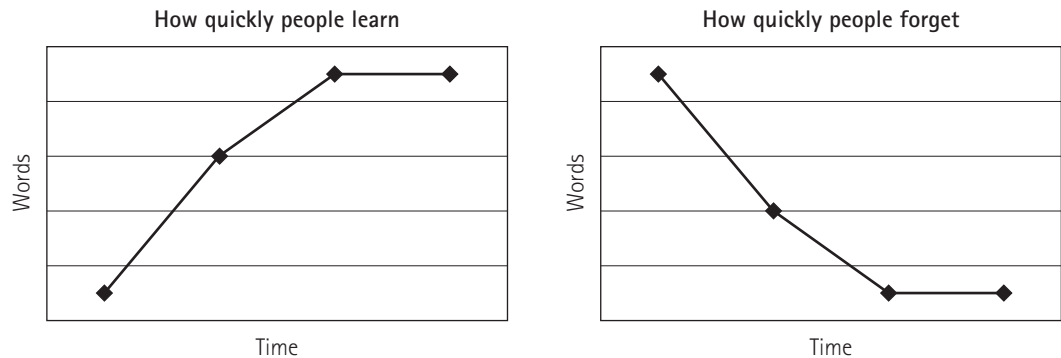


LOWER LEVEL WORKBOOK

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Introduction for Students

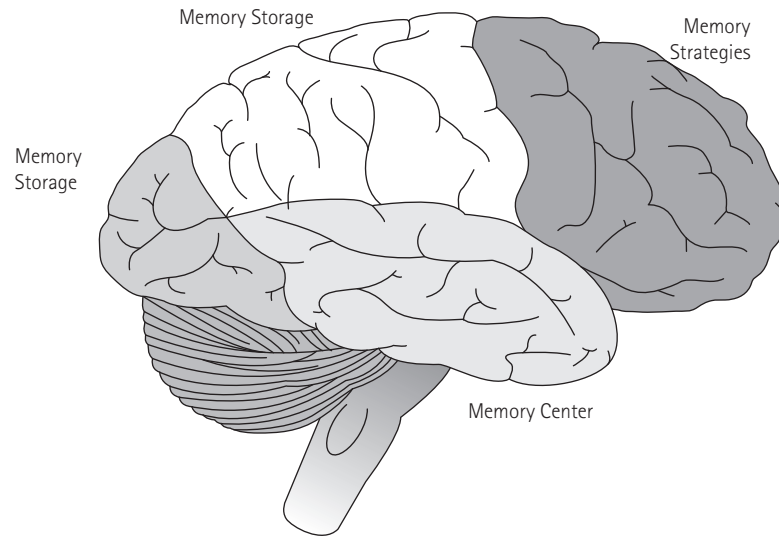
Do you often forget things you wish you could remember, such as how to spell a word, where you put something, or the directions you were supposed to follow? You know that it's impossible to remember everything, no matter how hard you try. Forgetting facts and all sorts of information happens to everyone. No matter how quickly we first learn new facts, we begin forgetting at least some of them immediately after we stop trying to learn and remember them. As minutes and hours go by, forgetting happens quickly. Then, after a day or two, forgetting begins to slow down. The graphs "How Quickly People Learn" and "How Quickly People Forget" show how quickly most people learn and then forget a list of words.



The good news is that we can learn ways to remember more and forget less. The purpose of this workbook is to help you learn methods for improving your memory. In order to learn these methods well, you will need to practice them with your memory "trainer" and use them when you study and in other situations where you need to remember things.

Learning and remembering is a big part of what our brains do. One part of the brain—let's call it the *memory center*—creates memories (see the picture titled "The Brain's Memory Center and Storage Areas"). Other parts of the brain store memories. The front part of the brain does not create or store memories, but it is responsible for using special methods or *strategies* that help us remember. Some memories aren't put into storage very well, and they don't last. Also, some memories remain in storage just fine, but we can't

The brain's memory center and storage areas



Adapted from: Neuropsychological Perspectives on Learning Disabilities in an Era of RTI: Recommendations for Diagnosis and Intervention, by E. Fletcher-Janzen and C. R. Reynolds (Eds.), 2008, Hoboken, NJ: Wiley. Used with permission.

remember them when we want to, such as when we forget someone's name. How well our memory works depends a lot on our memory center. Some people are born with a weaker memory center, and some people experience things that damage their memory center. For example, a serious illness or a head injury can damage the memory center.

LESSON

2

Thoughts and Feelings About Memory

Name _____ Grade _____ Date _____

Directions

Discuss each answer with your trainer before writing it.

1. How is your memory for what is taught in class? Do you remember most of what is taught, or do you forget most of it?
2. How is your memory for what you try to learn on your own at school? Do you remember most of it or forget most of it?
3. How is your memory for what you need to remember at home, such as where you put things? Is it strong or weak?
4. How is your memory for things that happen to you? Is it strong or weak?
5. How often do you feel bad or get frustrated because you can't remember something? Is it never, sometimes, very often?
6. For about how long can people remember something like a new phone number in their short-term memory?

44 **Thoughts and Feelings About Memory**

7. There are different types of long-term memory. What do you think these types might be?

8. What are some things you think you can do to make your memories last longer?

9. What are some things you don't understand about memory?

10. If you could change one thing about your memory, what would you change?

11. Discuss with your trainer any other thoughts and feelings you have about your memory, then write them down here.

12. What questions do you have about memory and how it works?

People have two main kinds of memory: *short-term* memory and *long-term* memory.

Short-Term Memory

Everything we see and hear goes into our short-term memory before it goes into our long-term memory. What you are thinking about right now is in your short-term memory. Information only stays in short-term memory for a few seconds, 15 seconds at most. But we can keep information in short-term memory longer if we keep repeating it. There is also a limit on how much information we can hold in short-term memory. The usual limit for an elementary student is four to five pieces of information, such as five words. There are two types of short-term memory. Things we hear go into one type of short-term memory and things we see go into the other type.

Your trainer will now read you a list of five words. Immediately repeat them back. You have just put your short-term memory to work.

Long-Term Memory

Anything we remember for more than 15 seconds has made it into our long-term memory. Although some long-term memories can last a lifetime, we forget most details and newly learned facts within a few days, unless we do things to create long-lasting memories. For example, we can remember most of the details of what happened at school today, but a week from now, we will not remember nearly as much.

Like short-term memory, long-term memory can be divided into memory for what we see and memory for what we hear. Also, there are personal memories for what happens in our daily lives and memories for facts and knowledge that we must learn for school, such as arithmetic facts. We usually don't have to make a special effort to get personal experiences into memory; they go into memory automatically. But we do need to make a special effort to get facts into memory. That's why we usually have to study facts several times before they stick in our long-term memory.

