to improve academic performance

Notes to the Teacher

Students often find themselves trapped in certain study patterns that may or may not be effective for them. Learning psychological principles that improve the memorization and recall of information may help students see yet another benefit of taking a psychology class—improved academic performance.

Students see that memory and study problems are common, learn suggestions for improving their memory, play a game in which the principles are applied in typical school situations, and write letters describing these principles to students who could benefit from such advice.

To prepare for the game, cards need to be made from the teacher resource pages (pages 39–42). One set of cards, with a question on one side and its answer on the other, is needed for each small group of students.

Procedure

1. Write the following statements on the board before the students arrive in class.
 1. “I just can’t remember anything when I take tests.”
 2. “I remember the information when I’m studying, but I forget it the day of the test.”
 3. “I can’t even remember information while I am studying, much less during the test.”
 4. “My memory is so bad that I can’t even remember three pieces of information!”
 5. “I remember things I read in the textbook, but I can’t seem to remember what the teacher talks about in class.”
 6. “I remember every word the teacher says in class, but I have trouble remembering information from what I read.”
 7. “I’m just so bored with what we have to learn. I can’t remember things if they’re not interesting to me.”
- When students arrive in class, ask if they have any of the problems expressed by the statements on the board. Ask them each to rank the seven typical student problems in order from “most closely relates to you” to “causes me the least problem.” Have students discuss which problem seems to be the most common among the class. Remind students that learning psychological principles can help them in very practical ways. Tell them that today’s lesson includes suggestions that can improve their performance on tests.
3. Distribute **Handout 15**. Tell students to read the suggestions for remembering information. These suggestions apply to each of the typical problems that were listed on the board. Inform students they will need to know the information in order to play a game during the second half of class.
 4. Divide students into groups of two or three. Distribute a game board made from **Handout 16** and a set of game cards made from the teacher resource pages to each group. Tell students to follow the directions written above the game board to play a game that reviews the memory principles from **Handout 15**. Debrief the game at its conclusion.
 5. Conclude the lesson with a discussion. Ask students to list any other study problems they may have and other methods of study they have found helpful. (*Problem—I get sleepy when I study. Suggestions—Find a spot to study that encourages you to stay awake; study with a friend; promise to pay your younger sibling \$5 if he or she catches you sleeping in the next hour; etc.*) Have students write down these ideas so that they leave class with an even more complete list of ways to improve their test scores. Encourage students to use the principles to help improve their academic performance.

6. Distribute **Handout 17**, or make an overhead transparency of the writing assignment. Have a student read the assignment aloud. Then let the class choose a real audience who can benefit from reading their completed letters (such as a younger class of students just entering their school or a younger group of students at another school feeding into their own). Assign a due date for the letters. Have students share their letters before sending them to the intended audience.

Extension

1. Survey high school students on typical methods they use to study. Share survey results with the class.
2. Conduct the following experiment to test study methods. Share your results with the class.
 1. Prepare a list of twenty nonsense syllables. Nonsense syllables are three-letter, consonant-vowel-consonant combinations that should not resemble real words. For example, *yuk*, *lik*, and *soc* are not good nonsense syllables. *Qez*, *vuc*, and *zil* are better.
 2. Have a control group study by simply reading the list for three minutes.
 3. Have an experimental group study the same list for the same amount of time, but direct them to use a different study method. Examples would include a mnemonic clue you place at the top of the list or using pictures formed from the letters of each nonsense syllable.



