

# **DNA Magic Cookie Story**

## **(A little analogy about protein synthesis)**

The setting: My first job in high school - a cookie factory with a round bosses office in the middle. The factory produced magic cookies!

The owner of the factory's name was Daniel Nathaniel Avery (the big boss) and only one person ever got to go into his office and see him. Daniel Nathaniel never came out of his office.

My supervisor's name was Rex Ned Allen and he was the only one allowed into Daniel Nathaniel Avery's office.

One day I, being a worker in the factory, listened at the door after R.N. Allen went in. I suppose D.N. Avery was paranoid because no one knew his cookie recipes and he would whisper them in R.N. Allen's ear while R.N. wrote the recipe down all the while saying, "mmmmmm" like he understood.

After R.N. Allen had the recipe written, he would leave the office of D.N. Avery and start shouting orders at us, the factory workers.

Rex Ned would shout out what ingredient each of us should bring to where he stood in the corner of the factory by a thing called a Ribovat.

Our uniform consisted of wearing stupid looking baker's hats that flared out at the top in the shape of a "T".

The other workers and I would go get the ingredients he told us to. Odd but each of us always had to get the same ingredients each time... I always had to get a sack of flour. I would put it on my back and carry it over to the Ribovat... then I had to wait.

Rex Ned was very particular about what ingredient went into the Ribovat and in what order. Sometimes workers didn't have to bring their ingredient, and sometimes we had to make many trips back and forth to the Ribovat with our same ingredient over and over.

Then Rex would tell us when to dump our ingredient into the Ribovat and then he would turn it on to mix them together. The Ribovat made a sound I will never forget.... It went, "rrrrrrrrrrrrrrrrrrrr".

Finally the Ribovat turned off and the cookies were done! The amazing thing about these cookies is they could change your life. Like one cookie might turn your eyes brown, while another cookie recipe would make you an alcoholic. Another could turn a shy person into an extrovert and another could make you less susceptible to cancer. Every cookie recipe had it's own magic properties.

