Getting Students to Class and Engaging Them Once They're There

Matt Evans

U of Wisconsin – Eau Claire

iClicker
Active learning simplified

iClicker Reef

COURSES

Matt Evans

Phys 211

Attendance

COURSE HOME | ROSTER (92) | ATTENDANCE (Beta) | GRADEBOOK

Search

Export

Student Name	Unexcused Absences	Session 17 4/7/2017	Session 16 4/5/2017	Session 15 4/4/2017	Session 14 4/3/2017	Session 13 3/31/2017	Session 12 3/29/2017	Session 10 3/27/2017
[redacted]	5	Absent	Absent	✓	✓	✓	Absent	✓
[redacted]	5	✓	✓	✓	✓	✓	✓	✓
[redacted]	4	✓	✓	✓	✓	✓	Absent	Absent
[redacted]	4	✓	✓	✓	✓	✓	✓	✓
[redacted]	4	Absent	✓	✓	✓	Absent	Absent	Absent
[redacted]	4	Absent	✓	✓	✓	Absent	✓	✓
[redacted]	3	✓	✓	✓	✓	✓	✓	✓
[redacted]	3	Absent	✓	✓	✓	✓	Absent	✓

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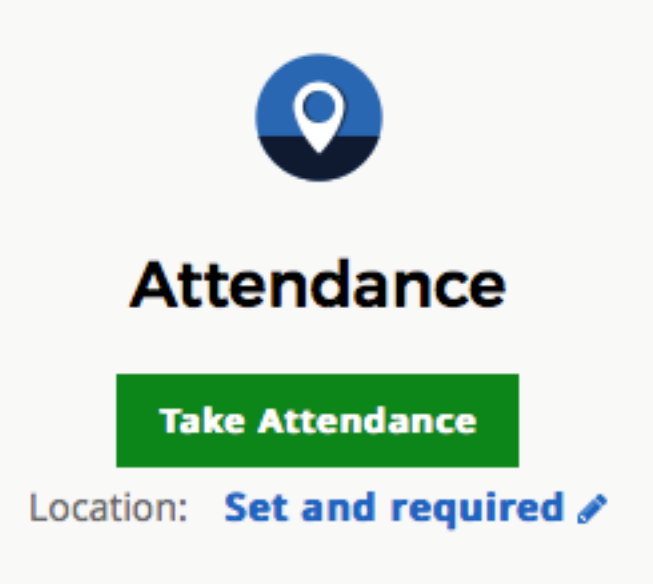
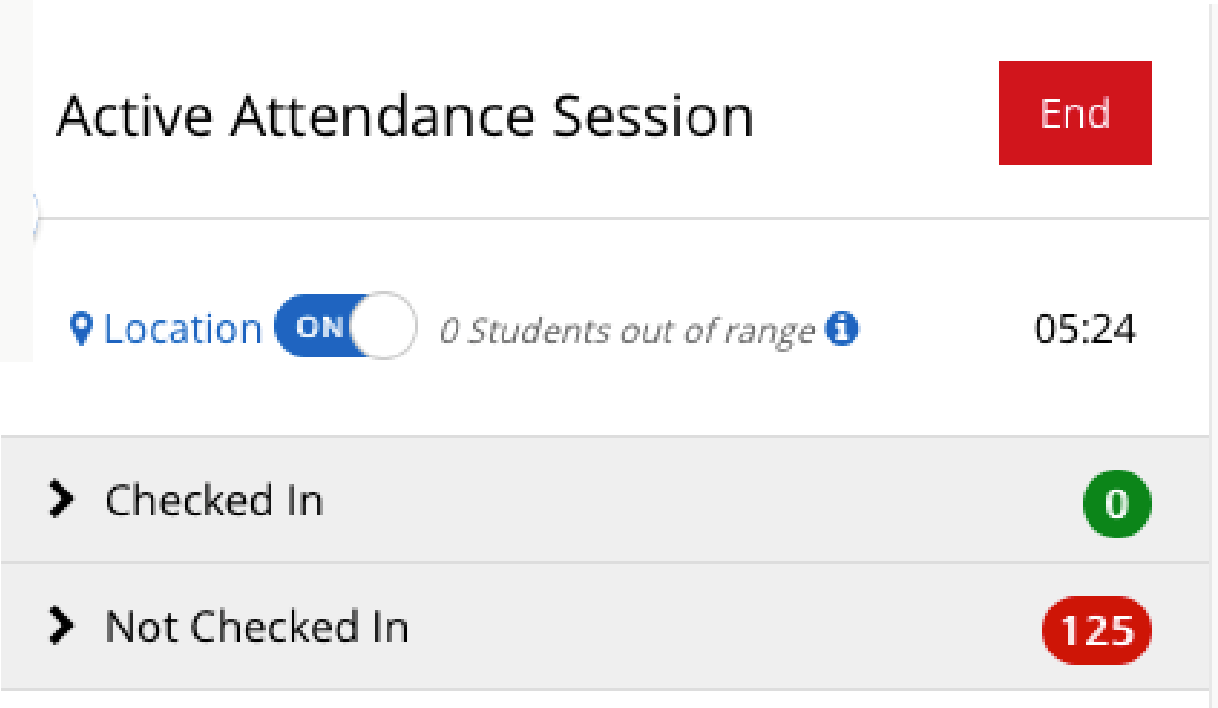
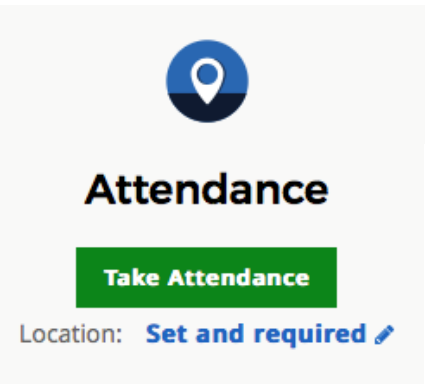
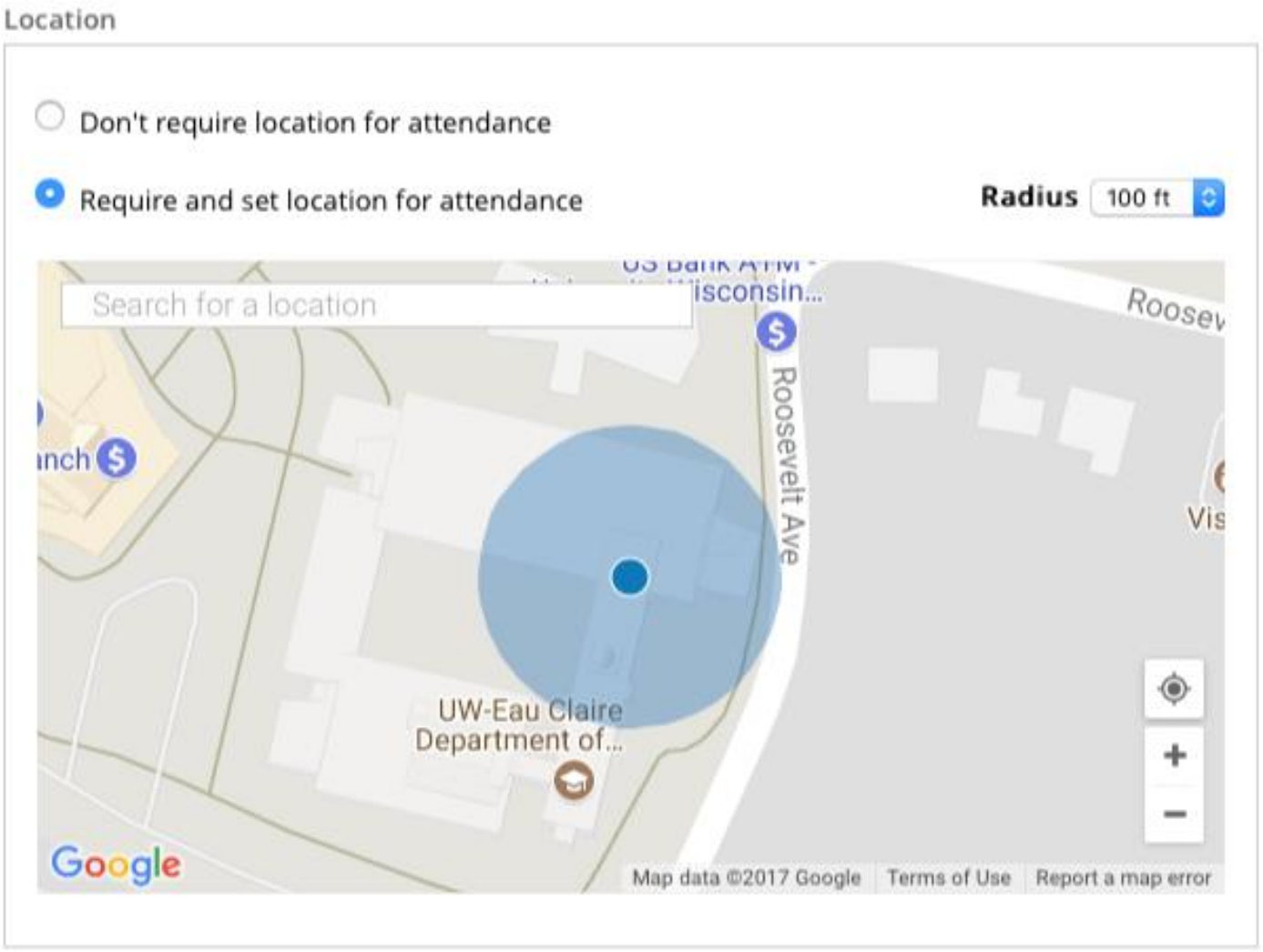
Running an Attendance Session