4. Compare the difference in the number of nonsense syllables remembered when using each method.

Questions

<p>A. Paul is practicing the notes on the music staff by saying “Every Good Boy Does Fine” for the musical notes “E-G-B-D-F.” What memory principle is he using?</p>	<p>G. Kate was falling asleep in class. She decided to write three questions in her notes about the novel her class was discussing. What memory principle was she using?</p>	<p>M. Amber had to memorize the order of the planets in the solar system. She decided to create a sentence of words beginning with the same letters as the first letter of each planet. Which memory principle was she using?</p>
<p>B. Susan is thinking about her date Friday night instead of concentrating on what she is reading. What memory principle does she need to start using?</p>	<p>H. Allyson is good at listening to lectures but has difficulty remembering what she sees in her textbook. She decided to hum the words as she reads along, so that the information has a little melody to it. What is the music?</p>	<p>N. Holly had to memorize the names of the rulers of twenty-five different nations. She decided to write the names inside the boundaries of those countries on a map so that she could see a picture of the country and associate its ruler’s name with it more easily. What kind of memory cue was she using?</p>
<p>C. Brett is too busy with his job to study for tests. Which memory principle does he need to start using?</p>	<p>I. During his study time the night before, Mohammed makes sure a friend asks him all the questions that might be on the test. Which memory principle did he use?</p>	<p>O. Tommy does his classwork and homework assignments regularly. He listens attentively to class lectures and discussions. However, he always scores poorly on tests. He never actually studies for these tests. He thinks that doing his assignments should be enough to help him remember. What basic memory principle has he forgotten to use?</p>

Questions

<p>D. Tommy thought he knew all the test information after reading it several times the evening before. However, he did not make sure he could recite the information without looking at it. On the test day, he couldn't remember anything. Which memory principle did he forget to use?</p>	<p>J. Dana thinks she has learned all the test information, but she practices reciting the facts three more times just to make sure. Which memory principle is she using?</p>	<p>P. After Kelly reads over her notes, she covers part of the information with a blank sheet of paper and tries to recite the information without looking. What memory principle is she using?</p>
<p>E. Peggy studied a few facts at a time until she was sure she knew them, rather than reading over all her notes at once. What memory principle was she using?</p>	<p>K. Mark had to memorize all 206 bones of the body for biology class. He decided to practice them three at a time until he got tired of studying and to aim for just a passing grade on the test. To his surprise, he was able to keep studying for a long time because it never seemed hard to learn just three more bones, and then just three more, and so on. Which memory principle did he use?</p>	<p>Q. Matt keeps failing his current events quizzes in Social Studies. He decides to talk to his family about world news as they eat dinner, because they have strong opinions about lots of things and could probably get him interested in the news.</p>
<p>F. Matt uses pictures and sketches of information to help him study. What are these called?</p>	<p>L. David is a poet at heart and decided to write a rhyme out of the facts he needed to remember for a test. What would this rhyme be called?</p>	<p>R. Stacey always studies a few pieces of information until she knows them, rather than reading over pages of information at a time. What memory principle is she using?</p>

Answers

M. Mnemonic devices	G. Be curious	A. Mnemonic devices
N. Visual cue	H. Auditory cue	B. Be curious
O. Rehearsal	I. Self-tests	C. Rehearsal

Answers

P. Self-tests	J. Rehearsal	D. Self-tests
Q. Be curious	K. Chunking	E. Chunking
R. Chunking	L. Auditory cue	F. Visual cue

Remembering Information

Carefully read the following suggestions for remembering information. You will need this information in order to play a game.

1. Problem—"I just can't remember information when I take tests."

Suggestion—Rehearsal

Review information for a test over and over until you remember it all. Then review it some more! If you read or write information just to the point of knowing it all, you might forget some of it by test day. If you read or write it until you know it all and then read or write it again and again, you may have rehearsed the information enough to remember it all in spite of the brain's tendency to forget. High school students often have many after-school responsibilities that prevent them from making a habit of this basic study principle.

2. Problem—"I remember the information when I'm studying, but I forget it the day of the test."

Suggestion—Self-tests

After you have read information over and over or have written it again and again to rehearse it, you may start feeling that you remember information just because it looks familiar. You might have remembered it enough to recognize it but not enough to recall it. The only way to be able to tell is to test yourself after some time has passed or have a friend test you. To test yourself, make a list of questions as you study, and set it aside. After you have taken a long break from studying, answer the questions to see if the information is actually in memory.

