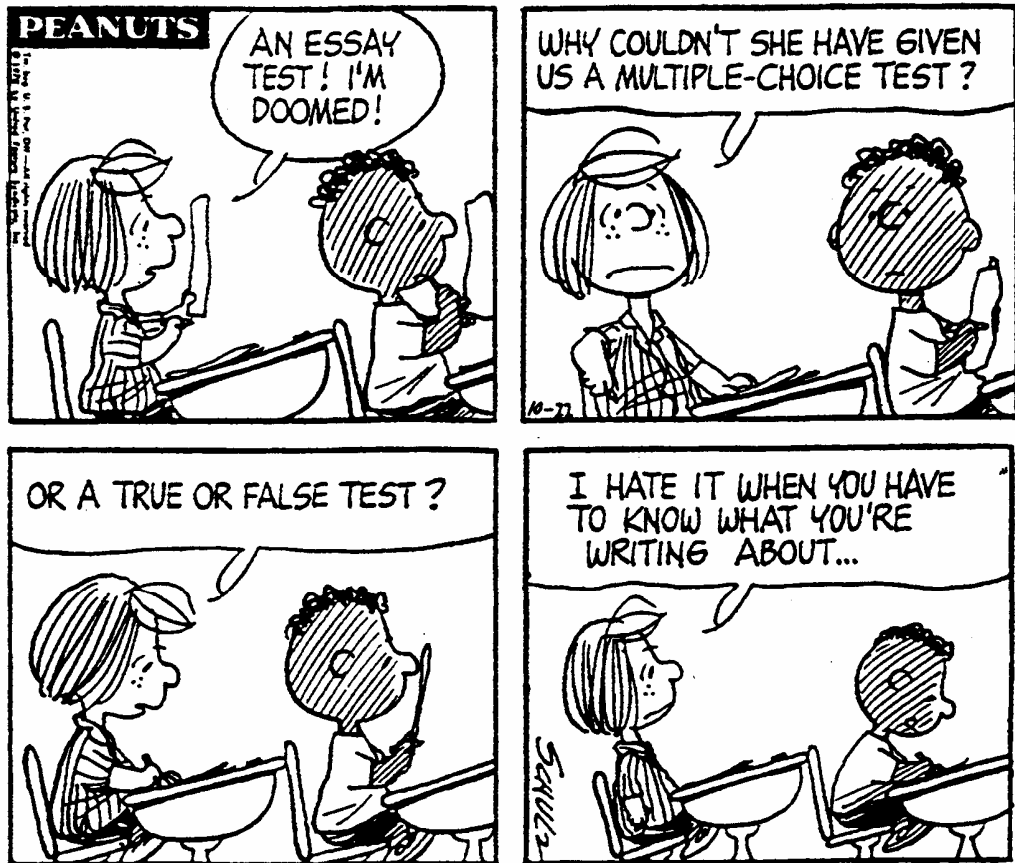


Cornell

Notes



**AVID Region 8 – Kern County
2009-2010**



HOW CAN WE PREPARE OUR STUDENTS TO TAKE TESTS?

One suggestion: Cornell Notes

In this style of taking notes:

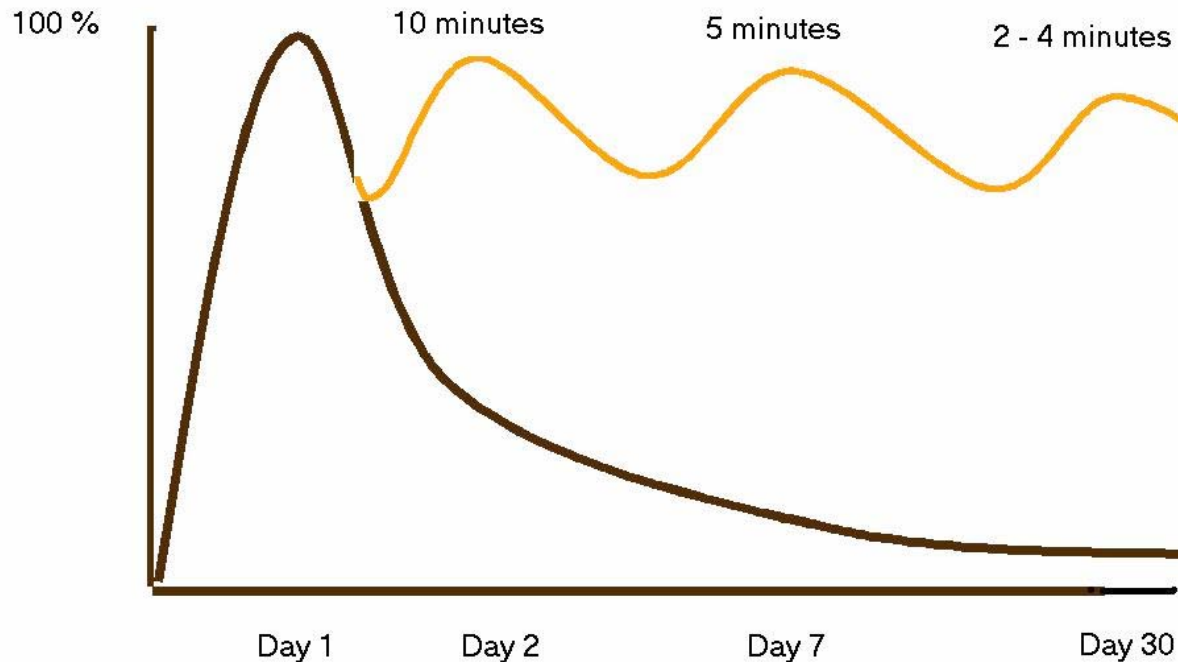
- students organize their notes into three parts
- students develop questions based on the lecture that they can later use to prepare for tests
- students summarize the key points at the end of the lecture

Note: Summarizing and note taking
 Questions, cues, and advance organizers

Marzano #2 strategy
 Marzano #9 strategy

The Curve of Forgetting

The Curve of Forgetting describes how we retain or get rid of information that we take in. It's based on a one-hour lecture.



On Day 1, at the beginning of the lecture, you go in knowing nothing, or 0%, (where the curve starts at the baseline). At the end of the lecture you know 100% of what you know, however well you know it (where the curve rises to its highest point).

By Day 2, if you have done nothing with the information you learned in that lecture, didn't think about it again, read it again, etc. you will have lost 50%-80% of what you learned. Our brains are constantly recording information on a temporary basis: scraps of conversation heard on the sidewalk, what the person in front of you is wearing. Because the information isn't necessary, and it doesn't come up again, our brains dump it all off, along with what was learned in the lecture that you actually do want to hold on to!

By Day 7, we remember even less, and by Day 30, we retain about 2%-3% of the original hour! This nicely coincides with midterm exams, and may account for feeling as if you've never seen this before in your life when you're studying for exams - you may need to actually re-learn it from scratch.

You can change the shape of the curve! A big signal to your brain to hold onto a specific chunk of information is if that information comes up again. When the same thing is repeated, your brain says, "Oh- there it is again, I better keep that." When you are exposed to the same information repeatedly, it takes less and less time to "activate" the information in your long term memory and it becomes easier for you to retrieve the information when you need it.

Here's the formula, and the case for making time to review material: Within 24 hours of getting the information - spend 10 minutes reviewing and you will raise the curve almost to 100% again. A week later (Day 7), it only takes 5 minutes to "reactivate" the same material, and again raise the curve. By Day 30, your brain will only need 2-4 minutes to give you the feedback, "Yup, I know that. Got it."

Often students feel they can't possibly make time for a review session every day in their schedules - they have trouble keeping up as it is. However, this review is an excellent investment of time. If you don't review, you will need to spend 40-50 minutes re-learning each hour of material later - do you have that kind of time? Cramming rarely plants the information in your long term memory where you want it and can access it to do assignments during the term as well as be ready for exams.