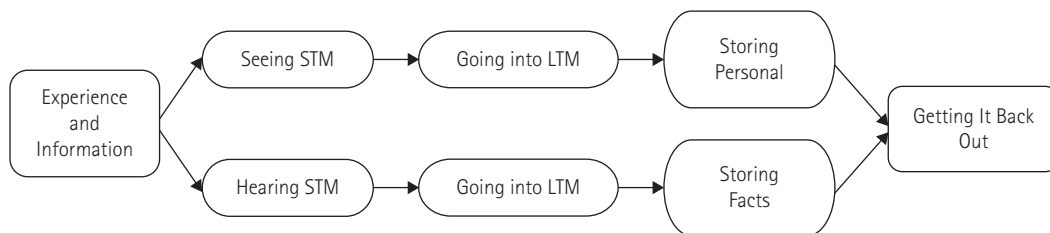
Now tell your trainer the words she or he read to you a couple minutes ago. The ones you still remember are now coming out of your long-term memory, not your short-term memory.

How Things Move Through Memory

When we experience something or try to memorize facts, our short-term memory gets involved first. Then, some of the information goes from our short-term into our long-term memory. There are three steps to a long-term memory: getting it in, keeping it there, and getting it back out. When we have memory problems, the problem can happen at any step. Sometimes we cannot remember something because it never got into long-term memory; other times we cannot keep information in memory very well; and sometimes we cannot get the information back out when we want to, even though it is still stored in our memory.

Now, look at the picture of the movement of information through different kinds of memory and discuss the different kinds of memory and memory steps with your trainer.

The Movement of Information Through Different Kinds of Memory



STM = Short-Term Memory and LTM = Long-Term Memory

Memory Quiz

Name _____ Grade _____ Date _____

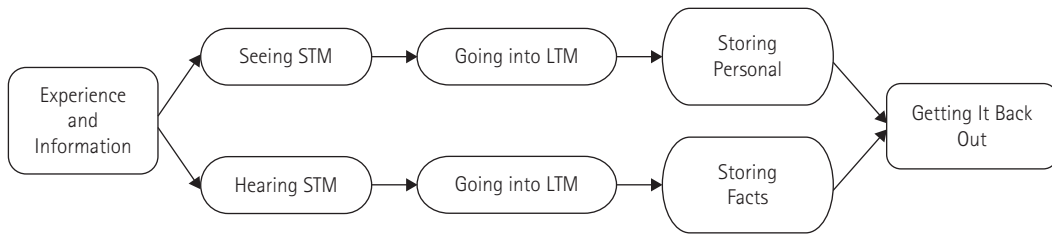
Directions

Answer the following questions without help from your trainer. You may look back at the information presented in this lesson.

1. Unless we repeat information over and over, how long does it usually remain in short-term memory?
2. How many pieces of information can short-term memory usually hold at a time?
3. What are the two types of short-term memory?
4. When we still remember something after a minute, which kind of memory is the information coming from?
5. Is our memory for facts a different kind of memory than our memory for personal experiences?
6. Are there different reasons why people can't remember things?
7. What are the three main steps a memory goes through?

Look at the picture below and discuss with your trainer which kinds of memory are your strengths and which kinds are weaknesses. After the two of you agree on your strengths and weaknesses, color in each part of the picture, with green for strengths and red for weaknesses.

My Memory Strengths and Weaknesses



LESSON 5 Memory Beliefs

Name _____ Grade _____ Date _____

Here are some statements about memory. Check the box in front of those that you believe.

- A person will remember something better just because he or she wants to.
- All memories last forever.
- People have no control over their memory.
- If you can remember something five minutes later, you will almost certainly remember it tomorrow.
- Repeating something over and over is the best way to create a lasting memory.
- People can easily tell whether they have learned something well enough to remember it tomorrow.
- The ability to remember things cannot be improved.
- Only dumb people have memory problems.
- If you can't remember something when someone asks you a question, it means that the information has been completely lost from your memory.
- How you study has nothing to do with how well you will remember the material.
- People will remember something better just because they are interested in it.
- You should spend the same amount of time trying to memorize easy material as you do for hard material.
- To do your best on a test, you just need to study the night before the test.

Now, ask your trainer which of the beliefs are true and discuss the ones you marked.

6 Memorization Methods

Name _____ Grade _____ Date _____

Practice Round 1

Below is a list of six Spanish words. Let's say that you have to memorize their English meanings. Show your trainer how you will memorize them. Your trainer will provide any materials you might need.

Vaca = Cow

Ballena = Whale

Niña = Girl

Calle = Street

Perro = Dog

Sol = Sun

With your trainer's help, write a description of the method you were using to memorize the vocabulary words.

Practice Round 2

Below is a short science lesson. Imagine that you have to memorize the facts for a test. Demonstrate for your trainer how you will learn and memorize the science facts. Your trainer will provide any materials you might need.

To stay alive, you need a steady flow of blood through your body. Blood has four different parts. Each part does something different. The liquid part moves food to the body cells and takes wastes away from the cells. Red blood cells, which make blood look red, move oxygen from the lungs to the body cells. White blood cells protect the body from illness by killing germs. The last part, the sticky part, stops bleeding when there is a cut.

With your trainer's help, write a description of the method you were using to memorize the science facts.

Questions

1. Tell your trainer about any other the methods you use when you want to learn and memorize facts and information. After discussing the methods with your trainer, decide how to describe each of them in a few words and write the descriptions here.
2. Which of the above methods is your favorite?
3. If you want to remember something for a long time, which of your methods works best?
4. Do you use different methods for different kinds of material? Explain.
5. How do you know when you have studied something long enough that you will remember it?

Memory Strategies Survey

Name _____ Grade _____ Date _____

Below is a list of different methods that students use to memorize information. Circle the word that best describes how often you use each method. Ask your trainer about any words you don't understand.

- | | | | |
|---|--------------|------------------|---------------|
| 1. Repeating the information several times | <i>Never</i> | <i>Sometimes</i> | <i>Always</i> |
| 2. Making a list of things to do | <i>Never</i> | <i>Sometimes</i> | <i>Always</i> |
| 3. Writing information down several times | <i>Never</i> | <i>Sometimes</i> | <i>Always</i> |
| 4. Putting the words to remember in a sentence or story | <i>Never</i> | <i>Sometimes</i> | <i>Always</i> |
| 5. Grouping words into categories | <i>Never</i> | <i>Sometimes</i> | <i>Always</i> |
| 6. Using special words, such as HOMES for the names of the Great Lakes | <i>Never</i> | <i>Sometimes</i> | <i>Always</i> |
| 7. Creating pictures in my head, such as picturing an apple when I need to remember the word "apple" | <i>Never</i> | <i>Sometimes</i> | <i>Always</i> |
| 8. Having someone test me with flash cards | <i>Never</i> | <i>Sometimes</i> | <i>Always</i> |
| 9. Reviewing or studying the same material every day for several days | <i>Never</i> | <i>Sometimes</i> | <i>Always</i> |
| 10. Saying the names of objects I need to remember, such as saying "ball" to myself when I want to remember that I saw a ball | <i>Never</i> | <i>Sometimes</i> | <i>Always</i> |

54 **Memory Strategies Survey**

- | | | | |
|---|--------------|------------------|---------------|
| 11. Placing objects or notes in a special location | <i>Never</i> | <i>Sometimes</i> | <i>Always</i> |
| 12. Stopping and thinking about new information as I hear it or read it | <i>Never</i> | <i>Sometimes</i> | <i>Always</i> |
| 13. Asking someone to help me remember to do something | <i>Never</i> | <i>Sometimes</i> | <i>Always</i> |

LESSON

8

Goals for Improving Memory

Name _____ Grade _____ Date _____

Review Lesson 4, where you colored in your memory strengths and weaknesses. List your memory weaknesses here.

