

**Lab 1 – Learning
Biology**

Name:

This lab will test two ways of learning: Visual learning and Auditory learning. Most people are better at one type than the other. Visual learners retain more when they see it and auditory learners remember more when they hear it. Learning can also be affected by your surroundings and background but one thing that holds true is that everyone can learn.

Visual learning –

You will be shown a picture for 30 seconds that contains twenty objects. Study it carefully, but do not write anything down. When instructed, write down as many of the objects as you can remember, order is not important.

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

How many of the objects did you remember correctly? _____

What was the class average? _____

Can you give any reasons why you remembered those object better than others?

Was there any special method you used to help you remember the pictures?

What could have been done to help you remember the objects better?

Auditory Learning

You will be read a list of twenty words, listen carefully, do not write anything down. Immediately after you have heard the entire list write down all the words you can remember, order is not important.

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

We will now analyze the results. I will repeat the list and assign a number to each word from 1 to 20. Write that number down in front of the words you recalled and write down the number of people that also remember each word after it. For words you didn't recall simply write the word number and the number of people that did remember it in an empty space.

On the graph paper provide plot a graph: Number of People Recalling Word vs. Word Position.

Does the graph show any pattern?

Which of the words was recalled the most? _____
What number was it? _____

Which word was recalled the least? _____
What number was it? _____

Do you think you will remember these words tomorrow? _____

If you wanted to remember these words, how would you go about it?

Stroop Effect

At your lab station you will receive three colored word lists. With each list the object is to look at each word and say *what color the word is not the word itself*. For each list, the time it takes to correctly recite all the colors will be recorded.

Time for List #1 _____ sec.

Time for List #2 _____ sec.

Time for List #3 _____ sec.

Which list seemed the easiest to recite? Why?

Which list seemed the hardest to recite? Why?

Can you feel your brain working?

The differences you are feeling is call *interference* or the Stroop effect. This is due to the processing center of the brain called the anterior cingulate. This is a region just in front of the corpus callosum, which is the big nerve trunk that connects the two sides of the brain. This region is involved in thought processing and emotional response. When the brain has to process two conflicting ideas – see a word but say it's color – interference occurs and things slow down.