Attendance – Set Location





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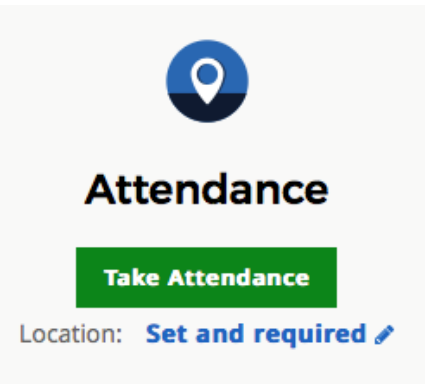
Auto-run Attendance



Auto-Run

Auto run attendance from 9:55 AM to 10:45 AM (UTC-06:00) Central Time (US & Canada) on class days.

Alerts

Highlight students with 4 or more unexcused absences.

iClicker remotes

Allow iClicker remote usage for attendance

Students using an iClicker remote are marked present when they answer a poll or quiz question while attendance is running. iClicker base required for remote usage.

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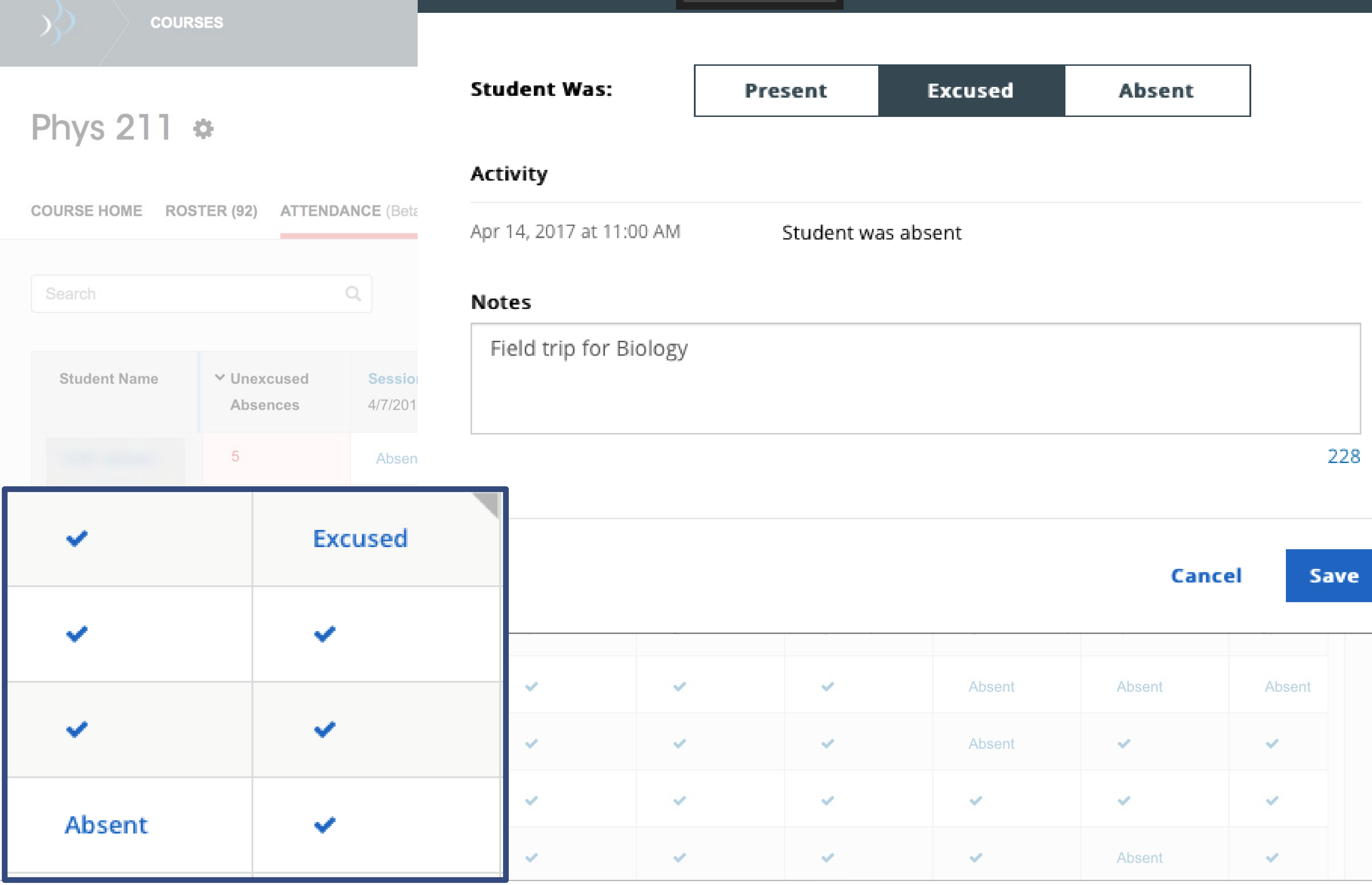

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Academic Integrity

- ... Giving your iClicker to someone else to use in your absence will result in the loss of all clicker points for both people for the entire semester. Accessing the polls from outside the classroom is also considered misconduct. I consider any academic misconduct in this course as a serious offense. The disciplinary procedures and penalties for academic misconduct are described in the UW-Eau Claire Student Services and Standards Handbook in the section titled, Chapter UWS 14-Student Academic Disciplinary Procedures.

Phys 100

University of Wisconsin Eau Claire

Take Attendance

ATTENDANCE (Beta) GRADEBOOK ROSTER (49)

Search

Sync Scores to LMS Export

Last synced Nov 4, 2016, 8:23 AM

Student Name	LMS Connection	Total	Performance	Participation	Session 42 - 11/... POLL 11/11/2016	Session 41 - 11/... POLL 11/9/2016	Session 40 POLL 11/7/2
Class Average		78.5%	78.5%	80.1%	77.07 / 100.01	36.01 / 40.01	8.99 / 20.01
Evans, Matt	●	0.0%	0.0%	0.0%	No Response	No Response	No Respons
[redacted]	●	76.4%	76.4%	78.6%	96.01	39.01	10.01
[redacted]	●	82.4%	82.4%	82.1%	No Response	38.01	10.01
[redacted]	●	86.4%	86.4%	89.3%	85.01	39.01	10.01
[redacted]	●	73.3%	73.3%	64.3%	97.01	40.01	10.01
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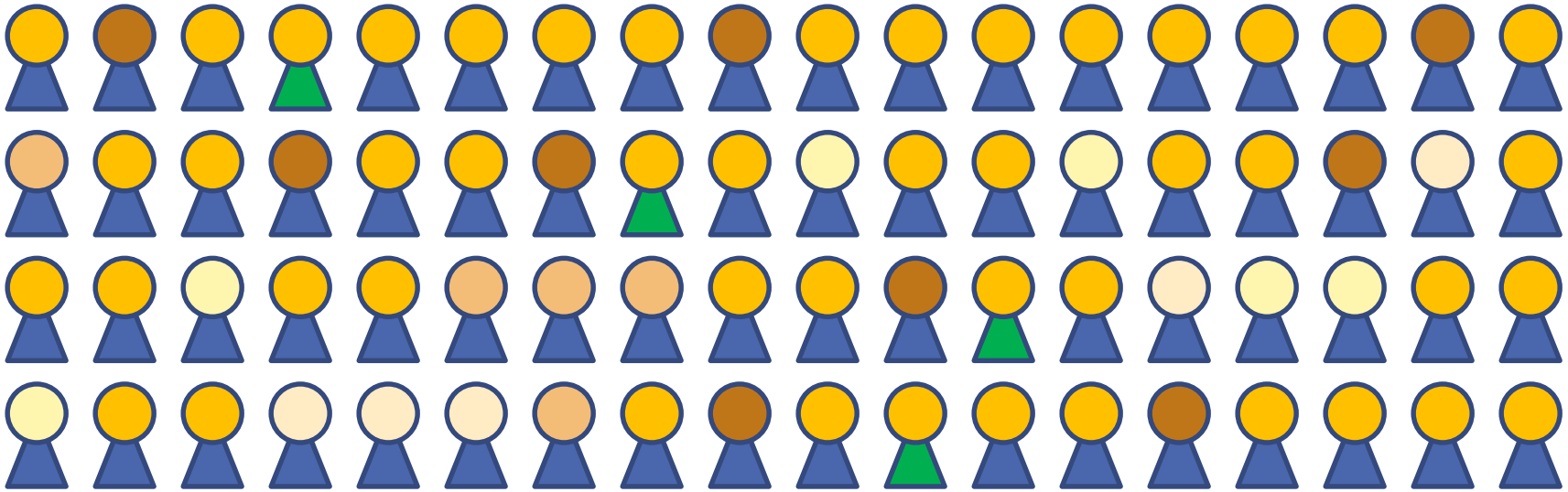
Questions about Attendance or Online Gradebook?

