

# Chunk don't Clump:

## A Practical Approach to Online Course Design

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Outlook Web App

+ New mail

Search mail and people

INBOX CONVERSATIONS BY DATE

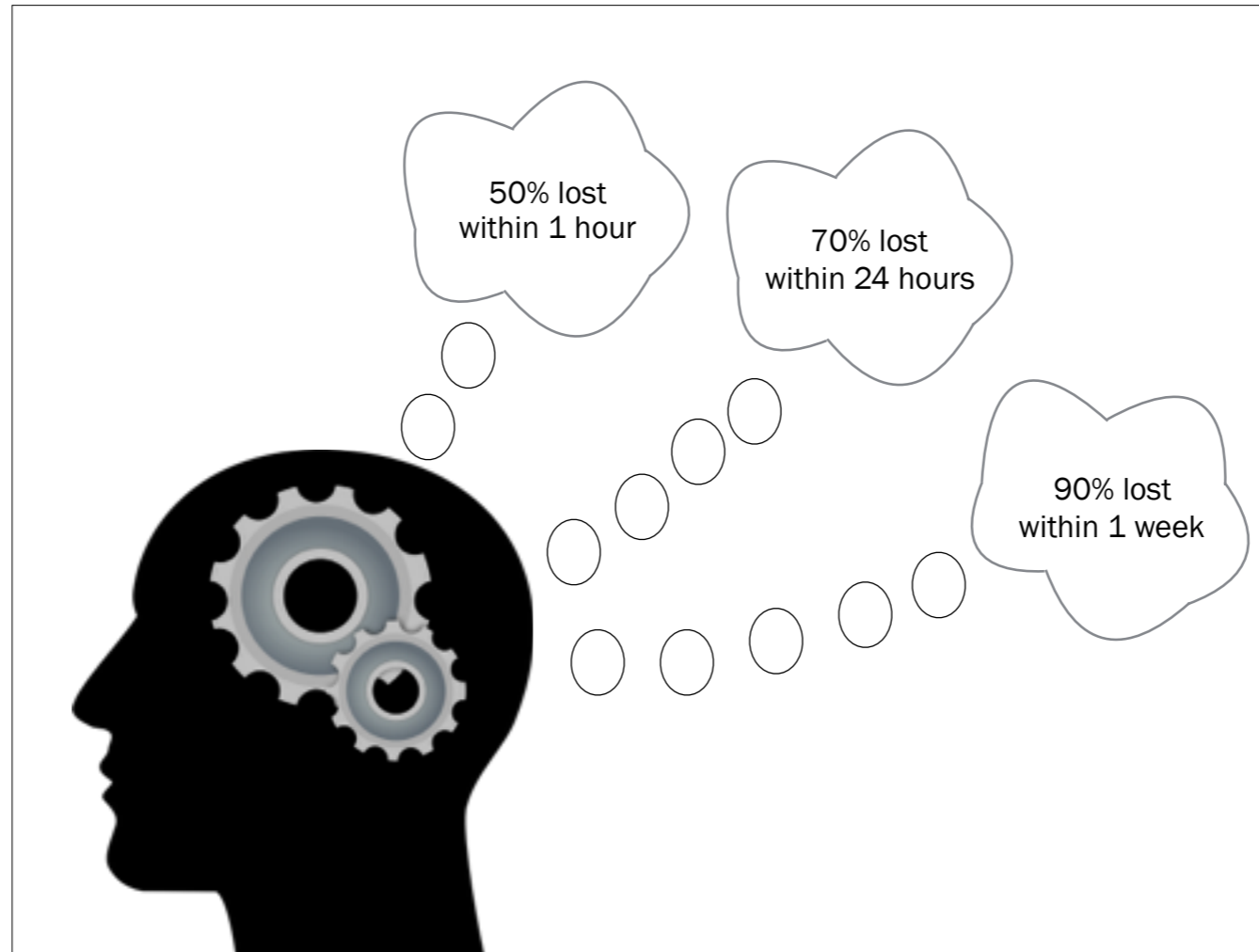
<< All Unread To me Flagged

Favorites  
 Inbox 10  
 Sent Items  
 Deleted Items 1599

Rawlings, Megan E. (OL & Ed Tech)  
 Inbox 10  
 Candidates  
 Course Development  
 Fall 2013  
 Fall 2014  
 Fall 2015  
 Spring 2014  
 Spring 2015  
 Summer 2013  
 Summer 2014  
 Summer 2015

