

# Flipping 101: An introduction to flipped classrooms



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@julieschell

THE UNIVERSITY OF  
**TEXAS**  
— AT AUSTIN —

**Julie Schell**  
Director, OnRamps and Strategic Initiatives  
Center for Teaching and Learning  
[onramps.org](http://onramps.org)

**Southwest College of Naturopathic Medicine**  
**January 25, 2014**  
**Tempe, AZ**



I



Education



I



Education



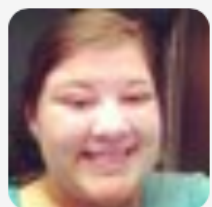


I



Education



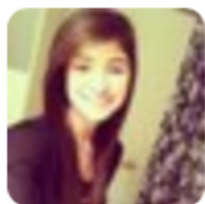


**brianna girlie** @bripaigegirlie

33 mins

I hate school. lhateschool. I HATE school. I h8 school. I hate skool.  
lh8skool. I. hate. school. Eye h8 skool. I HATE SCHOOL. **#ihateschool**

Expand   ← Reply   ↕ Retweet   ★ Favorite   ... More



**LundenStallings** @livestrong\_1

Feb 25

I was having a pretty good night, until I realized i gotta get up for prison in the morning 😊🔫 **#ihateschool**

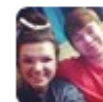
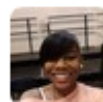
Collapse ↩ Reply ↻ Retweet ★ Favorite ⋮ More

**11**

RETWEETS

**3**

FAVORITES





**Kaylee Krepps** @kay\_lay13

Fel

Dear pre-calc, **I hate** your stinking guts You make me vomit You're the scum between my toes Love me P.S. send that message to **physics** too



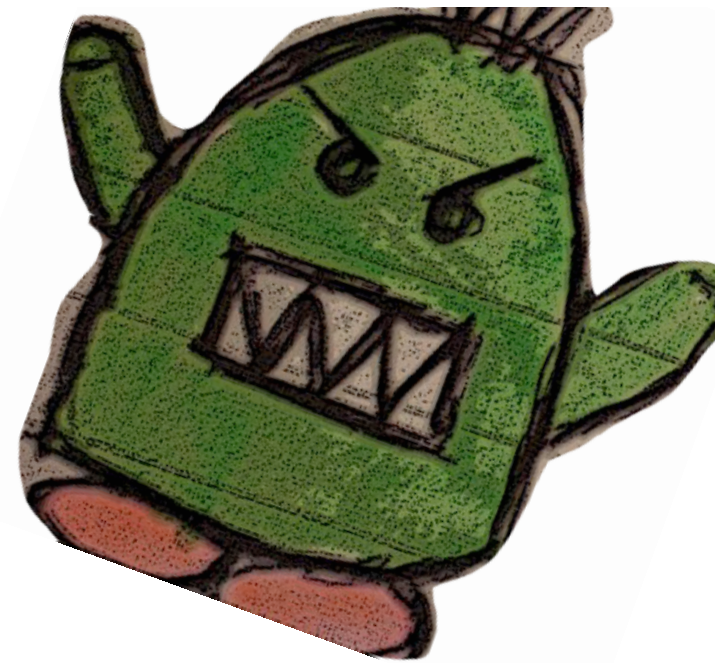


**JasmineJandu** @JasmineJandu

13 mins

I hate the fact that there's school tomorrow. Dead serious right now, I'd rather throw up and sit on it. **#ihateschool**

Expand



**Kelly Chen** @pianokchen

School is so boring #ihateschool

Expand

---

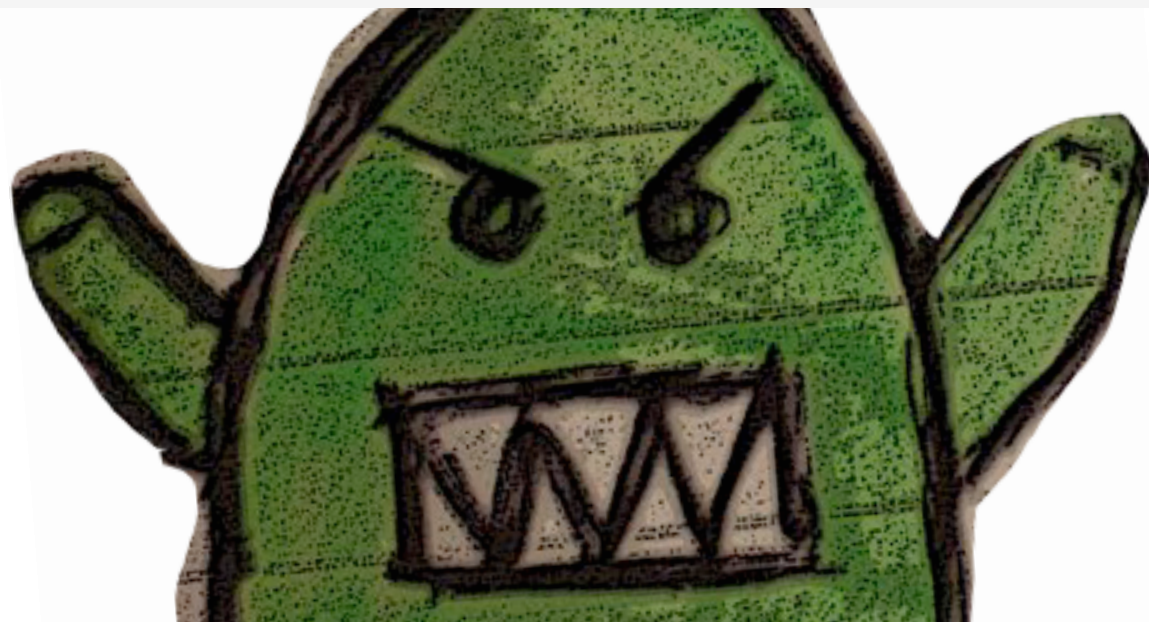


**Jessie Stockstad** @jessistockstad

16 Apr

Casually sitting in my room staring at the wall cause that's more fun than actually studying **#iloveschool**

Expand   ← Reply   ↻ Retweet   ★ Favorite   ... More







✨ Lexie 🚢 ✨ @XxL\_weeezyxX

17 Mar

History = there dead dude.

English = dictionary/ google.

Science = not a nerd. Don't need it.

Math= calculator.

**#ihateschool #die**

Expand



✨ Lexie ✨ @XxL\_weeezyxX

17 Mar

History = there dead dude.

English = dictionary/ google.

Science = not a nerd. Don't need it.

Math= calculator.

**#ihateschool #die**

Expand



**KAILS** @kaillleybird

7 Apr

Never learned how to get a loan, buy a house, car, or anything else useful in life, but I DO know the effing **pythagorean** theorem

Expand



Would be funny...if it wasn't so  
heartbreaking.

**The number of hours students spend in a system they hate.**

**10,800**

# What #hashtag best describes your schooling experience?

- a. **#ihateschool**
- b. **#iloveschool\*(really)**
- c. **#schoolisboring**
- d. **#schoolisnotpractical**
- e. **#mixedfeelings**



Q. What keeps you  
up at night?

A.

Q. What keeps you  
up at night?

A.

Not much after 20 years.

SNMC

A.

Q. What keeps you  
up at night?

I sleep well at night.

SNMC

A.

Q. What keeps you  
up at night?

It is difficult to teach to all levels  
and to reach students in such large  
class sizes.

SNMC

A.

Q. What keeps you  
up at night?

I picture those students that appear  
bored, frustrated, and who roll their  
eyes.

SNMC

Q. What keeps you  
up at night?

A.  
How to facilitate student  
learning and retention given  
short class times and an  
continually increasing amount of  
content.

SNMC



Q. What  
up at night?

Q. What keeps you

Q. What keeps you  
up at night?

How can I motivate

A.

F

A.

Desinteresse!!

Brazil

A.

How  
be

Q. What keeps you  
up at night?

Q. What  
up at night?

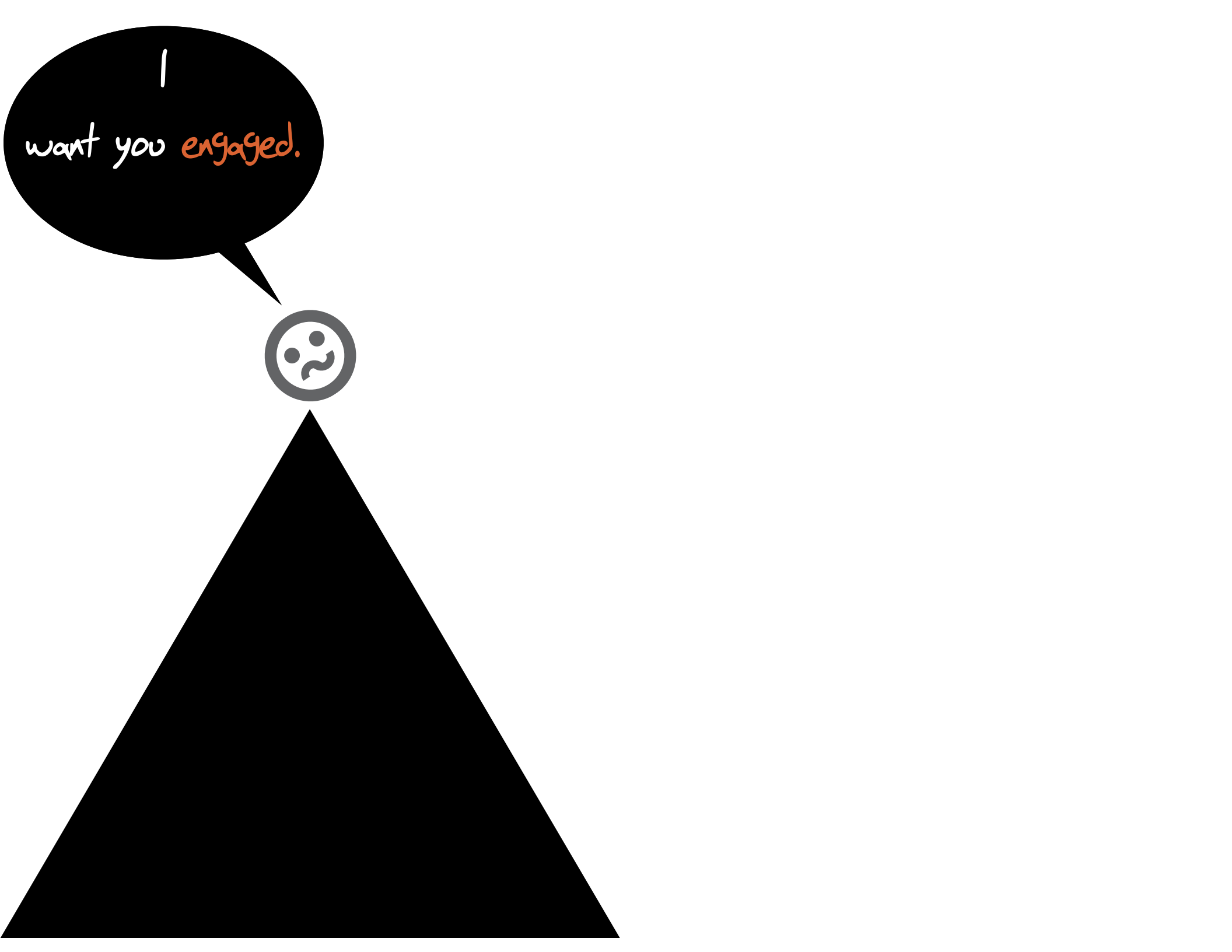
you

How boring I am & how little  
will be retained by the student.

Yale

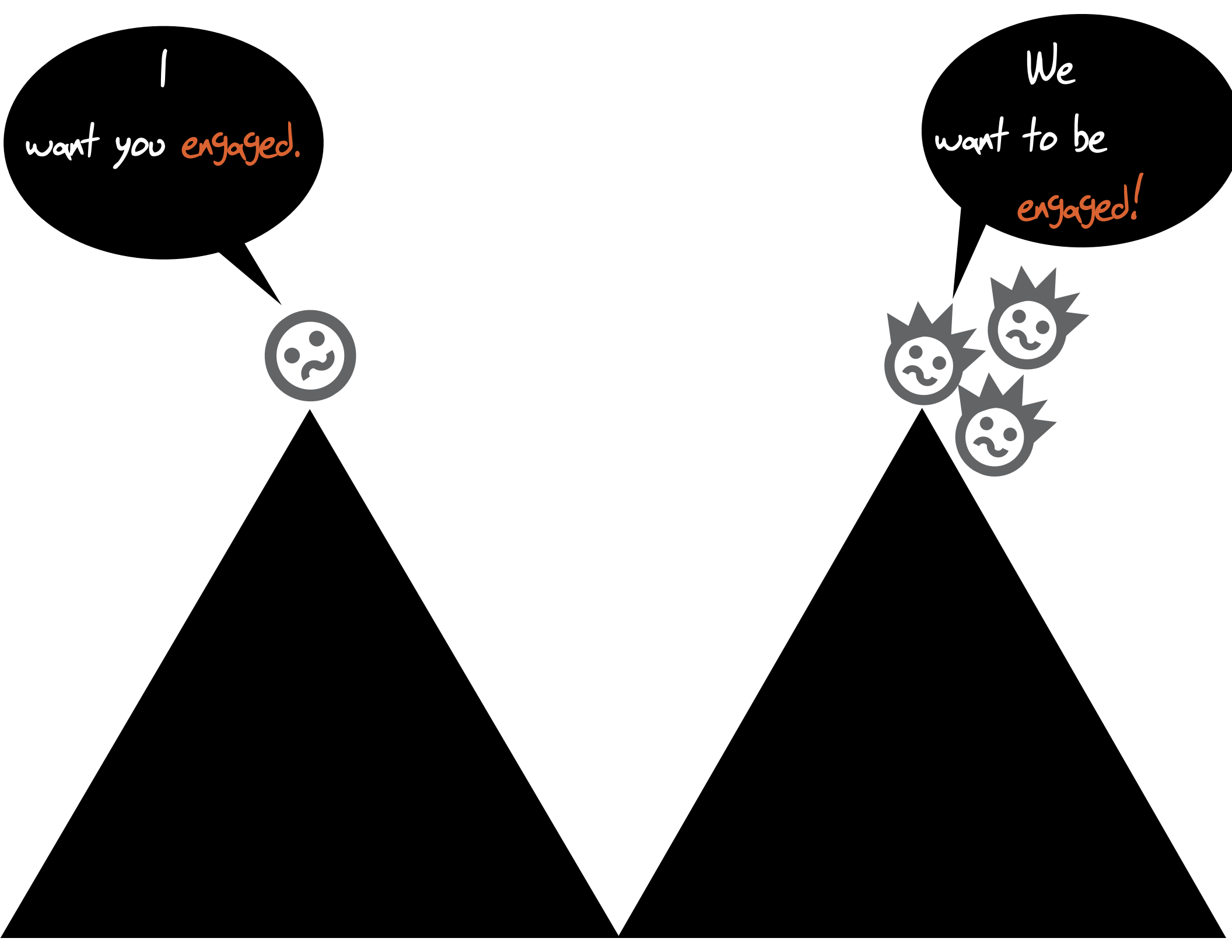
A.

