

Effects of Environment on Memory

Question: What are the effects of environmental factors on the ability to remember increasing lists of words?

Organization: Three people to a team. The roles are

- * Researcher - The person who reads the words from the list. _____
- * Subject - The person whose ability to remember the words is measured. _____
- * Data Collector - The person who records the # of words remembered. _____

Materials:

- * Word lists
- * Lamps
- * CD players with music
- * Bags of ice
- * Blind folds
- * TV on mute

Example of dialogue:

Researcher: "*vague, focus, clear*"

Subject: "*vague, focus, clear*"

Researcher: "*vague, focus, clear, hazy*"

Subject: "*vague, focus, clear, hazy*"

Procedure:

1. Control: Baseline capacity is established for the subjects' ability to memorize an increasing series of words. This is accomplished by the researcher repeating a series of words beginning with three and adding one word at a time, until the subject cannot repeat the list. The test is repeated three times, and the data are averaged.

2. Repeat the above procedure with the addition of the following stimuli:

Light -- 4 times in a well lit part of the room, facing the light.

Dark -- 4 times with a blindfold on.

Tactile -- 4 times while holding two baggies of ice in each hand.

Sound -- 4 times while listening to loud music.

Visual -- 4 times while watching TV without sound.

Variables:

Experimental control:

Controlled variables:

Manipulated variables:

Responding variables:

Hypothesis:

Data:

STUDENT DATA CHART:

<u>Trials</u>	<u>Control</u>	<u>Light</u>	<u>Dark</u>	<u>Tactile</u>	<u>Sound</u>	<u>Visual</u>
1						
2						
3						
4						
Average						

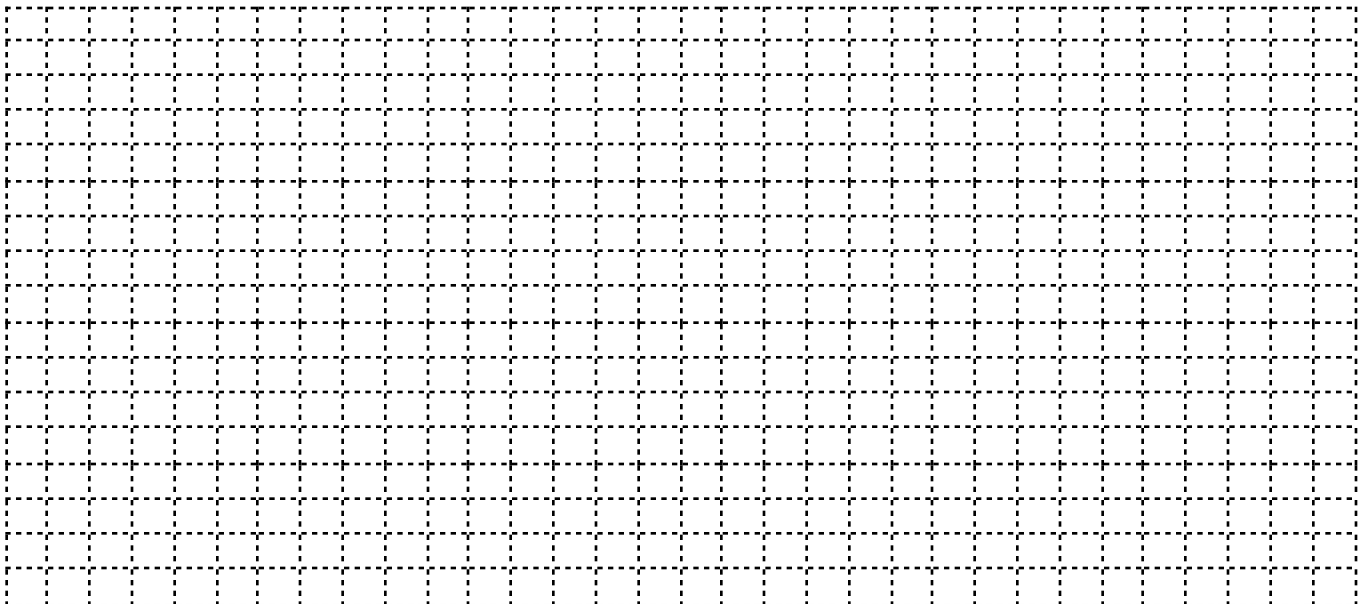
CLASS DATA CHART:

<u>Group</u>	<u>Control</u>	<u>Light</u>	<u>Dark</u>	<u>Tactile</u>	<u>Sound</u>	<u>Visual</u>
1						
2						
3						
4						
5						
6						
7						
8						
9						

Average

Analysis of Data:

After compiling and averaging class data, draw a line graph for your group's average (chart on page 1) and a bar graph for the class average (chart on this page).



Conclusion:

1. Under which conditions is memory the best? Can you explain reasons for this?
2. Did all students show the same capacity to remember? Explain.
3. Were all students negatively affected by the stimuli? Explain.
4. Were the results you obtained surprising to you? Why or why not.
5. Does loud music interfere with memory? Do you study listening to music?
6. What conclusions can you reach on the effects of stimuli on learning?