DiMarco, Erin J.(Student)	Need homework HELPI	9:26a
Jones, Mike A.(Student)	Please explain!	Sat 4/9
✓ Hurd, Thomas W.(Student)	URGENT NEED HELPI	✗ Fri 4/8
Smith, Allison L.(Student)	Very confused!	Fri 4/8
Brown, Ashley J.(Student)	HELPI	Fri 4/8
Brown, Ashley J.(Student)	Need HELPI	Thu 4/7

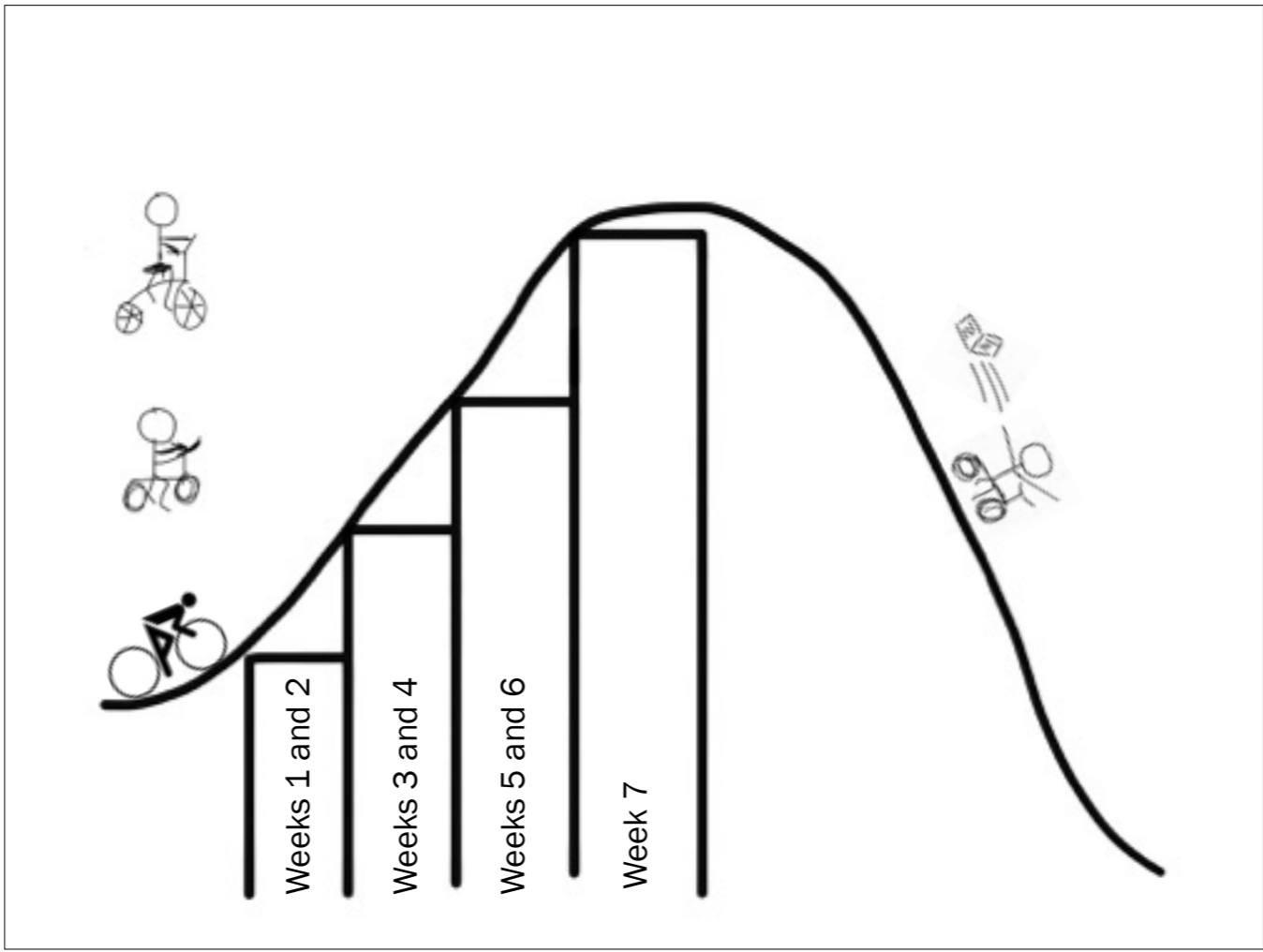
Why do our inboxes look like this the night before an assignment is due? Are students lost in the course, in the material or both? What can we do to better enable our students to succeed?



