

# Connecting with your Students: Meet them Where They Are

presentation slides online: <http://bit.ly/hilo18-julia>



Image credit: "Connection", 2018, used with permission from the artist  
[www.deviantart.com/chiandra4u/](http://www.deviantart.com/chiandra4u/)

Please pick up a  
copy of:

1. handout
2. color ABCD card
3. small slip of paper

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# Jump right in



...to class.

...to the term.

...to change.

# Goals

By the end of this talk, you will:

1. articulate one clear goal for a topic you (will) teach
2. list *and rate* 4 different strategies for eliciting student answers and ideas during class time
3. generate one idea for establishing relevance of a topic to your audience
4. list *and rate* 7 different strategies for reducing digital distraction



# Per-semester goals help you prioritize what material to include and emphasize



Image credit: Noel Hendrickson via Getty Images



# Per-semester goals help you prioritize what material to include and emphasize

§ -- core concepts  
out the course

My overarching goals for this course are for you to:

- \* think in the big picture, pondering your own place in the Universe
- \* distinguish how science is different from other intellectual pursuits
- \* acquire enough familiarity with the tools and terminology of astronomy that you could follow articles in the popular news media if you so desired
- \* apply math and quantitative reasoning where appropriate to solve problems

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Per-lecture goals summarize the most valuable nuggets of your presentation



Image credit: <https://detectorreviews.co.uk/beach-metal-detecting-guide>

Per-lecture goals summarize the most valuable nuggets of your presentation

# Study Guide

Last updated Apr 26, 2018

This study guide lists all the testable topics for the class, roughly in the order we will cover them, and how you should be able to demonstrate your understanding of them.

- (1/6) Name all 8 planets
- (2/6) Identify all 4 terrestrial planets
- (2/6) State the major characteristics of the major classes of planets
- (2/6) Define an Astronomical Unit
- (2/6) Explain the difference between apparent and absolute magnitude
- (2/6 & 2/8) Explain differences between comets and asteroids
- (2/6) Explain the differences between comets and asteroids

Properties of Stars  
brightness, luminosity, etc.





# Types of Goals (see handout)

Different types of goals

	some illustrative examples	your priority(ies)?
content		
skills		
attitudinal		

Goals allow you to begin with the end in mind:  
Where do you want students to end up?