In school, what do you have the most difficulty remembering?

At home, what kinds of things do you frequently forget?

56 Goals for Improving Memory

With your trainer's help, write the three most important goals that you have for improving your memory.

1.

2.

3.

Is there anything else you would like to gain from memory training? If yes, explain.

Name _____ Grade _____ Date _____

A Memory Experiment: Part I

When your trainer says “begin” try to memorize the list of words below as you read the list four times.

Cherry
Pants
Table
Potato
Desk
Gloves
Banana
Chair
Peach
Shirt
Couch
Boots

Things That Can Harm the Memory Center

Here are some things that can harm the brain’s memory center:

- Lots of worrying
- Feeling really bad for long periods of time
- Getting hit in the head
- Being unable to breathe
- Problems controlling diabetes
- A high fever
- Drug abuse
- Getting very little sleep
- Illnesses that put you in the hospital

A Memory Experiment: Part I Continued

A few minutes ago you tried to memorize a list of 12 words. Write the words you remember below.

A Memory Experiment: Part II

This time your trainer will read a list of 12 words to you. Close your eyes as you listen. When you hear each word, picture that thing in your mind, and then tell your trainer what you see.

Things That Can Help Memory

Here are some things that help memory work better. Check the ones that you do.

- Organizing the information you want to remember
- Repeating things to yourself
- Studying material more than once
- Practicing a skill many times
- Testing yourself or having someone test you
- Making yourself remember instead of just looking at the answer
- Thinking about the information you are studying
- Taking breaks when you study
- Getting plenty of sleep
- Creating pictures of words in your mind
- Naming things that you see

A Memory Experiment: Part II Continued

A few minutes ago you listened to a list of 12 words that you pictured in your mind. Write the words you remember here.

Now count the number correct from Parts I and II of the experiment. On which part did you do better? Why do you think you did better on this part? Discuss this with your trainer.

Assignment

Picturing things in your mind can help you remember. This coming week, make a special effort to picture more things in your mind. Try picturing:

- Directions from your teacher
- New facts that you need to remember

LESSON

10

Review and Reflections

Name _____ Grade _____ Date _____

Since you began this memory training, list some new things you have learned about how everyone's memory works.

List some new things you have learned about your own memory.

What do you think and feel about these memory training sessions?

Name _____ Grade _____ Date _____

Review of the Memory Experiment

Tell your trainer about the times you've tried picturing things in your mind since the Memory Experiment lesson.

Picturing things in your mind may help you remember, because you may have a better memory for what you see than for what you hear. Also, if you picture things you hear or read, the information is stored in two kinds of memory. So, if you forget it one way, you might remember it the other way.

Practice Round 1

Your trainer will now read a list of seven words to you just once. This time, there is no need to picture them in your mind. When she or he is finished, say as many words as you can remember.

How many words did you remember?

Repetition

Repeating things over and over is a method most people use when they want to remember something for more than a few seconds. Repetition helps keep things in short-term memory, and it also helps move information into long-term memory. In everyday life, you use repetition to remember something that is not written down. For example, you might repeat a phone number several times after someone tells you the number. Or, you might repeat a list of directions from a teacher.

Practice Round 2

Your trainer will now slowly read you a list of seven shopping items to remember. When you hear the first word, keep whispering it until you hear the second word, then add the second word, and then keep adding each new word to the list as you hear it. For example, if the words are "apple, lettuce, plates," keep repeating "apple" until you hear "lettuce,"

62 Repetition

then say “apple, lettuce” until you hear “plates,” and then keep saying “apple, lettuce, plates.” Now, practice three other words with your trainer.

Now use this method, adding words to the list as you hear them, as your trainer says seven words. When she or he is finished, say as many words as you can remember.

How many words did you remember?

Did you remember more words this time than in Practice Round 1?

Do you think this kind of repetition helps your short-term memory?

12 Repeating Written Information

Name _____ Grade _____ Date _____

Repeating information is also helpful when you want to memorize something that is in writing. Repeating written information is a little different than repeating what you hear. When the words are in writing, just read through the entire list instead of adding one word at a time to what you are repeating. When you go over the list repeatedly, be sure to actually whisper the words to yourself, instead of just reading them silently.

Practice Round 1

Whisper the words below as you repeat the list several times. Keep repeating the words until you think you know them all. After you've finished, cover the words and immediately write down as many as you can remember.

Write words here

Drum
Coat
Fire
Train
Wall
Game
Doll
Clock
Foot
Ring

Practice Round 2

Writing things over and over is another way of getting them into memory. On a separate piece of paper, write each of the following words five times.

Bottle	Heart	Rabbit	Truck	Donkey
Cloud	Pants	Dress	Swing	Horse

Practice Round 2 Continued

Now write as many words as you can remember here:

Look at how many you had correct for each practice round. Which method works better for you: saying the words to yourself or copying the words?

Do you think you could do even better if you say them to yourself as you write them down?

Assignment

Practice using the repetition method whenever someone says something to you that you need to remember. Also, try using written repetition when you need to memorize words, such as vocabulary words, for school.

For the next memory training session, bring your spelling book.

Many students practice spelling by copying the words or by spelling them aloud. You might remember spelling even better if you combine repetition and writing when you practice the words. Let's use the word "monkey" to practice the steps below. Do each step before going to the next one.

1. Say the word. Then spell it aloud as you point to each letter with a pencil.
2. Copy the word, saying each letter aloud as you print it.
3. Look at the word you printed. Say the word and spell it aloud as you point to each letter with your pencil.
4. Cover up the word and spell it aloud. Check to see if you spelled it correctly. If not, repeat all the steps.

Now use this method to practice your spelling words for this week.

Name _____ Grade _____ Date _____

Imagine that you want to remember someone's phone number. Say this phone number aloud one number at a time: 5 1 2 3 9 7 4 8 0 6

Now cover up the phone number and say it.