Students and professors want the same thing.



I

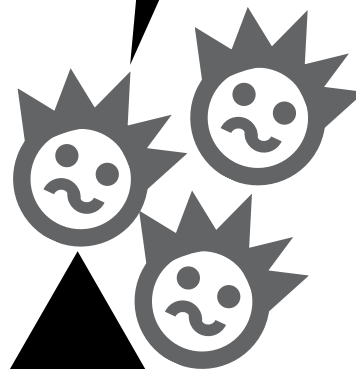
want you engaged.



I  
want you engaged.



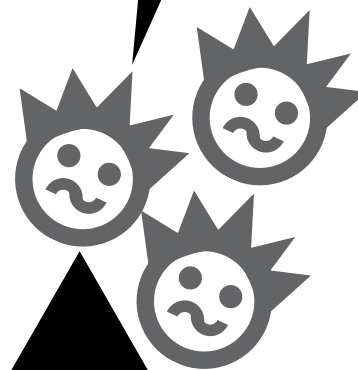
We  
want to be  
engaged!



I  
want you *engaged.*



We  
want to be  
*engaged!*



# Message



**Education doesn't  
have to be this  
way.**



What is going on in this classroom?

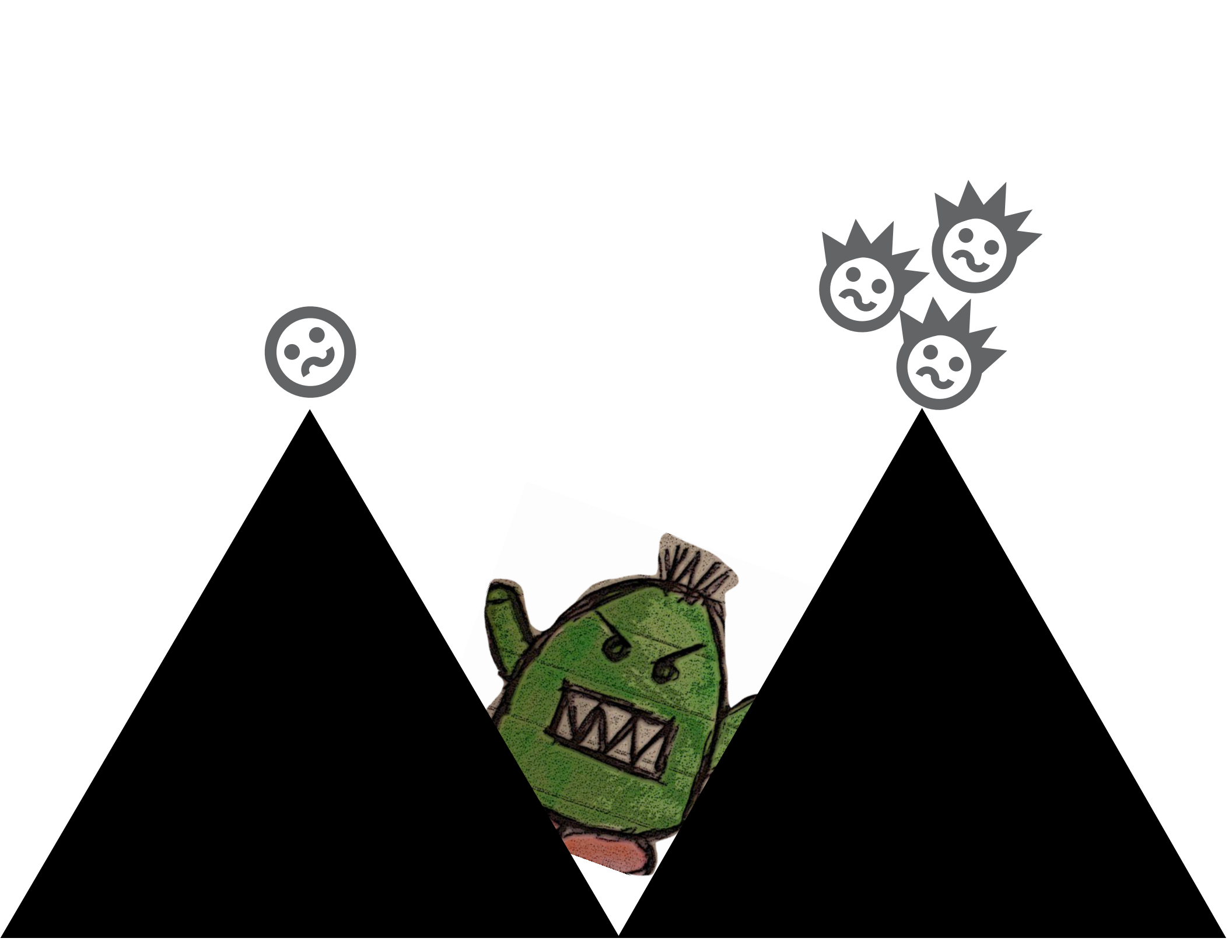


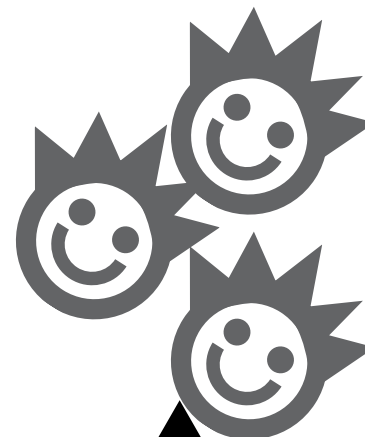
# What is going on in this classroom?

- a. teacher left the room**
- b. talking about dating**
- c. working on a physics problem**
- d. this isn't a classroom, it's a party**

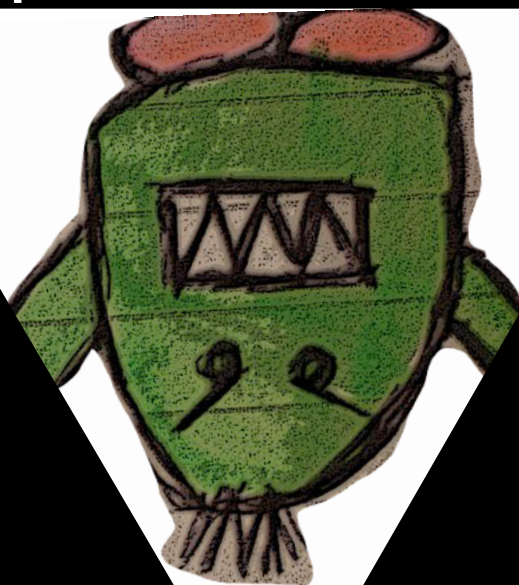
# What is going on in this classroom?

- a. teacher left the room
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- c. working on a physics problem**
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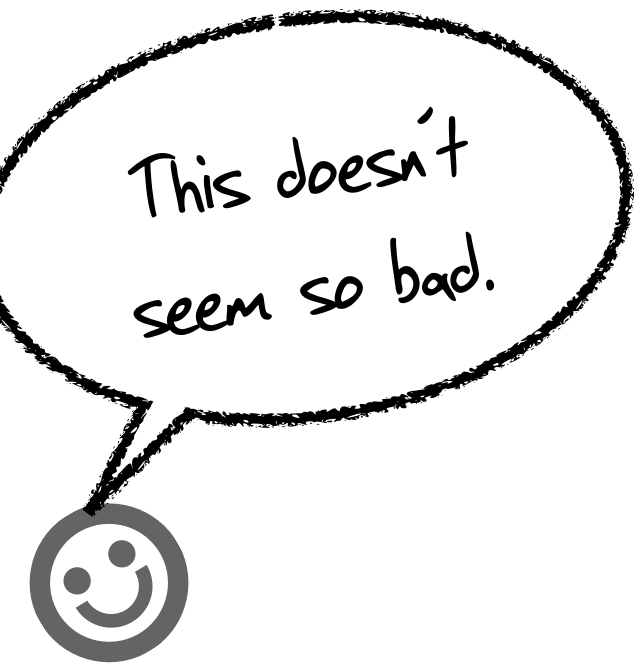




# Flipped Classrooms




# My goals for this talk...

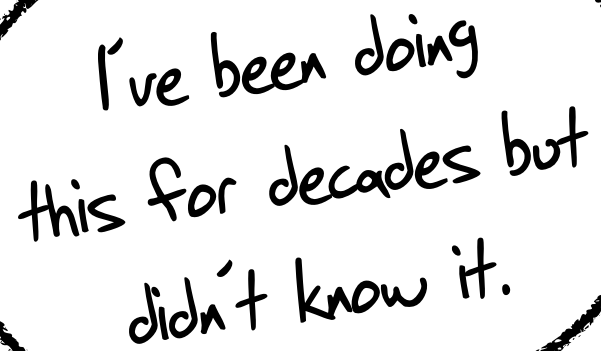




# My goals for this talk...



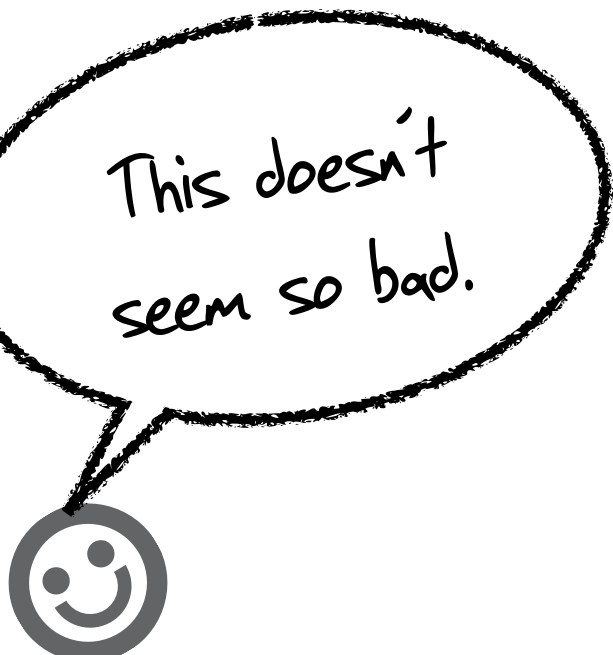
This doesn't  
seem so bad.




I've been doing  
this for decades but  
didn't know it.




# My goals for this talk...



This doesn't  
seem so bad.



I've been doing  
this for decades but  
didn't know it.



I already do this.  
I'm going to innovate  
and help others.

# 3 essential questions about flipped classrooms



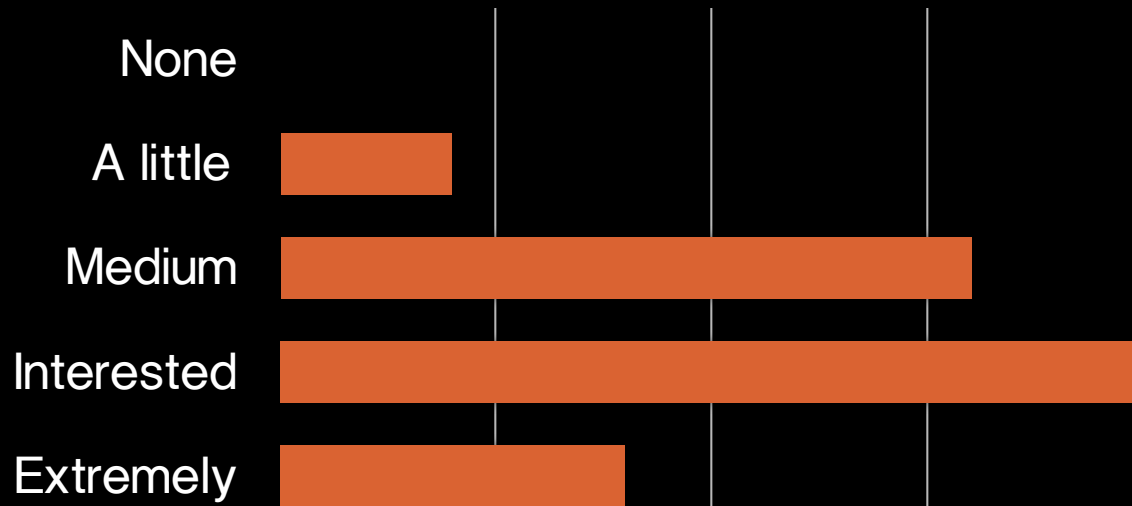
Big ideas about  
flipped classrooms





# What is a flipped classroom

**Interest**



# The Flipped Classroom

Students prepare to  
participate in class activities

**BEFORE**



Out of Class

created by Josh Walker

# The Flipped Classroom

**DURING**



Students practice applying key concepts with feedback

In Class

Students prepare to participate in class activities

**BEFORE**



Out of Class



# The Flipped Classroom

**DURING**



Students practice applying key concepts with feedback

In Class

Students prepare to participate in class activities

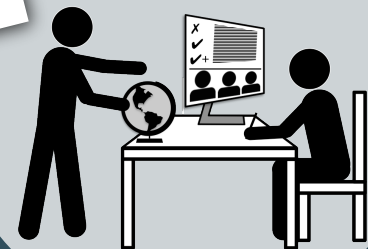
**BEFORE**



Out of Class

**AFTER**

Students check their understanding and extend their learning



# The Flipped Classroom

**DURING**



Students practice applying key concepts with feedback

In Class

GOAL

GOAL

GOAL

Students prepare to participate in class activities

**BEFORE**



Out of Class

**AFTER**

Students check their understanding and extend their learning



# You must flip your entire class

- a. True
- b. False
- c. I am not sure

# Myth 1: You must flip your entire class

► **Big idea: A flipped classroom is an approach that can be implemented gradually *or* all at once.**

