

# Techniques for Remembering Information 1-1

Here are eight techniques for remembering information. The technique you should use depends on the number of details you must remember. Read to learn about these techniques and when to use them. Then answer the questions.

**Repetition** When you read, say, or write information a number of times, you are using repetition. Repetition is most useful for remembering information that is **not very detailed**.

**Mnemonics** To remember information that is **detailed**, you should use a mnemonic. Here are several mnemonics from which you can choose.

- **Acronyms** are words formed by using the first letters of information to be remembered. The acronym does not have to be a real word, but it must be pronounceable.
- **Abbreviations** are formed by using the first letters of each word of the information to be remembered. An abbreviation does not form a pronounceable word.
- **Acronymic sentences** are sentences formed from words that begin with the first letter of each word of the information to be remembered.
- **Pegwords** are words that rhyme with numbers and are used to build associations with information to be remembered.
- **Keywords** are familiar words that sound like words to be learned. They can be used to create mental images that you can use to remember new words and their definitions.
- **Rhymes** are poems or verses used to remember information.

**Graphic Organizers** When information to be remembered is **very detailed**, you may need to use a graphic organizer. Graphic organizers are visual representations that show how information is organized.

## Mnemonic Techniques and Specific Memory Tricks to improve memory, memorization

Mnemonic techniques are more specific memory aids. Many are based on the general memory strategies that were presented earlier. Although it can be easiest to remember those things that you understand well, sometimes you must rely on rote memory. The following techniques can be used to facilitate such memorization.

**1. ACRONYMS.** You find acronyms by using each first letter from a group of words to form a new word. This is particularly useful when remembering words in a specified order. Acronyms are very common in ordinary language and in many fields. Some examples of common acronyms include NBA (National Basketball Associations), SCUBA (Self Contained Underwater Breathing Apparatus), BTUs (British Thermal Units), and LASER (Light Amplification by Stimulated Emission of Radiation). What other common acronyms can you think of? The memory techniques in this section, for example, can be rearranged to form the acronym "SCRAM" (Sentences/ acrostics, Chunking, Rhymes & songs, Acronyms, and Method of loci).

Let us suppose that you have to memorize the names of four kinds of fossils for your geology class: 1) actual remains, 2) Petrified, 3) Imprint, and 4) Molds or casts. Take the first letter of each item you are trying to remember: APIM. Then, arrange the letters so that the acronym resembles a word you are familiar with: PAIM or IMAP.

Although acronyms can be very useful memory aids, they do have some disadvantages. First, they are useful for rote memory, but do not aid comprehension. Be sure to differentiate between comprehension and memory, keeping in mind that understanding is often the best way to remember. Some people assume that if they can remember something, that they must "know" it; but memorization does not necessarily imply understanding. A second problem with acronyms is that they can be difficult to form; not all lists of words will lend themselves equally well to this technique. Finally, acronyms, like everything else, can be forgotten if not committed to memory.

**2. SENTENCES/ACROSTICS.** Like acronyms, you use the first letter of each word you are trying to remember. Instead of making a new word, though, you use the letters to make a sentence. Here are some examples:

- My Dear Aunt Sally (mathematical order of operations: Multiply and Divide before you Add and Subtract)
- Kings Phil Came Over for the Genes Special (Kingdom, Phylum, Class, Order, Genus, Species)

Can you think of other examples? Like acronyms, acrostics can be very simple to remember and are particularly helpful when you need to remember a list in a specific order. One advantage over acronyms is that they are less limiting. If your words don't form easy-to-remember acronyms, using acrostics may be preferable. On the other hand, they can take more thought to create and require remembering a whole new sentence rather than just one word (as is the case with acronyms). Otherwise, they present the same problem as acronyms in that they *aid* memorization but not comprehension.

**3. RHYMES & SONGS.** Rhythm, repetition, melody, and rhyme can all aid memory. Are you familiar with Homer's Odyssey? If you are familiar with the book, then you know that it is quite long. That is why it is so remarkable to realize that this, along with many ancient Greek stories, was told by storytellers who would rely solely on their memories. The use of rhyme, rhythm, and repetition helped the storytellers remember them.