When we want to remember things, like number and letters, it helps to put them into small groups called *chunks*. This time, put the numbers together into chunks of two. For example, for 5, 1, say "fifty-one." Try chunking this phone number:

4 7 1 9 7 3 2 5 7 6

Now cover up the phone number and say it. Did you remember the phone number better this time?

Continue chunking the phone numbers below with your trainer. After you have chunked each number, cover it up and recall it. After a round of putting the numbers in chunks of two, try putting them into chunks of three with the last number by itself.

5783729910

9834523176

7014863209

4859731260

5934813372

3914582706

Combining Repetition and Chunking

Sometimes, you can combine two different memory methods. This can help you remember things even better. This time after you chunk the phone number, repeat the chunks a

few times. For example, for 6 7 1 9 7 3 2 5 7 4, you will repeat 67, 19, 73, 25, 74 a few times. Practice this combined method on the numbers above.

Chunking and Repeating Words

Now try chunking words by putting the words you want to memorize in groups of three. After you repeat a group of three several times, go on to the next group of three until you finish the list. Use these words for practice:

Hammer Ball Car

Apple Hat Lion

Carrot Mouse Tree

Church Phone Boat

How do you feel about chunking? Does it seem to help you remember more?

Name _____ Grade _____ Date _____

Review

1. Explain how you should repeat words to yourself when you are trying to memorize a list you are listening to.
2. When you are repeating a written list, explain how you should do it.
3. Explain how to chunk information.

Repetition Practice

Practice the repetition method with the words below without chunking. Then cover them up and write as many as you can.

Write the words here

Winter
Tunnel
Dream
Wheat
Hotel
Creek
Office
Tiger
Lamp

More Practice With Combining Repetition and Chunking

Now try to remember the list of nine shopping items below. Put them in chunks of three and say each chunk several times. Then cover up the list and write the words you can remember on a separate piece of paper.

Glue Nails Butter Paper Grapes Comb Soap Folder Water

How many did you remember?

Which works better for you: repetition alone or repetition and chunking combined?

Using Chunking to Memorize Spelling

Name _____ Grade _____ Date _____

Chunking can help you remember how to spell words. First, you must divide the words into syllables. Do this by drawing a line between the syllables, like this: sun/set. Second, say the letters in each chunk together, pausing before you do another chunk. For example, say “s-u-n,” then pause and say “s-e-t.”

Practice

Try chunking with the following spelling words. First draw lines between the syllables. Then say the letters in syllable chunks. After spelling each word this way three times, cover up the list and write them on the right.

Spell the words here

Carpet
Window
Computer
Sensation
Wonderful
Retirement

Now use this method to practice your spelling words for this week.

Thoughts About Memory Training

From practicing repetition and chunking, what new things have you learned about how your memory works?

Do you think these methods help improve your memory? If yes, how do they help?

**Putting Words Into Sentences
and Stories**

Name _____ Grade _____ Date _____

Repetition and Chunking Practice

Combine the repetition and chunking methods as you go over the list of words below. Keep going over them until you think you have them memorized. Then cover the words and say them.

Cabbage Umbrella Spider Violin Basket Saddle

Putting Words in Sentences

Another way to remember a word is to put it into a sentence. For example, the word “bananas” is easier to remember when it is in the sentence, “Monkeys love bananas.”

Practice

For each word on the shopping list below, create and write a short sentence that includes the word.

Write the sentences here

Turkey

Peanuts

Flower

Backpack

72 Putting Words Into Sentences and Stories

Toothpaste

Baseball

Now cover up the words and sentences and write the words below. First, try to remember each sentence that you wrote. Then “pull out” each word you need to remember and write it here.

Putting the Words Into a Story

Another way to remember words is to put them into a story. When you recall the story, you will recognize the words you want to remember.

Practice

Make up a short story using the words below. First think of what the story is going to be about, and tell your trainer the idea of your story. Then write the story and include each of the words. Try to make the story funny and it will be easier to remember.

Airplane Tomato Rope Pancakes Wheels Gloves

Write the story here. Each sentence should have at least one of the words in it. The words do not need to be used in order.

Now cover up the words and the story. Retell the story aloud, and as you come to each word on the list, write it here:

How do you feel about these two methods?

What kinds of information might they help you remember?

Assignment

Try using the sentences or story method with words or facts you need to remember for a science or social studies chapter. You can try this now or at a later session.

LESSON

18

Comparing Memory Methods

Name _____ Grade _____ Date _____

During the last session you memorized a list of six words, using the repetition and chunking methods combined. Write the words you remember here.

During the last session you created six sentences to help you remember some words. Try to remember those sentences now and write the words here.

During the last session you also made up a story to help you remember six words. Try to remember the story now and write the words here.

With which method did you remember the most words?

19 Using Arithmetic to Build Memory

Name _____ Grade _____ Date _____

Short-term and long-term memory help you do arithmetic problems. It works the other way too. Practicing with arithmetic facts can help make your short-term memory stronger. Here's how it works. Your trainer will show you two arithmetic flash cards. Tell her or him the answer to each card, and then say the answers you gave in order. For example, when you see $5 + 2$, say "7," and when you see $4 + 5$, say "9." Then, when the last card is put down, say "7, 9." When this becomes easy to do, you will practice remembering three answers in a row, then four, and so on.

Now try it with some arithmetic flash cards. See if you can remember 10 pairs of answers without making any mistakes.

How did you do?

Assignment

If you have arithmetic flash cards at home you might ask a parent to do this exercise with you. Always use a set of flash cards that you already know the answers to. The arithmetic should be easy, only remembering the answers in order should be hard. Your trainer will send home directions for your parent.

Name _____ Grade _____ Date _____

A deck of playing cards can also be used to strengthen your short-term memory. To play, you must remember cards you have seen a certain number of cards back. For example, it works like this when you are asked to remember what you saw two cards back: If you see 6—3—4—7—5 one at a time, you would say “six” when the 4 is shown, “three” when the 7 is shown, and “four” when the 5 is shown. Let’s start by having you remember the card you saw just before. When you get 10 of these correct in a row, you can go to the next level, where you will need to remember what you saw two cards before. Your trainer will keep adding another card back to remember until you hit your level of difficulty.

Now, explain to your trainer what you were doing to remember the cards. If you don’t have a strategy, your trainer might suggest one.

Assignment

Ask a parent to play this memory-building game with you at home. Your trainer will send home directions for your parent.

Jesse: A True Story About Someone With Memory Problems

A 9-year-old girl we shall call Jesse had problems learning and remembering things. It all started when Jesse was a baby; she fell and hit her head so hard that she needed brain surgery. Growing up as a preschooler, Jesse could do everything that other kids her age could do but her parents did notice that she was forgetful. For example, she had a hard time remembering where things were kept or where she put things. When she started school, other memory problems began to show. Jesse had a hard time remembering teacher’s directions for even a minute and would forget a lot of what she learned by the very next day.