- <http://www.learningsolutionsmag.com/articles/1379/brain-science-the-forgetting-curve-the-dirty-secret-of-corporate-training>
- Numbers like these we have seen before, do we agree? What does this mean for our students?
- How can we build better assignments that avoid the forgetfulness curve?

Week	Assignments
Week 1	<ul style="list-style-type: none"><li>• Read Text and review Powerpoint slides</li><li>• Discussion Board</li><li>• Essay</li></ul>
Week 2	<ul style="list-style-type: none"><li>• Read Text and review Powerpoint slides</li><li>• Discussion Board</li><li>• Quiz</li></ul>
Week 3	<ul style="list-style-type: none"><li>• Read Text and review Powerpoint slides</li><li>• Discussion Board</li><li>• Essay</li></ul>
Week 4	<ul style="list-style-type: none"><li>• Read Text and review Powerpoint slides</li><li>• Discussion Board</li><li>• Test</li></ul>
Week 5	<ul style="list-style-type: none"><li>• Read Text and review Powerpoint slides</li><li>• Discussion Board</li><li>• Essay</li></ul>
Week 6	<ul style="list-style-type: none"><li>• Read Text and review Powerpoint slides</li><li>• Discussion Board</li><li>• Test</li></ul>
Week 7	<ul style="list-style-type: none"><li>• Read Text and review Powerpoint slides</li><li>• Discussion Board</li><li>• Final</li></ul>

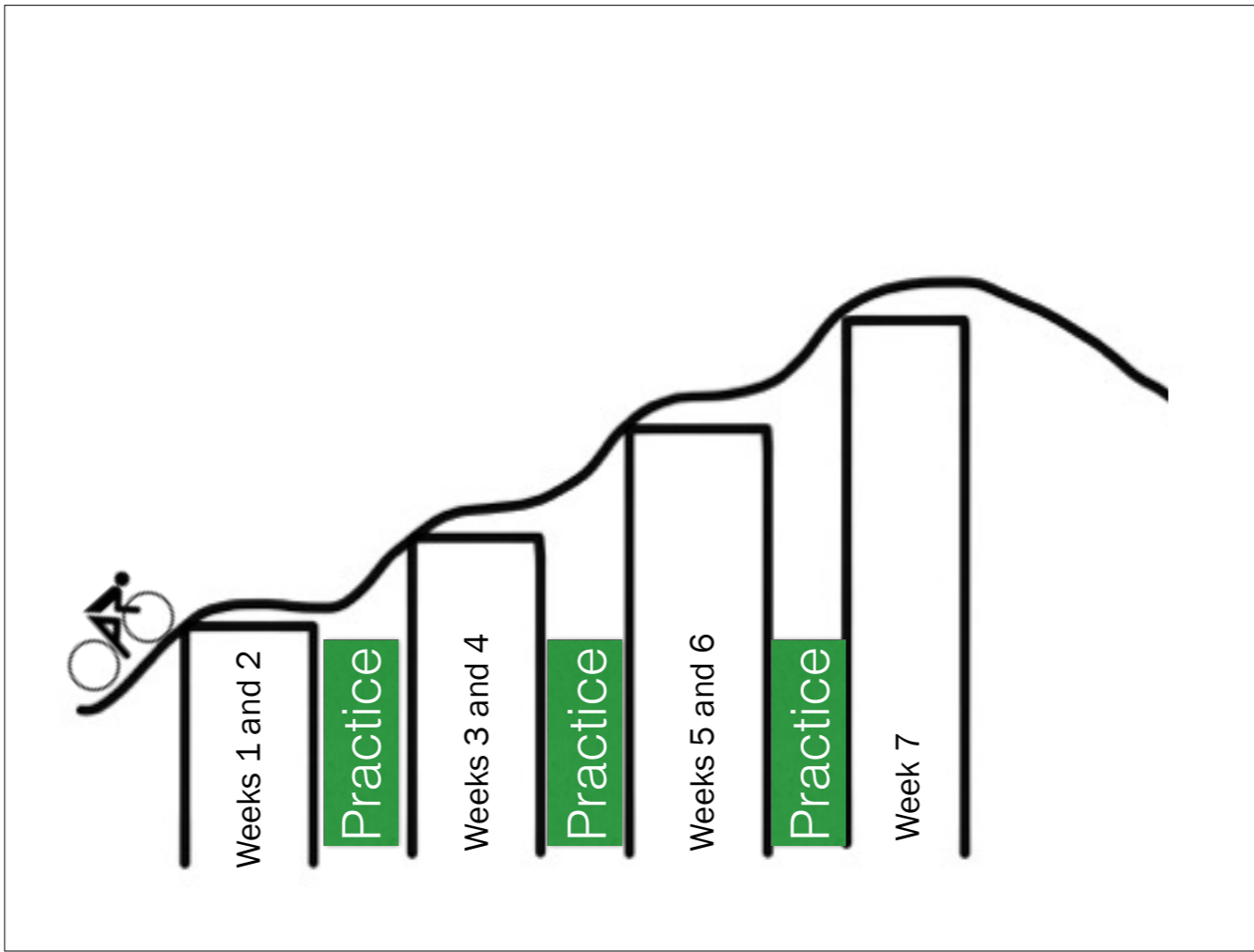
Ties to hill on next slide.