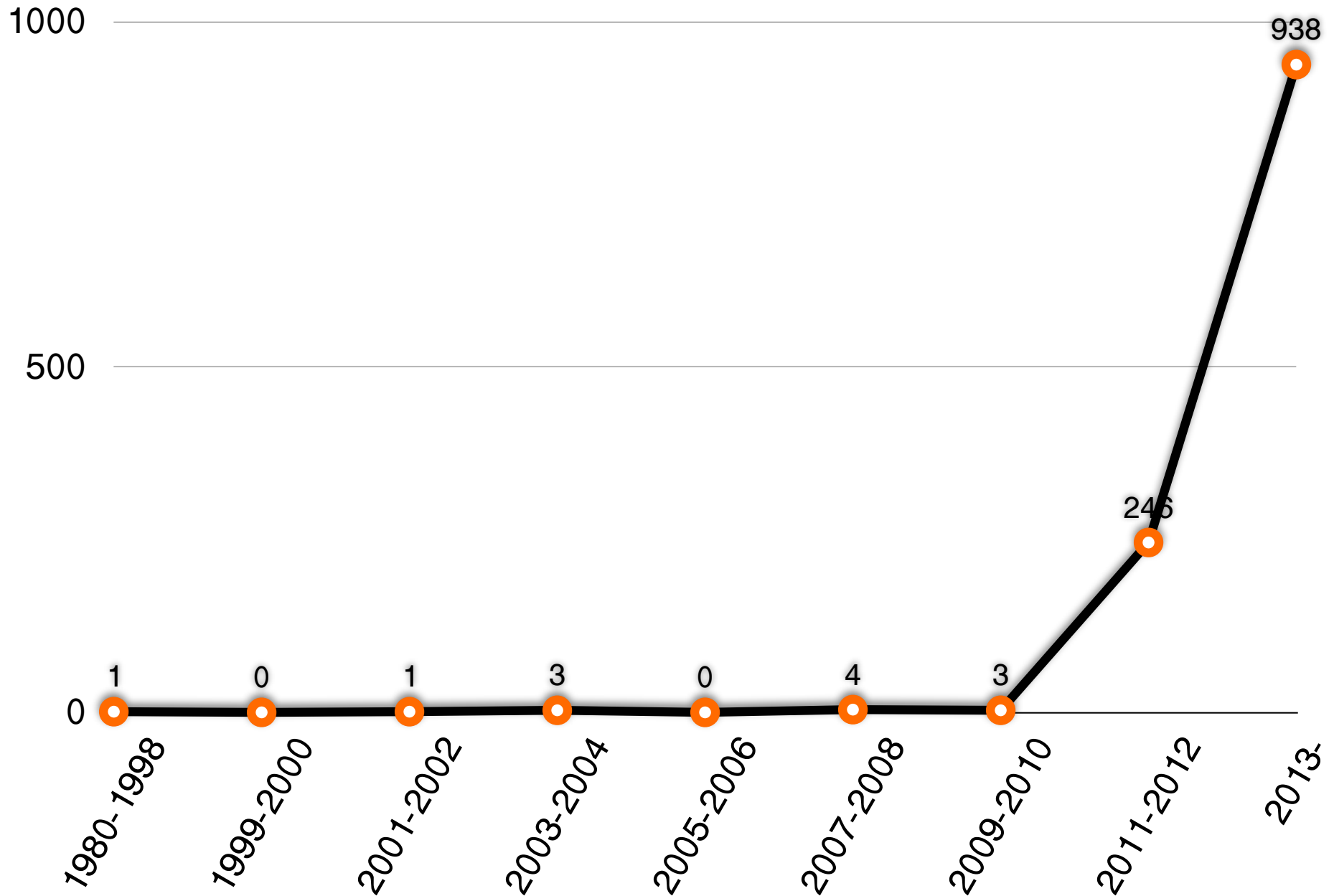
**FLIP**

- 1 concept
- 1 chapter
- 1 unit
- 1 lab
- 1 course
- 1 school

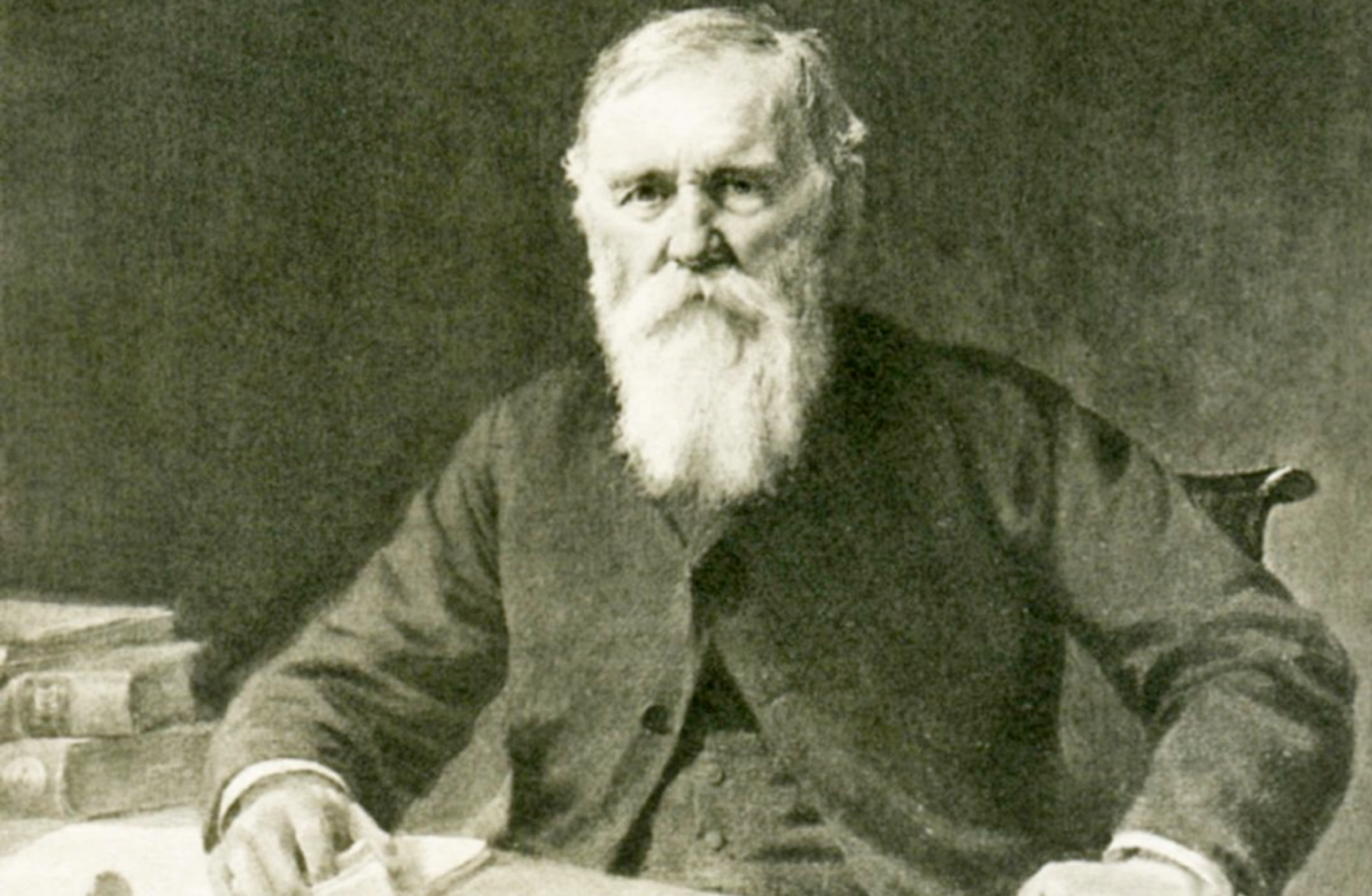
# Flipped classrooms are the latest edutrend.

- a. True
- b. False
- c. I am not sure

○ Number of Google Scholar Hits for “flipped classroom”



# Christopher Columbus Langdell, 1890s





# School at Athens, Antiquity





# Myth 2: Flipped classrooms are the latest edutrend.

► **Big idea: Flipped classrooms= new term, old idea.**

- 1st modern flipped classroom, 1890s
- Larry Michaelson, Team-Based Learning, 1980s
- Eric Mazur, Peer Instruction, 1990s
- Seminal publication in Economics Lage et al., 2000
- Jonathan Bergmann and Aaron Sams, 2007

**A flipped class replaces faculty with computers and videos.**

**a. True**

**b. False**

**c. I am not sure**

I don't really know what a flipped classroom is, but judging from the questions, it seems to involve recording your lectures.









THE WOODRUFF TABLE  
DONATED BY W. M. WOODRUFF  
1862-1906  
AND RECEIVED BY THE UNIVERSITY OF TEXAS  
AT AUSTIN IN 1906  
AFTER BEING IN THE CARE OF THE  
W. M. WOODRUFF FOUNDATION

Kellie  
Bennett

DANA

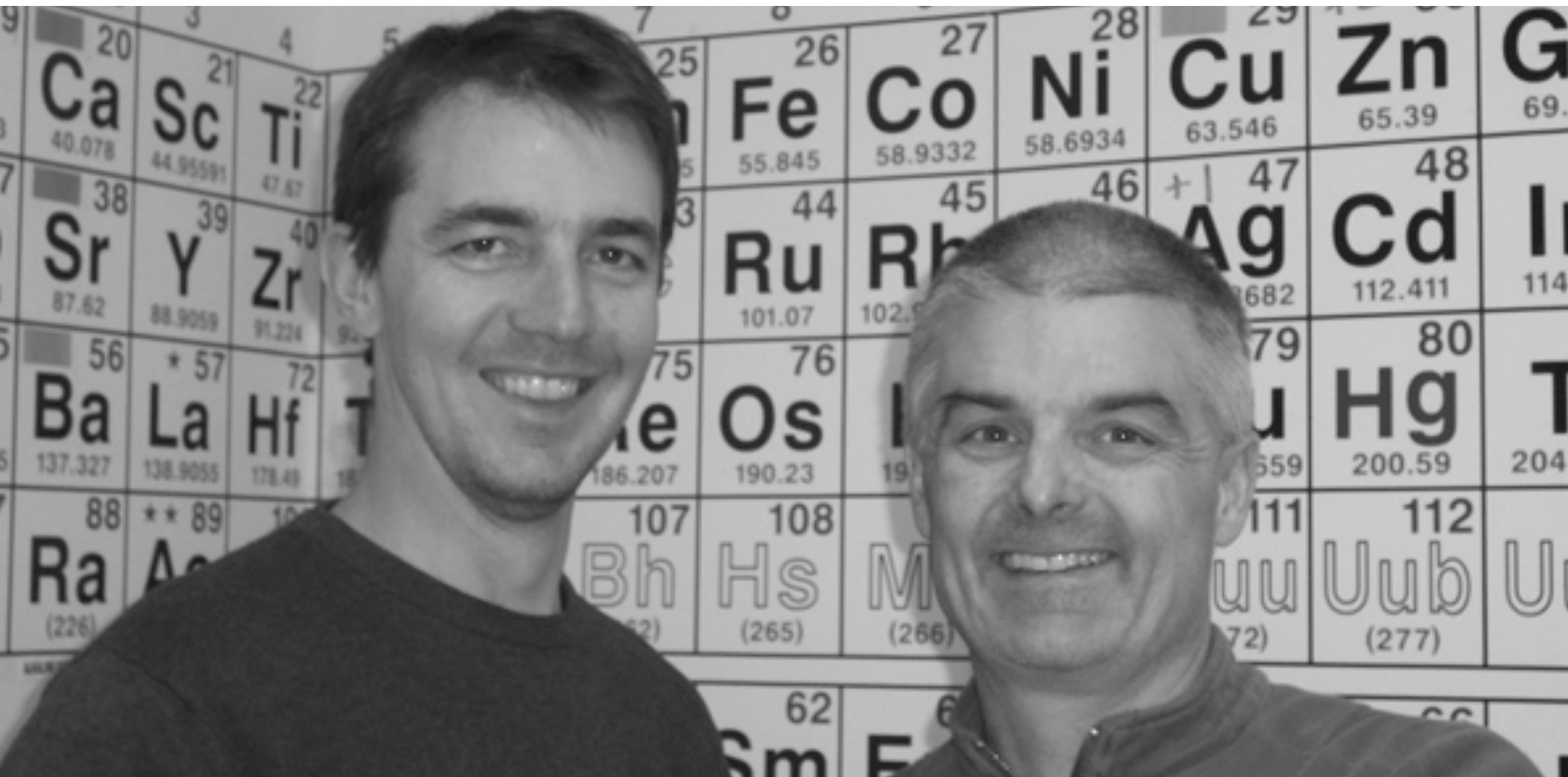
NAME TAG

Margaret





“Flipping the classroom is...[a] **mindset** redirecting attention away from the teacher and putting attention on the learner and the learning.”



# Myth 3: A flipped class replaces faculty with computers and videos.

► **Big idea: Flipped classrooms are not about technology, they are about pedagogy.**

## **Main approach**

1. lift coverage of some content out of the class
2. privilege content application in-class
3. find ways to motivate continued learning after class.



How have you already flipped your class?

If I knew what it was, I might have done it.

SNMC

How have you already flipped your class?

If it is in the required reading, I don't re-deliver it in class!

SNMC



How have you already flipped your class?

Team-Based Learning

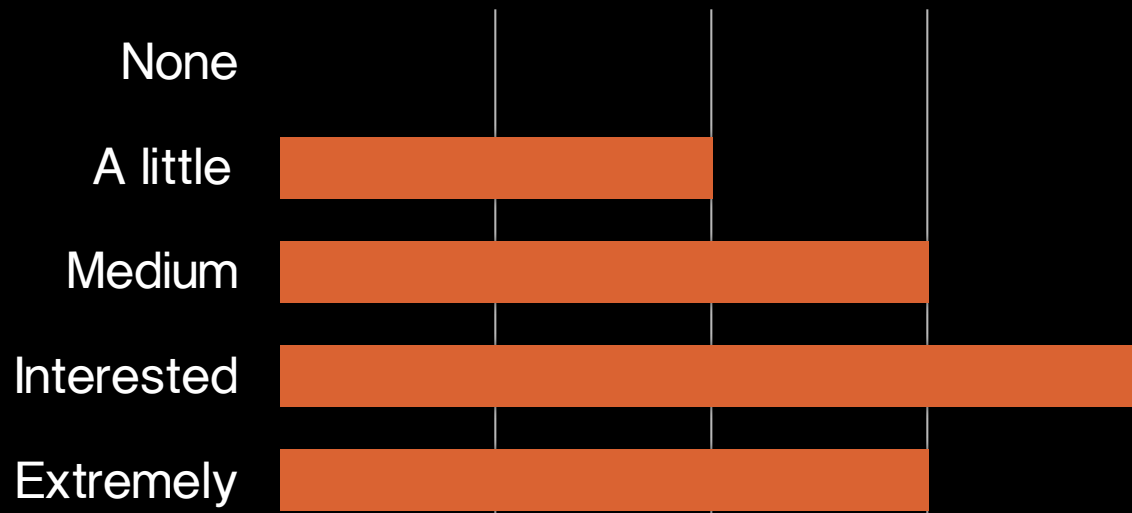
SNMC

**How could you flip your class in one small way, without videos?**

# Why should I flip my classroom



**Interest**



# Flipped classrooms are tied to how people learn.

- a. True
- b. False
- c. I am not sure





**People learn most when they are *engaged*.**

# 2 Tips to Driving Student Engagement

## 1. Play with Velcro





Study these letters, don't write them  
down.