3. Problem—"I can't even remember information while I am studying, much less during the test."

Suggestion—Chunking

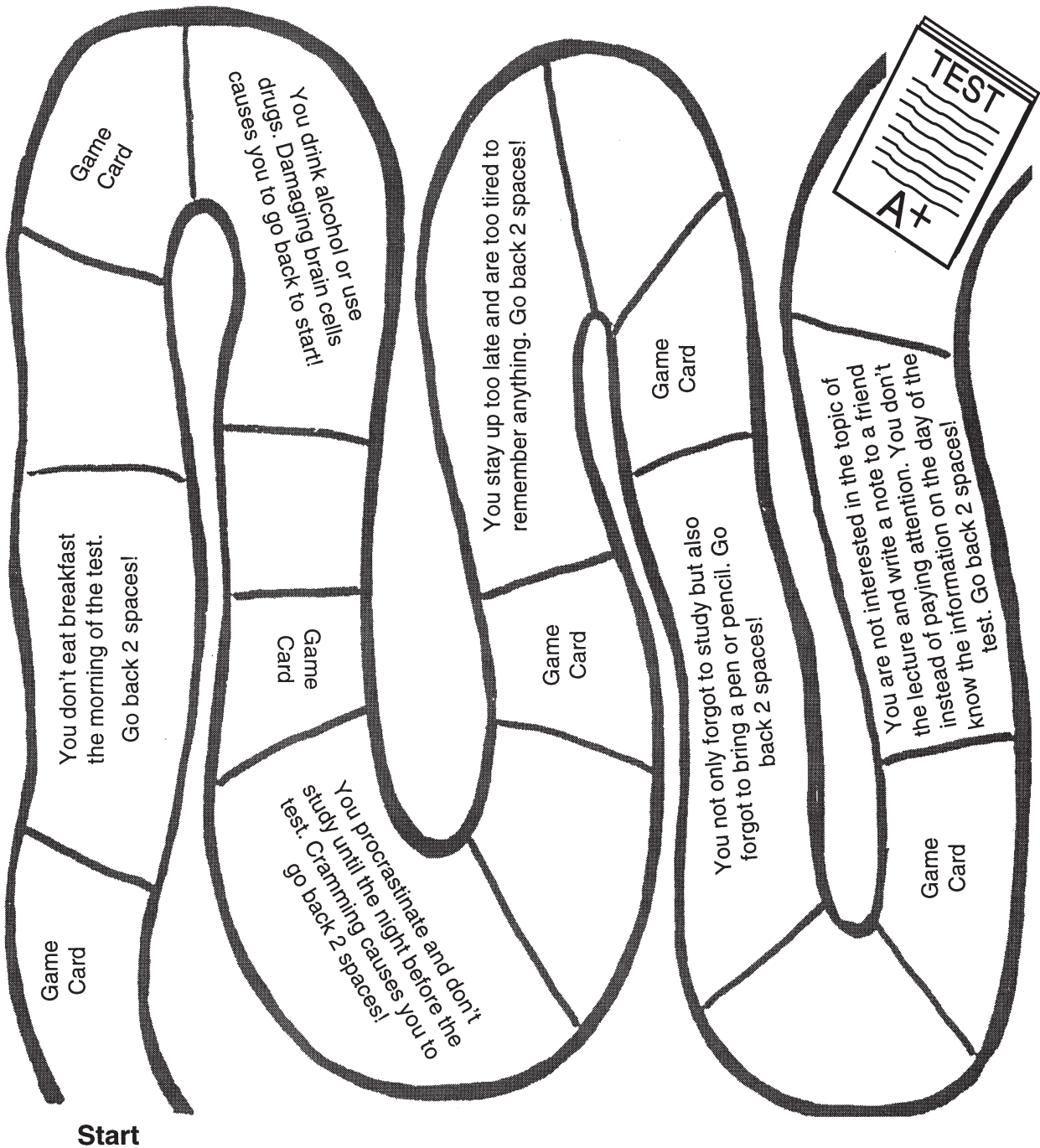
A modification of simply rehearsing all of the information at once is to divide it into small chunks. Then study one chunk at a time. Some students can manage larger chunks than others (so they will finish faster), but most students can remember just as much information if they start studying in smaller chunks well before the test day. You can remember huge amounts of information if given enough time to rehearse the information according to the following steps.