Steep hill with units stacked one on top of the next, hard work for student to climb up this hill of learning.

Week	Assignments
Week 1	<ul style="list-style-type: none"><li>• Read Text and watch videos</li><li>• Discussion Board</li><li>• Quiz</li></ul>
Week 2	<ul style="list-style-type: none"><li>• Read articles and watch videos</li><li>• Essay</li><li>• Quiz</li></ul>
Week 3	<ul style="list-style-type: none"><li>• Watch videos</li><li>• Discussion Board</li><li>• Quiz</li></ul>
Week 4	<ul style="list-style-type: none"><li>• Read Text and articles</li><li>• Discussion Board</li><li>• Quiz</li></ul>
Week 5	<ul style="list-style-type: none"><li>• Read Text and watch videos</li><li>• Presentation</li><li>• Quiz</li></ul>
Week 6	<ul style="list-style-type: none"><li>• Read articles and watch videos</li><li>• Discussion Board</li><li>• Quiz</li></ul>
Week 7	<ul style="list-style-type: none"><li>• Read Text</li><li>• Final</li></ul>

Ties to hill on next slide.



Easier hill with time for practice between main aspects of units instead of stacked against each other.

Week	Assignments #1	Assignments #2
Week 1	<ul style="list-style-type: none"> <li>• Read Text and review Powerpoint slides</li> <li>• Discussion Board</li> <li>• Essay</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Read Text and watch videos</b></li> <li>• <b>Discussion Board</b></li> <li>• <b>Quiz</b></li> </ul>
Week 2	<ul style="list-style-type: none"> <li>• Read Text and review Powerpoint slides</li> <li>• Discussion Board</li> <li>• Quiz</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Read articles and watch videos</b></li> <li>• <b>Essay</b></li> <li>• <b>Quiz</b></li> </ul>
Week 3	<ul style="list-style-type: none"> <li>• Read Text and review Powerpoint slides</li> <li>• Discussion Board</li> <li>• Essay</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Watch videos</b></li> <li>• <b>Discussion Board</b></li> <li>• <b>Quiz</b></li> </ul>
Week 4	<ul style="list-style-type: none"> <li>• Read Text and review Powerpoint slides</li> <li>• Discussion Board</li> <li>• Test</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Read Text and articles</b></li> <li>• <b>Discussion Board</b></li> <li>• <b>Quiz</b></li> </ul>
Week 5	<ul style="list-style-type: none"> <li>• Read Text and review Powerpoint slides</li> <li>• Discussion Board</li> <li>• Essay</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Read Text and watch videos</b></li> <li>• <b>Presentation</b></li> <li>• <b>Quiz</b></li> </ul>
Week 6	<ul style="list-style-type: none"> <li>• Read Text and review Powerpoint slides</li> <li>• Discussion Board</li> <li>• Test</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Read articles and watch videos</b></li> <li>• <b>Discussion Board</b></li> <li>• <b>Quiz</b></li> </ul>
Week 7	<ul style="list-style-type: none"> <li>• Read Text and review Powerpoint slides</li> <li>• Discussion Board</li> <li>• Final</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Read Text</b></li> <li>• <b>Final</b></li> </ul>

Compare the two syllabi, what is the key difference that cause the steep hill vs the gradual hill?



The difference?

Low-stakes assessments.

Formative assessments that aren't worth a large portion of the students' overall grade.