Jesse knew she had memory problems, and she was afraid of her memory. She would get very upset whenever her parents tried to make her play memory games and when they tried to help her memorize facts for school. The summer she was nine, Jesse’s parents took her to get some memory training. The first thing Jesse learned was how to

repeat things to herself. This was something she had never done before. She discovered that if she repeated things she could remember more. Jesse then learned to play a game where she had to remember toys and other things that were placed on the table in front of her. She discovered that she could remember more of what she saw when she said the names of the objects to herself.

Jesse learned a few other memory methods that summer. By the end of the summer, Jesse was feeling much better about her memory. Her memory no longer scared her. She had learned that she could have some control over it.

21 Remembering Locations to Build Memory

Name _____ Grade _____ Date _____

Trying to remember what you see and where you see it can make your short-term memory stronger. In the boxes below you will see Xs and Os in certain locations. Try to remember where they are. When your trainer covers up a box, mark the Xs and Os in the correct places in the box at the right.

		0
X		

Fill in Xs and Os here

0	X	
		X

	0	
X		X
		0

	0		
	X		
		0	X
X			0

Name _____ Grade _____ Date _____

Practice Round 1

You will have one minute to study the words below. Silently read through the list as many times as you can.

Castle	Nose	Spider	Frog	Truck
Phone	Camel	Rainbow	Tree	Sock

Helping Your Short-Term Memory in the Classroom

When you help your short-term memory, you will learn and remember better. Below are ways to help your short-term memory. Check the ones you already do.

- Keep my desk and backpack neat and organized
- Have the materials I need before class begins
- Repeat directions to myself right after the teacher says them
- Repeat directions to myself until I get them written down
- Organize information before I study it
- Do an assignment, activity, or project one step at a time
- Try to picture information I am reading or hearing

Assignment

From the list above, try something new to help your short-term memory. Next week, your trainer will ask you about what you have tried.

Practice Round 1 Continued

A few minutes ago, you tried to memorize a list of 10 words. Write the words you remember below.

Picturing What We Hear and Read

Memories of what we hear and read are called *verbal* memories. Memories of what we see are called *visual* memories. When we create pictures in our minds, they are called *images*, and these images are stored as visual memories. Images are remembered just as well as things we have actually seen. When we create images of words and sentences, we will remember that verbal information better, because it gives us another way of remembering the information. In an earlier lesson, you pictured words as they were read to you. Did you remember more words when you pictured them? Most people do.

Practice Round 2

Below is another list of words to memorize. After you read each word, close your eyes for a few seconds and create an image of that thing. Tell your trainer when you have finished going through the list.

Baseball	Hammer	Airplane	Turkey	Carrot
Mouse	Flower	Snake	Bike	Piano

Helping Your Short-Term Memory at Home

Here are some things you can do to help your short-term memory when you study or do homework at home. Check the ones that you already do.

- Always study in the same place
- Have all the materials I need, such as paper and a dictionary, in my study area
- Study in a quiet place where I can't hear music, a TV, or people talking
- Keep an example of what I have to do, such as a math problem, in front of me
- Keep a list of the steps I have to complete in front of me

- When I don't understand something, I read it again
- Take breaks when it becomes hard to concentrate

Assignment

From the list above, try something new to help your short-term memory. Next week, your trainer will ask you about what you have tried.

Practice Round 2 Continued

A few minutes ago you created images of 10 words. Write the words you remember here.

How many words did you remember from Practice Round 1?

How many words did you remember from Practice Round 2?

On which Practice Round did you do better?

Why do you think you did better on this Round?

Did creating images make a difference?

Visualizing Directions

Creating images, also called *visualizing*, can help you remember directions. When you hear directions, visualize what needs to be done and imagine yourself doing it. Do this for each step of the directions your trainer will now read to you.

Now describe your images for your trainer.

Were you in the scenes?

82 Picturing Verbal Information

Now say all the directions in order.

Do you think visualizing helped?

Why does visualizing help you remember verbal information better? Discuss this with your trainer.

Assignment

This coming week, try to visualize all the steps in directions that your teachers or parents give you. When you do, imagine yourself doing each step.

LESSON

23

Naming and Describing What You See

Name _____ Grade _____ Date _____

Practice Round 1

You will have 15 seconds to look at the shapes below.

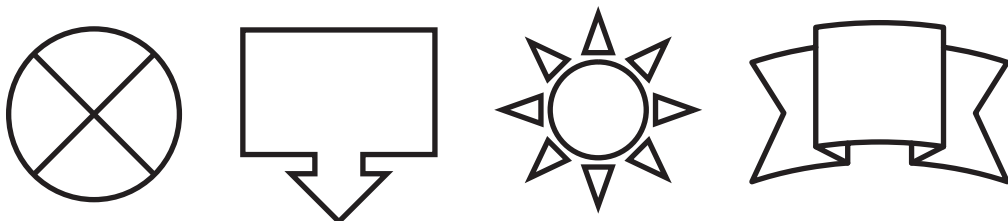


Now draw the shapes from memory on a blank sheet of paper.

How did you do?

Practice Round 2

Naming and describing what you see helps you remember it better, because the information goes into both your verbal and visual memory. When looking at the star above, for example, you might have said to yourself, "A star with seven points." As you look at the shapes below, use words to describe them to yourself. Say your descriptions aloud so that your trainer can hear you.



84 Naming and Describing What You See

Now draw the shapes from memory on a blank sheet of paper.

Did you remember the details better this time?

Assignment

This coming week, look for situations where you need to remember something that you see and try this method of using words to describe it to yourself. At the next session, be prepared to tell your trainer about the times you tried this.

Name _____ Grade _____ Date _____

Review

Last time you looked at several figures and then drew them from memory. On a separate sheet of paper, draw the figures the best that you can, even if you can't remember all of the details.

Now draw the figures you had named and described to yourself.

Did you remember the figures you had named and described better than the others?

Practice Round 1

You will have one minute to memorize the list of words below by repeating them over and over to yourself. Cover the words when time is called.

Hammer	Carrots	Gloves	Wrench	Shoes
Cabbage	Pliers	Beans	Pajamas	

Memory Likes Organization

When the information we put into memory is organized, it is much easier to remember. That's because our memory keeps the same kinds of information together. For example, what we know about animals is kept in the same place in the brain and what we know about plants is kept in a different place. So, it's important to organize information before we try to memorize it.

Practice Round 1 Continued

Now write the words you tried to memorize here.

Practice Round 2

On a blank sheet of paper, organize the words below into categories. Write the name of each category at the top of each group. Then study the words by first memorizing the names of the categories. Then repeat the items under each category a few times before you go on to the next category. Tell your trainer when you are finished.