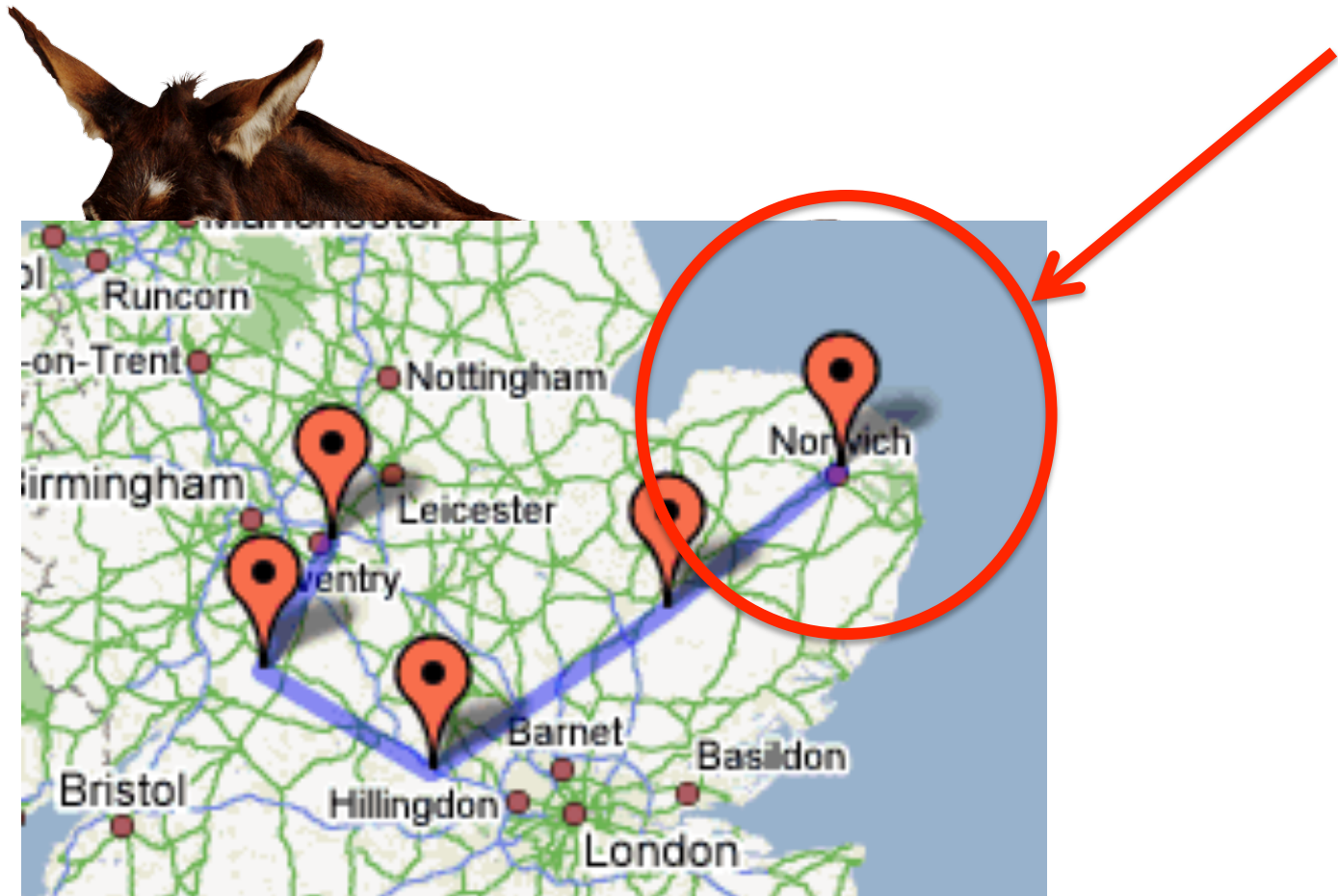


Image credit: <https://freegeographytools.com/2007/creating-gps-routes-in-google-maps>

Active Learning strategies come in a wide variety of flavors to suit your taste



Image credit: <https://www.chowhound.com/food-news/113102/the-dim-sum-cart-goes-bistro/>



# Minute Paper

On your paper, write the following information:

1. Your full name (as it will appear on my roster)
2. What name do you prefer to be called?
3. If people ever mispronounce your name, please provide me with pronunciation tips.
4. Optional: What pronouns do you use? (e.g. she/her/hers, he/him/his, they/them/theirs, ze/hir...)

# Minute papers are brief in-class writing assignments



Image credit: Peeter Jontes

<https://edwp.educ.msu.edu/green-and-write/wp-content/uploads/sites/5/2015/11/StudentTesting.jpg>

Work with a partner.

In 1 minute, brainstorm as many benefits of minute papers as you can.

See handout for some example prompts...



What size class(es) do you teach?