# Cell Organelles (A Memory Game!)



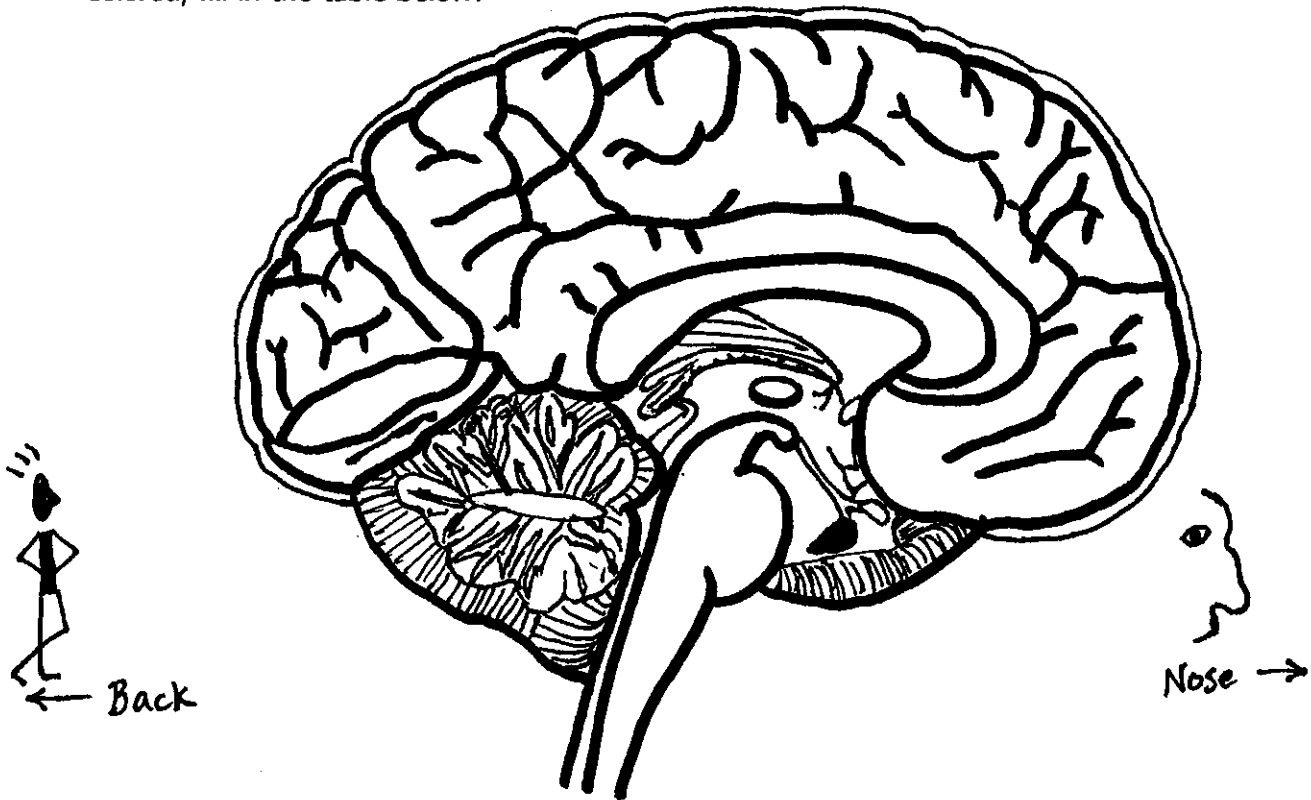
Peg #	Memory Clue	Structure	Function	Diagram	A, P, or B?
1	Sun – The big boss, the brains of the operation	Nucleus	Control Center of the cell. Contains instructions for all life processes (DNA)		Both
2	Eyes – Wink and say "nucleolus" while little black protein pellets come out of eye	Nucleolus	Contained in Nucleus – Makes Ribosomes		Both
3	Triangle – Use a tail (like Vestigial. Structures)	Cilia Flagella	Cilia – lots of hair-like structures Flagella – one longer structure → Movement		Animal
4	Floor – Water and food, mess on the floor! Need to vacuum it up –Vac Oie!	Vacuole	Food and water storage units		Both
5	Fingers – Wave fingers like DNA then lots!	Chromosome Chromatin	Chromosome – one molecule of DNA Chromatin – all the DNA is a nucleus		Both
6	Sticks – Miti Dance club band = ATP lots of energy! Plants signs = Chloroblast!	Mitochondria Chloroplast	Mito – Forms ATP by respiration Chloro – forms ATP by Photosynthesis		A = Mito P = Both
7	Up – Diet and reg. Cola Smooth has fat/drugs : Rough is chalky/protein	E.R. – Smooth and Rough	Smooth – Transport and assembly of Lipids / denatures drugs & toxic wastes Rough – Transport and assembly of protein		Both
8	Octopus – Smoothly streaming though ocean holding things in arms	Cytoplasm	Semi-fluid Matrix holds all organelles outside nucleus		Both
9	Baseball – Clean up hitter; eats hot dogs Carries Lyso!	Lysosome	Digestion and recycling – cleans up the cell		Both
10	Hen – laying eggs (contain lots of protein) "Ribo"	Ribosome	Proteins are made here		Both
11	Score!! – after big game go celebrate at In & Out	Plasma (cell) Membrane	Controls substances moving in and out of the cell – gatekeeper		Both
12	Dozen – Juggling sticks and twigs; Tubular, Fil!	Microtubules Microfilaments	Microtubules – large; move cell parts around Microfilaments – small; cell shape (skeleton)		Both
13	Black Cat – Runs across the road and you run into a wall covered in ivy	Cell Wall	Protects the cell and provides support		Plant
14	Love – Package on V. Day, throw it out, from Golgi	Golgi Body	Sorts and packages protein, lipids and prepares them for export out of cell		Both
15	Rounds – Boxing Ring, you're on the ropes!	Centriole	Specialized microtubules involved in mitosis – makes spindle fibers		Animal

Name \_\_\_\_\_

# LOBES OF THE BRAIN

## Coloring, Labeling, and Functions!

Color code the **4 lobes** of the brain and the **cerebellum** and **brain stem** (containing the medulla oblongata). That means you'll need 6 different colors altogether! Use page 596 in your book and the back of this paper (great reading ! ☺). After you've colored, fill in the table below:



Brain Part	Color on diagram	Functions
Frontal Lobe		
Occipital Lobe		
Temporal Lobe		
Parietal Lobe		
Cerebellum		
Brain Stem		