Why engagement of all students is necessary









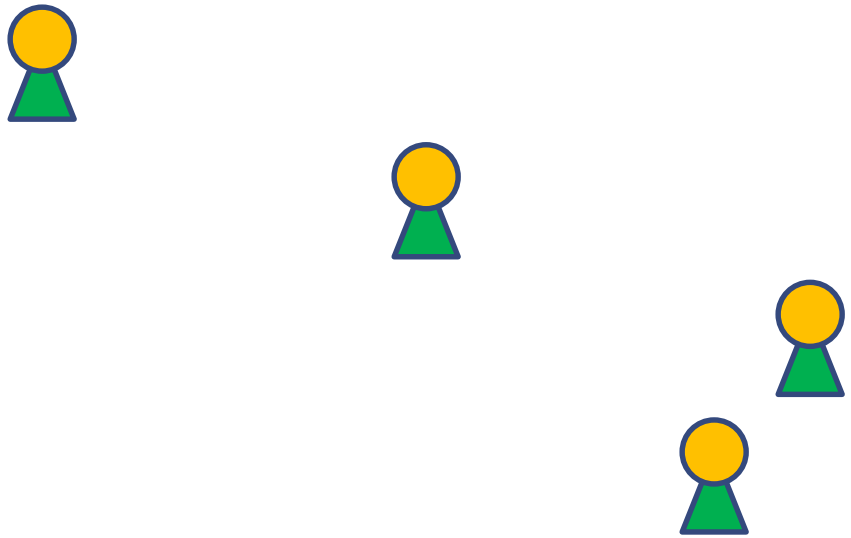









Why engagement of all students is necessary

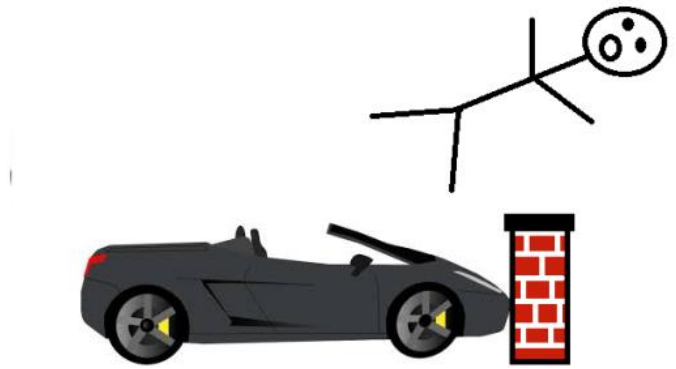


Engaging Students – Priming the Pump

You are driving your convertible and hit a wall. You feel like you are thrown forward.

Why?

Photo Credit: Science Over Everything



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B. no force is pushing you
C. you remained at rest
D. you didn't move, but only seemed to
E. gravity briefly stopped acting on you

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Inertia!

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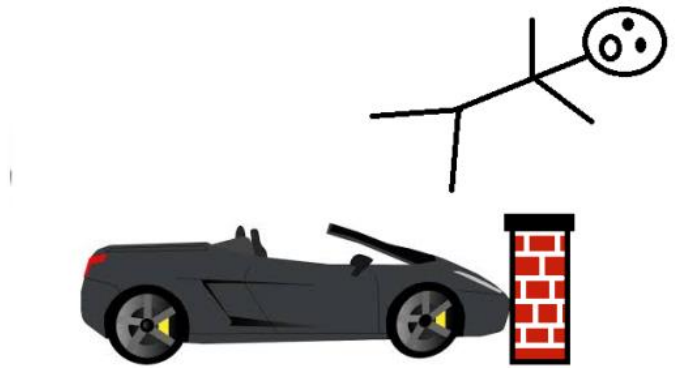