- A. <20
- B. 20-50
- C. 50-100
- D. >100
- E. Don't know



Voting can be done without  
any tech



# Your handout lists ideas for reducing anxiety for shy students

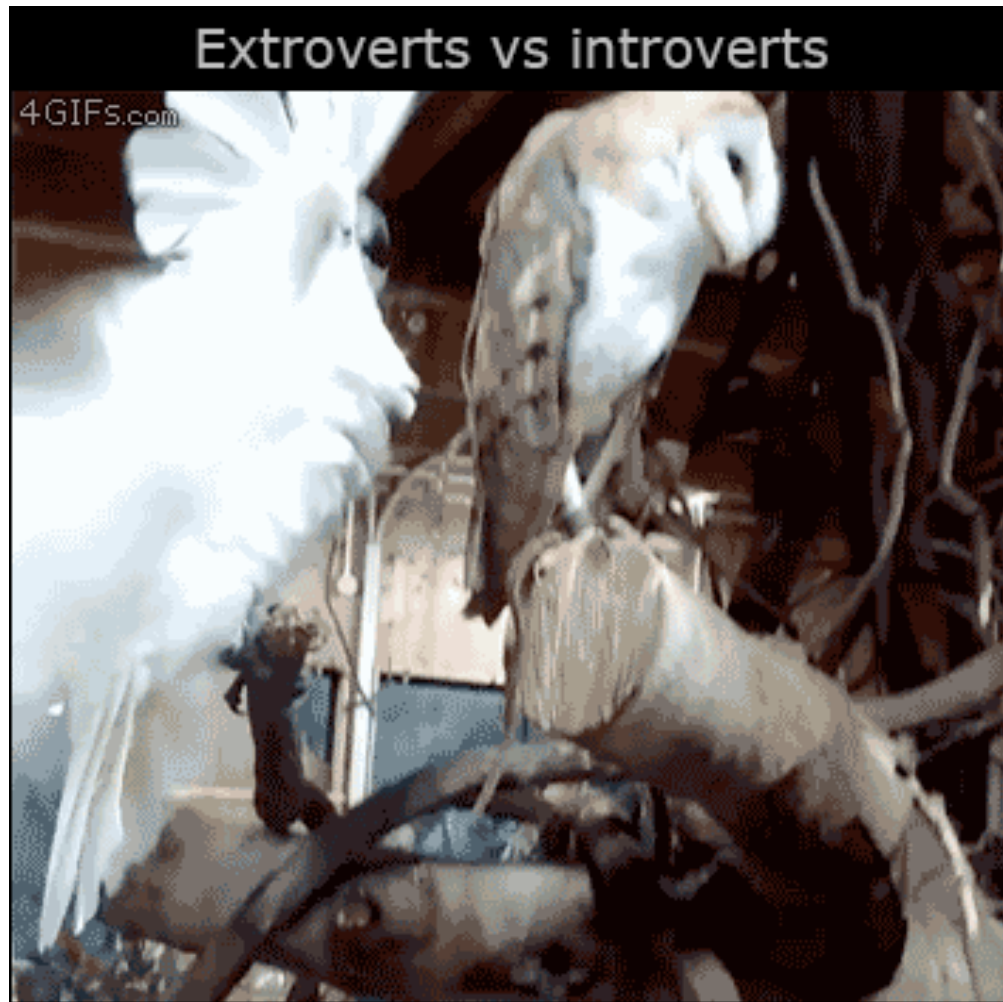


Image credit: [https://iwastesomuchtime.com/extroverts\\_vs\\_i\\_161227](https://iwastesomuchtime.com/extroverts_vs_i_161227)



Check in with students frequently to see how much time they need for activities



# Rate each Active Learning strategy on how likely you are to use it

- [1] not at all
- [2]
- [3] maybe
- [4]
- [5] definitely

Active Learning Strategies sampler

	examples	notes/details	your rating (1-5)
<b>minute papers</b>	E.g.: muddiest point OR main points from class, what do you hope to learn, explain in your own words, give an example, etc.	Benefits:	
<b>brainstorming</b>	solo or groups, write or aloud	asking them to write ideas first gives time for slower processors to think	
<b>drawing names</b>	draw randomly from hat, cold-calling	students could opt in/out; can give participation credit or not; try getting multiple responses	
<b>voting</b>	cards, clickers, hands, arms, online polling	can give credit or not	

# Actively support and engage students with different levels of prep



Image credit: <https://clipartuse.com/clipart/894325>



# Augment motivation with **relevance** authenticity, and appropriate challenge



Image credits: <http://why-am-i-always-tired.org/78/are-you-tired-or-are-you-bored/>  
<https://logophilesunleashed.wordpress.com/2015/08/19/honors-english-i-extra-credit-recommend-a-book/>

Augment motivation with **relevance**,  
authenticity, and appropriate challenge



Image credit: Prof. Daniel A. Fleisch

Augment motivation with relevance,  
**authenticity**, and appropriate challenge



<https://www.dailystar.co.uk/news/latest-news/608297>



# Augment motivation with relevance, authenticity, and **appropriate challenge**



Image credits:

<https://www.upwork.com/hiring/for-clients/lightweight-app-design/>

<https://www.building-muscle101.com/light-or-heavy-weights-for-weight-training.html>



What is one way you could establish the relevance of a topic (or idea, or skill) you teach?

Jot ideas on your handout...

# How concerned are you about off-task digital distraction in higher ed?

- A. Zero
- B. A little
- C. Medium
- D. A lot
- E. not sure



Image credit: <https://www.edutopia.org/blog/digital-tools-distraction-in-school-mary-beth-hertz>