You can use the same techniques to better remember information from courses. For example, even the simple addition of familiar rhythm and melody can help. Do you remember learning the alphabet? Many children learn the letters of the alphabet to the tune of "Twinkle, Twinkle, Little Star." In fact, a student demonstrated how she memorized the quadratic formula (notorious among algebra students for being long and difficult to remember) by singing it to a familiar tune!

Using these techniques can be fun, particularly for people who like to create. Rhymes and songs draw on your auditory memory and may be particularly useful for those who can learn tunes, songs, or poems easily. Like the other techniques in this section, however, they emphasize rote memory, not understanding. Also, when devising rhymes and songs, don't spend too much time creating them. Use these techniques judiciously and don't let them interfere with your studying.

**4. METHOD OF LOCI.** This technique was used by ancient orators to remember speeches and it combines the use of organization, visual memory, and association. Before using the technique, you must identify a common path that you walk. This can be the walk from your dorm to class, a walk around your house, whatever is familiar. What is essential is that you have a vivid visual memory of the path and objects along it. Once you have determined your path, imagine yourself walking along it, and identify specific landmarks that you will pass. For example, the first landmark on your walk to campus could be your dorm room, next may be the front of the residence hall, next a familiar statue you pass, etc. The number of landmarks you choose will depend on the number of things you want to remember.

Once you have determined your path and visualized the landmarks, you are ready to use the path to remember your material. This is done by mentally associating each piece of information that you need to remember with one of these landmarks. For example, if you are trying to remember a list of mnemonics, you might remember the first--acronyms--by picturing SCUBA gear in your dorm room (SCUBA is an acronym).

You do not have to limit this to a path. You can use the same type of technique with just about any visual image that you can divide into specific sections. The most important thing is that you use something with which you are very familiar.

**5. CHUNKING.** This is a technique generally used when remembering numbers, although the idea can be used for remembering other things as well. It is based on the idea that short-term memory is limited in the number of things that can be contained. A common rule is that a person can remember 7 (plus or minus 2) "items" in short-term memory. In other words, people can remember between 5 and 9 things at one time. You may notice that local telephone numbers have 7 digits. This is convenient because it is the average amount of numbers that a person can keep in his or her mind at one time.

When you use "chunking" to remember, you decrease the number of items you are holding in memory by increasing the size of each item. In remembering the number string 64831996, you could try to remember each number individually, or you could try thinking about the string as 64 83 19 96 (creating "chunks" of numbers). This breaks the group into smaller "chunks." Instead of

remembering 8 individual numbers, you are remembering four larger numbers. This is particularly helpful when you form "chunks" that are meaningful or familiar to you (in this case, the last four numbers in the series are "1996," which can easily be remembered as one chunk of information).

**6. PRACTICE MAKES PERFECT** (or closer to it anyway): Okay, it may not be a mnemonic, but repeating is still a great memory aid. Remember the children's game "I'm going on a picnic and I'm bringing..." As each new object is added, the old objects are repeated. People can often remember a large number of objects this way. When remembering a list of things, you might try a similar concept. Once you are able to remember 5 items on your list without looking, add a 6th, repeat the whole list from the start, add a 7th, and so on. It can be quite intimidating to see long lists, passages, or equations that you are expected to commit to memory. Break up the information into small bits that you can learn, one step at a time, and you may be surprised how easy it can be. You might even utilize grouping techniques, like those discussed earlier, to form meaningful groups that you can learn one at a time.

[http://www.web-us.com/memory/mnemonic\\_techniques.htm](http://www.web-us.com/memory/mnemonic_techniques.htm)

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# The Journey System

## Remembering Long Lists

The journey method is a powerful, flexible and effective mnemonic based around the idea of remembering landmarks on a well-known journey. It combines the narrative flow of the Link Method and the structure and order of the Peg Systems into one very powerful system.

## How to Use the Tool:

You use the Journey Method by associating information with landmarks on a journey that you know well. This could, for example, be your journey to work in the morning; the route you use to get to the front door when you get up; the route to visit your parents; or a tour around a holiday destination. Once you are familiar with the technique you may be able to create imaginary Journeys that fix in your mind, and apply these.