Table	Ship	Book	Oranges	Couch	Radio
Cherries	Bed	Newspaper	Truck	Apples	Airplane

Other Ways of Organizing Information

Putting words into categories is one way to organize information. Other ways include alphabetizing and putting things in order from first to last. Sometimes, it even helps to reorganize information that has been given to you by a teacher or that you find in a book. When you do this, organize the information in a way that makes sense to you.

Practice Round 2 Continued

Now write the words you memorized by category here.

This time there were more words to remember than in Practice Round 1. How did you do? Does organizing the information make it easier to remember?

Practice Round 3

Imagine you need to memorize the science facts below for a quiz tomorrow. On a sheet of paper, group the facts together in a way that makes sense.

- Blood moves through arteries
- Digestion begins in the stomach
- Kidneys remove waste from the body
- There are red and white blood cells
- Lungs take carbon dioxide out of the body
- The intestines finish digesting food
- Some blood cells kill germs
- Sweating allows waste to pass through the skin
- Bile helps digest food

Assignment

With your trainer, discuss the kinds of information you have to memorize for school. Talk about how you might organize or reorganize information to make it easier to remember. Come up with a plan for how you will try this method.

LESSON

25

Imagining Yourself in the Scene

Name _____ Grade _____ Date _____

Review

During the last lesson, you memorized some words by repeating them. Write the words you remember here.

Now write the words that you put into four categories before memorizing them.

Now write the science facts that you organized.

Do you think putting words into groups and organizing information helps you remember it better? Why?

Using Imagination to Help You Remember

When you are listening to or reading a story, a social studies book, or any book in which something is happening, you should try to imagine yourself being there and watching the action from up close. Doing this will help you remember the facts and information later on.

Practice

As you read the story below, stop now and then and imagine yourself being there and seeing everything that is happening from up close.

Washington's Army at Valley Forge

When winter came, George Washington took his large army to a small valley called Valley Forge. The soldiers were strong and healthy when they arrived. They quickly cut down trees and built some log cabins. The winter was long and cold and wet. The men suffered terribly and many of them died before winter was over. The first problem was that they did not have warm clothing. Most of them had only ragged clothing. They were constantly cold and uncomfortable. The second problem was that there was not enough food. Occasionally, some potatoes and meat would be brought to the valley camp, but these were not enough. All of the men became very skinny, and many of them starved to death. Even hundreds of their horses starved to death during that winter. The other killer was disease. The conditions in the camp allowed diseases to spread, and there were few doctors and almost no medicines. Valley Forge will always be remembered for the cold, the misery, and all the men who died there.

When you have finished reading, think about what you saw and how you felt and share this with your trainer.

Assignment

Try this method whenever you read social studies, science, or literature. When you take a test on what you have read, stop and imagine yourself being in that scene again. Think about what you saw and felt. This will help you remember the facts better.

Using Locations to Remember Information

Name _____ Grade _____ Date _____

Review

Last time you read a story about George Washington's army at Valley Forge. Before you tell your trainer the answers to the questions below, imagine yourself at Valley Forge and think about what you saw when you were at the scene.

1. What did the soldiers do when they first arrived?
2. Why did the men suffer so much from the cold?
3. Who died from starvation besides the soldiers?
4. When there was food, what kind of food was it?
5. What else did the men die from?

Do you think imagining yourself in the scene helped you remember the facts better?

Using Locations to Remember

Picturing things you want to remember with objects in your bedroom will help you remember those things. It works because you can't forget the objects in your room.

Now, list six objects in your bedroom. List them in the order they appear when you go around your room to your left.

Practice

Imagine that you have to memorize a list of endangered animals (animals that might disappear from the earth) for a science quiz tomorrow. (This is a made up list; not all of these animals are endangered.) In order of your room's objects, picture each animal with an object. The image will be easier to remember if it is funny or unusual. After you create each image, describe it to your trainer.

Siberian Tigers

Blind Frogs

Fruit Bats

Rhinoceroses

Wild Ponies

Red Wolves

LESSON **27** Pegword

Name _____ Grade _____ Date _____

Review

During the last lesson, you memorized a list of endangered animals by imagining each one with an object in your bedroom. Now, go through your room and picture each object. When you do, the animal you imagined with the object should appear. Then write down the animal's name below.

How well does this method of using familiar locations or objects work for you?

Pegword

Pegword is another method that can help you remember words or facts. To use this method, you must first memorize the pegwords below. Practice and review the pegwords until you can recite them three times without looking.

One is a bun
Two is a shoe
Three is a tree
Four is a door
Five is a hive (beehive)
Six is sticks
Seven is heaven
Eight is a gate
Nine is a vine
Ten is a hen

Practice Round 1

When using pegwords, create a funny image of each item on your list with one of the pegwords. For example, if want to remember "carrots," you might picture a bunch of carrots

sticking out of bun. Using the pegwords in order, pair each item below with a pegword. Describe each image to your trainer.

Knife Flower Toothbrush Peanuts Napkins Bread

Practice Round 2

Imagine that you are going Christmas shopping and want to remember to buy a gift for each of those listed below. Imagine each one with a pegword. Share the images with your trainer.

Best friend Father Grandmother
Family dog Teacher An uncle or aunt

Name _____ Grade _____ Date _____

Review

Recite the list of pegwords, beginning with “One is a bun.” Next, use pegwords to recall the shopping list of six items. To recall the first item, think of “bun,” and you should see the first item pictured with it. Continue through the pegwords and write the list here.

Now use the same method to recall the people for whom you need to buy a Christmas gift.

Review and Reflection Questions

1. How are you feeling about the memory training so far?
2. Which memory exercise or strategy do you like the most?
3. Which memory exercise or strategy is hard to do?

Name _____ Grade _____ Date _____

Study cards have a term or question written on one side and the answer written on the other side. With study cards, someone can test you or you can test yourself. Create study cards for the following Spanish terms:

Bolso = Purse

Reina = Queen

Pato = Duck

Mudar = Shed

Zapato = Shoe

Carne = Meat

Palo = Stick

Equipo = Team

Carpa = Tent

Rules for Using Study Cards

Each time you use study cards to memorize, follow these rules:

1. Mix the cards up before you start.
2. Say aloud or whisper the questions and answers to yourself.
3. Never peek at the answer or let someone tell you the answer. Always try hard to remember. Take a guess if you need to. Then turn the card over to see if you are right.
4. Put the cards you really know into a “know” pile. Keep going through the other cards until all the cards are in the “know” pile.
5. Go through the cards on at least three different days before you take the test on them.

Practice

Practice Rules 1 to 4 with the cards you just made. When you think you know all the words, put the cards down and cover up the words above. Then write the English word for each term below as your trainer reads the Spanish words to you.

How did you do? Do you like using study cards?

Assignment

If you are using study cards for something, bring them to a future memory lesson. Also, bring your social studies book to the next memory lesson.

Name _____ Grade _____ Date _____

Review

Your trainer will now ask you the meaning of the Spanish words that you tried to memorize with study cards during the last lesson.