Depending on the course load, the general recommendation is to spend half an hour or so every weekday, and 1 1/2 to 2 hours every weekend in review activity. Perhaps you only have time to review 4 or 5 days of the week, and the curve stays at about the mid range. That's OK, it's a lot better than the 2%-3% you would have retained if you hadn't reviewed at all.

Many students are amazed at the difference reviewing regularly makes in how much they understand and how well they understand and retain material. It's worth experimenting for a couple weeks, just to see what difference it makes to you!

Counseling Services, Study Skills Program
University of Waterloo

A Three Story Intellect



BLOOM'S TAXONOMY *and Costa's Levels of Questioning*

The Student will...

Knowledge (Remembering) Learn specific facts, ideas, vocabulary; remembering/recalling information or specific facts.	Comprehension (Understanding) Ability to grasp the meaning of material; communicate knowledge; understanding information without relating it to other material.	Application (Applying) Ability to use learned material in new and concrete situations; use learned knowledge and interpret previous situations.	Analysis (Analyzing) Ability to break down material into its component parts and perceive interrelationships.	Synthesis (Creating) Ability to put parts together to form a new whole; use elements in new patterns and relationships.	Evaluation (Evaluating) Ability to judge the value of material (statement, novel, poem, report, etc.) for a given purpose; judgment is based on given criteria.
<i>Introduction of knowledge</i> <i>Level One—the basement</i>		<i>Practice knowledge learned</i> <i>Level Two—the ground floor</i>		<i>Demonstrates mastery of knowledge learned</i> <i>Level Three—the penthouse</i>	
<i>By doing the following...</i> collect, copy, define, describe, examine, find, group, identify, indicate, label, list, locate, match, name, omit, observe, point, provide, quote, read, recall, recite, recognize, repeat, reproduce, say, select, sort, spell, state, tabulate, tell, touch, underline, who, when, where, what		<i>By doing the following...</i> acquire, adopt, apply, assemble, capitalize, construct, consume, demonstrate, develop, discuss, experiment, formulate, manipulate, organize, relate, report, search, show, solve novel problems, tell consequences, try, use, utilize		<i>By doing the following...</i> alter, build, combine, compose, construct, create, develop, estimate, form a new..., generate, hypothesize, imagine, improve, infer, invent, modify, plan, predict, produce, propose, reorganize, rewrite, revise, simplify, synthesize appraise, argue, assess, challenge, choose, conclude, criticize, critique, debate, decide, defend, discriminate, discuss, document, draw conclusions, editorialize, evaluate, grade, interpret, judge, justify, prioritize, rank, rate, recommend, reject, support, validate, weigh	