To use this technique most effectively, it is often best to prepare the journey beforehand. In this way the landmarks are clear in your mind before you try to commit information to them. One of the ways of doing this is to write down all the landmarks that you can recall in order on a piece of paper. This allows you to fix these landmarks as the significant ones to be used in your mnemonic, separating them from others that you may notice as you get to know the route even better.

To remember a list of items, whether these are people, experiments, events or objects, all you need do is associate these things with the landmarks or stops on your journey.

This is an extremely effective method of remembering long lists of information. With a sufficiently long journey you could, for example, remember elements on the periodic table, lists of Kings and Presidents, geographical information, or the order of cards in a shuffled pack.

The system is extremely flexible: all you need do to remember many items is to remember a longer journey with more landmarks. To remember a short list, only use part of the route!

One advantage of this technique is that you can use it to work both backwards and forwards, and start anywhere within the route to retrieve information.

You can use the technique well with other mnemonics. This can be done either by building complex coding images at the stops on a journey, or by linking to other mnemonics at each stop. You could start other journeys at each landmark. Alternatively, you may use a peg system to organize lists of journeys, etc.

*(SEE EXAMPLE ON BACK)*

## **Example:**

You may, as a simple example, want to remember something mundane like this shopping list:

*Coffee, salad, vegetables, bread, kitchen paper, fish, chicken breasts, pork chops, soup, fruit, bath tub cleaner.*

You could associate this list with a journey to a supermarket. Mnemonic images could be:

1. *Front door:* spilt coffee grains on the doormat
2. *Rose bush in front garden:* growing lettuce leaves and tomatoes around the roses
3. *Car:* with potatoes, onions, and cauliflower on the driver's seat
4. *End of the road:* an arch of French bread over the road
5. *Past garage:* with its sign wrapped in kitchen roll
6. *Under railway bridge:* from which haddock and cod are dangling by their tails
7. *Traffic lights:* chickens squawking and flapping on top of lights
8. *Past church:* in front of which a pig is doing karate, breaking boards
9. *Under office block:* with a soup slick underneath: my car tires send up jets of tomato soup as I drive through it
10. *Past car park:* with apples and oranges tumbling from the top level
11. *Supermarket car park:* a filthy bath tub is parked in the space next to my car!

# Pegwords

The pegwords strategy is a good strategy to use when you must remember a number of things such as five reasons we should conserve energy. Pegwords are words that rhyme with number words. Each pegword is substituted for a number word and is then associated with the information to be remembered.

You can use any word as a pegword as long as it rhymes with a number word. Below are suggested pegwords for the number words one through ten. You can substitute your own number words. Nouns and verbs are best to use as pegwords because they are easy to associate with information to be remembered.

Number Word	Pegword
one	run
two	shoe
three	tree
four	door
five	dive
six	fix
seven	heaven
eight	gate
nine	sign
ten	hen



Here are the steps to follow to use the pegwords strategy.

1. Think of the first piece of information to be remembered.
2. Think of the pegword for the number word *one*. The pegword for *one* is *run*.
3. Form an association in your mind between the pegword *one* and the first piece of information to be remembered. Create a picture in your mind of this association.
4. Repeat steps 1-3 for each additional piece of information to be remembered. Use the pegword *shoe* for the second piece of information, *tree* for the third piece of information, and so on.

Here is an example of how the pegwords strategy can be used to remember three important reasons for preserving forests.

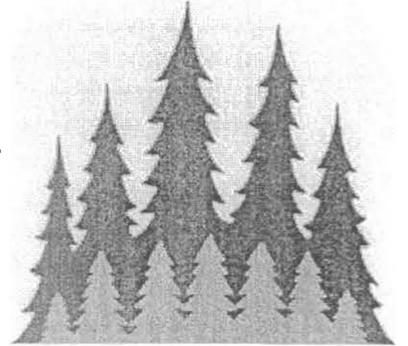
1. Forests provide food for animals.

