

Leading with a Growth Mindset in an Era of Increased Performance Demands

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Turning Students into Learners

HARVARD



GRADUATE SCHOOL
OF EDUCATION

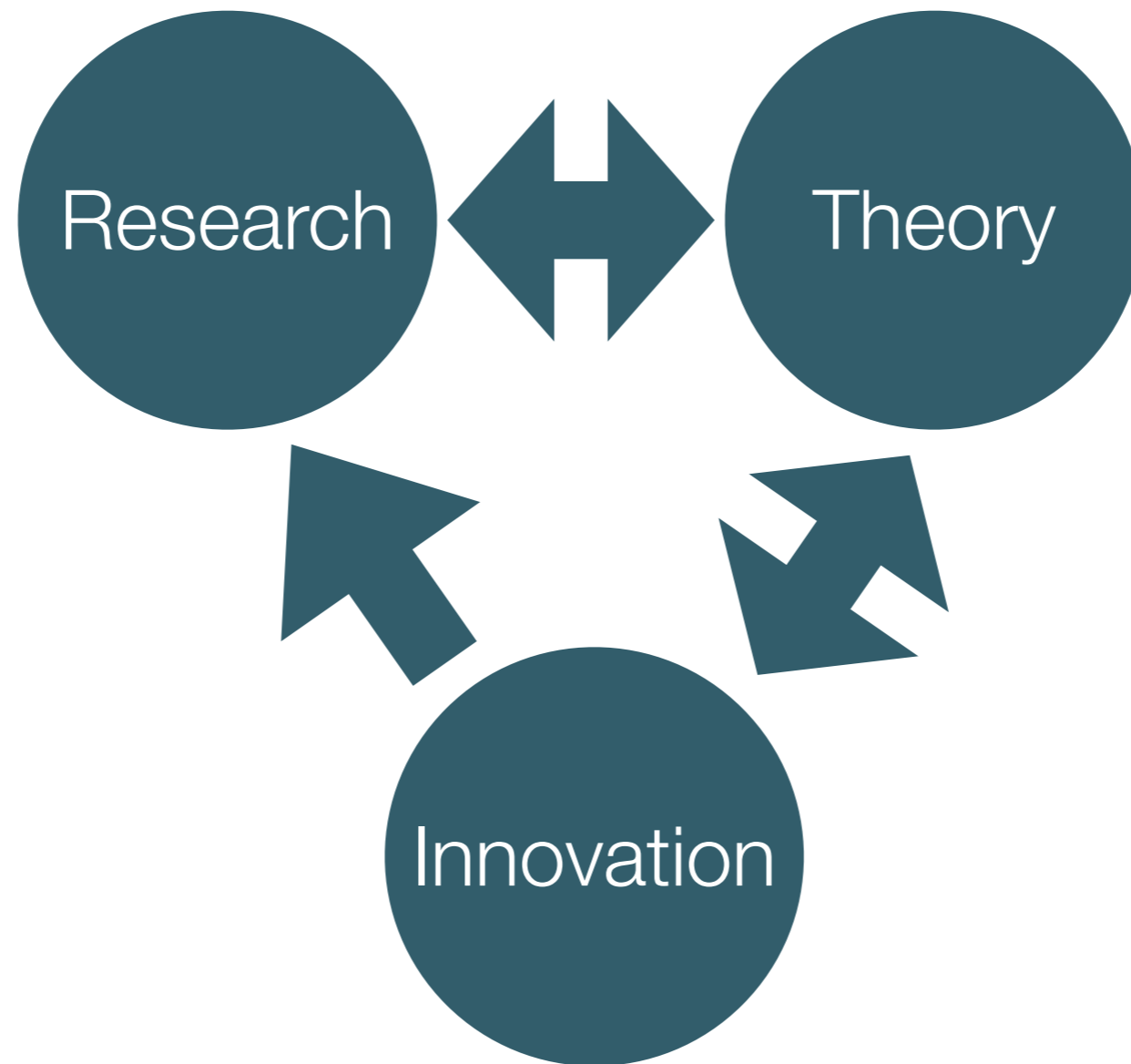
Working at the Nexus of Practice, Policy, & Research



Houghton Mifflin Harcourt.



A Framework: Theory Drives Action



I believe this is worth doing.

I believe I can learn what I need.

Beliefs

Knowledge,
Skills, Strategies

Behaviors

I believe I can do it.

I believe my group values my effort.

Task

LITERATURE REVIEW JUNE 2012

Teaching Adolescents To Become Learners

The Role of Noncognitive Factors in Shaping School
Performance: A Critical Literature Review

