

Name _____

Perception Laboratory: Brain Processing of Visual Information

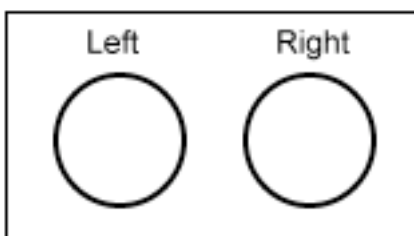
1. Visual Pathways from the Eyes through the Brain

Using the figure on the web page, identify structures of the visual pathway and their functions.

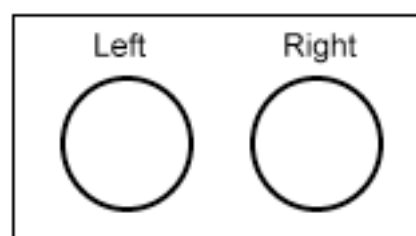
Structure	Letter	Function
Eye		
Lateral Geniculate Nucleus (LGN)		
Optic chiasm		
Optic nerve		
Optic tract		
Superior Colliculus		
Primary Visual Cortex (V1)		

Your answers to Molavi's first three lesions (in Basic Visual Pathways):

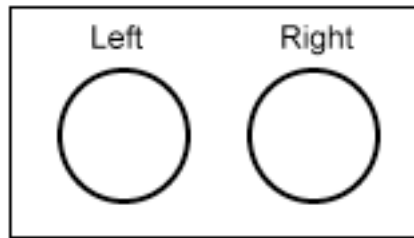
Lesion 1



Lesion 2



Lesion 3



On the basis of your exploration of several sites, you should be able to provide some specific information about the areas of the primary and secondary visual cortex.

Cortical Area	What I learned on the web
V1	
V2	
V3	
V4	
V5 (MT)	

2. The M, P and K Pathways and the *What* and *Where* Pathways

Distinguish among the M, P, and K pathways regarding origin and function...but focus primarily on M and P.

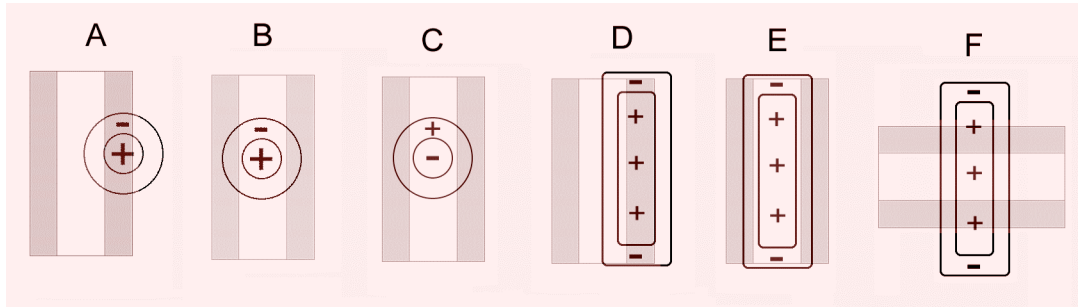
M Pathway	P Pathway	K Pathway

Distinguish between the *What* and *Where* pathways in terms of structure(s) and function.

<i>What Pathway</i>	
<i>Where Pathway</i>	

3. Receptive Fields

Imagine that the stimulus is a bar of white light (with dark on either side). For each of the receptive fields shown below, indicate how the neuron's activity would change as a result of the stimulation (use low, medium, high to indicate activity level).



Example	A	B	C	D	E	F
Activity						

Where would you be likely to find receptive fields such as those seen in A, B, and C?

Where would you be likely to find receptive fields such as those seen in D, E, and F?

What type of receptive field (in general) would you expect to find in the secondary visual cortex?

At what point in the visual cortex would you expect to find cells that respond to binocular input?