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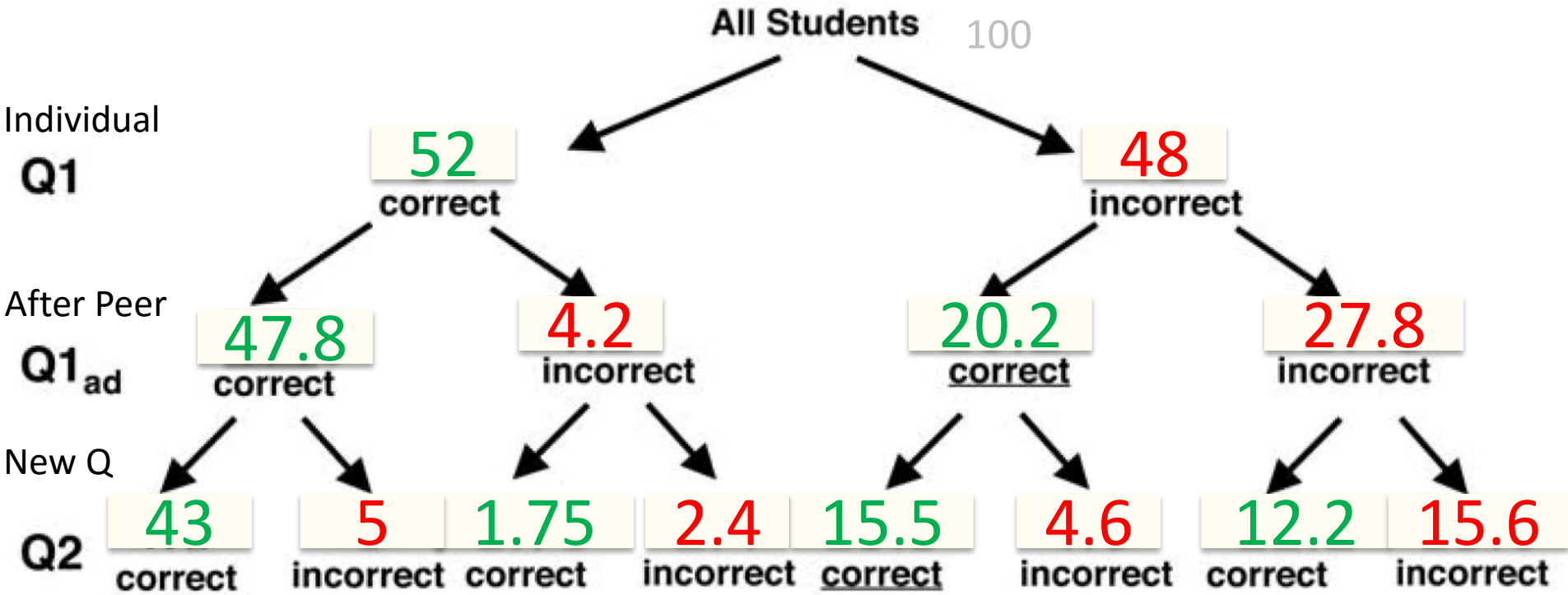
Have you ever been told how to think?

Peer Discussion Improves Student Performance on In-Class Concept Questions

Answers not revealed after Q1 votes – learning is from peer discussion



Q2 now has 73% correct

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M. K. Smith et. al. SCIENCE VOL 323 2 JANUARY 2009 123

Polling improves Engagement

- Behavior change (pre-reading)
- Boosts confidence
- Challenge students to think
- Break up the class
- Assign grades
- Keep instructor connected to students' learning
- Attendance

Climbing the Rope

When you climb up a rope, the first thing you do is pull down on the rope. How do you manage to go up the rope by doing that??

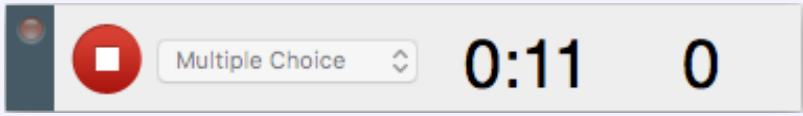
a) this slows your initial velocity, which is already upward

b) you don't go up, you're too heavy

c) the rope actually pulls you up

d) you're not really pulling down—it just seems that way

e) you are pulling the ceiling down



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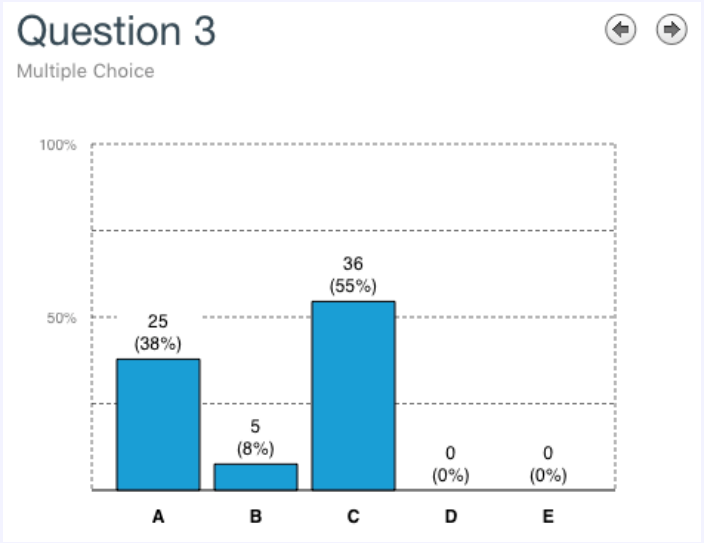
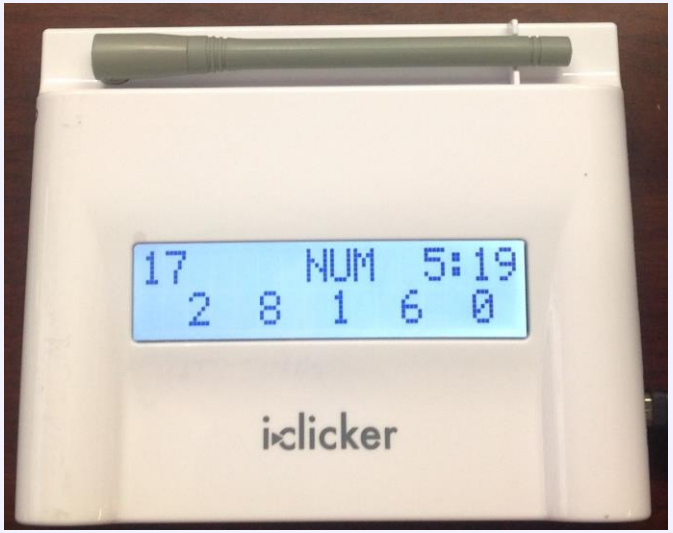


Can be used in Dual Screen mode



iClicker base unit

Climbing the Rope

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When you pull down on the rope, the rope pulls up on you!! It is actually this upward force by the rope that makes you move up! This is the "reaction" force (by the rope on you) to the force that you exerted on the rope. And voilá, this is Newton's Third Law.