The pegword for *one* is *run*. You could create a picture in your mind of a rabbit running to a bowl of food. Later, when you try to recall the reasons for preserving forests, the number word *one* will trigger the pegword *run*, and you will recall the picture of a rabbit running toward a bowl of food. You will thereby remember that one reason for preserving forests is that forests provide food for animals.

**2. Forests provide shelter for animals.  
(two/shoe). You could create a picture in your mind of a chipmunk  
living in a shoe.**

**3. Forests provide lumber that is used to build homes  
for people.  
(three/tree). You could create a picture in your mind of  
stacks of lumber lying on the ground next to a partially  
built house.**

**The pegwords strategy lets you use your imagination  
to remember information.**



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# Learning about Graphic Organizers: Topic-List

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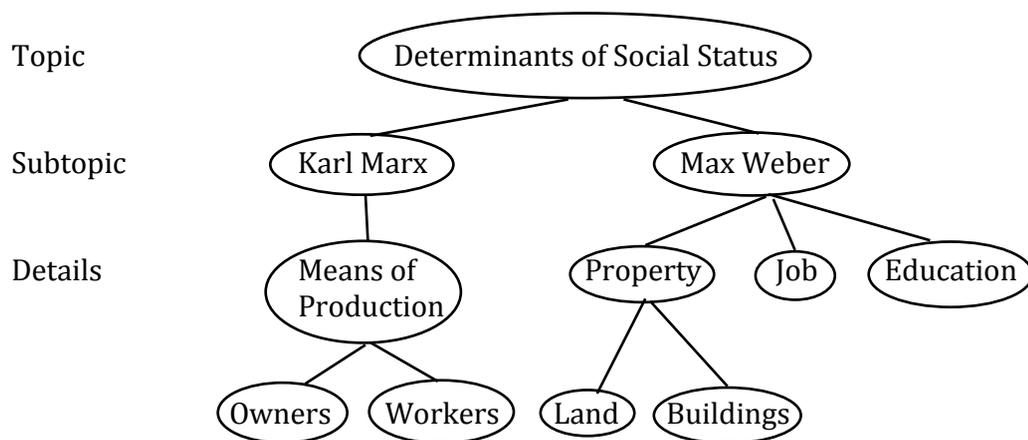
Graphic organizers are useful for remembering information that is very detailed. They show graphically how information is organized. Here are six types of graphic organizers: topic-list, question-answer, compare-contrast, series of events, cause-effect, and problem-solution.

A **topic-list** graphic organizer shows how a topic, subtopics, and details are organized. Here are the questions you should answer to obtain the information needed to create a topic-list graphic organizer:

1. What is the topic
2. What subtopics are related to the topic?
3. What details are known about the subtopics?

Read the following class notes about the determinants of social status. Then examine the topic-list graphic organizer for the notes.

Determinants of social status. According to Karl Marx--two status levels: those who have (owners) means of production have high status. Others (workers) low status. According to Max Weber, social status determined by how much property (land and buildings) you own, your job, and level of education.



Create a topic-list graphic organizer for information you want to remember.