Knowledge—Level 1A (Remembering)	Comprehension—Level 1B (Understanding)	Application—Level 2A (Applying)	Analysis—Level 2B (Analyzing)	Synthesis—Level 3A (Creating)	Evaluation—Level 3B (Evaluating)
<p>Skills Demonstrated:</p> <ul style="list-style-type: none"> • Observation and recall of information • Knowledge of dates, events, places • Knowledge of major ideas • Master of subject matter 	<p>Skills Demonstrated:</p> <ul style="list-style-type: none"> • Understanding information • Grasp meaning • Translate knowledge into new context • Interpret facts, compare, contrast • Order, group, infer causes • Predict consequences 	<p>Skills Demonstrated:</p> <ul style="list-style-type: none"> • Use information • Use methods, concepts, theories in new situations • Solve problems using required skills or knowledge 	<p>Skills Demonstrated:</p> <ul style="list-style-type: none"> • Seeing patterns • Organization of parts • Recognition of hidden meanings • Identification of components 	<p>Skills Demonstrated:</p> <ul style="list-style-type: none"> • Use old ideas to create new ones • Generalize from given facts • Relate knowledge from several areas • Predict, draw conclusions 	<p>Skills Demonstrated:</p> <ul style="list-style-type: none"> • Compare and discriminate between ideas • Assess value of theories, presentations • Make choices based on reasoned argument
<p>What is...? How is...? Where is...? When did ____ happen? How did _____? Why did...? How would you describe...? When did...? Can you recall...? How would you show...? Can you select...? Who were the main...? Can you list three...? Which one...? Who was...?</p>	<p>How would you classify the type of...? How would you compare/contrast...? Will you state or interpret in your own words...? How would you rephrase the meaning...? What facts or ideas show...? What is the main idea of...? Which statements support...? Can you explain what is happening...what is meant...? What can you say about...? Which is the best answer...? How would you summarize...?</p>	<p>How would you use...? What examples can you find to...? How would you solve_____using what you have learned...? How would you organize _____to show...? How would you show your understanding...? What approach would you use to...? How would you apply what you learned to develop...? What other way would you plan to...? What would result if...? Can you make use of the facts to...? What elements would you choose to change...? What facts would you select to show...? What questions would you ask in an interview with...?</p>	<p>What are the parts of...? How is_____related to...? Why do you think...? What is the theme...? What motive is there...? Can you list the parts...? What inference can you make...? What conclusions can you draw...? How would you classify...? How would you categorize...? Can you identify the different parts...? What evidence can you find...? What is the relationship between...? Can you make a distinction between...? What is the function of ...? What ideas justify...? How would you estimate the results for...? What facts can you compile...? Can you construct a model that would change...? Can you think of an original way for the...?</p>	<p>Do you agree with the actions...? with the outcomes...? What is your opinion of...? How would you prove...? Disprove...? Can you assess the value or importance of...? Would it be better if ...? Why did they (the character) choose...? What would you recommend...? How would you rate the ...? What would you cite to defend the actions...? How would you evaluate...? How could you determine...? What choice would you have?</p>	<p>Do you agree with the actions...? With the outcomes...? What is your opinion of...? How would you prove...? Disprove...? Can you assess the value or importance of...? Would it be better if...? Why did they (the character) choose...? What would you recommend...? How would you evaluate...? How could you determine...? What choice would you have made...? What would you select...? How would you prioritize...? What judgment would you make about...? Based on what you know, how would you explain...? What information would you use to support the view...? How would you justify...? What data was used to make the conclusion...? Why was it better that...? How would you prioritize the facts...? How would you compare the ideas...?</p>

EXAMPLES OF COSTA'S LEVELS OF QUESTIONS

Level One questions cause students to recall information. This level of question causes students to input the data into short-term memory, but if they do not use it in some meaningful way, they will soon forget.

Level Two questions enable students to process information. They expect students to make sense of information they have gathered and retrieved from long- and short-term memory.

Level Three questions require students to go beyond the concepts or principles they have learned and to use these in novel or hypothetical situations.

TOPIC	LEVEL ONE	LEVEL TWO	LEVEL THREE
	(complete, count, match, name, define, observe, recite, describe, list, identify, recall)	(analyze, categorize, explain, classify, compare, contrast, infer, organize, sequence)	(imagine, plan, evaluate, judge, predict, extrapolate, invent, speculate, generalize)
Science	What is a gene? What is a chromosome?	Compare and contrast genes and chromosomes.	Use what you know about genes and chromosomes to predict a trait in a child.
Spanish	Conjugate the Spanish verb "ser" in the present tense.	Elaborate on the similarities and differences of the preterit and past tenses in the Spanish language.	"Invent" a new Spanish regular "-ar" ending verb. Use it in 6 sentences, using different tenses and persons.
Mathematics	Evaluate this expression: $3x^2$ if $x=4$.	When, if ever, can $x^2=2x$?	Prove whether or not the operation [Y] is commutative given that $a[Y]b=a^2-b$
History	Which amendment in the Constitution gives citizens the right to bear arms?	Compare and contrast societal conditions in the U.S. that impacted the inclusion of the Second Amendment in the U.S. Constitution with conditions today.	If there were a Constitutional amendment that prohibited ownership of weapons by citizens, how might American society be affected?

"The Hedgehog Concept"

Are you a hedgehog or a fox?