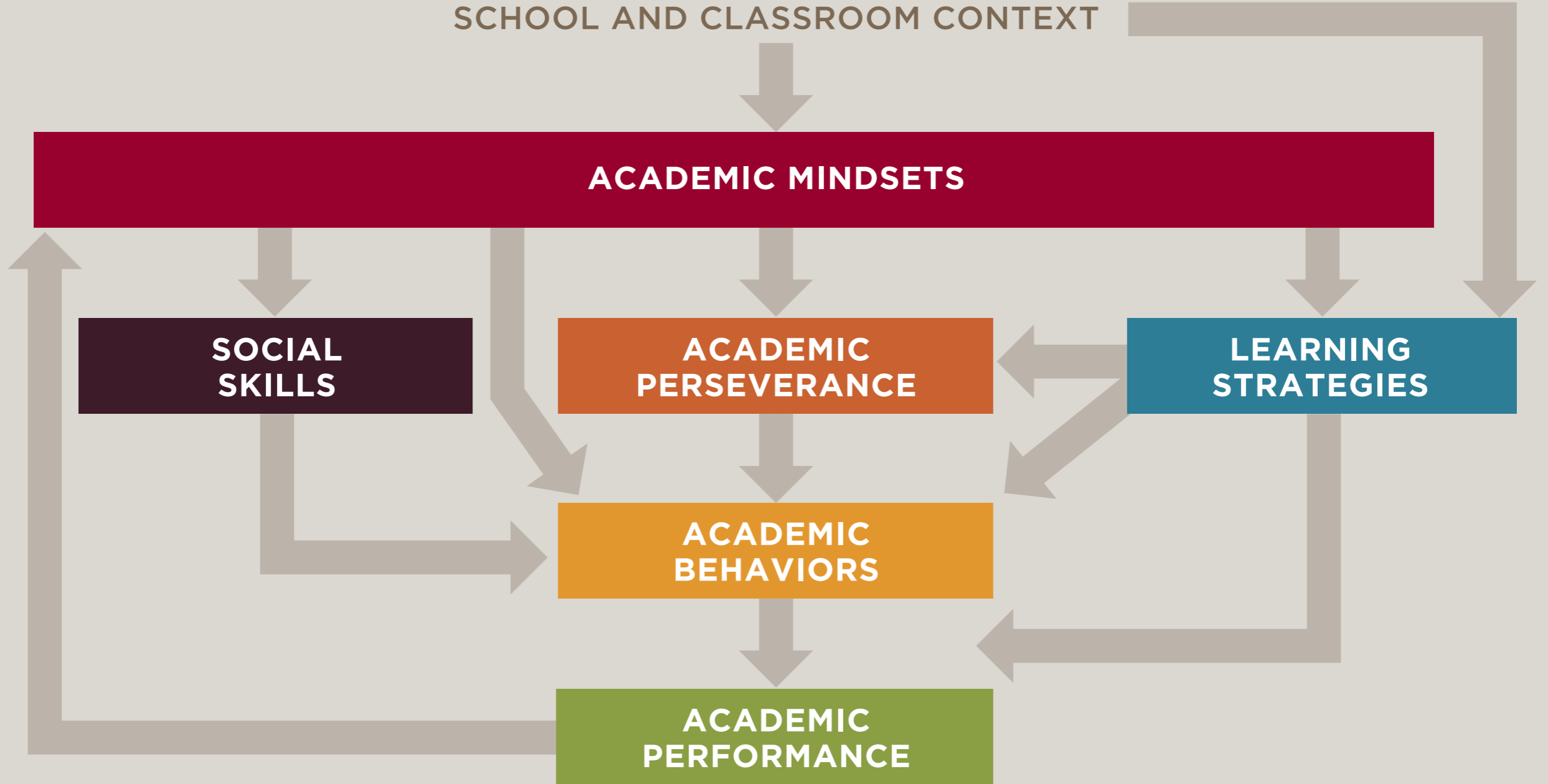
What makes someone a
learner?

Farrington, et.al., 2012

SOCIO-CULTURAL CONTEXT

SCHOOL AND CLASSROOM CONTEXT

STUDENT BACKGROUND CHARACTERISTICS

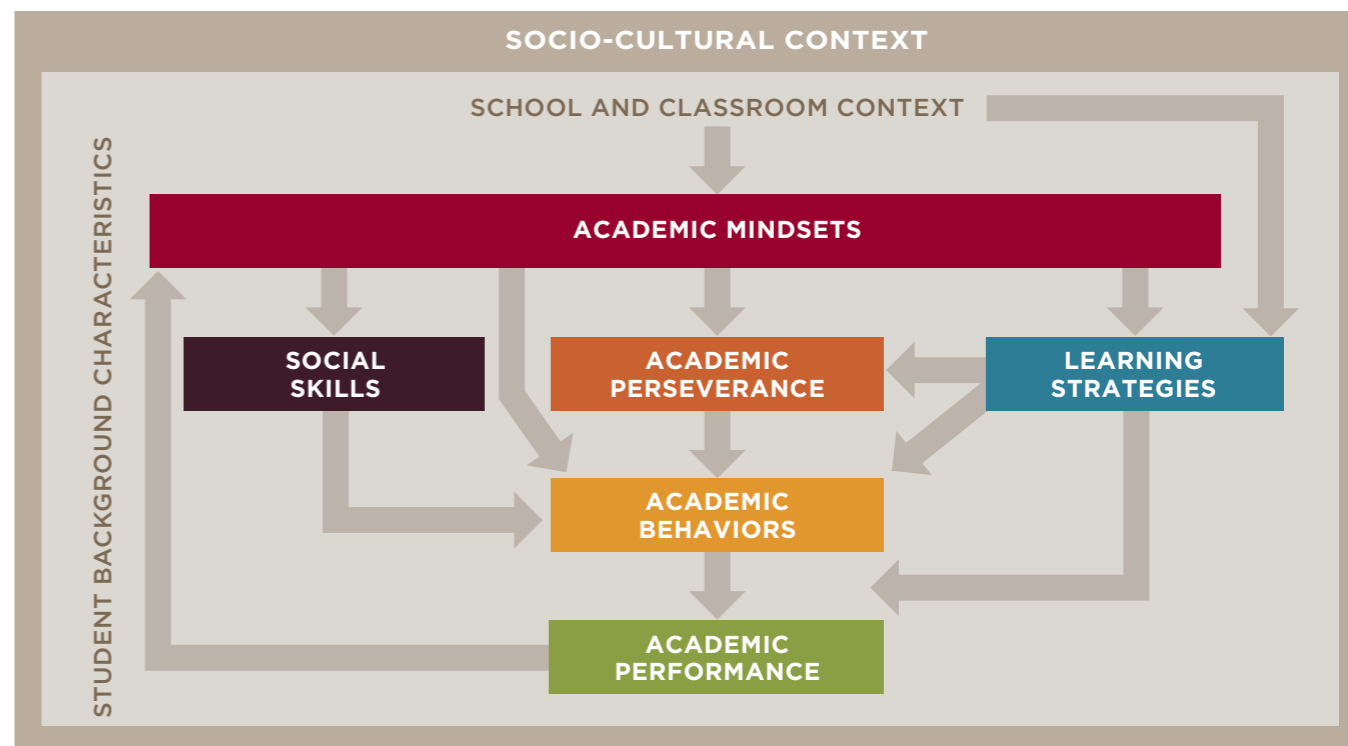


Academic Mindsets

Beliefs that drive behavior

Beliefs that Underlie Performance

- “This work has value for me” (expectancy-value theory).
- “I can succeed at this” (self-efficacy).
- “My ability and competences grow with my effort” (implicit theories of ability).
- “I belong in this academic community” (sense of belonging)