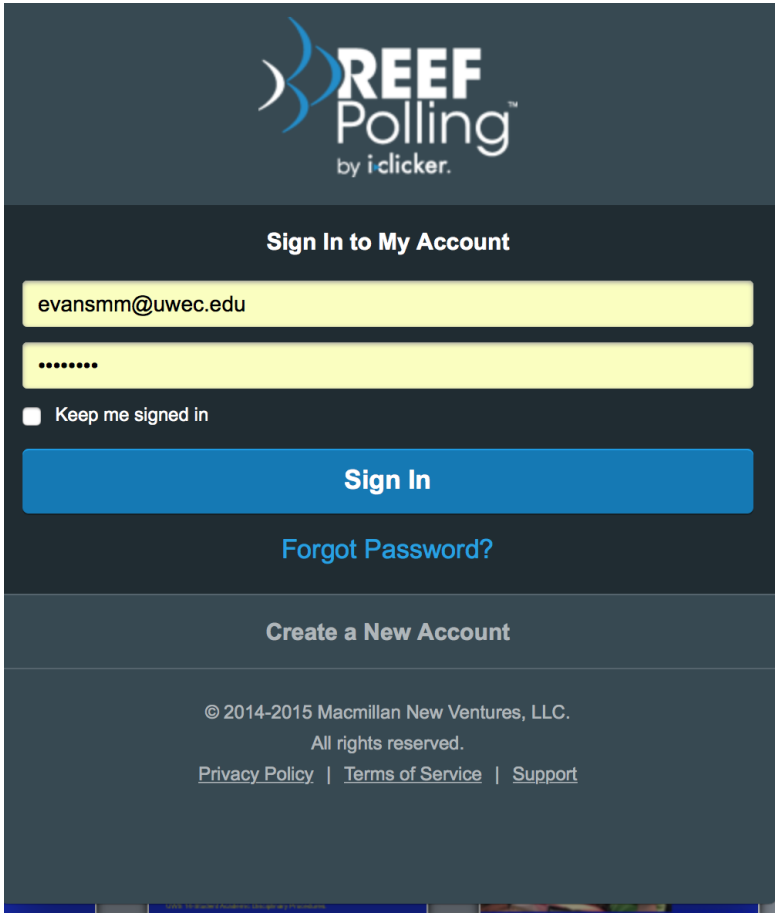
REEF Polling on a device

Apple, Android & Web

Laptop, Tablet or Phone

i>clicker
REEF

i>clicker
Remotes



Both device and clicker can be used in same class!

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Advice to Faculty:
Be consistent and sell, sell, sell

- Add a clicker policy to your syllabus
- Explain your grading policy
- Explain why you are using polling
- Explain again later in the semester why you are using the clickers when good questions come up
- True for any new technique you use!

What's your question?

- What question do you pose to students that they misunderstand initially?
- What can you do to lead *them* to the correct thinking?