- Step 1 Divide your information to be remembered into chunks of three to five facts or ideas by writing each piece of information on an index card. Then divide the cards into stacks of three to five cards each. Another method is to draw lines on your study papers after every three to five pieces of information.
- Step 2 Rehearse the first chunk of information until you remember all of the pieces of information perfectly. You are not supposed to look at the next chunk until you have proven that you know the first chunk by testing yourself or having someone test you.
- Step 3 Then study the next chunk of information until you self-test to show that you know the whole set.
- Step 4 Next, do a self-test that shows you know *both* sets.
- Step 5 Then study the next chunk.
- Step 6 Then self-test that you know the contents of all three chunks.
- Step 7 Continue studying a chunk at a time and checking that you still know all the ones you've done previously until you know them all. If at any point you cannot remember something, go back over it until you remember it.

4. Problem—"My memory is so bad, I can't even remember three pieces of information!"
Suggestion—Mnemonic devices
Sometimes a special code word, artificial sentence, or memory clue created to remind you of the information is enough to jog your memory.
1. Code word
Use *homes* to remember the five Great Lakes (*Huron, Ontario, Michigan, Erie, Superior*).
 2. Artificial sentence
Use *We All Jog* to remember the order of the first three presidents of the United States (*Washington, Adams, Jefferson*).
 3. Memory clue
Use the number of months (12) and days (365) in a year to remember the height of Mt. Fujiyama (12,365 feet).
5. Problem—"I remember things I read in the textbook, but I can't seem to remember what the teacher talks about in class."
Suggestion—Visual cues
If you remember what you see (visual) better than what you hear (auditory), create study hints that use your strengths. Use pictures if you have visual strengths. For example, draw pictures about what the teacher says during lectures if you tend to forget what you hear.
6. Problem—"I remember every word the teacher says in class, but I have trouble remembering information from what I read."
Suggestion—Auditory cues
If you remember what you hear (auditory) better than what you see (visual), create study hints that use your strengths. Use music and rhyme if you have auditory strengths. Set pieces of information to little songs or make them rhyme if you forget what you read.
7. Problem—"I'm just so bored with what we have to learn. I can't remember things if they're not interesting to me."
Suggestion—Be curious
Being curious about something usually involves asking questions. For example, imagine that a friend introduces you to some of her out-of-town cousins at a party. The cousins seem uninteresting, but you know that she wants you to be friendly to them for her sake. You usually begin by asking them questions such as "Where are you from?" or "What are you doing while you're here?" You may find out they're going to a concert of a group you love, or to the championship game of your favorite sport, or that they have a hobby that you enjoy too. Suddenly, they become interesting to you! The same principle works in remembering information that seems uninteresting to you. Develop the skill of thinking about and even writing questions about things you read (e.g., Why did that happen? What if it were done a different way? Where could this be changed? Who was in charge when that decision was made?). The opinions you form as a result of wondering about information will help you remember it, sometimes without "studying" at all!

Game Board

Use bent paper clips for game pieces. Place shuffled game cards question-side-up in a pile. The person whose last name begins with the letter closest to the letter Z goes first, followed by players in a clockwise direction. Move forward one square per turn. If a question is answered correctly, move forward two squares. The first person to reach the A+ test paper wins.



Writing Assignment

Imagine that you find one of your good friends crying in the hall between classes because he or she is failing many classes. This friend is too upset to talk or listen to you and leaves school early to go home. You know this friend does well on the classwork and homework assignments but always fails tests. You decide to write a long note with your advice about how to remember information for tests.

Before you begin writing, you might want to think about the different problems people have that cause them difficulty in remembering information on test days. Think about specific solutions to these different problems. Also, think about ways to encourage your friend to use your suggestions.