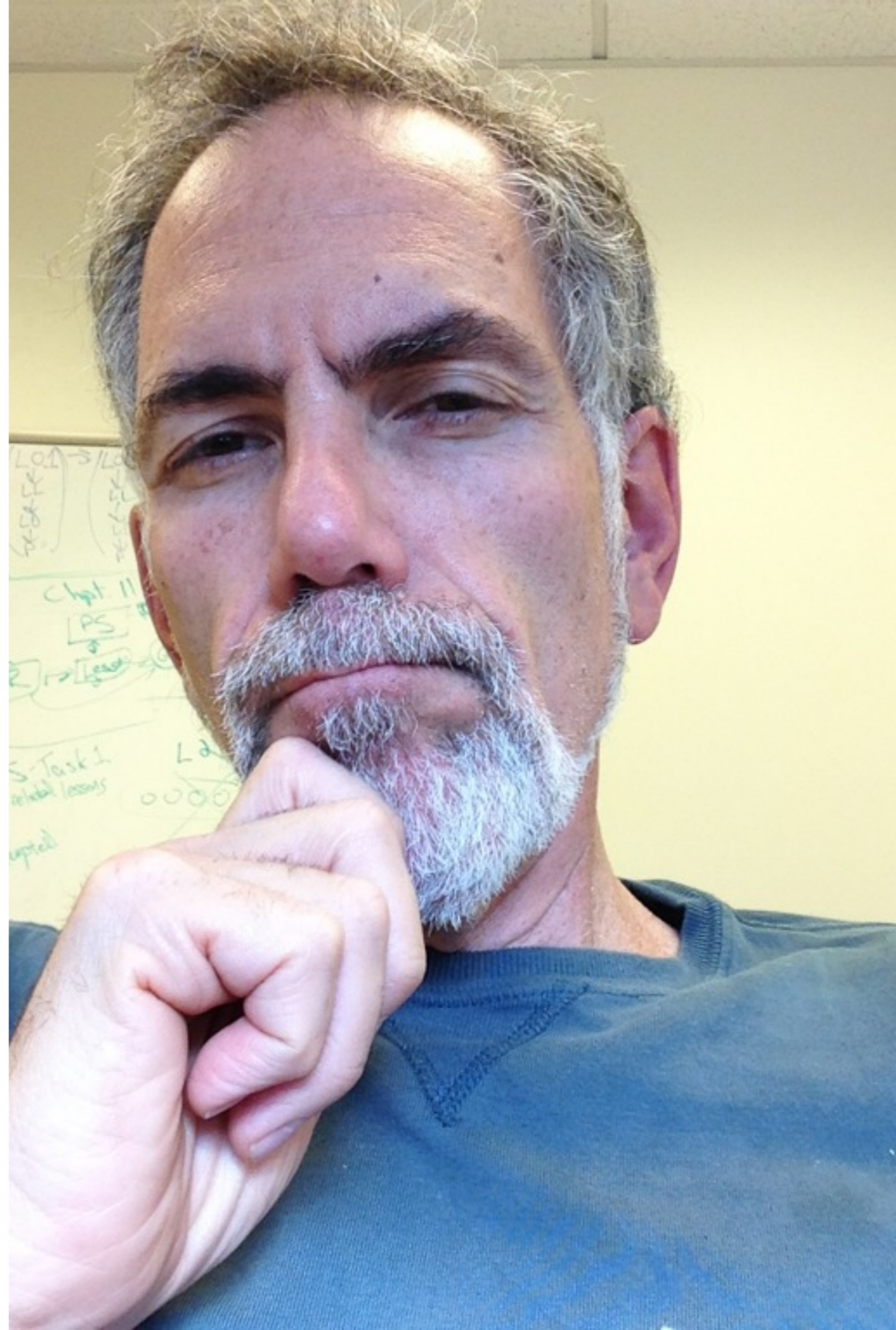


Three Questions

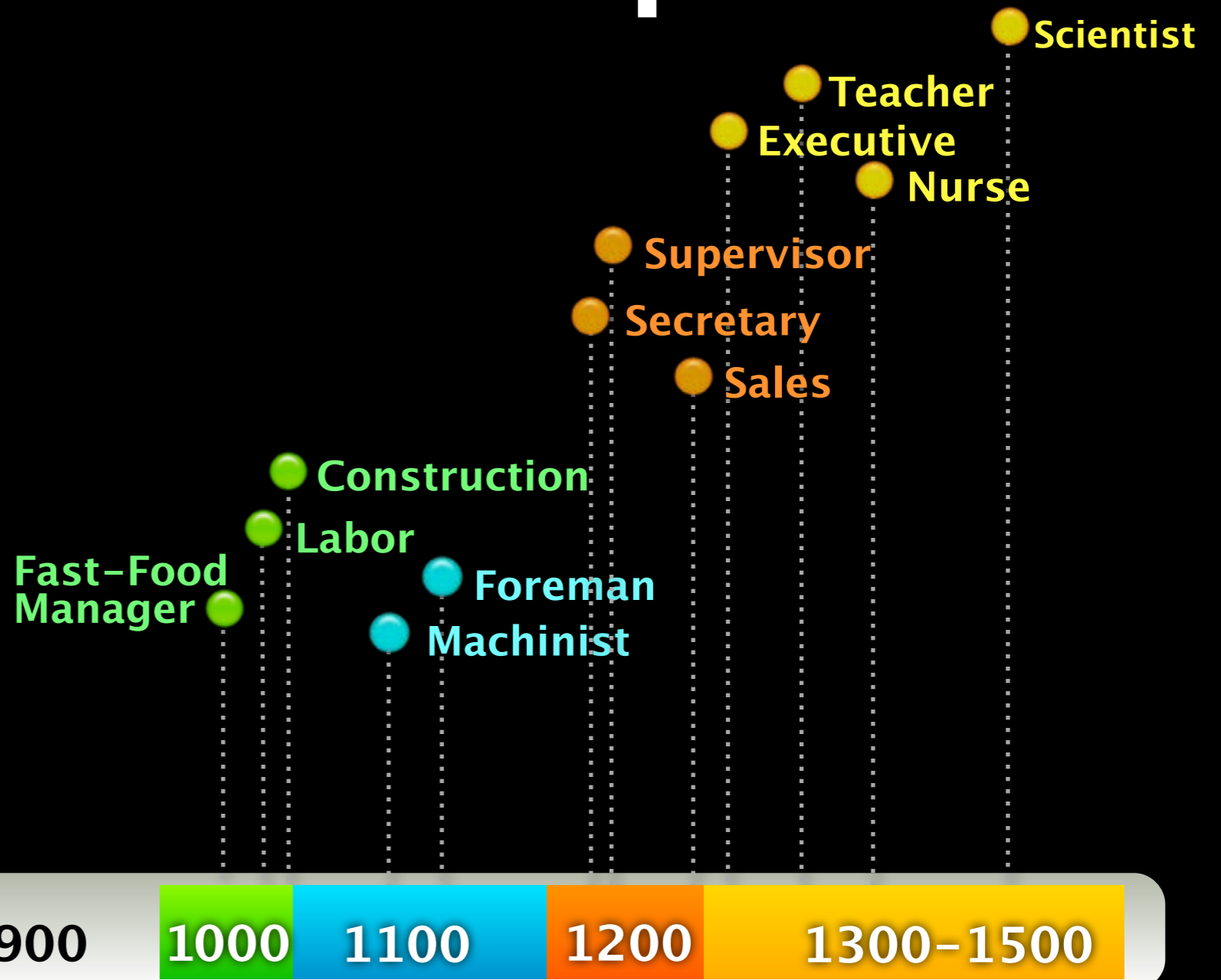
1. How do we get students to believe school is worth doing?
2. How do we get students to believe success is possible...even when it's hard?
3. How do we create a climate for productive struggle, where students believe it's okay to stumble on the path to learning?