# Learning about Graphic Organizers: Compare-Contrast

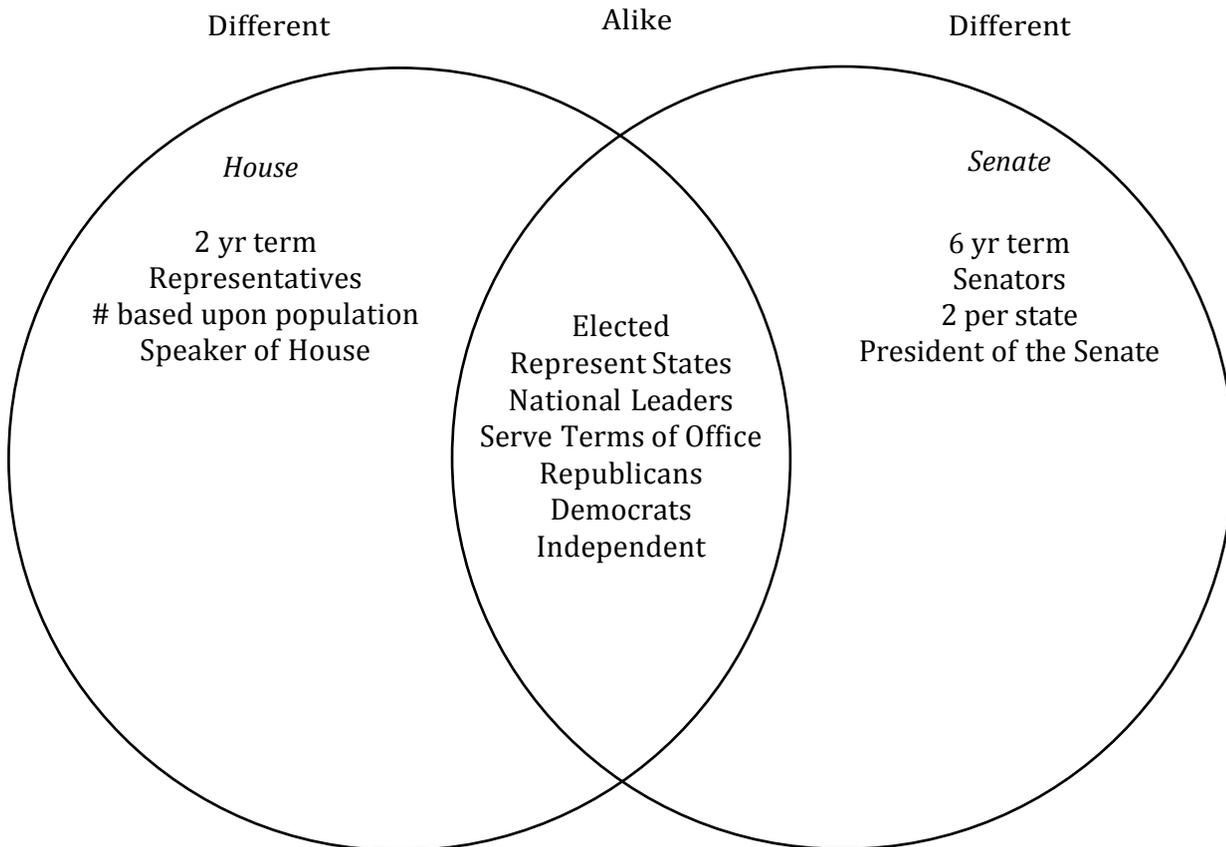
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A **compare-contrast** graphic organizer shows how two things are alike and how they are different. Here are the questions you should answer to obtain the information needed to create a compare-contrast graphic organizer:

1. What two things are being compared and contrasted
2. In what ways are the two things alike?
3. In what ways are the two things different?

Read the following class notes about the U.S. House of Representatives and the Senate. Then examine the compare-contrast graphic organizer for the notes.

House of Representatives - National leaders elected for 2 yr term, members called representatives, leaders called Speaker of House. Number of representatives based upon population. Represent their state. From all parties. Senate - National leaders, elected for 6 yr term, represent state, 2 senators per state. Leader called President of Senate. From all parties.



Create a compare-contrast graphic organizer for information you want to remember.

# Learning about Graphic Organizers: Cause-Effect

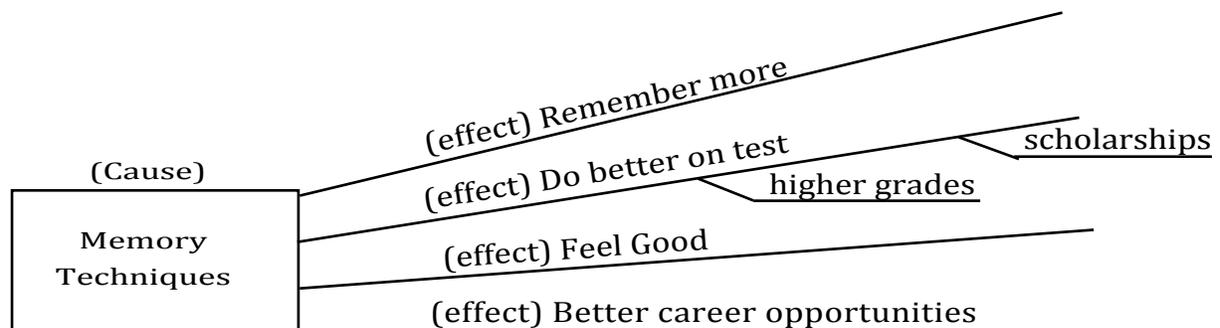
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A **cause-effect** graphic organizer is used to show how something occurs. Here are the questions you should answer to obtain the information needed to create a cause-effect graphic organizer:

1. What is the cause?
2. What is/are the effect(s)?
3. What details are associated with the effect(s)?

Read the following class notes about the importance of using techniques for remembering information. Then examine the cause-effect graphic organizer for the notes.

It is important to use techniques to remember information you hear or read about in college. As a result of using remembering techniques, you can expect a number of good things to happen. You will remember more information. You will do better on tests, which will result in higher grades and scholarships. You will also feel better about yourself as a student. Finally, you will have greater career opportunities.



Create a cause-effect graphic organizer for information you want to remember.

# Learning about Graphic Organizers: Series of Events

A **series of events** graphic organizer shows a series of events in a logical order. Sometimes this pattern is used to describe the stages of something, such as the growth of a plant. At other times, the pattern is used to show the steps in a procedure, such as balancing a checkbook. The pattern also may be used to depict a sequence of events in time order, such as the events that led to the Persian Gulf War.

Here are the questions you should answer to obtain the information needed to create a series of events graphic organizer.

1. What is the topic?
2. What is the first stage, step, or event?
3. What are the intervening stages, steps, or events?
4. What is the final stage, step, or event?

Examine the series of events graphic organizer constructed from a psychology textbook showing Piaget's stages of cognitive development.

Topic	Piaget's Stages of Cognitive Development
First Stage	<p><b>Sensorimotor</b>                      Birth to 18-24 months                      Learn to represent the world internally                      Learn relationships between actions and external world                      Learn basic cause and effect</p>
Intervening Stages	<p><b>Preoperational</b>                      18-24 months to 7 years                      Growth of symbolic activity                      Language begins to develop                      Thought is egocentric                      Principle of conversation is acquired</p>
	<p><b>Concrete Operations</b>                      6-7 years to 11 years                      Logical thought emerges                      Problems can be solved                      Principle of reversibility is acquired</p>
Final Stage	<p><b>Formal Operations</b>                      Age 12+                      Deal with abstractions                      Adult thought emerges                      Hypothetico-deductive reasoning is used</p>

Create a series of events graphic organizer for information you want to remember.

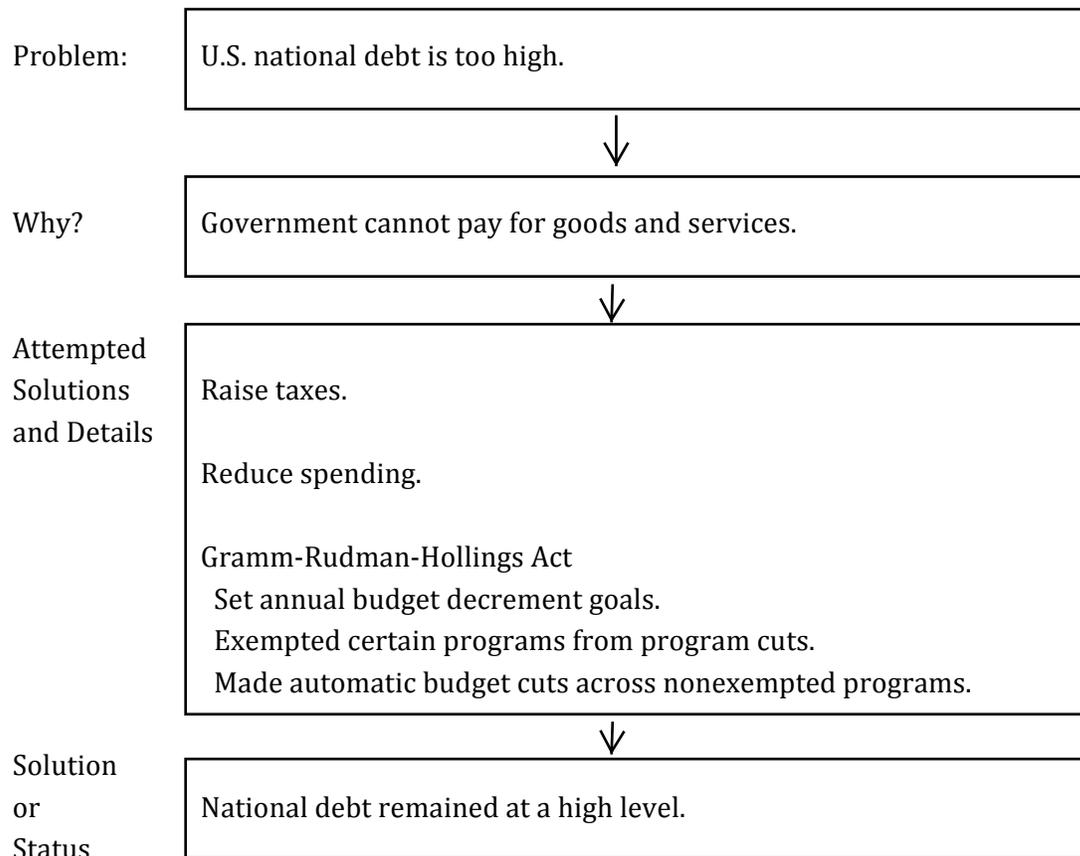
# Learning about Graphic Organizers: Problem-Solution