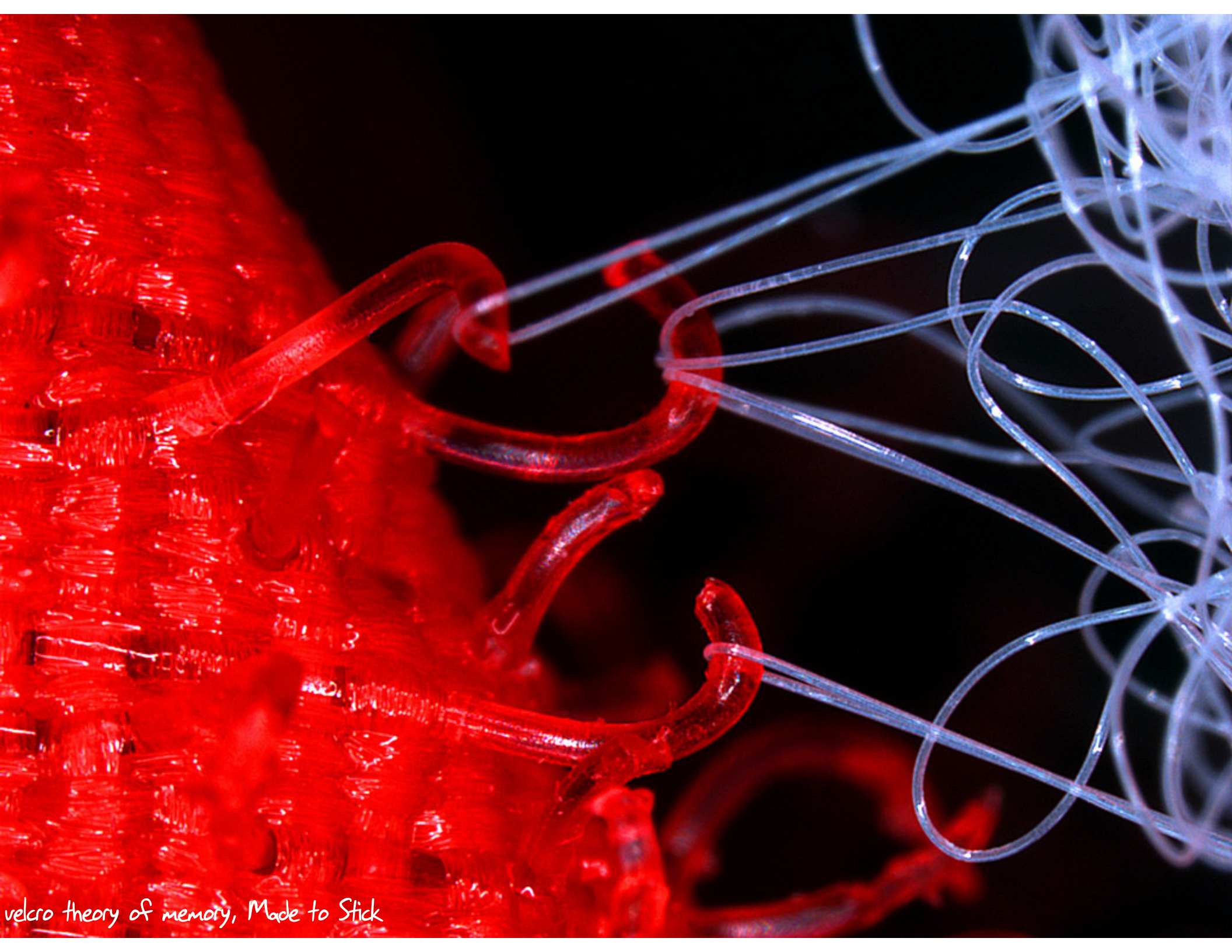
Study these letters, don't write them down.

J FKFB INAT OUP SNA SAI RS

Study these letters, don't write them  
down.

Study these letters, don't write them down.

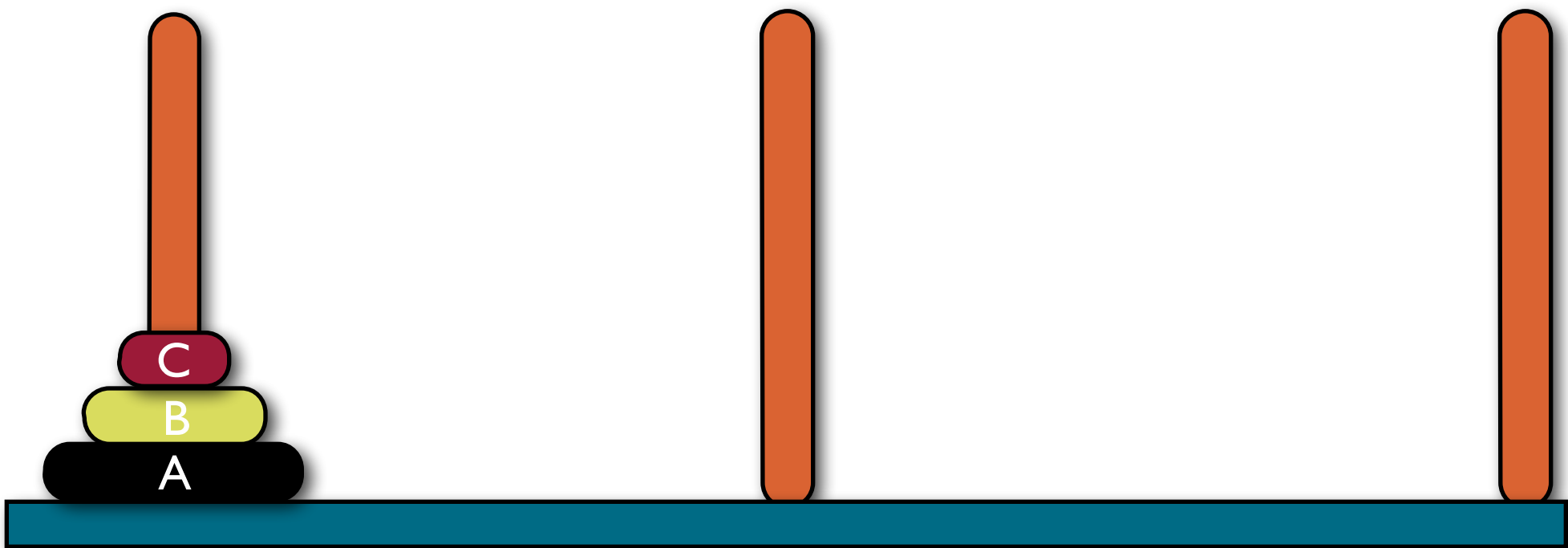
JFK FBI NATO UPS NASA IRS



velcro theory of memory, Made to Stick

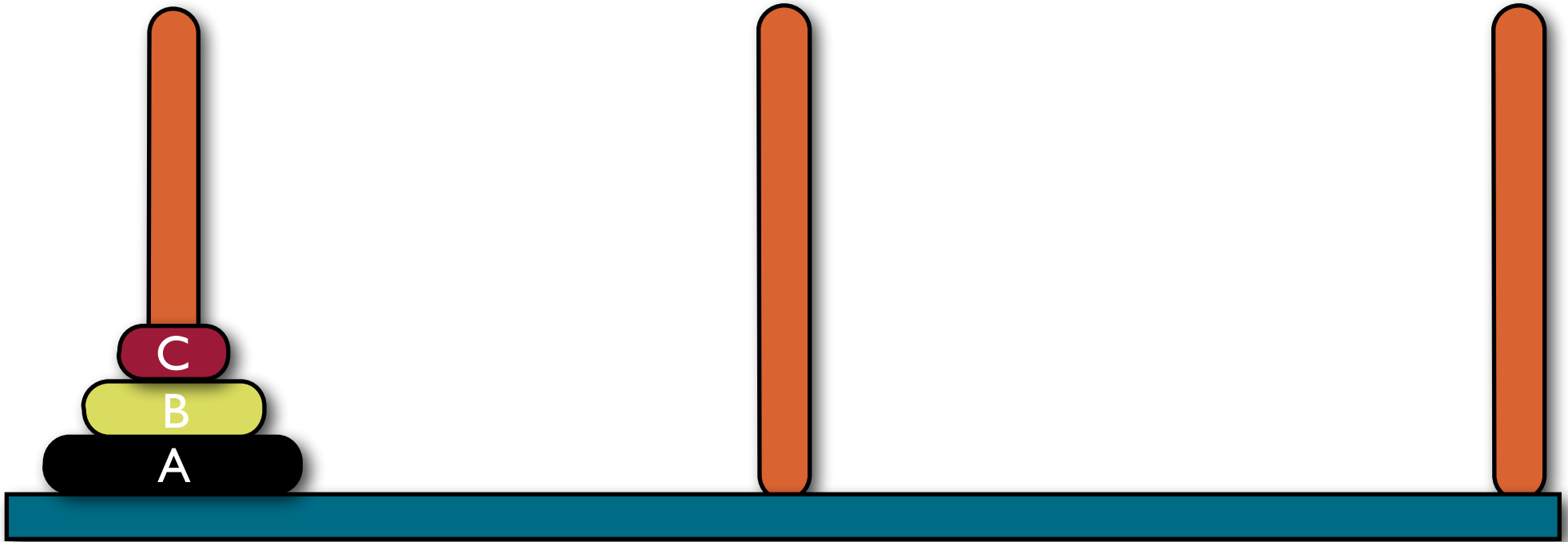
# 2 Tips to Driving Student Engagement

- 
1. **Play with Velcro: Buildup their prior knowledge loops.**
  2. **Turn your students into Goldilocks**



**Pole 1**

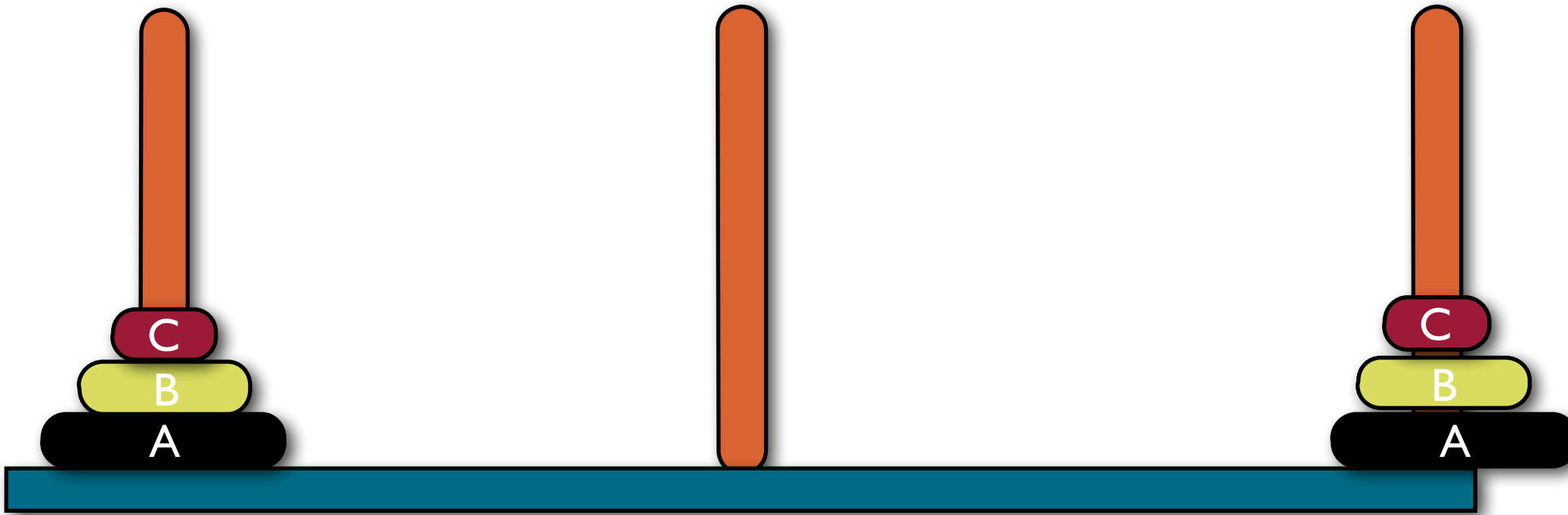
**Pole 2**



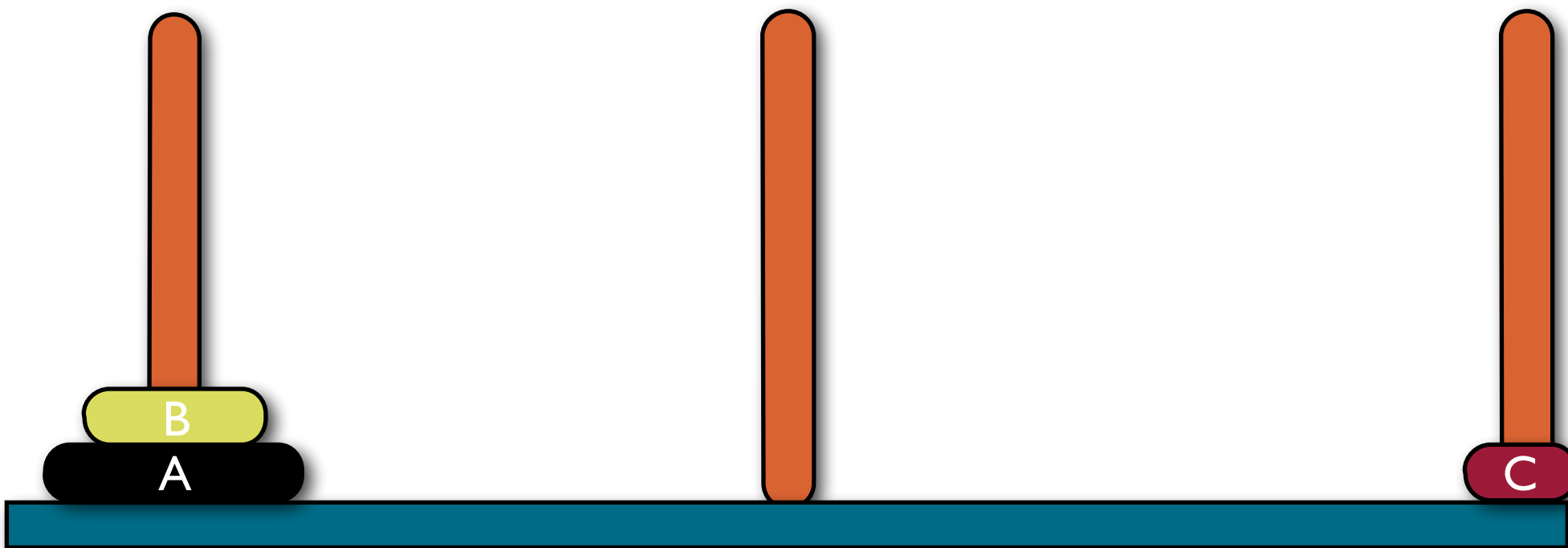
**What is the shortest number of steps required to replicate the order of disks on pole 1 on pole 2, following these rules:**