Get you thinking...

- What makes something “worth doing” for you?
- What makes something relevant?
- What makes something interesting?



On-The-Job Text Requirements



A Vision of the Future

Seeing that school matters



RECIPES

KNIFE CUTS REQUIRED FOR PRELIMINARY AND FINAL COMPETITION

Large Dice – 3/4" x 3/4" x 3/4"



Medium Dice – 1/2" x 1/2" x 1/2"



Small Dice – 1/4" x 1/4" x 1/4"



Brunoise – 1/8" x 1/8" x 1/8"



Bâtonnet – 1/4" x 1/4" x 2"



(From Bâtonnet we get Small Dice)

Julienne – 1/8" x 1/8" x 2"



(From Julienne we get Brunoise)

Fine Julienne – 1/16" x 1/16" x 2"



(From Fine Julienne we get Fine Brunoise (not pictured))

Tourné (turned) – 7 Sides – 3/4" width x 2" length



Put Application Up Front





Chris - flickr

Let them play

even if they're bad at it

From Careers to Causes

Self-transcendence - Contributing to something bigger than ourselves

WRAP-UP PROJECT

Critical Thinking and Problem Solving

Focus Skills Evaluate Risk | Ask Questions

What is your disaster plan?

A natural disaster could happen at any time. How would you respond if a major storm or earthquake hit while you were in school? **Propose a plan** for what to do if a disaster strikes.

1 Brainstorm risks. List two possible disasters that could hit your area.

A. _____

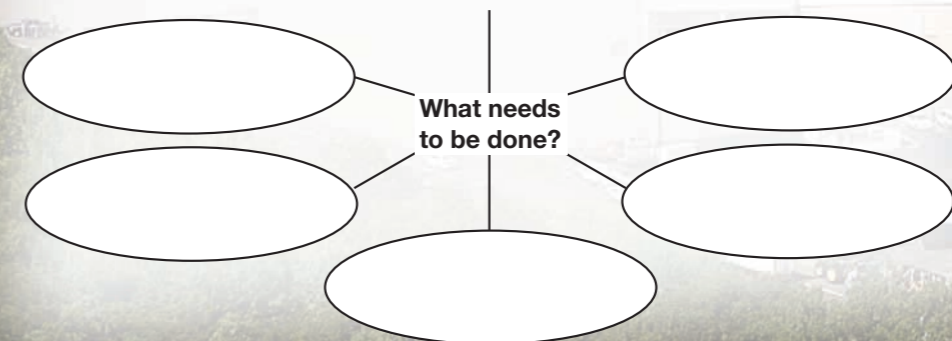
B. _____

2 Ask questions. What questions might people have during an emergency? Consider the different groups at your school that would be affected.

Groups Affected	Questions
Teachers and School Officials	• <i>What's the best way to communicate the plan in the school building?</i>
Students	
Parents	

3 Collaborate. Decide what would need to happen during a disaster. Add five more actions to the web. Then, circle the three best actions for students to take.

Follow instructions carefully.