# Your handout lists ways mitigate distraction without condescension or policing

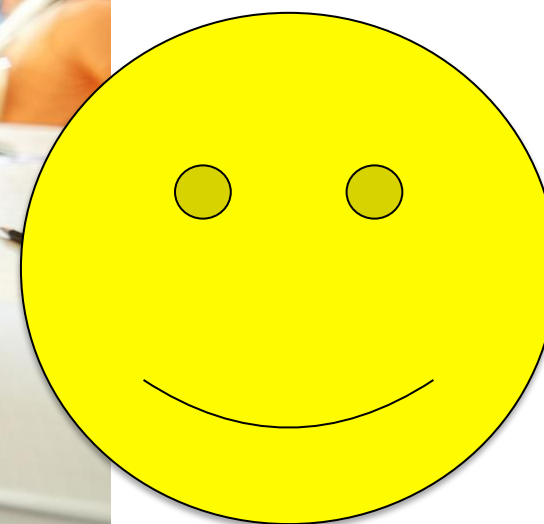


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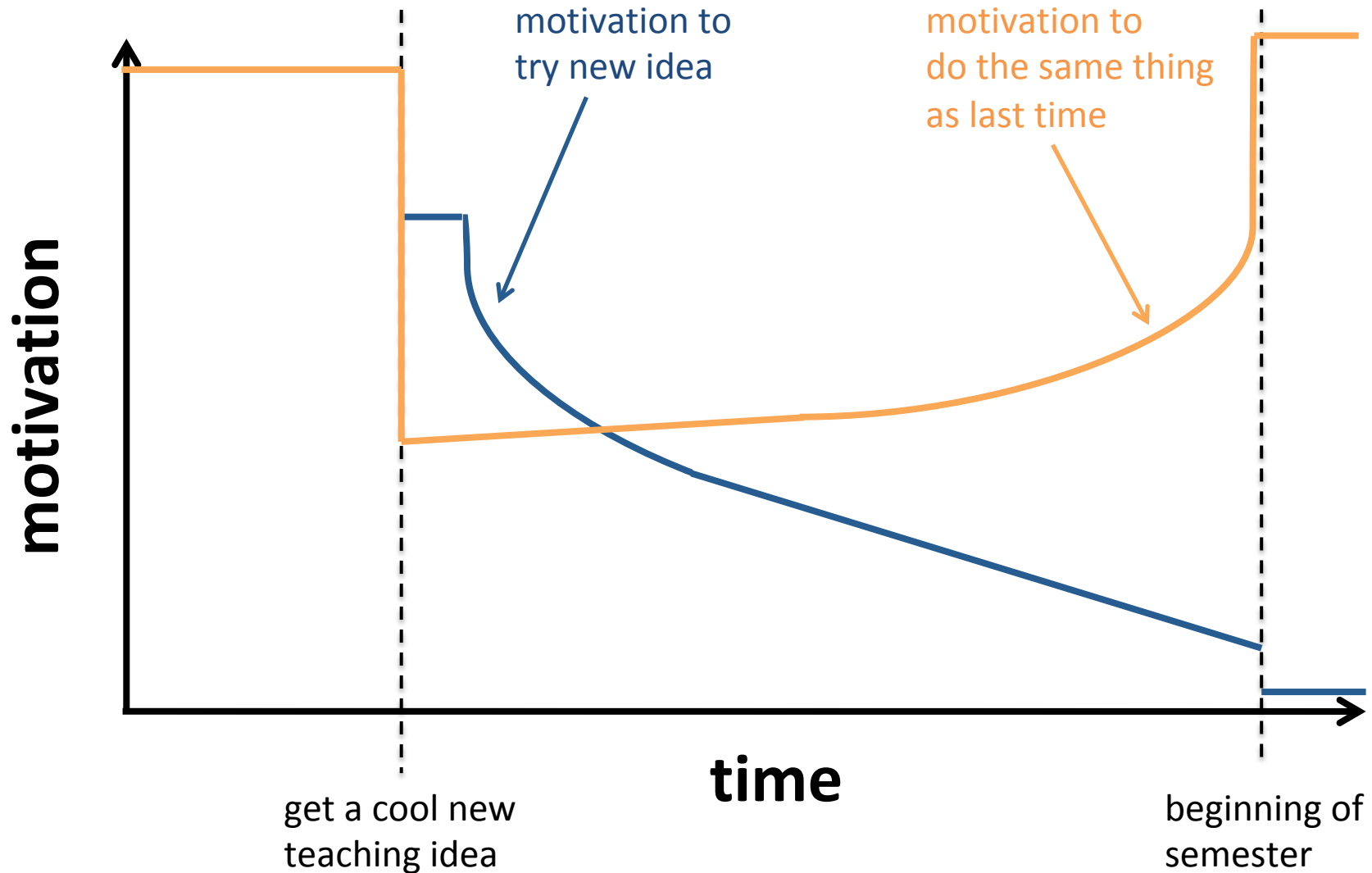
# Rate each distraction mitigation strategy on how likely you are to try it