- 1. You can only move one disk at a time**
- 2. You can never put a bigger disk on top of a smaller disks**





- a. 3
- b. 5
- c. 7
- d. 9





A

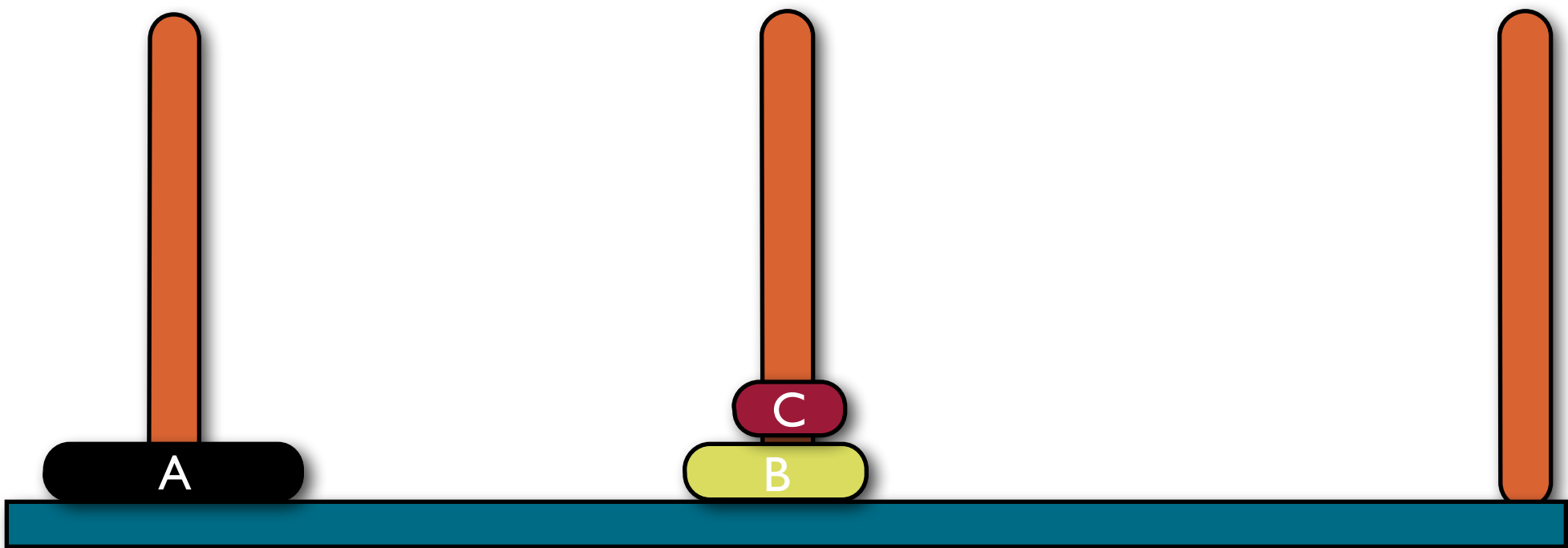


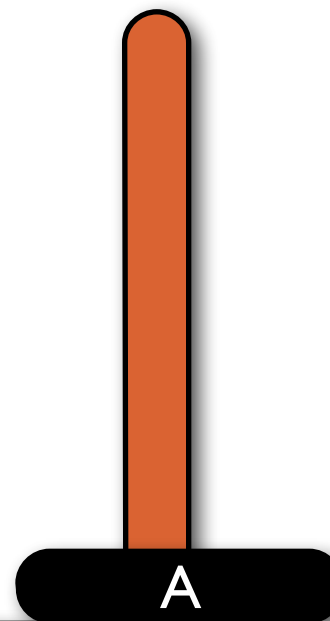
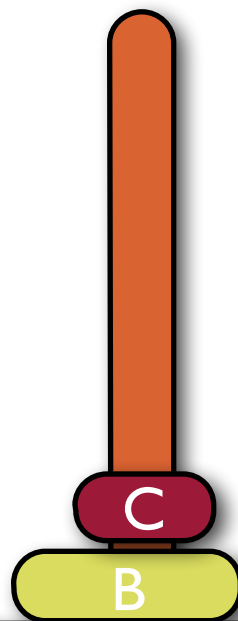
B

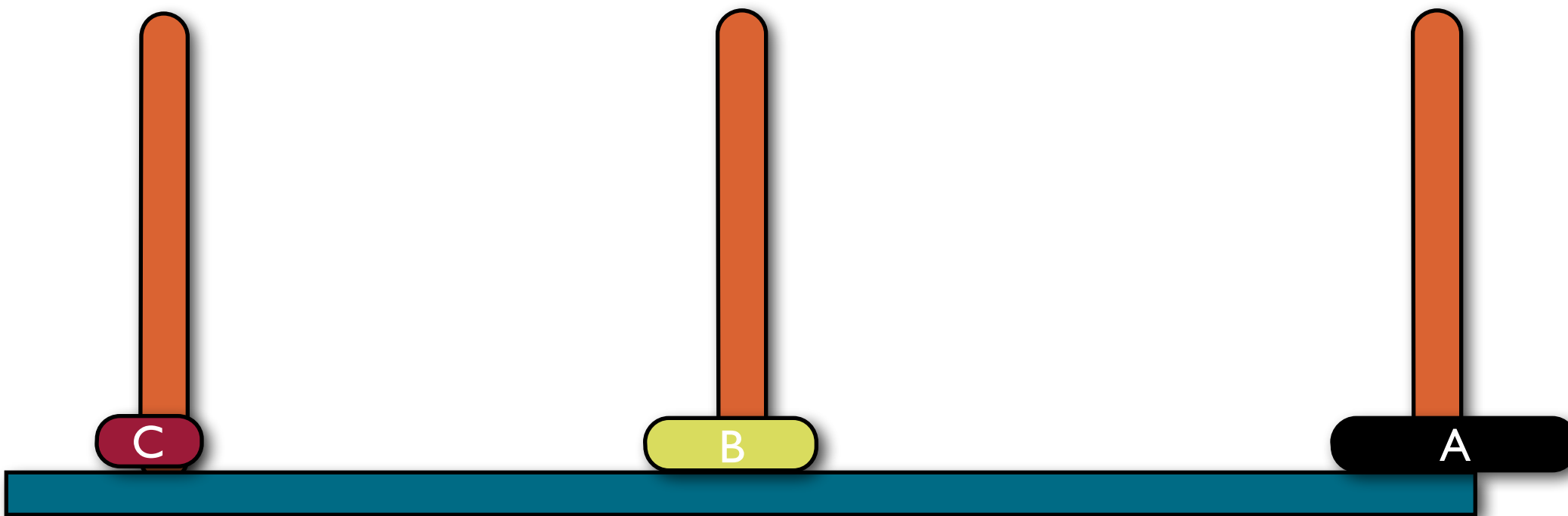


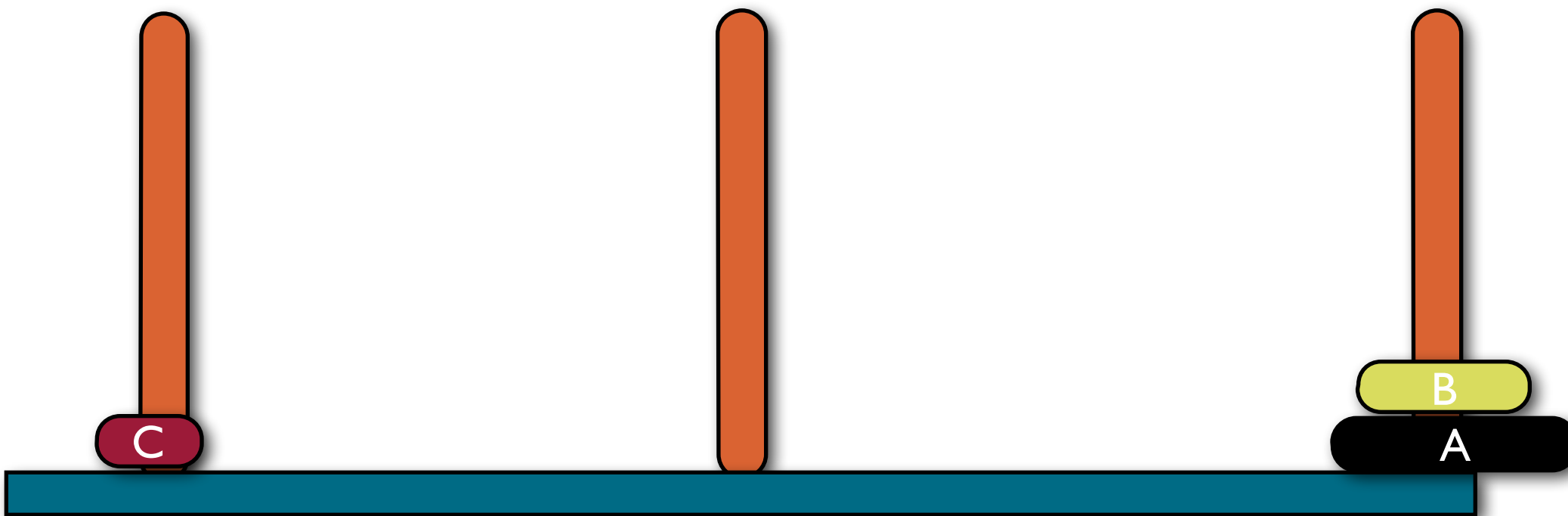
C

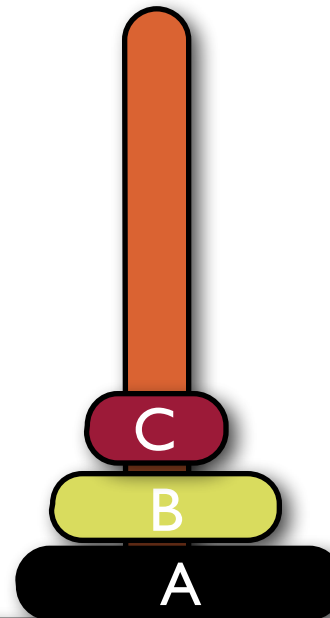




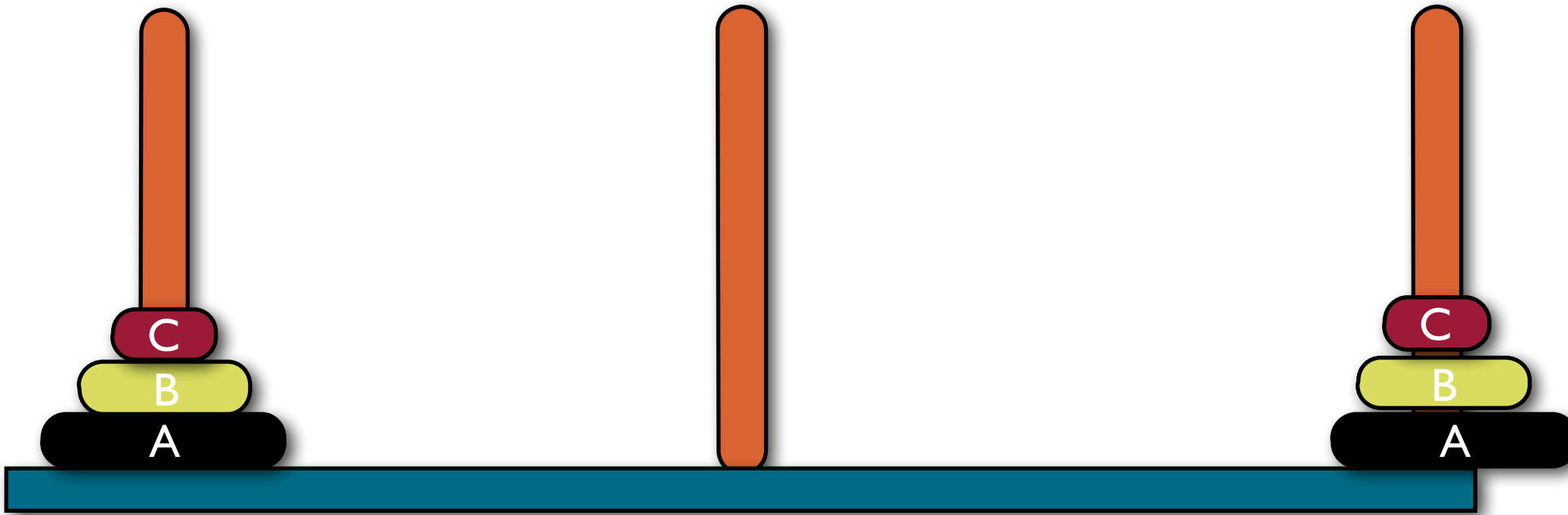












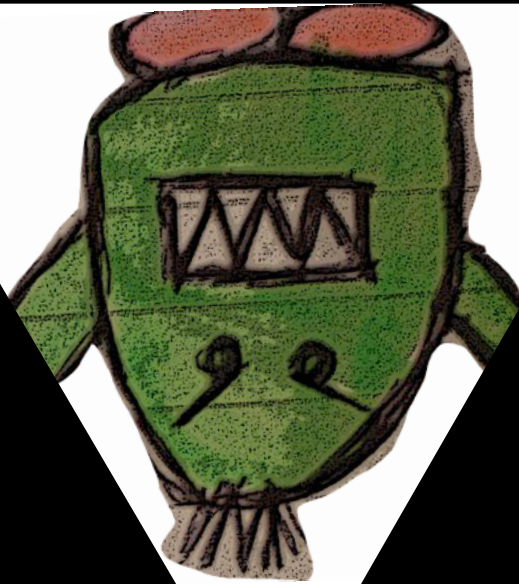
- a. 3
- b. 5
- c. 7
- d. 9



**Where was the boredom monster the  
past 5 minutes?**

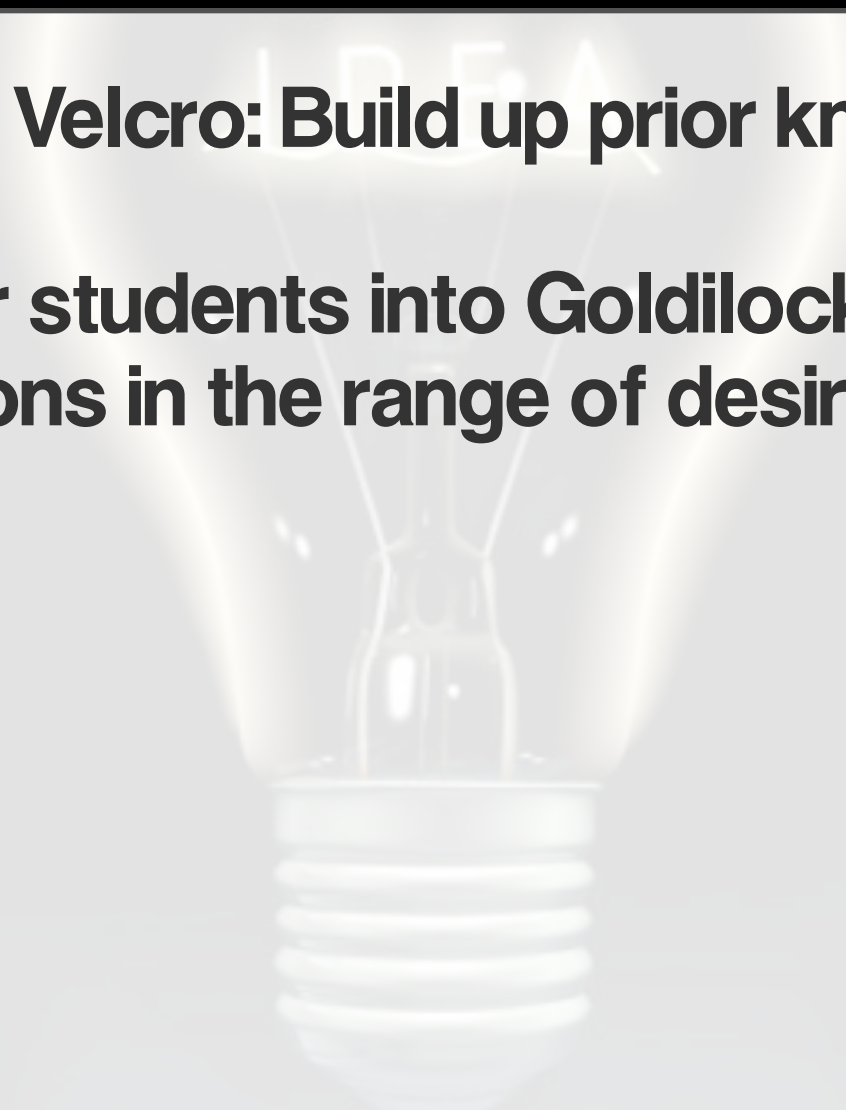
**Where was the boredom monster the  
past 5 minutes?**