How many did you remember?

Explain to your trainer the rules for using study cards, and then demonstrate those rules with the study cards from last time or some other study cards that you have.

Practice Round 1

Below are five science facts that are probably new to you. Study them for a couple minutes, as you normally would.

- The world's six continents were once joined together in one big continent.
- Heat and pressure change dead plants into coal.
- Natural gas is found at the top of underground oil.
- The farther water falls over a dam, the more electricity it can make.
- An old, dying star (sun) gets bigger before it gets smaller.

Thinking About Information

Thinking about new information you are trying to learn is a powerful way of making it easier to remember. In fact, thinking about information works better than just repeating it. You should especially think about what you already know about the topic. For example, maybe you must learn some new information about George Washington. Stopping to think about what you already know about Washington will help you remember the new information better. Here are some ways to do this kind of thinking:

1. When you hear or read a new fact, stop to think about the things you already know about the subject.

2. Think about how the new information is the same or different from what you already know. Think about how well the information fits with what you already know.
3. Try to make sense out of the new information. Especially try to figure out *why* the new fact or information makes sense. You should ask and answer this question: "Why does this new fact make sense?"

Practice Round 2

Below are five social studies facts. Think about each fact or the part of each fact that is new to you. Then, tell your trainer what you already know about it.

- There were statues of servants in King Tut's tomb.
- The ancient Mexicans built pyramids that look much like Egyptian pyramids.
- Some of the 50,000 miles of roads built by the Romans are still used today.
- The English people once beheaded one of their kings.
- In Australia, the wide open land where almost no one lives is called the *bush*.

Practice Round 3

Below are more social studies facts. Think about each fact and ask yourself, "Why does this make sense?" Then tell your trainer the answer.

- The Egyptians invented the calendar that we have today.
- Around the world, people eat more goat meat than cow meat.
- Marco Polo's father made a trip to China before Marco did.
- Paper was invented in China.
- There are more Indians (Native Americans) living west of the Mississippi River than east of the Mississippi.

Practice Round 4

You can also ask and answer the "why" question when you are reading material that you need to remember. To do this, stop after you read each paragraph; pick an important new fact in that paragraph and then answer the "why" question about that fact. Practice this now with one of your school books. Write each of the five facts you select below, and then tell your trainer the answer to the "why" question for each one.

Name _____ Grade _____ Date _____

Review

Your trainer will ask you some questions about the science and social studies facts from the last lesson.

Do you believe that thinking about the new facts and answering the “why” question helped you remember the facts better?

PRSAR

There is a special way of reading information that makes it easier to remember. The steps to follow when reading are known as PRSAR. The letters stand for *Preview*, *Read*, *Select*, *Answer*, and *Review*. You already learned how to *Select* and *Answer* during the last lesson.

Preview

Before you begin to read, look the selection over and:

- Read the title
- Read the words in bold print
- Look at the pictures and graphs and read the information under them
- Read any review questions at the end

Now preview today’s reading selection. After you finish previewing, look at the preview list above and check the ones you did.

Read

Now read the selection, one paragraph at a time. Stop after each paragraph to complete the *Select* and *Answer* steps below.

Select

After reading each paragraph, select what you think is the most important fact.

Answer

For each fact you select, tell your trainer the answer to the “Why does this fact make sense” question.

Review

After you have finished reading the selection, look over the headings, subheadings, bolded words, pictures, and review questions again.

Name _____ Grade _____ Date _____

Review

Tell your trainer what each letter in PRSAR stands for.

Since the last lesson, have you tried using this method when you read?

Review Sheets

Making and using review sheets is similar to making and using study cards.

Rules for Creating a Review Sheet

1. Create your review sheet right after the material is covered in class or as you read it. The review sheet needs to be created at least three days before the test on the material.
2. In the Question column of your review sheet, write a question for each important fact you need to know for the test.
3. Write the answer in the Answer column.
4. If it's hard to think of a question, just put a *who*, *what*, *when*, or *where* at the front of the factual statement in your book. For example, if the fact reads "Sam Houston was the first president of Texas," your question should be "*Who* was the first president of Texas?"
5. If there are many new facts to learn, pick the ones that are the hardest to understand and learn. Not every new fact needs to go on your review sheet.
6. Write the page number where you found the information in the Page Number column.

Practice Round 1

Following the rules above, create a review sheet with six questions and answers on the short science lesson below. Use the table on the next page.

To stay alive, you need a steady flow of blood through your body. The heart is the pump that keeps your blood flowing quickly through your body. You also need the right balance of different kinds of blood. Although it looks red, blood has four different parts, and only one of the parts is red. Each part does something different. The liquid part is called plasma. It moves food to the body cells and wastes away from the cells. Red blood cells, which make blood look red, move oxygen to the body cells and carbon dioxide away from the cells. White blood cells protect the body from illness by destroying germs. Platelets help stop bleeding by forming seals over cuts.

Review Sheet

Name _____ Subject/Topic _____

Dates Reviewed _____

Page Number	Question	Answer	Correct Responses				

Practice Round 2

Following the rules below, practice using your review sheet.

Rules for Using Your Review Sheet

1. At the top of the sheet, under Dates Reviewed write in the date each time you study the sheet.
2. Cover up the Answer column and only look at the answer after you have really tried to answer it. Guess if you have to.
3. Each time you get an answer correct, put a check mark in the Correct Responses column. Once you have checked an item off as correct, you don't need to review it again until the next time you study the sheet.
4. Keep going over the questions until all of them have been checked off.
5. Be sure to study the review sheet on at least three different days before a test.

At this point, which do you prefer: study cards or a review sheet?

Assignment

Make a review sheet for one of your classes and bring it to a future lesson to show your trainer.

Name _____ Grade _____ Date _____

Testing yourself, or having someone test you, is another way of improving your memory for what you have studied. Testing yourself is better than just repeating things. Each time you “pull” something out of your memory, it makes it easier for you to remember it the next time. Study cards and review sheets are ideal for testing yourself. To make self-testing work, follow the rules below.

1. When using a review sheet, cover up the answers.
2. Always answer the question or guess before looking at the answer.
3. When someone else is testing you, that person should tell you the correct answer when you make a mistake.
4. Try to test yourself on at least three different days before the class test.
5. Each time, keep track of the number correct so you know if you are improving.
6. When self-testing, you don't always need study cards or a review sheet. Another way to self-test is to read it, cover up, and then see if you can repeat it correctly. Students often self-test this way when they study spelling.

Practice

Use either a review sheet or a set of flash cards that you created previously to practice self-testing. Follow the rules above when you do.

Name _____ Grade _____ Date _____

Here are some home study skills that will improve your memory. Check the ones that you usually do.