- [1] not at all
- [2]
- [3] maybe
- [4]
- [5] definitely

Mitigating Digital Distraction

	description	limitations; other notes/details	your rating (1-5)
turn in phones	leave phones at front of room before class; pick them up after	unwieldy in large class	
phones face down	phones out on tables face down and visible during class	requires large desks or tables	
swap phones	swap phones with a neighbor during class; optional: neighbor can affirm swap with signature		
smoking section	divide room in half side-to-side: "screens" side and "no screens"		
tech break	short break midway through class		
preach about multitasking	educate students about dangers of multitasking (in lecture, reading, video, etc.)		
app, e.g. "Flipd"	offer extra credit for students to voluntarily not use phones during class time	app costs \$	

Try new a new strategy(ies) to improve your teaching soon, before motivation decays



**Jump right in**

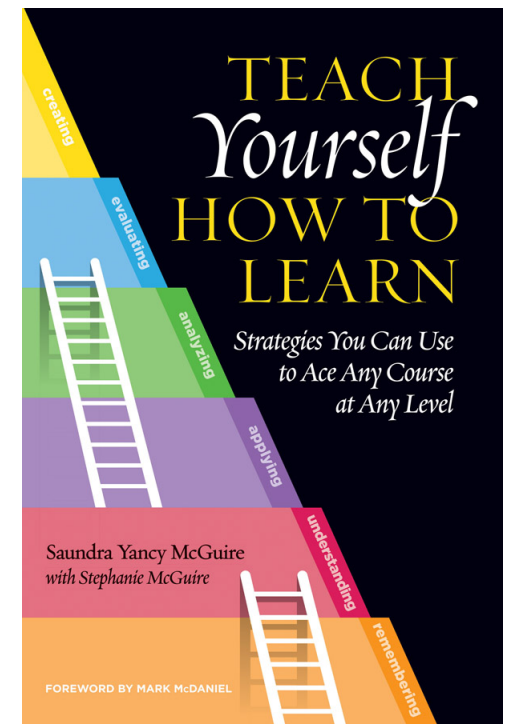
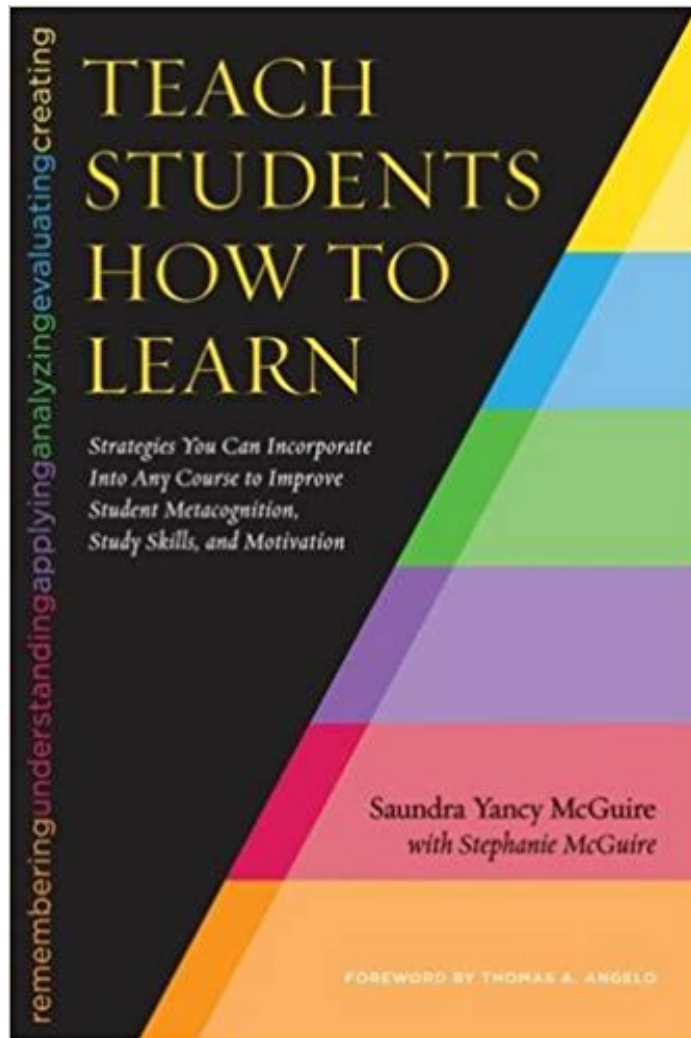


**...to change.**



Extra slides (hidden)...

Students who take ownership of their learning are more motivated & successful



<https://www.aacu.org/resources/stem-higher-education/mcguire>