**Flipped Classrooms**



# 2 Tips to Driving Student Engagement

1. Play with Velcro: Build up prior knowledge loops.
2. Turn your students into Goldilocks:  
Ask questions in the range of desirably difficulty



# Bloom's Taxonomy

Traditional Arrangement						
Instructional Design	In-class		Out-of-class			
Bloom's Taxonomy	Remember	Understand	Apply	Analyze	Evaluate	Create

created by Josh Walker



# Bloom's Taxonomy

Inverted "Flipped Classroom" Arrangement						
Instructional Design	Out-of-class		In-class			
Bloom's Taxonomy	Remember	Understand	Apply	Analyze	Evaluate	Create

created by Josh Walker



**People learn most when they are engaged.**

# Myth 4: Flipped classrooms are fads not tied to how people actually learn.

► **Big idea: Flipped classrooms leverage how people learn best.**

- Build prior knowledge loops to facilitate engagement
- Ask desirably difficult questions

# Myth 5: Flipped classrooms are a cure all.

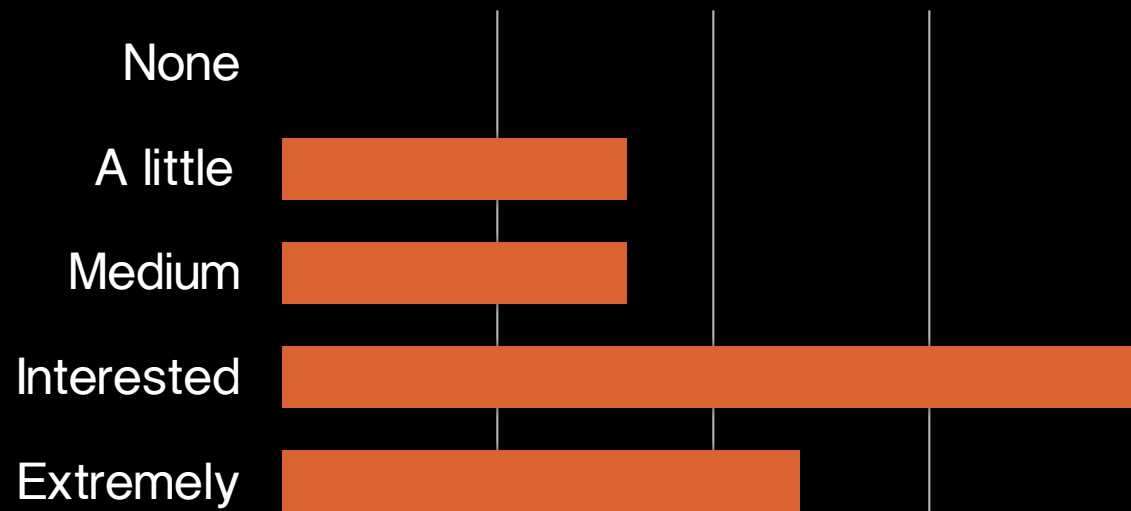
►Big idea: Flipped classrooms take time, effort, and iteration - but doesn't all good teaching?

**Why should I flip if it is going to take time & energy I don't have & will take more work at first?**

# How do I flip my class



**Interest**

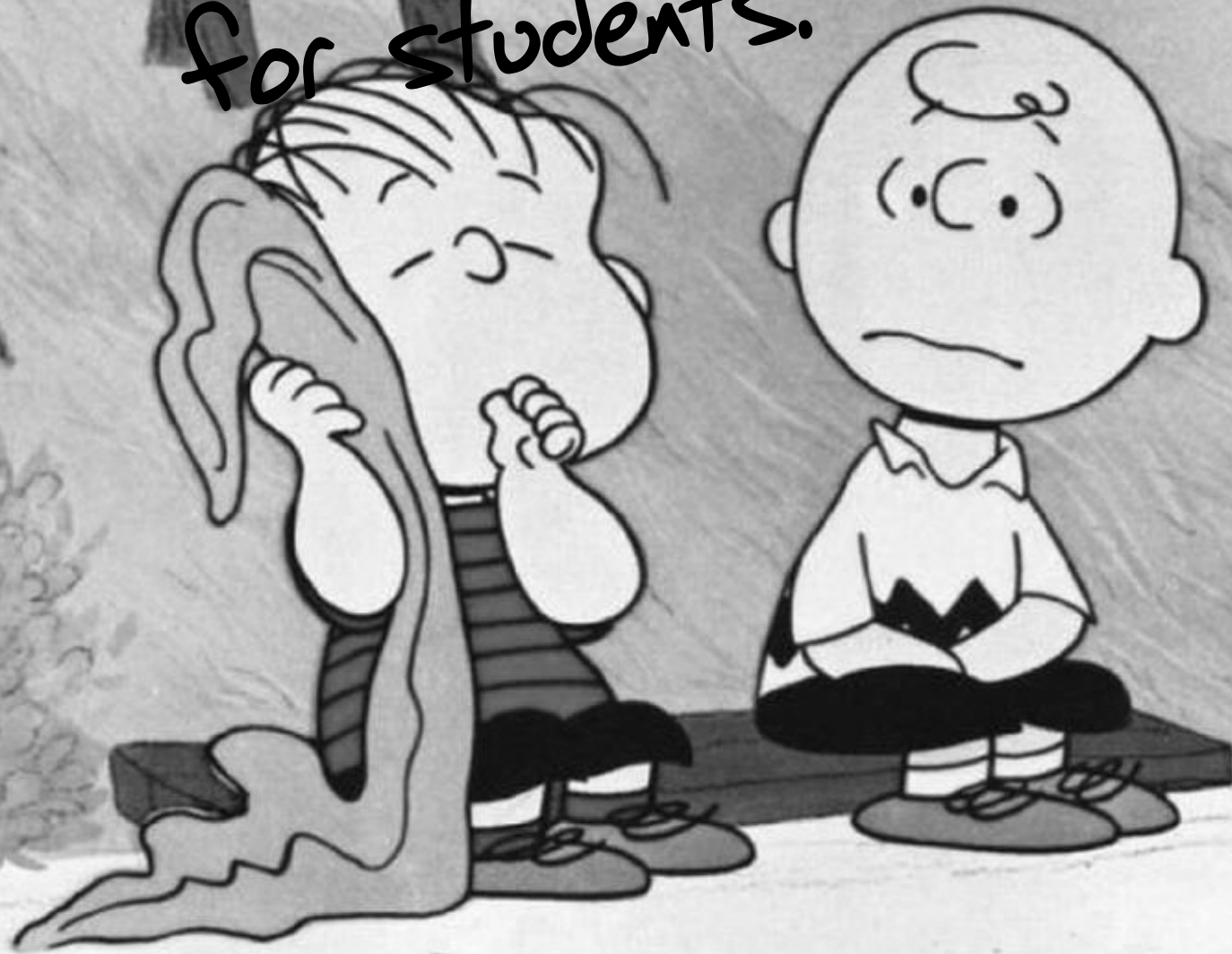




# The flipped classroom means no more lecture.

- a. True
- b. False
- c. I am not sure

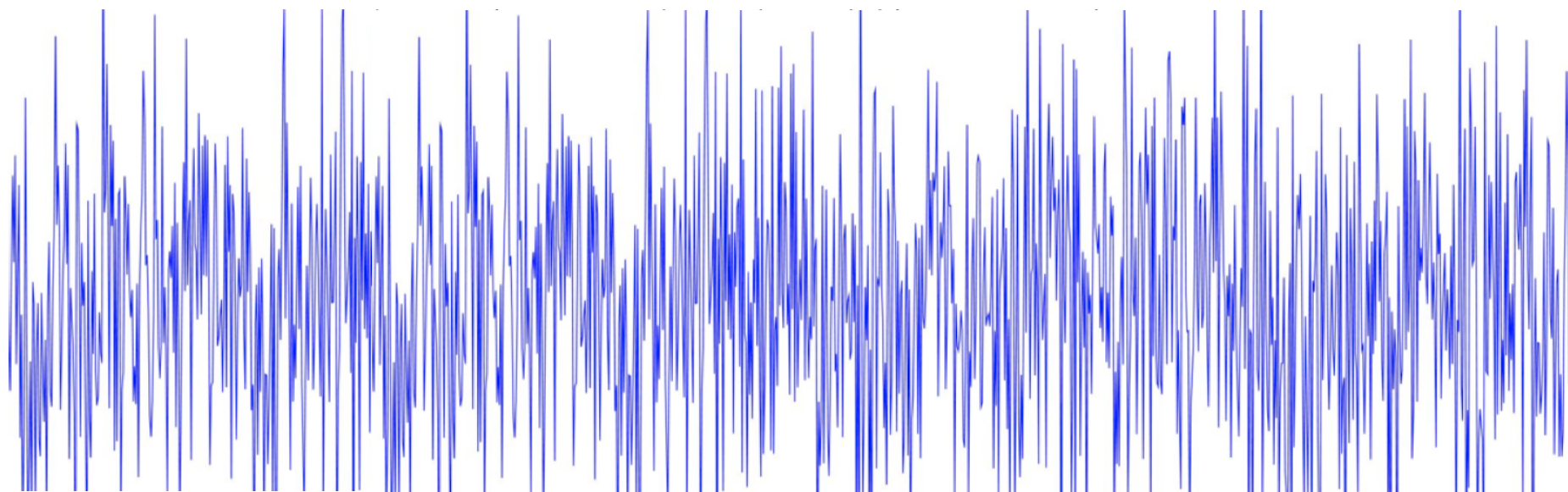
"Lecture is a comfort blanket  
for students."