- Have a snack before you begin to study. Your memory center needs a steady supply of brain food.
- Get some exercise before you begin to study. It will give your brain a break and make it easier to concentrate when you sit down to study.
- Get organized. Have all the things you need before you sit down to study.
- Study in a quiet place with no distractions so that you can really pay attention.
- Take frequent breaks to avoid overloading your memory center. Every 30 minutes, take a break for a few minutes.
- Think about what the new information means to you personally. For example, think about experiences you've had that involve the subject you are studying.
- When you have a test the next day, review the material again just before you go to sleep. If you do, your memory center will keep working with that material while you sleep.
- Plan for when you will study in preparation for a test. You should review the material on at least three separate days before a test. Put the review days in your assignment notebook.
- Compared with the easy material that you know well, always spend more time reviewing the hard material that is difficult to understand and remember.
- Keep on studying the hard material even after you think you know it.
- When you study with a family member or a friend, ask that person to test you on the material.

Assignment

Pick two new study skills and try them this coming week. Write the skills you will try below.

See if they help you remember more of what you study. Next week, give a report to your trainer on how it went.

Name _____ Grade _____ Date _____

Do you like music and singing? Once you learn a song you never really forget it. That's why songs can be used to remember facts. All you have to do is take a song that you know and replace the words with facts that you want to memorize.

Practice

Below is a science lesson about the heart. Let's say that you have to memorize how the blood flows through the heart and body. Pick a song that you will use. Then write the facts in your own words so that they fit the music. You may have to change the wording a few times to make it work.

The heart pumps blood through the whole body. The blood leaves the heart through the heart's lower, left chamber. It goes into a large artery called the aorta. The aorta is like a tree trunk and the body's blood vessels are like its branches. The smallest branches deliver blood to all of the cells in the body. The blood then follows veins to return to the heart, where it enters the heart's upper chamber on the right side. The blood then goes to the lower, right chamber. From there it flows to the lungs and back, where it enters the heart's upper chamber on the left. The blood then goes into the left, lower chamber, where the cycle starts all over again.

Which song will you use?

Write the final version of your song below and then practice singing it a few times.

Name _____ Grade _____ Date _____

1. Sing the song you created last time about blood circulation. Did you remember all of it?
2. What is one important thing you should do when using study cards to memorize?
3. Should thinking about the information and answering the “why” question help you remember it better than repetition?
4. On how many different days should you study from your review sheet before a test?
5. Why should testing yourself work better than repetition?
6. Write about a time your memory has been better because you used one of the new memory methods.

110 Review and Reflections

7. Write about a time within the last two weeks when you could not remember something you really wanted to remember.

8. Which memory methods that you have learned lately do you like the most?

Name _____ Grade _____ Date _____

Do you want to be able to remember to do things without your parents or others always reminding you? With planning and some special memory techniques, you can remember to do things without help from others.

Practice Round 1

The most common way that people remember to do things is to make a plan, write it down, carry it with them, and constantly check it until everything is finished. Imagine you are going Christmas shopping for friends. In the space below, make up an organized list of two gifts that you plan to buy for each of four friends. For each gift, also write down the store where you plan to purchase it.

NamesGiftsStores

Other Ways to Remember to Do Things

Check the ones that you have done.

- Making plans for what needs to be done
- Writing things down in an appointment calendar or an electronic calendar
- Always carrying your electronic or other calendar with you
- Setting a reminder alarm or message on a cell phone, computer, or similar electronic device
- Placing objects in a special or unusual location where you will notice them
- Placing objects you want to remember in the same location (known as a memory spot)

Lessons 38 and 39 will have more ideas.

Pick one of the above methods that you have not done before and write it down below. Now, discuss with your trainer how you might start using this method. Next week report to your trainer on how it went.

Practice Round 2

Students use calendars for more than remembering school assignments. Students who really want to remember things use a calendar to write down everything that is going to happen and everything they need to do. They then carry the calendar with them at all times and keep checking it throughout the day, so that they don't forget anything. For each of the events below, make up a date and time the event will occur. Then fill in the information on the one-month calendar below. Be sure to write in the times the event will occur.

- A friend's birthday party that you've been invited to
- A school game that you plan to attend
- Practice for a school event that you must attend on three different dates
- A dental appointment you have
- A time to go shopping for new clothes
- A time to call a friend

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Assignment

Next time, bring the calendar or device you will be using from now on.

LESSON **38** Memory Aids

This lesson is the same as the Upper Level Lesson 38. To complete it, go to Lesson 38 in the Upper Level workbook.

Name _____ Grade _____ Date _____

Some people with memory problems carry a “memory book” with them all the time, so that they can enter and look up information whenever they want. A memory book is different than a calendar. Below are the different kinds of information you can put into a memory book.

1. Pictures of people, with their names and what they do written underneath.
2. Names and phone numbers of people you might want to call. Instead of arranging them alphabetically, you might arrange them by what they do. For example, you might have a coach’s name under *C* for *coach*.
3. Step-by-step directions for things that are hard to remember. For example, you might write down the steps for using a computer program.
4. Your school schedule, so that you can check to see what comes next and when it begins and ends.
5. A list of chores that you need to do every day or week. If any of the chores are complicated, you could write down all the steps you need to do.
6. All the steps you need to follow for certain kinds of homework and projects. For example, you might have a list of steps to follow for writing assignments.
7. Descriptions of memory strategies, including all the steps involved. You might also add the types of materials and situations for which each memory strategy works best.
8. A daily journal of memory successes and failures.
9. A diary of what happened each day.

Below, make a list of the sections that you would have in your memory book.

Assignment

Get the materials you need and organize a memory book. Put in dividers for the sections you will have. Then start entering information for each section.

Name _____ Grade _____ Date _____

Directions

Look at the list of memory strategies below and

1. Put a "+" beside the ones that work best for you.
2. Put a "-" beside the ones that do not seem to work well for you.
3. Put an "H" beside the ones that you plan to use to improve your memory at home.
4. Put an "S" beside the ones that you plan to use to improve your memory for what you need to learn and memorize for school.

- _____ Repeating Information You Hear
- _____ Repeating Written Information Aloud
- _____ Copying Information Several Times
- _____ Using Repetition to Study Spelling
- _____ Chunking
- _____ Using Chunking to Memorize Spelling
- _____ Putting Words into Sentences and Stories
- _____ Picturing Verbal Information
- _____ Naming and Describing What You See
- _____ Grouping Words by Category
- _____ Imagining Yourself in the Scene
- _____ Using Locations to Remember Information
- _____ Pegword
- _____ Using Study Cards
- _____ Thinking About the Information
- _____ Remembering What You Read (PRSAR)
- _____ Creating and Using Review Sheets
- _____ Testing Yourself
- _____ Using Music to Remember
- _____ Remembering to Do Things

_____ Memory Aids

_____ Creating and Using a Memory Book

What other plans do you have for using any of the new memory strategies that you learned?