1. In his famous essay "The Hedgehog and the Fox," Isaiah Berlin divided the world into hedgehogs and foxes, based upon an ancient Greek parable: "The fox knows many things, but the hedgehog knows one big thing."² The fox is a cunning creature, able to devise a myriad of complex strategies for sneak attacks upon the hedgehog. Day in and day out, the fox circles around the hedgehog's den, waiting for the perfect moment to pounce. Fast, sleek, beautiful, fleet of foot, and crafty – the fox looks like the sure winner. The hedgehog, on the other hand, is a dowdier creature, looking like a genetic mix-up between a porcupine and a small armadillo. He waddles along, going about his simple day, searching for lunch and taking care of his home.

2. The fox waits in cunning silence at the juncture in the trail. The hedgehog, minding his own business, wanders right into the path of the fox. "Aha, I've got you now!" thinks the fox. He leaps out, bounding across the ground, lightning fast. The little hedgehog, sensing danger, looks up and thinks, "Here we go again. Will he ever learn?" Rolling up into a perfect little ball, the hedgehog becomes a sphere of sharp spikes, pointing outward in all directions. The fox, bounding toward his prey, sees the hedgehog defense and calls off the attack. Retreating back to the forest, the fox begins to calculate a new line of attack. Each day, some version of this battle between the hedgehog and the fox takes place, and despite the greater cunning of the fox, the hedgehog always wins.

3. Berlin extrapolated from this little parable to divide people into two basic groups: foxes and hedgehogs. Foxes pursue many ends at the same time and see the world in all its complexity. They are "scattered or diffused, moving on many levels," says Berlin, never integrating their thinking into one overall concept or unifying vision. Hedgehogs, on the other hand, simplify a complex world into a single organizing idea, a basic principle or concept that unifies and guides everything. It doesn't matter how complex the world, a hedgehog reduces all challenges and dilemmas to simple—indeed almost simplistic—hedgehog ideas. For a hedgehog, anything that does not somehow relate to the hedgehog idea holds no relevance.

4. Princeton professor Marvin Bressler pointed out the power of the hedgehog during one of our long conversations: "You want to know what separates those who make the biggest impact from all the others who are just as smart? They're hedgehogs." Freud and the unconscious, Darwin and the natural selection, Marx and class struggle, Einstein and relativity, Adam Smith and division of labor—they were all hedgehogs. They took a complex world and simplified it. "Those who leave the biggest footprints," said Bressler, "have thousands calling after them, 'Good idea, but you went too far!'"³

5. To be clear, hedgehogs are not stupid. Quite the contrary. They understand that the essence of profound insight is simplicity. What could be more simple than $e = mc^2$? What could be simpler than the idea of the unconscious, organized into an id, ego, and superego? What could be more elegant than Adam Smith's pin factory and "invisible hand"? No, the hedgehogs aren't simpletons; they have a piercing insight that allows them to see through complexity and discern underlying patterns. Hedgehogs see what is essential, and ignore the rest.

Collins, Jim. *Good to Great*. New York: HarperCollins, 2001.

Excerpted from "Chapter 5: The Hedgehog Concept (Simplicity within the Three Circles)", pp. 90-91.

Dialectical Journal

What?	So what?
1.	
2.	
3.	
4.	
5.	