Allow students the opportunity to **gain confidence** and have **early successes**.

- Worth less so students don't bother to cheat and if they do the assignment it isn't worth a lot.
- Give the students an opportunity to practice and apply what they're learning with minimal damage to their learning if they fail the assignment due to comprehension and retention.
- Helps give you and the students an idea of where they are in regards to understanding the content because you have the chance to provide comprehensive feedback

short-term memory

PRACTICE

long-term memory

- In traditional schedules with multiple unit tests, students spend time re-reading notes and cramming. This only puts information into their short term memory but we want what they learn to pass into their long-term memory. This is done through practice.
- asking your learners to do something with the knowledge they have recently obtained will increase their ability to retrieve that knowledge later
- The research of Dr Pooja K. Agarwal, a cognitive scientist ([retrievalpractice.org](http://retrievalpractice.org)) focuses on retrieval practice of pulling that information back out again through practice and low stakes assessments. “Just because we learn something quickly and easily does not guarantee we’ll remember it” Students learn the material but then need to apply it.

- <http://www.learningsolutionsmag.com/articles/1684/brain-science-testing-testing-the-whys-and-whens-of-assessment/pageall>
- <http://www.uky.edu/~kbrad2/EPE773R/StudentPapers/ConsumerBehavior.pdf>

# Critical Thinking!

They need to perform the task and get feedback. Students need to go beyond rote memorization.

# Have your students:

**Interact**

**Make Stuff**



**Entertain**

**Question**

All of these will promote critical and higher order thinking. Students are just spitting back out information but instead have to do something with the material or other students and the material.