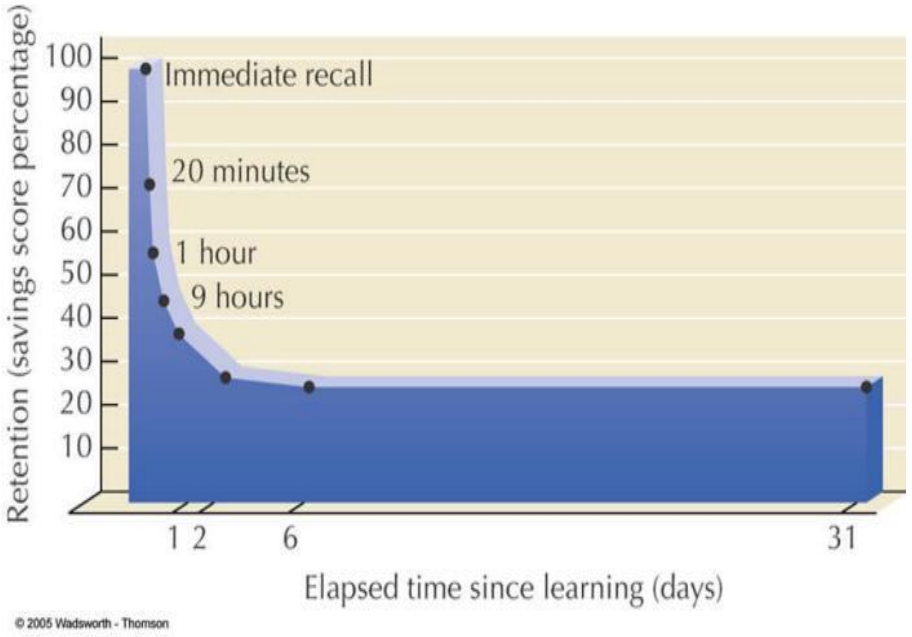
Build Confidence with Practice

Welcoming Class Introduction

"Problem you have seen before" to get started

Recall - Retrieval

Peer Teaching



When a ball is thrown in the air at the very top its acceleration is

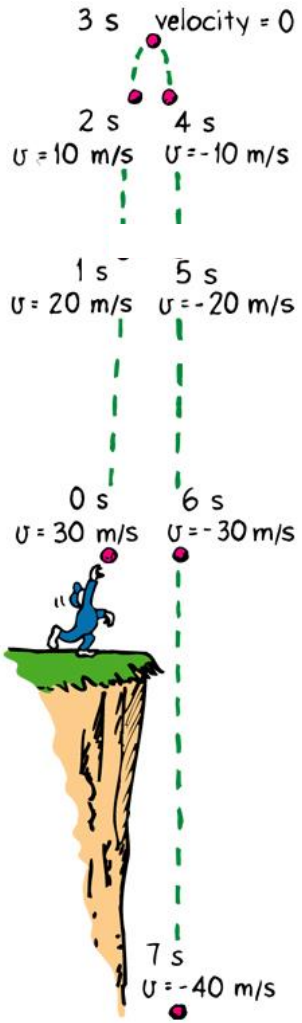
A Slightly positive

B Zero

C Slightly negative

D $-9.8\ m/s^2$

E A little bigger than $-9.8 m/s^2$



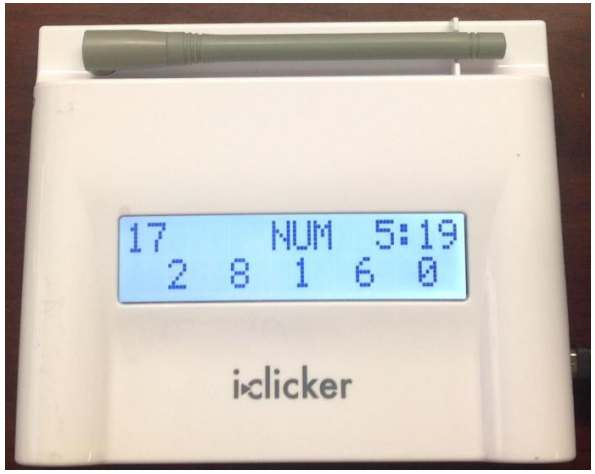
Let's try that again!

(Students groan)

YOU decide what to do next!

- Show results
- Take away most common wrong answer & poll again
- Peer instruction
- Ask another probing question

i>clicker inspired *Just in Time Teaching*!