How to lecture on or off line: **Chunk it**

9/10/2013  
Harvard  
University

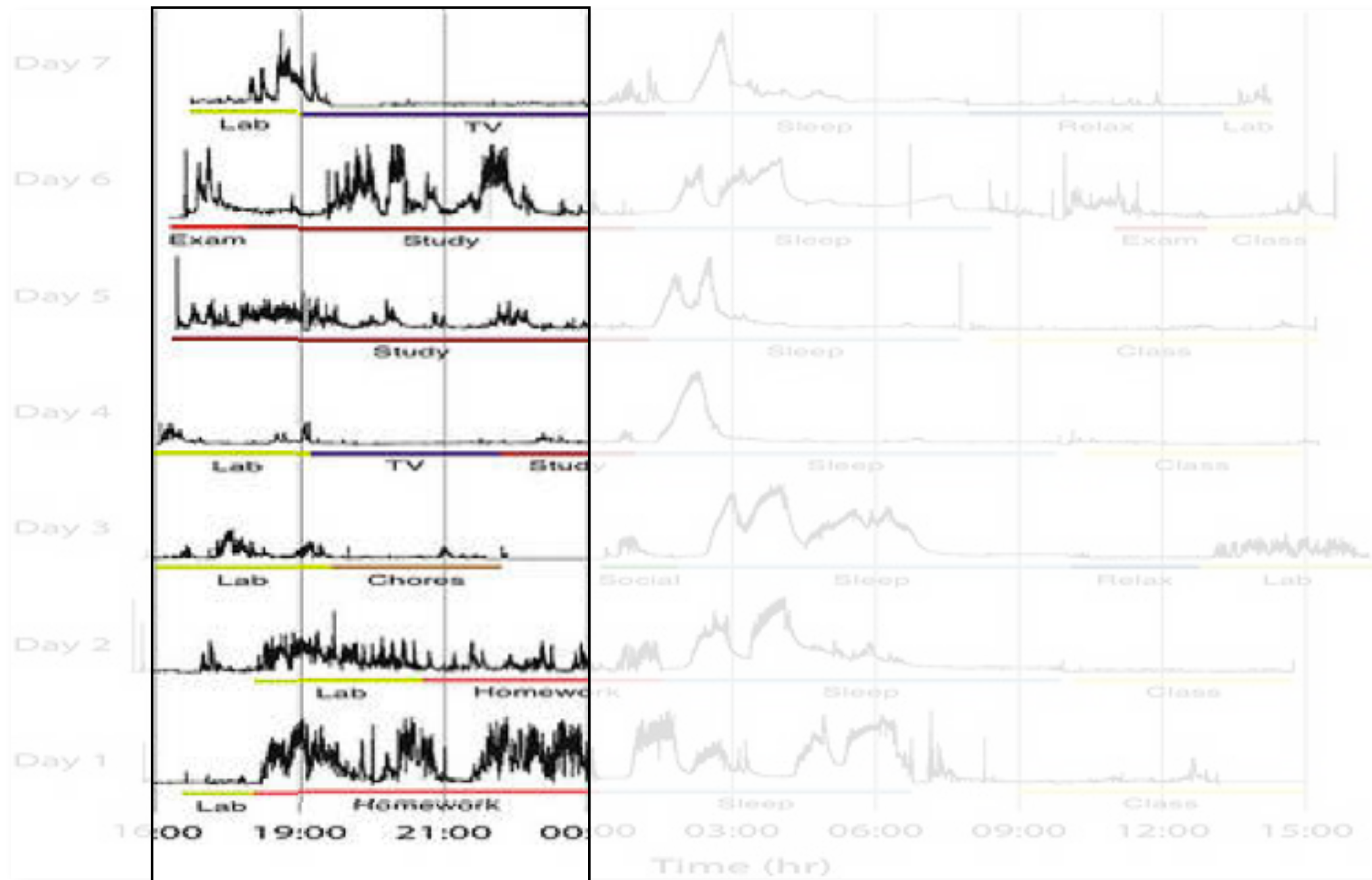


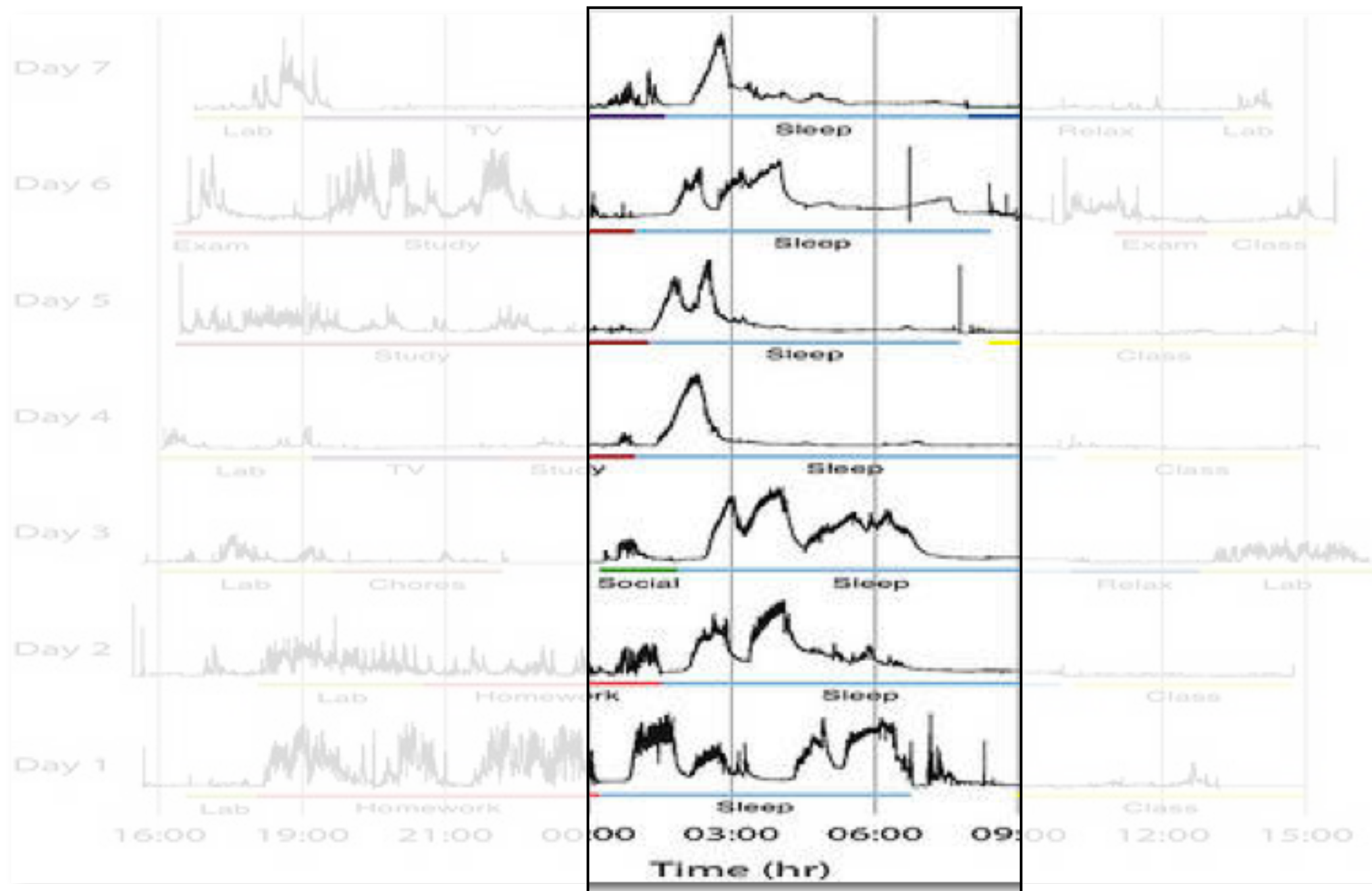


0 min

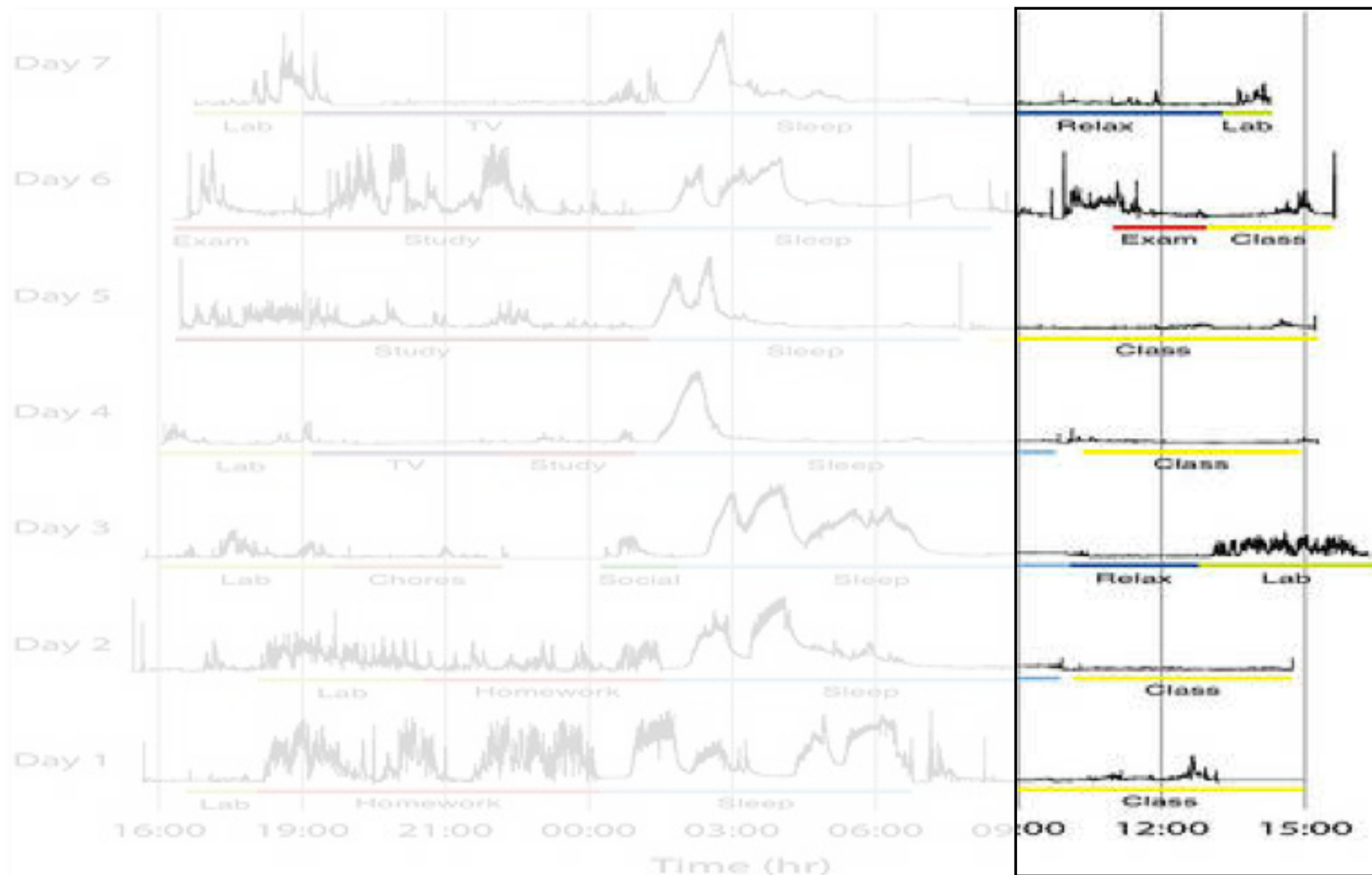
40 mins

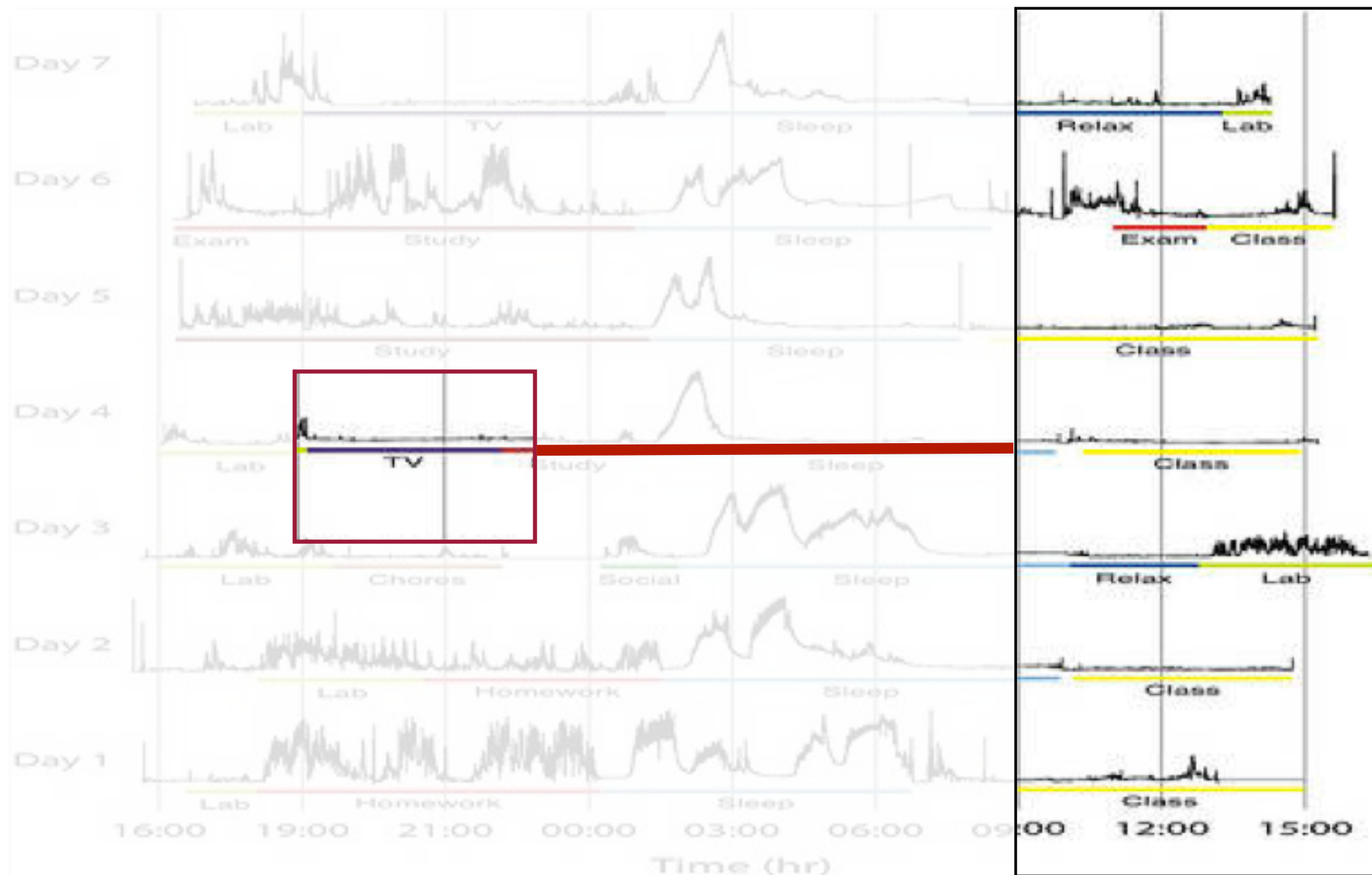




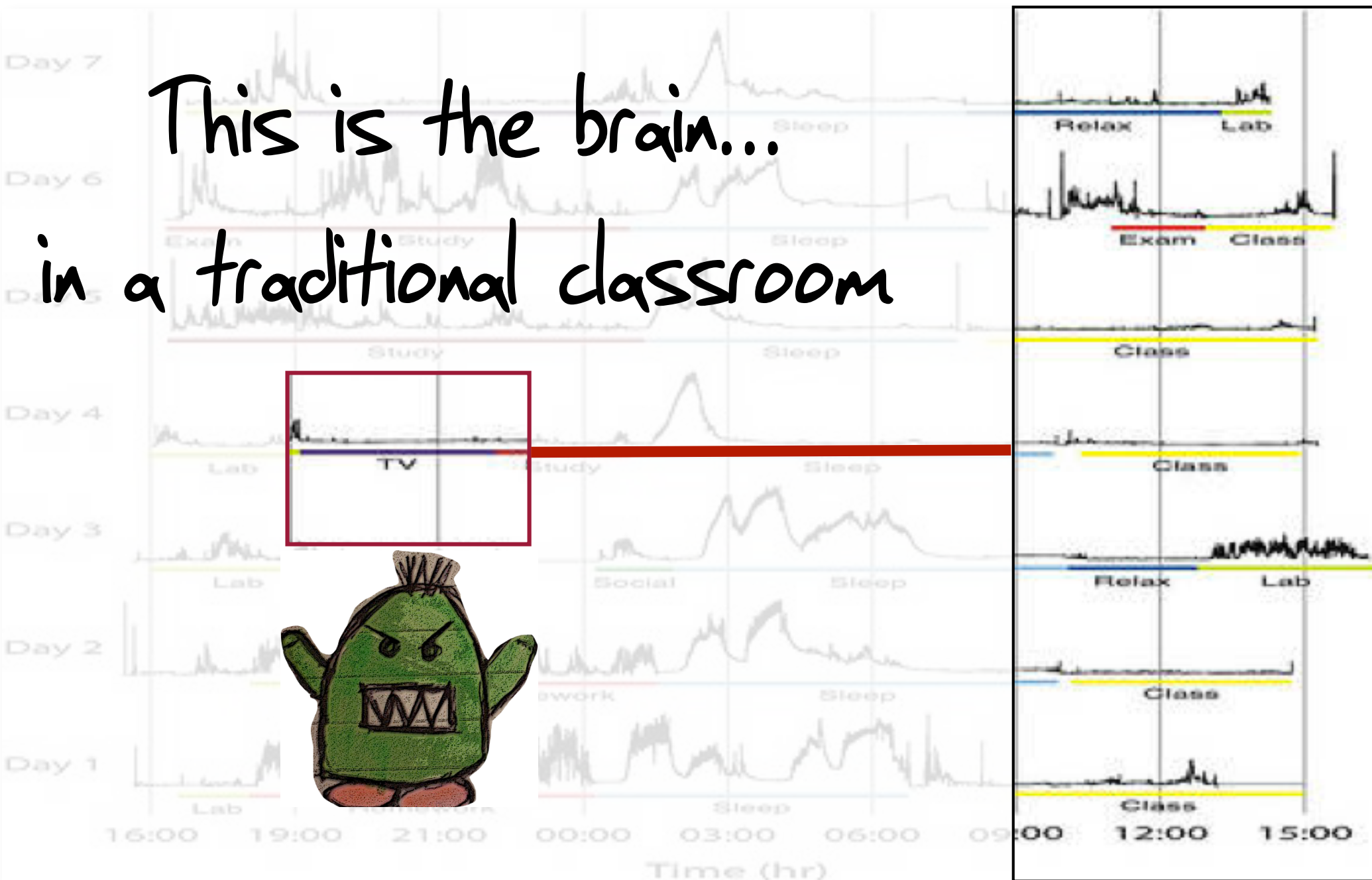


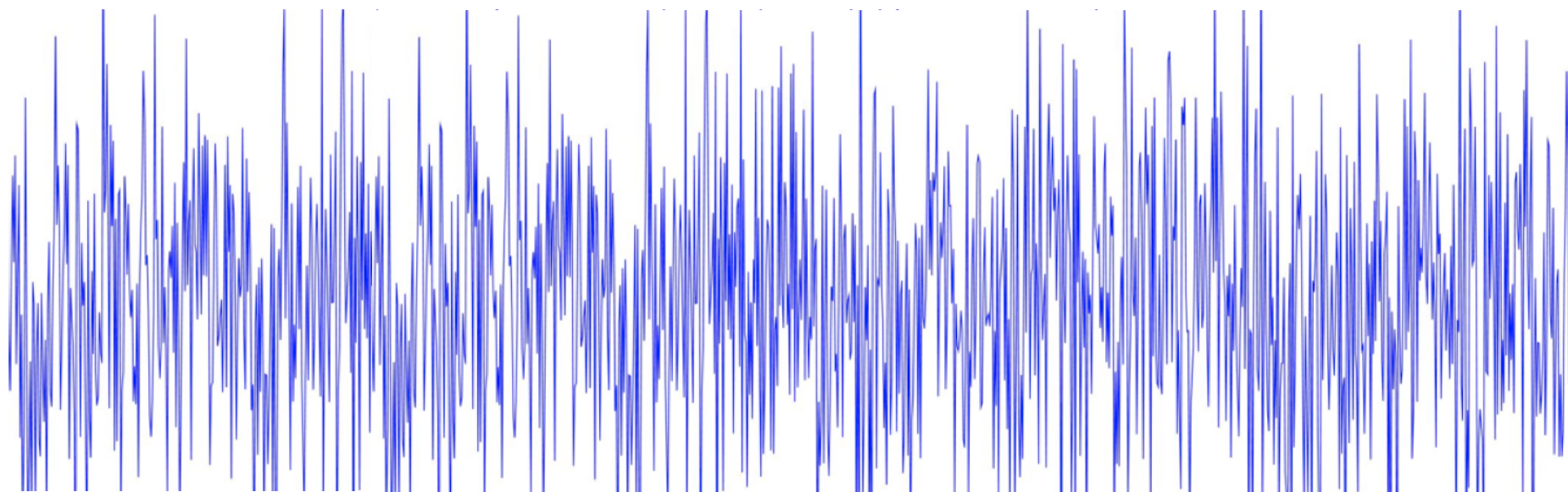






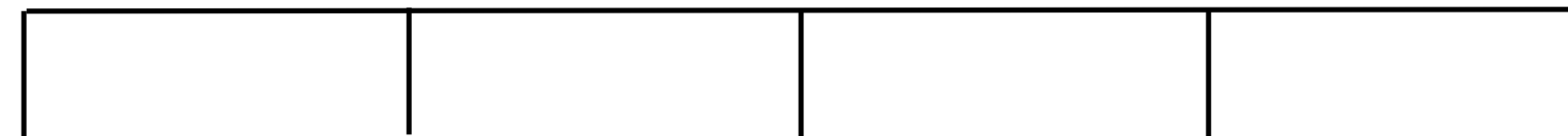
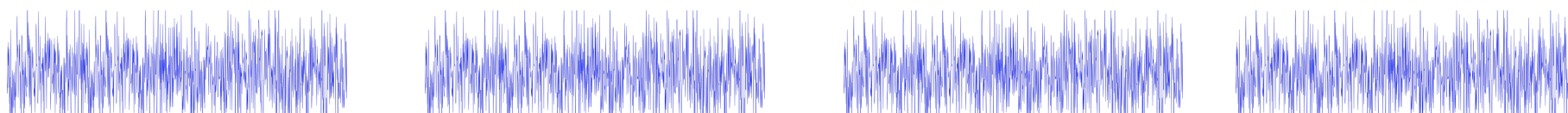
This is the brain...  
in a traditional classroom





0 min

40 mins



0

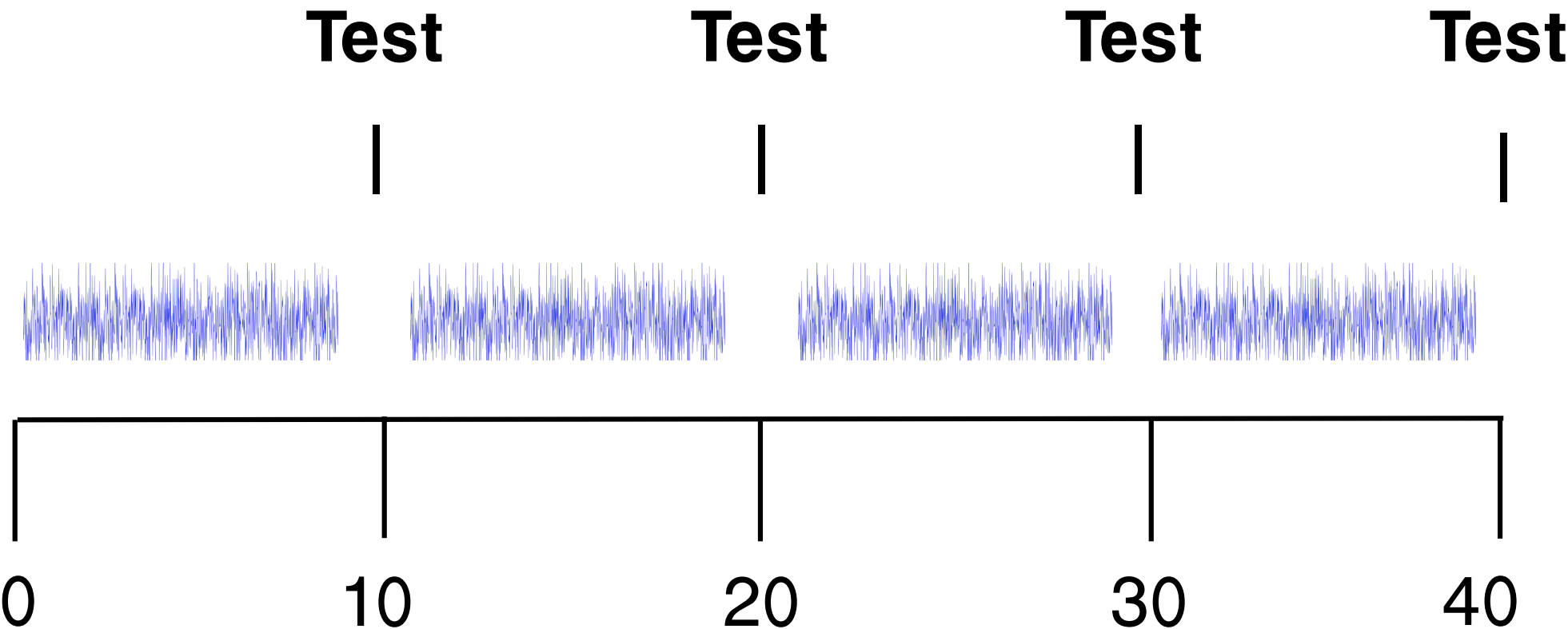
10

20

30

40

# Chunking with Retrieval Practice



# Myth 6: The flipped classroom means no more lecture.

►Big idea: Lecture a little, actually, in little chunks.

**My students will not do pre-class work.**

- a. True**
- b. False**
- c. I am not sure**







If you assess it...  
they will come

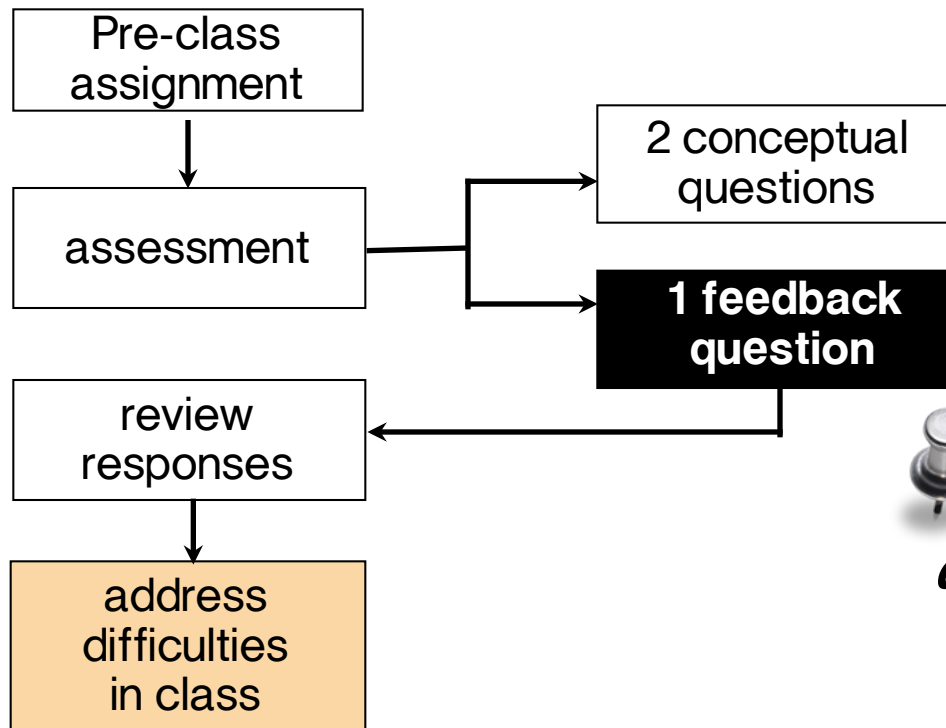
Schell



# **2 methods to get students to do out of class work:**

## **1. Just-in-Time Teaching**

# Just-in-Time Teaching



*What do you find most difficult or confusing about this concept?*

# **2 methods to get students to do out of class work:**

- 1. Just-in-Time Teaching**
- 2. Immediate Feedback Assessment**

Break into groups of 5.  
Answer these  
questions.

**Who won the Super Bowl in 2013?**

- a. Ravens**
- b. NY Giants**
- c. 49ers**
- d. Seahawks**



**What is the only breed of dog with the American Kennel Club description of “The Barkless Dog.”**

- a. Bouvier**
- b. Basenji**
- c. Briard**
- d. Borzoi**

# Myth 7: Students will not do pre-class work.

► **Big idea: If you assess it, they will come.**

- Students may resist flipped learning
- Don't call it a "flipped" classroom
- Don't call it an experiment