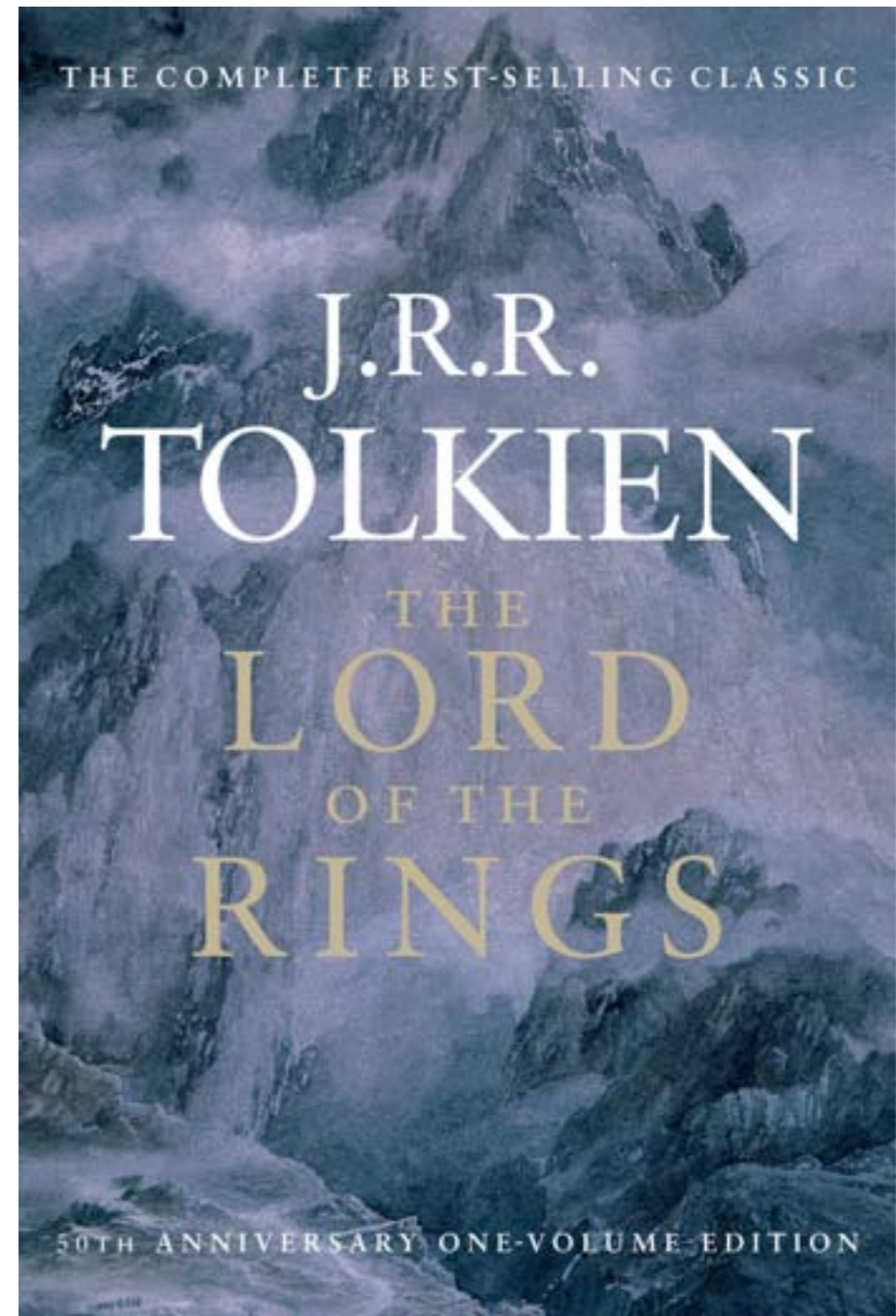
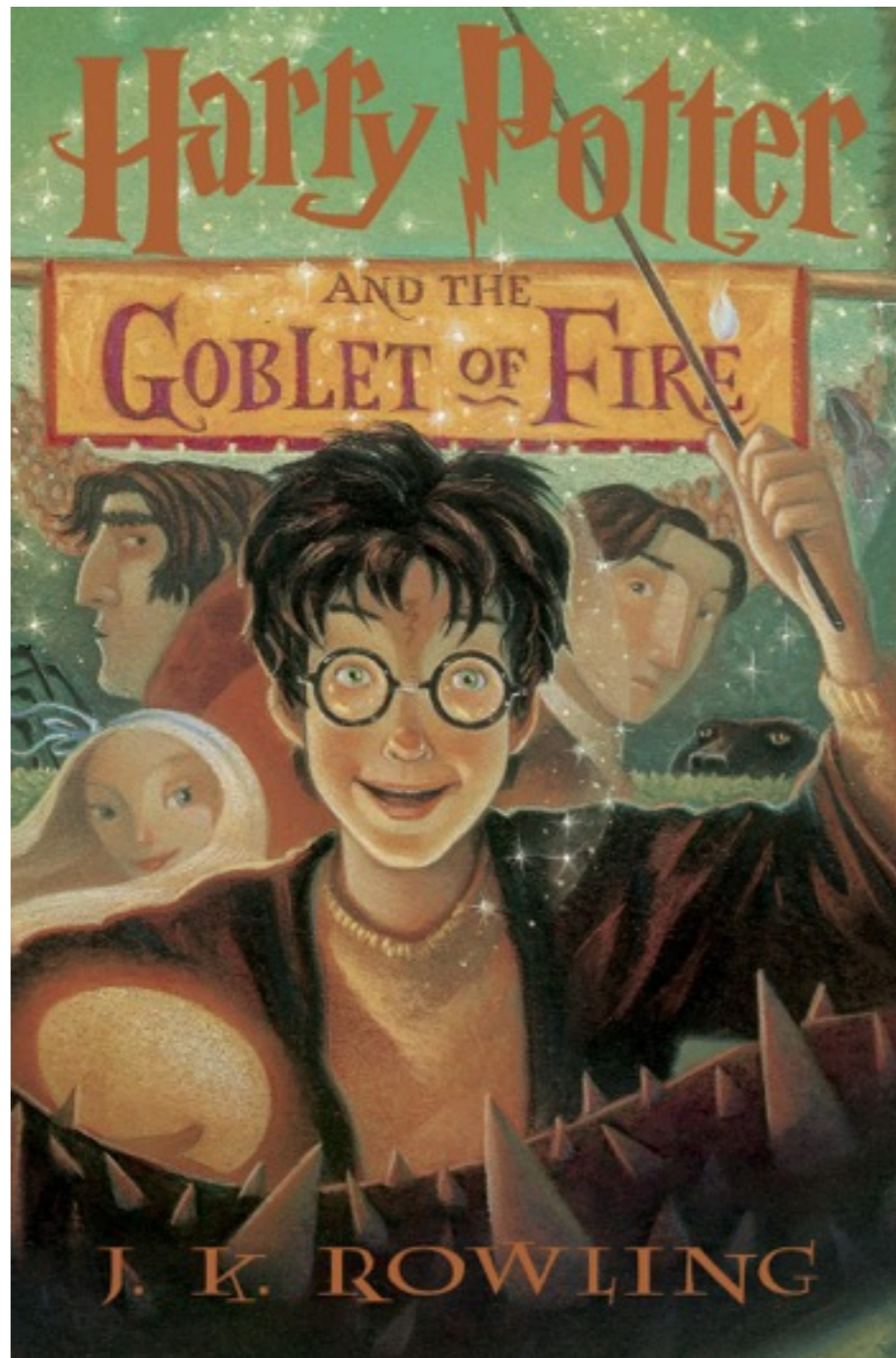
Belonging to something important