## Low - Stakes Assessments



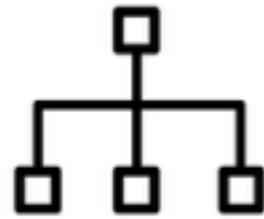
Discussion Boards



Quizzes



Notes or Annotations  
on Resources



Breaking down  
larger assignments



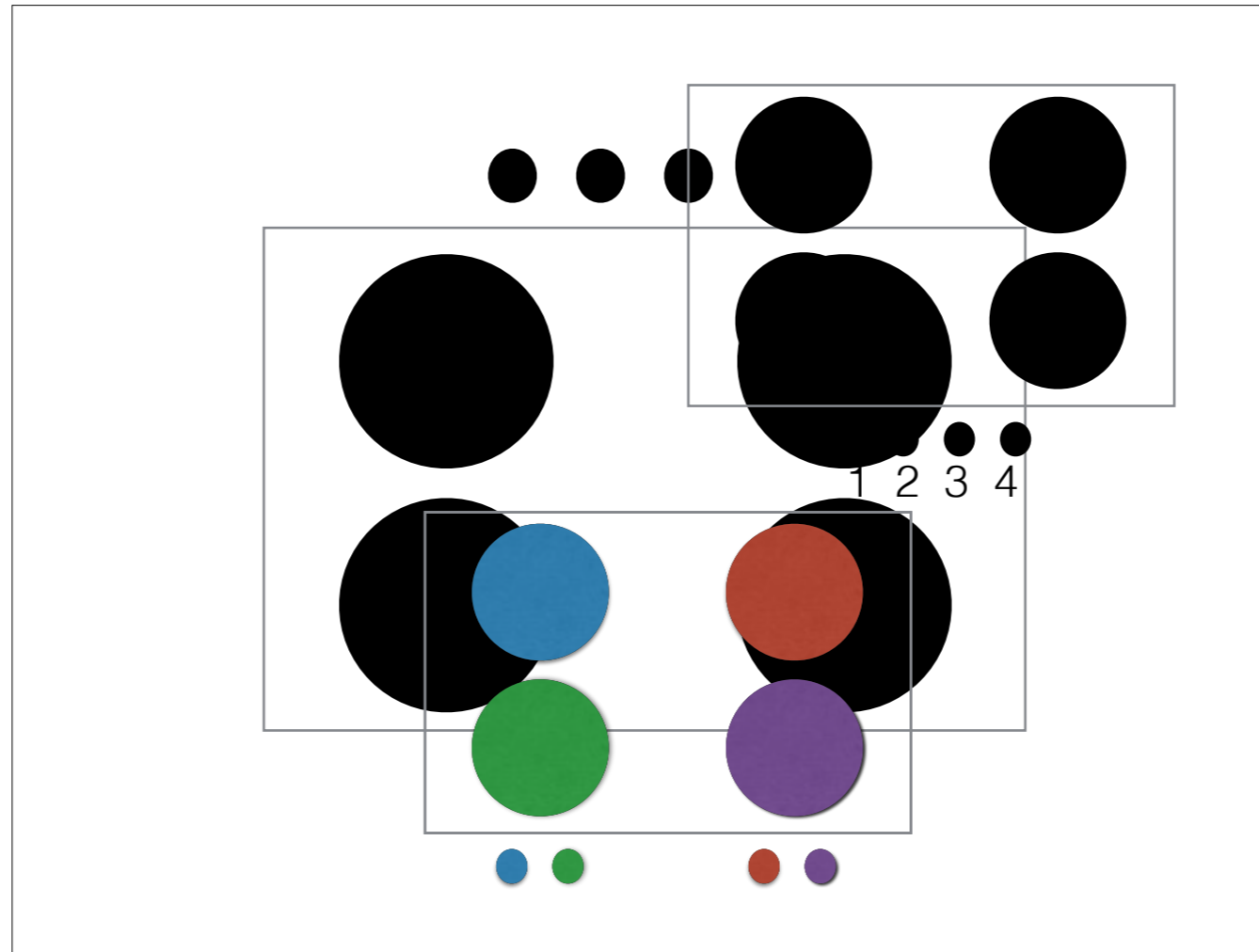
Journal entries

- Quizzes and breaking down larger assignments allow students to see the before and after, their progress
- Concept maps
- The research of Dr Pooja K. Agarwal, a cognitive scientist ([retrievalpractice.org](https://retrievalpractice.org)) then focuses on retrieval practice of pulling that information back out again through practice and low stakes assessments.

# Now what?

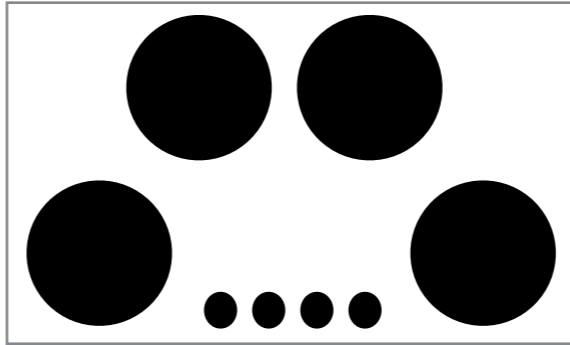
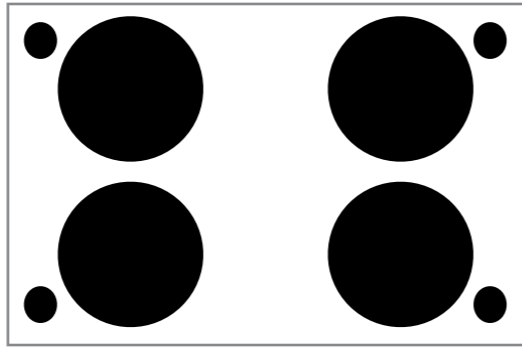
Recreating assignments in this manner is a lot of work and you may not see immediate results because it is a shift for students as well but having them work harder with low stakes assessments that force them to critically think will benefit them in the long run.

You can help ease their transition....



Stovetop design, why are stovetops designed so we must read labels, etc to determine which knob to use for which burner? It should be intuitive. Similarly, our courses should not require excessive explanation or labels on material. It should be easy for students to find and access what they need without have to work through disorganization.





Better stovetop designs, they are easy to determine which knob goes with which burner just at a glance. Course design should follow this practice.

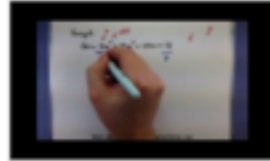
- Goldstein & Pevehouse Powerpoint
- Question Bank
- Pearson MyPollSciLab registration details
- Quiz 1 Chapter 1 G&P
- Quiz 2 Chapter 2 & 3 G&P (pp.71-96) Rosemary
- Quiz 2 Chapter 2 & 3 G&P (pp.71-96)
- Quiz 3
- Quiz 4 Chapter 3 (entire) & Chapter 4 (pp. 127 - 134)
- Quiz 5 (Part I Art & Jervis; pp. 1- 66)
- Quiz 6 (Part I Art & Jervis pp. 67-120)
- Quiz 7 (Part I & II Art & Jervis pp. 120 - 140)
- Quiz 8 (Part II Art & Jervis pp. 136 - 173)
- RC Assignments
- John Jarabek Homework 2
- Midterm\_140
- Homework 1 Chapter 1&2 G&P
- Homework 10 (Section I Art & Jervis (pp. 1 - 79)
- Homework 11 (Section I & II Art & Jervis pp. 79 - 151)
- Homework 12 (Section II & III Art & Jervis pp. 152 - 226)
- Homework 13 (Section III & IV Art & Jervis pp. 227 - 305)
- Homework 16 (Religious doctrine & conflict)
- Slantshev\_ConcertoEurope
- Class discussion instructions.docx.pdf
- Guide to taking notes