- Make sure frequent, low-stakes assessments cover what they do outside of class

**Myth 8: There is one right way to flip a class.**

# FLIP in 4 easy steps

F	Find a concept to flip
L	Lift coverage / first exposure out of class
I	Incentivize out of class work
P	Privilege application activities in class

# Myth 8: There is one right way to flip a class.

►Big idea: There are many ways to flip a class, and no one right way.

**How will you flip to slay the  
boredom monster?**

Big ideas about  
flipped classrooms





1

You can flip one concept or 10.

2

Flipped classrooms = new name, old concept.

3

Flipped classrooms are about pedagogy not technology.

4

Flipped classrooms align with how people learn best.

5

Flipping classrooms well takes time and effort.

6

Lecture is a comfort blanket for students, lecture a little.

7

If you assess pre-class work, most will do it.

8

There are many ways to flip a class and no one right way.

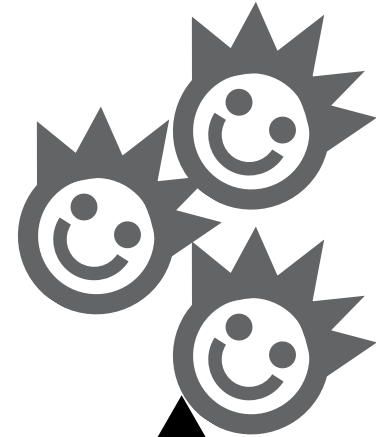


**brianna girlie** @bripaigegirlie

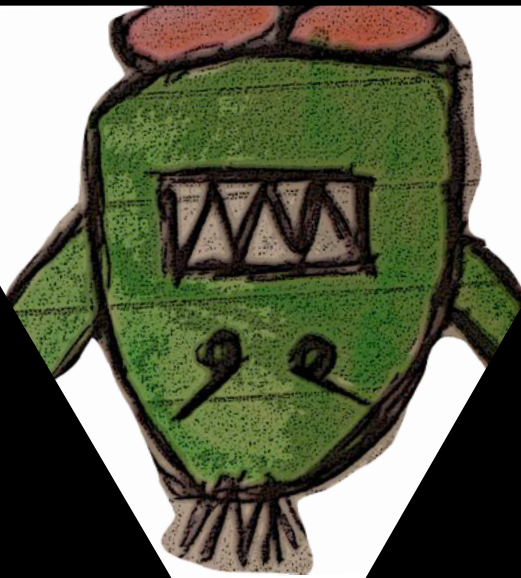
33 mins

I hate school. lhateschool. I HATE school. I h8 school. I hate skool.  
lh8skool. I. hate. school. Eye h8 skool. I HATE SCHOOL. **#ihateschool**

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# Flipped Classrooms





**Tyson\_Awesome** @tegrinse614

6 hrs

today I developed my own proof for **pythagorean**'s theorem. woooo  
yeah baby **#genius**

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## PEOPLE

Eric Mazur

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Dan Meyer

Nancy Duarte

Chip and Dan Heath

# Acknowledgements

## BOOKS

Flip Your Classroom

Slide!Dlogy

Made to Stick

Why Students Don't Like School



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