Campaign Bootcamp - flickr

Being exceptional

not the exception



And it should be
interesting


like a good story



Play Doh Sparkle Princess Ariel Elsa Anna Disney Frozen MagiClip
Glitter Glider Princesas Magic Clip



FunToyzCollector

 **Subscribe** 4,019,308

227,836,744

 Add to  Share  More



Unboxing – the YouTube phenomenon that lets you see what you're getting

First it was 'haul girls' showing off their purchases, now it's videos of people unpackaging toys – and they're potentially making millions

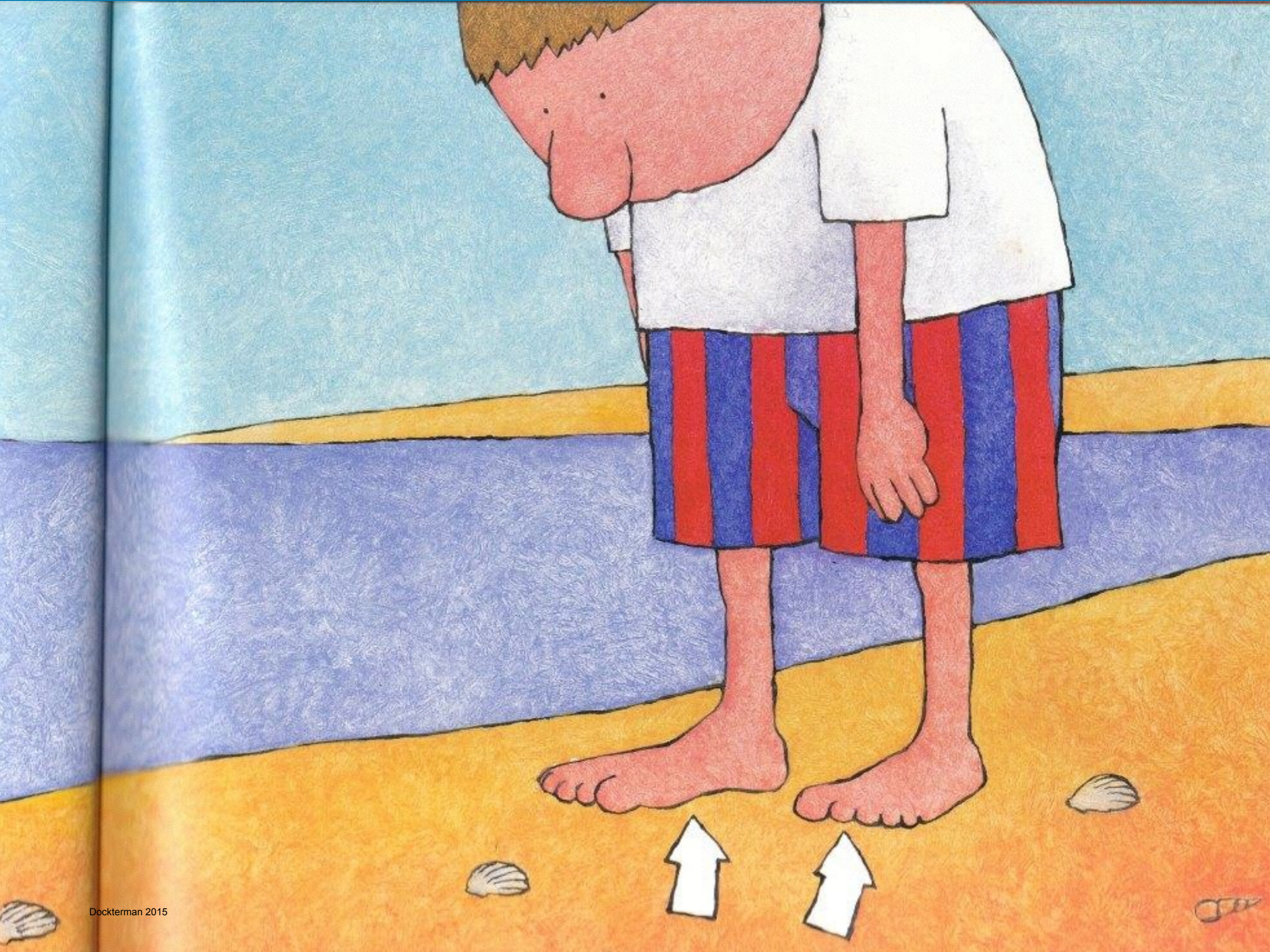
UNCERTAIN REWARD MORE MOTIVATING THAN SURE THING, STUDY FINDS

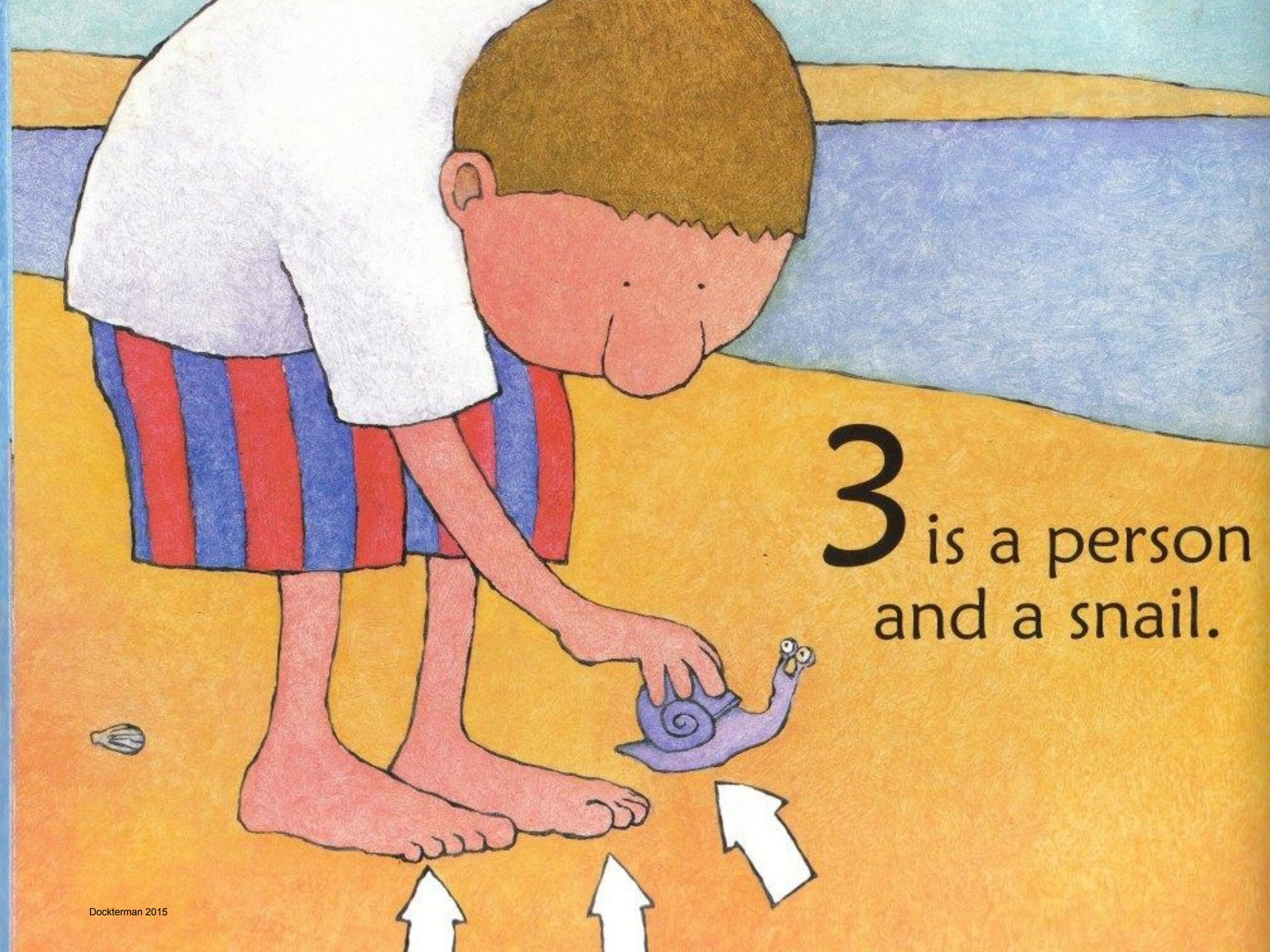
October 13, 2014



Reality TV drama - what do you think is going to happen?

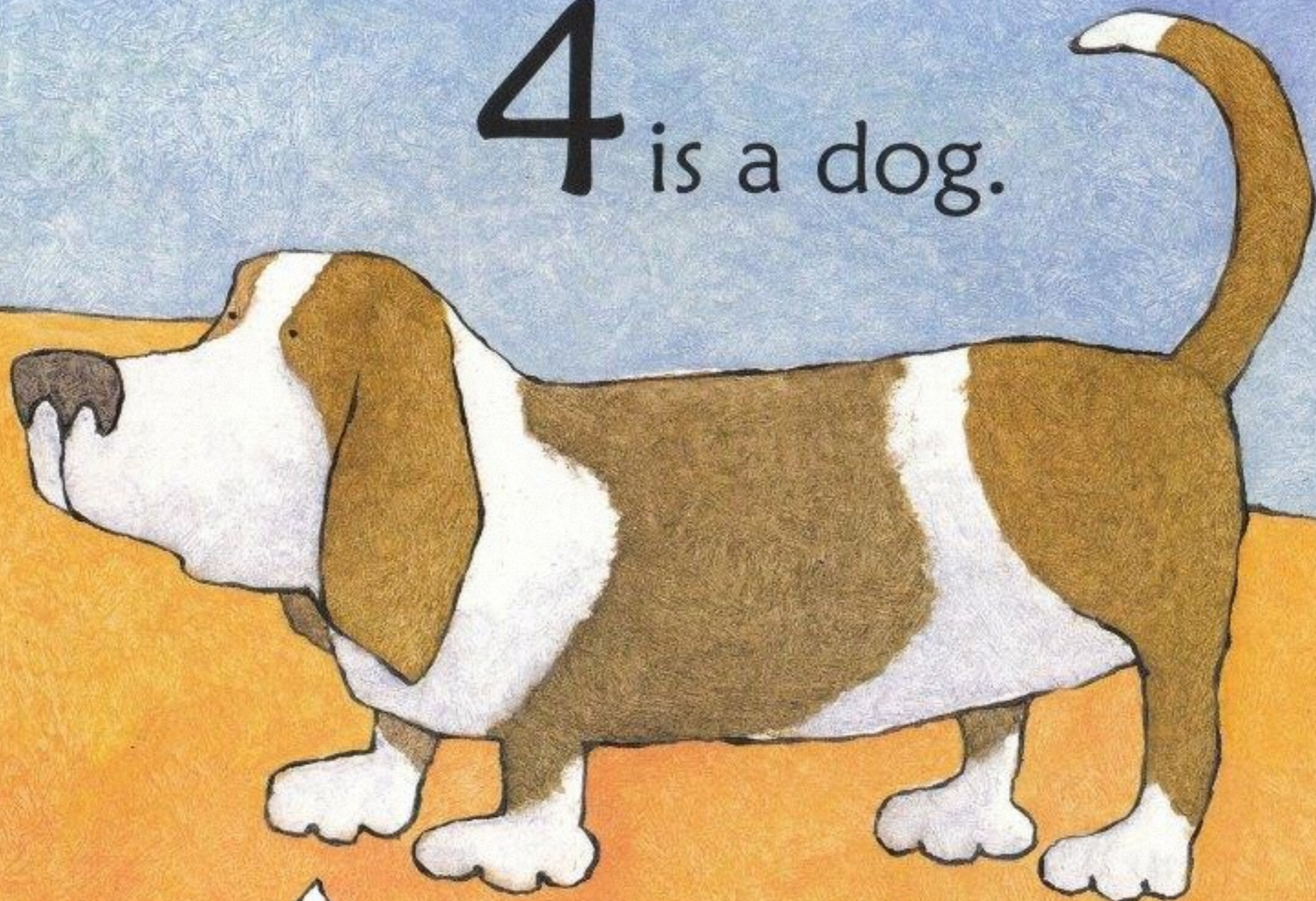






3 is a person
and a snail.