Desktop unit shows distribution of answers A-E

If a car is at rest, and has an acceleration of 0 $^{m}/_{s^2}$ how fast is it moving 1s later?

- A 0 $^{m}/_{s^2}$
- B 0 $^{m}/_{s}$
- C -9.8 $^{m}/_{s^2}$
- D -9.8 $^{m}/_{s}$
- E +9.8 $^{m}/_{s}$

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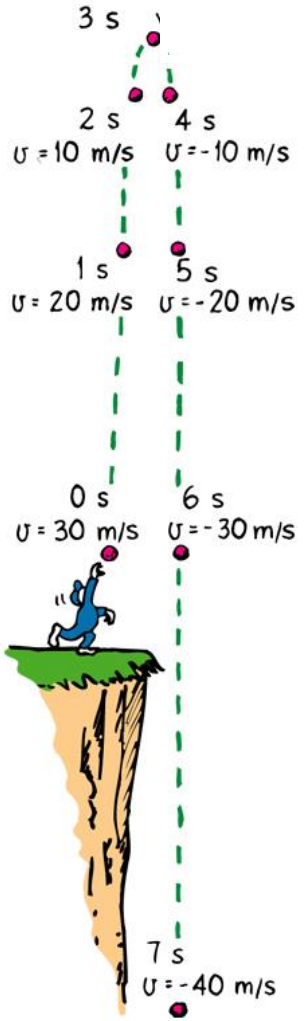

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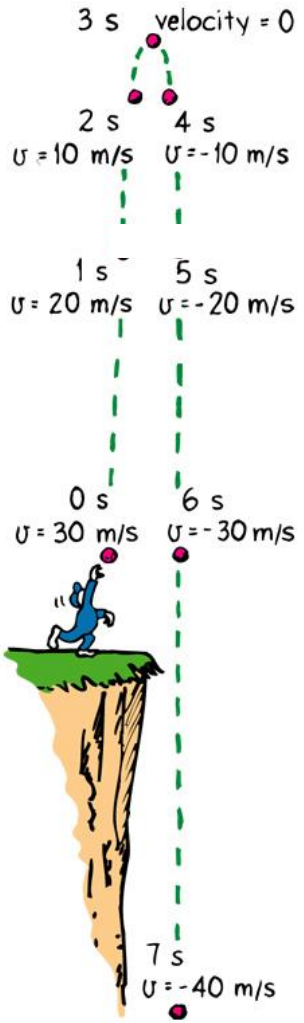


Make it CHALLENGING!

- Don’t make it too easy, or they drift off
  (I shoot for questions with less than 2/3rds get it correct)

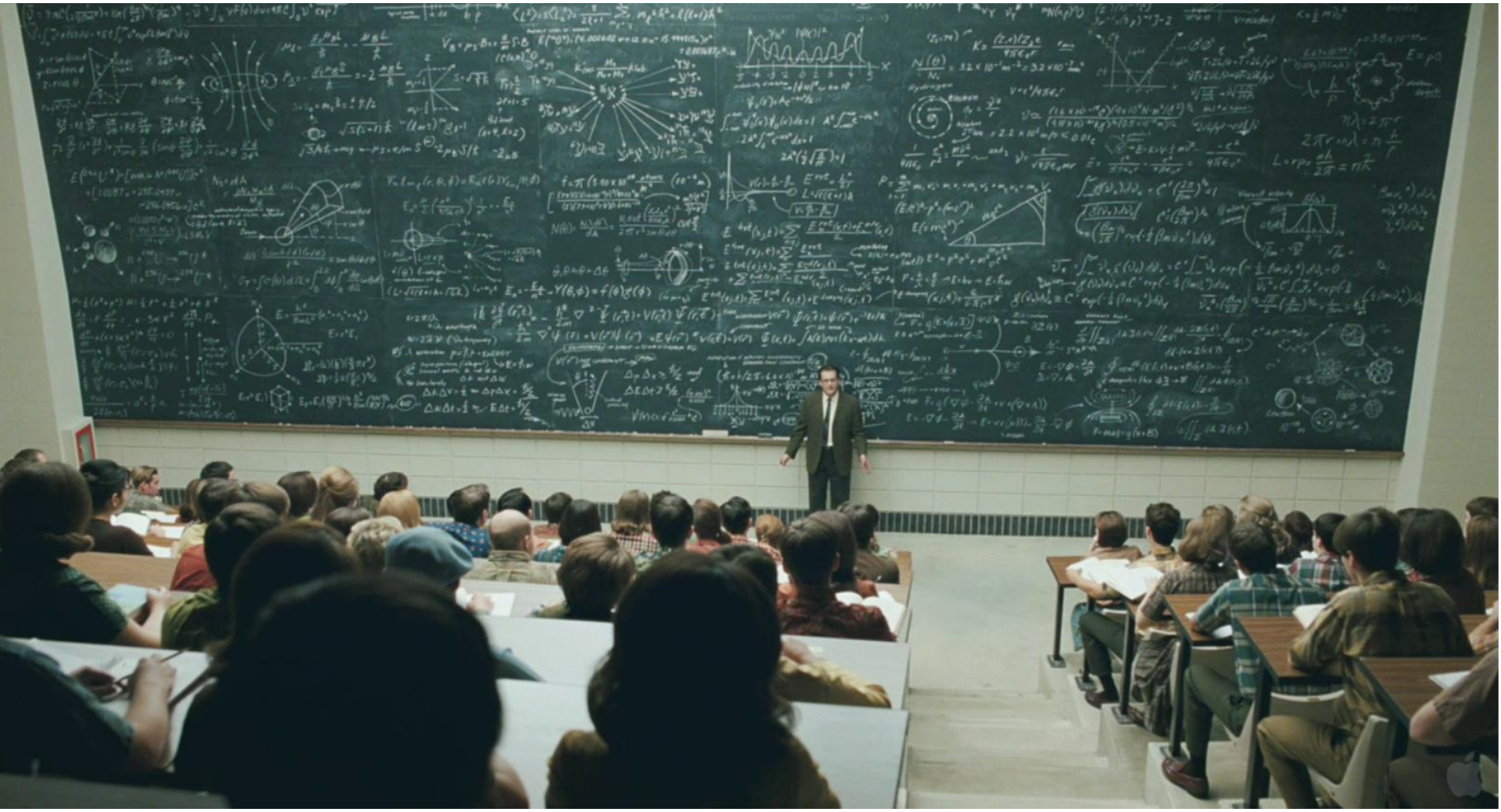
Make them talk to each other!