Clumped materials. confusing for students and faculty, hard to find the material you need.



## Readings and Resources

Complete this week's Textbook Reading: Pages 296 – 325 then review the following:



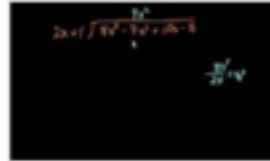
Watch Video

### Pre-Calculus – Graphing a polynomial function

Duration: (9:19)

User: mysecretmath tutor – Added: 4/16/13

YouTube URL: <http://www.youtube.com/watch?v=en2ctMSVNEI>



Watch Video

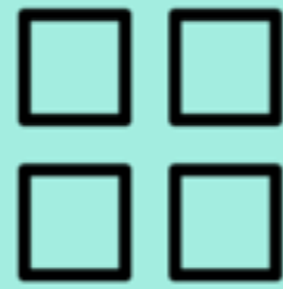
### Algebraic Long Division

Duration: (10:22)

User: khanacademy – Added: 8/31/08

YouTube URL: [http://www.youtube.com/watch?v=4u8\\_AMacu-Y](http://www.youtube.com/watch?v=4u8_AMacu-Y)

Nested folders - initially appears organized but students have to continue to click in and out to find all the material they need within that weekly or unit folder.



**CHUNK**

DON'T CLUMP



#### Week 6 Introduction

In Week 6 we draw conclusions on the relationship between exponential and logarithmic functions. We finish with Test #2 that covers topics from Week 4, 5 and 6. Be sure to review all the provided resources to deepen your understanding on this week's topics. Reviewing these resources will enable you to better process and complete this week's assignments.

If you have any questions do not hesitate to contact me!



#### Week 6 MyMathLab

Please log in and complete the Week 6 Homework set in MyMathLab. Be sure to take advantage of the "Show me an Example" and "Help" buttons when you need assistance; sometimes these will gain you partial credit. Please complete all work on paper then enter it in. Do not guess answers! You will be tested on this material in later weeks. This week's homework set is due by Sunday at 11:59PM this week.



#### Week 6 Discussion Board

Review [this article](#) on mathematics in the field then follow this link to complete the Week 6 Discussion Board.



#### Logarithmic Graph Assignment

Review the following video:



For each of the functions below, describe how the graph can be obtained from the graph of a basic logarithmic function:

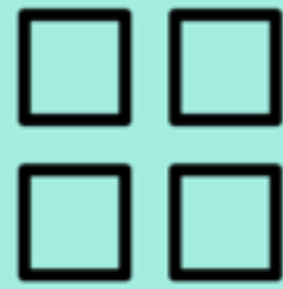
- $f(x) = \log_3(x-2)$

- $g = \ln(x+1)$

Then graph the function, this can be done digitally or on paper. Provide the domain and the vertical asymptote of each function.

Be sure to submit all your work including the graph!

- Better organization with resources embedded and linked right within instructions.
- Everything is accessible from one spot for this Week (unit or module)
- Folders can be used to further chunk material when appropriate. (for example, if you have a lot of resources that directly tied to one assignment then that assignment could be its own folder within the module or week folder).



**CHUNK**

DON'T CLUMP

Chunk don't Clump:

## A Practical Approach to Online Course Design

Megan Rawlings  
Senior Instructional Designer

[www.geneseo.edu/cit/instructional-design](http://www.geneseo.edu/cit/instructional-design)



## References:

- Design for How People Learn by Julie Dirksen
- How Fast Do Students Forget What They Learn in Consumer Behavior? Longitudinal Study by Donald R. Bacon and Kim A. Stewart
- Retrieval Practice - research and findings by Dr Pooja K. Agarwal
- The Design of Everyday Things by Donald A. Norman
- The Forgetting Curve by Art Kohn