Name: _____ Quarter: _____ Period: _____

Cornell Notes Rubric

	5	4	3	2	1
Page Set-up	<ul style="list-style-type: none"> Name, date, class, and topic are clearly written in the correct place. 	<ul style="list-style-type: none"> All parts but one (name, date, class, topic) are clearly written in the correct place. 	<ul style="list-style-type: none"> Some parts (name, date, class, topic) are written in the correct place. 	<ul style="list-style-type: none"> Heading is missing two parts (name, date, class, topic). 	<ul style="list-style-type: none"> Heading is missing three or more parts (name, date, class, topic) and/or may not be written in correct place.
Legibility	<ul style="list-style-type: none"> Notes are neat and completely legible. 	<ul style="list-style-type: none"> Notes are completely legible. 	<ul style="list-style-type: none"> Notes are mostly legible. 	<ul style="list-style-type: none"> Notes are mostly illegible. 	<ul style="list-style-type: none"> Notes are illegible.
Notes	<ul style="list-style-type: none"> Selective and accurate paraphrasing is used. Logical abbreviations are used. Notes have been edited. Key words have been highlighted and/or underlined. Revisions/additions are made in a different color. 	<ul style="list-style-type: none"> Selective and accurate paraphrasing is used. Logical abbreviations are used. Some key words have been highlighted or underlined. Partial revisions/additions are made in a different color. 	<ul style="list-style-type: none"> Notes may/may not be accurate; information not always paraphrased. Some words are abbreviated. No use of highlighting or underlining. No revisions have been made. 	<ul style="list-style-type: none"> Notes are incomplete. No use of abbreviations. 	<ul style="list-style-type: none"> Notes do not reflect Cornell Note format.
Questions	<ul style="list-style-type: none"> Questions check for understanding and directly reflect notes. (See Bloom's Level 1 and 2 or Costa's Level 1.) Questions also include Bloom's Levels 3-6 or Costa's Level 2 and 3, as appropriate. 	<ul style="list-style-type: none"> Questions check for understanding and directly reflect notes. (See Bloom's Level 1 and 2 or Costa's Level 1.) Most questions are lower-level. 	<ul style="list-style-type: none"> Questions are basic and may reflect notes. (See Bloom's Level 1 and 2 or Costa's Level 1.) Most questions are lower-level. 	<ul style="list-style-type: none"> Questions are limited and do not accurately reflect notes. 	<ul style="list-style-type: none"> Questions are missing.
Summary	<ul style="list-style-type: none"> Notes indicate learning by effectively identifying all main ideas. 	<ul style="list-style-type: none"> Notes indicate learning by effectively identifying some main ideas. 	<ul style="list-style-type: none"> Summary restates notes, indicates some learning. 	<ul style="list-style-type: none"> Summary restates notes and does not indicate learning. 	<ul style="list-style-type: none"> No summary included.

Notetaking Checklist

Name: _____ Period _____

Do your notes have the following characteristics?

- | | |
|---|-------|
| 1. Consistent Cornell physical format, notes dated & titled, readable | 3 pts |
| 2. Use of abbreviations, key words/phrases, underlining, starring | 1 pt |
| 3. Main ideas are easily seen; correct sequencing of information | 1 pt |
| 4. Questions are completed on left hand side: Level 2 & 3 questions | 3 pts |
| 5. An accurate, complete summary follows the notes | 2 pts |

Characteristics	Date:				
1. Consistent Cornell physical format, notes dated & titled, readable					
2. Use of abbreviations, key words/phrases, underlining, starring					
3. Main ideas are easily seen; correct sequencing of information					
4. Questions are completed on left hand side: Level 2 & 3 questions					
5. An accurate, complete summary follows the notes					
Total Points					

Rubric:

Consistent Cornell physical format, notes dated & titled, readable

- 3 Paper is folded 1/4 from the left hand side. Heading is complete with name, date, subject.
The notes are titled. Notes are adequate in length
- 2 Minor problem with format
- 1 No date or no title; short
- 0 Fails to use Cornell notetaking format or date and title are missing or notes are inadequate in length

Use of abbreviations, key words/phrases, underlining, starring

- 1 Techniques used throughout
- 0 Too much verbiage

Main ideas are easily seen; correct sequencing of information

- 1 Information is complete and in correct order
- 0 Notes confusing

Questions are completed on left hand side: Level 2 & 3 questions

- 3 A substantive number of higher order thinking questions are noted in the left margin which are answered in the notes to the right
- 2 Level 1 questions are many; level 2 and 3 questions minimal
- 1 Level 1 questions only 0 No questions in the left hand margin

An accurate, complete summary follows the notes

- 2 Detailed summary covers the main topics of the notes
- 1 Summary is generic or incomplete
- 0 Summary missing