- Learning happens! Listen to them!

Bring it back to group discussion

- Help them wrap up the concept

High Stakes Testing



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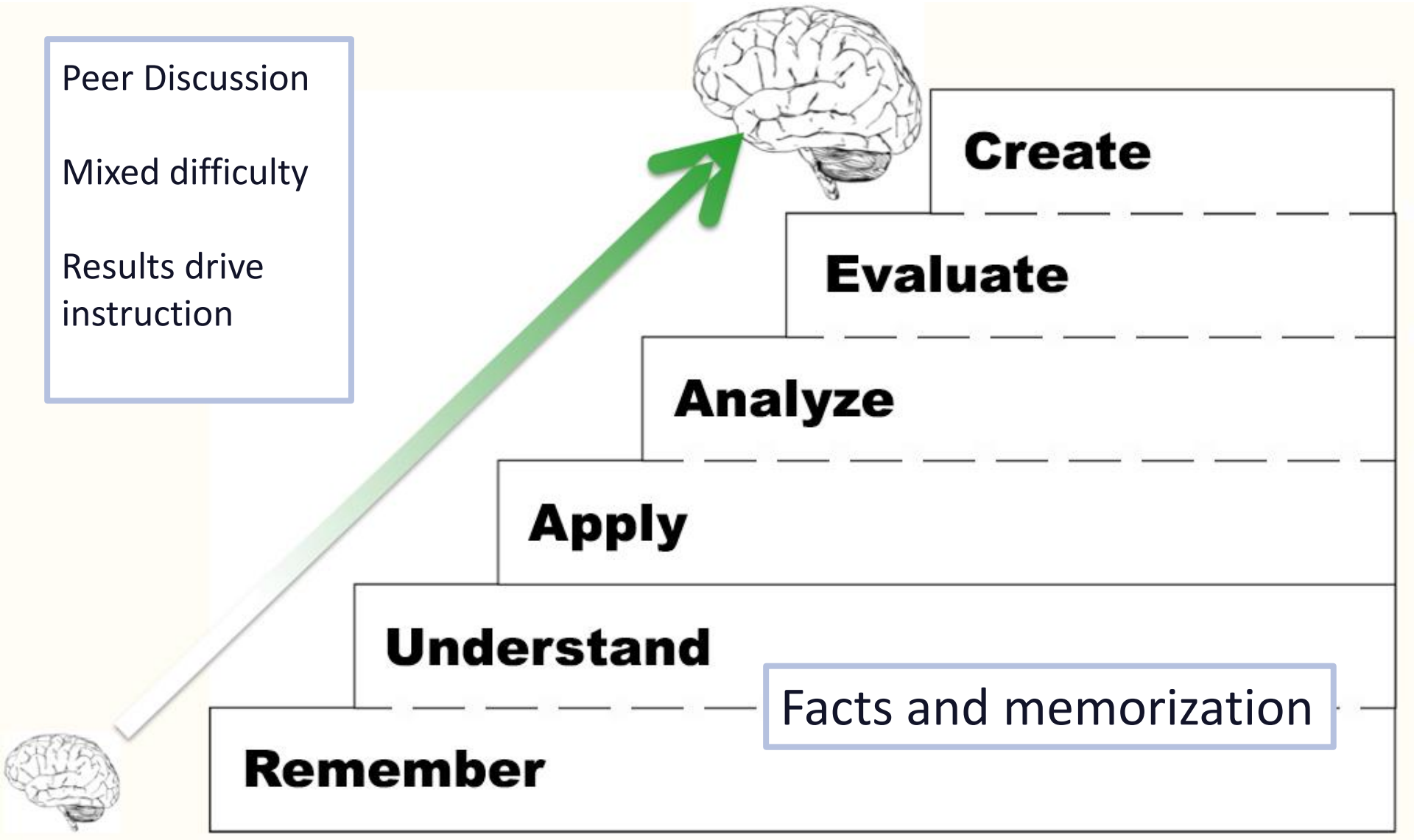
Bloom's Taxonomy & Polling Questions

Peer Discussion

Mixed difficulty

Results drive instruction



Thank you!

- Matt Evans: evansmm@uwec.edu