Name \_\_\_\_\_

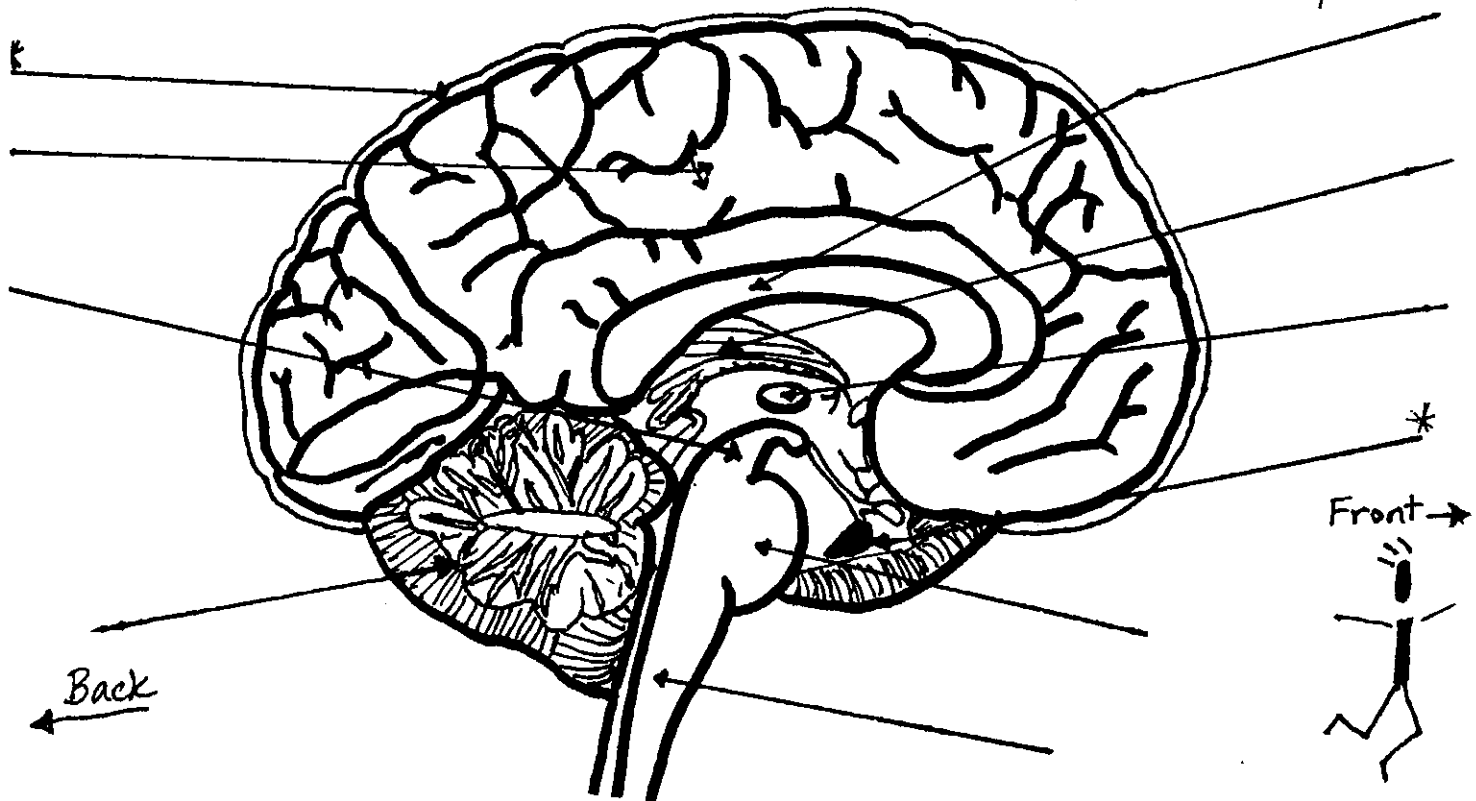
**✔** out brain dissection!  
 CD. Ch. 30; Con. 8 of 8  
 "The Brain" #1 & #6

## PARTS OF THE BRAIN - 2

### Coloring, Labeling, and Functions!

Also... Unit VI  
 Ch. 30  
 Con. 8 of 8  
 "The Brain"  
 #2, #3

In this, the second brain parts worksheet, you will need to again color code, label (on the line given), and complete the table below. Use pages 502-3106 in your Bio. book!



Brain Part	Color	Functions
Medulla oblongata		
Pons		
Cerebellum		
Midbrain		
Thalamus		
Hypothalamus		
Cerebral Cortex		
Cerebrum (all 4 lobes)		
Corpus Callosum		
Amygdala		