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A **problem-solution** graphic organizer is used to show a problem, to demonstrate why it is a problem, to show attempts to solve the problem, and to show the solution or the status of the at-tempts. Here are the questions you should answer to obtain the information needed to create a problem-solution graphic organizer:

1. What is the problem?
2. Why is it a problem?
3. What attempts have been made to solve the problem?
4. what is the solution or status of these attempts?

Examine the problem-solution graphic organizer constructed from an economics textbook showing the U.S. national debt as a problem, wh it it is a problem, attempts to solve the problem, including details as necessary, and the solution or status of attempted solutions at a specific point in time. In this case, the attempts to solve the problem did not work. In other cases, the problem may be solved.



Create a problem-solution graphic organizer for information you want to remember.

## Nutrition and Memory improvement

You probably know already that a diet based on fruits, vegetables, whole grains, and "healthy" fats will provide lots of health benefits, but such a diet can also improve memory. Research indicates that certain nutrients nurture and stimulate brain function.

**B vitamins, especially B6, B12, and folic acid**, protects neurons by breaking down homocysteine, an amino acid that is toxic to nerve cells. They're also involved in making red blood cells, which carry oxygen. *(Best sources: spinach and other dark leafy greens, broccoli, asparagus, strawberries, melons, black beans and other legumes, citrus fruits, soybeans.)*

**Antioxidants like vitamins C and E, and beta carotene**, fight free radicals, which are atoms formed when oxygen interacts with certain molecules. Free radicals are highly reactive and can damage cells, but antioxidants can interact with them safely and neutralize them. Antioxidants also improve the flow of oxygen through the body and brain. *(Best sources: blueberries and other berries, sweet potatoes, red tomatoes, spinach, broccoli, green tea, nuts and seeds, citrus fruits, liver.)*

**Omega-3 fatty acids** are concentrated in the brain and are associated with cognitive function. They count as "healthy" fats, as opposed to saturated fats and trans fats, protecting against inflammation and high cholesterol. *(Best sources: cold-water fish such as salmon, herring, tuna, halibut, and mackerel; walnuts and walnut oil; flaxseed and flaxseed oil)*  
Because older adults are more prone to B12 and folic acid deficiencies, a supplement may be a good idea for seniors. An omega-3 supplement (at any age) if you don't like eating fish. But nutrients work best when they're consumed in foods, so try your best to eat a broad spectrum of colorful plant foods and choose fats that will help clear, not clog, your arteries. Your brain will thank you!

[http://www.helpguide.org/life/improving\\_memory.htm](http://www.helpguide.org/life/improving_memory.htm)