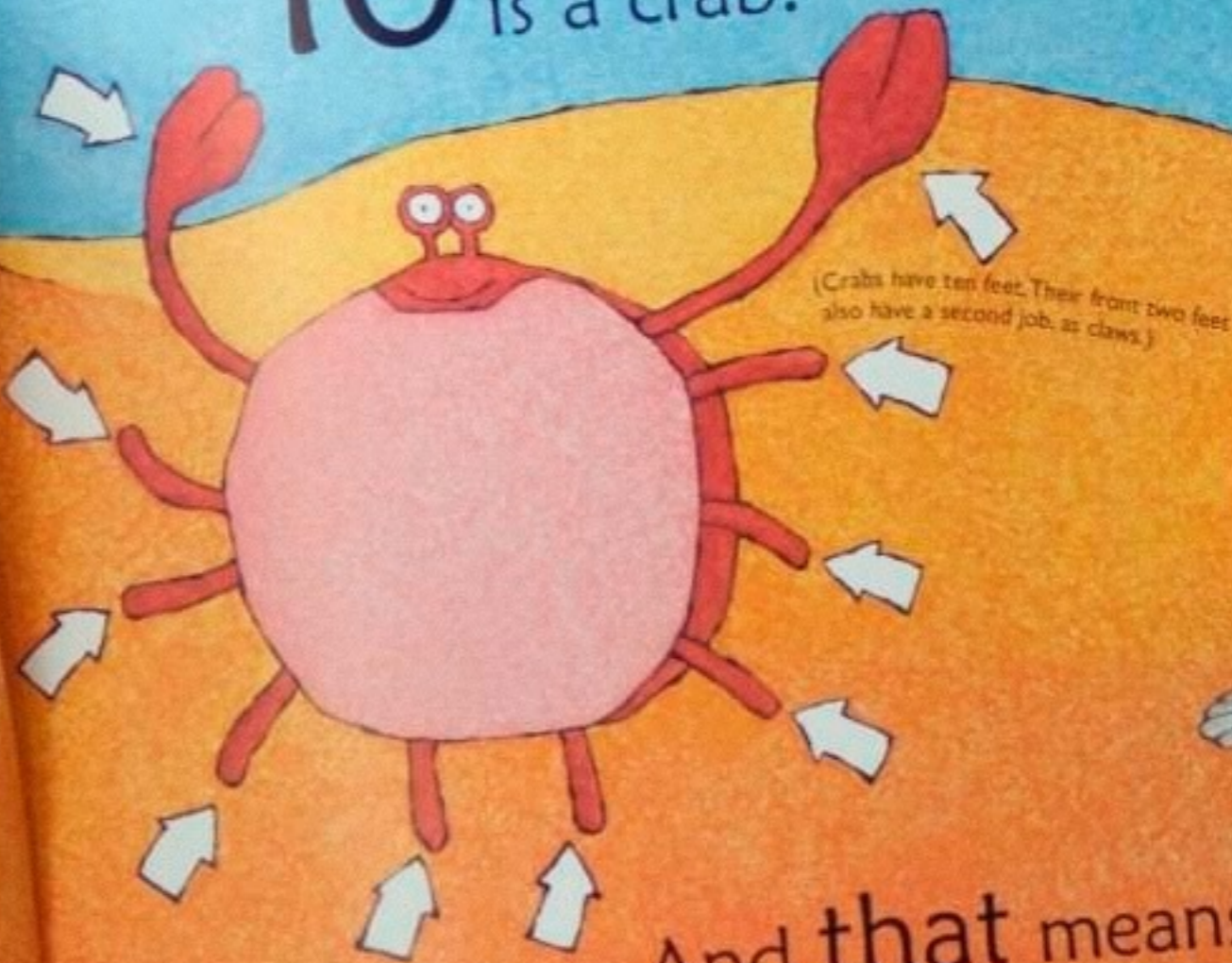
4 is a dog.



9 is a spider and a snail.



10 is a crab.



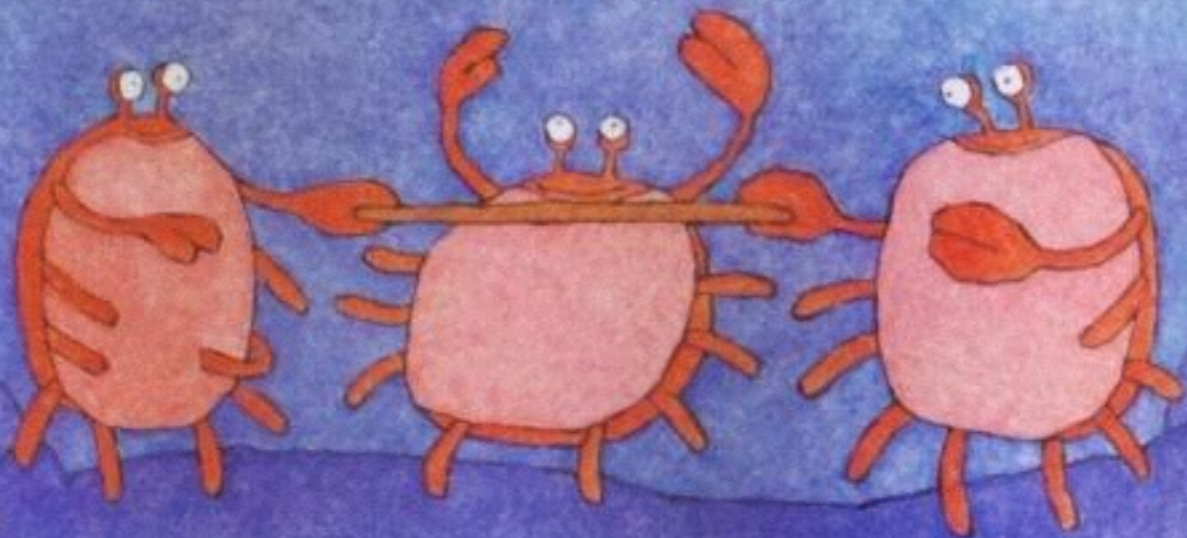
(Crabs have ten feet. Their front two feet also have a second job, as claws.)

And that means...

20 is two crabs.



30 is three crabs...

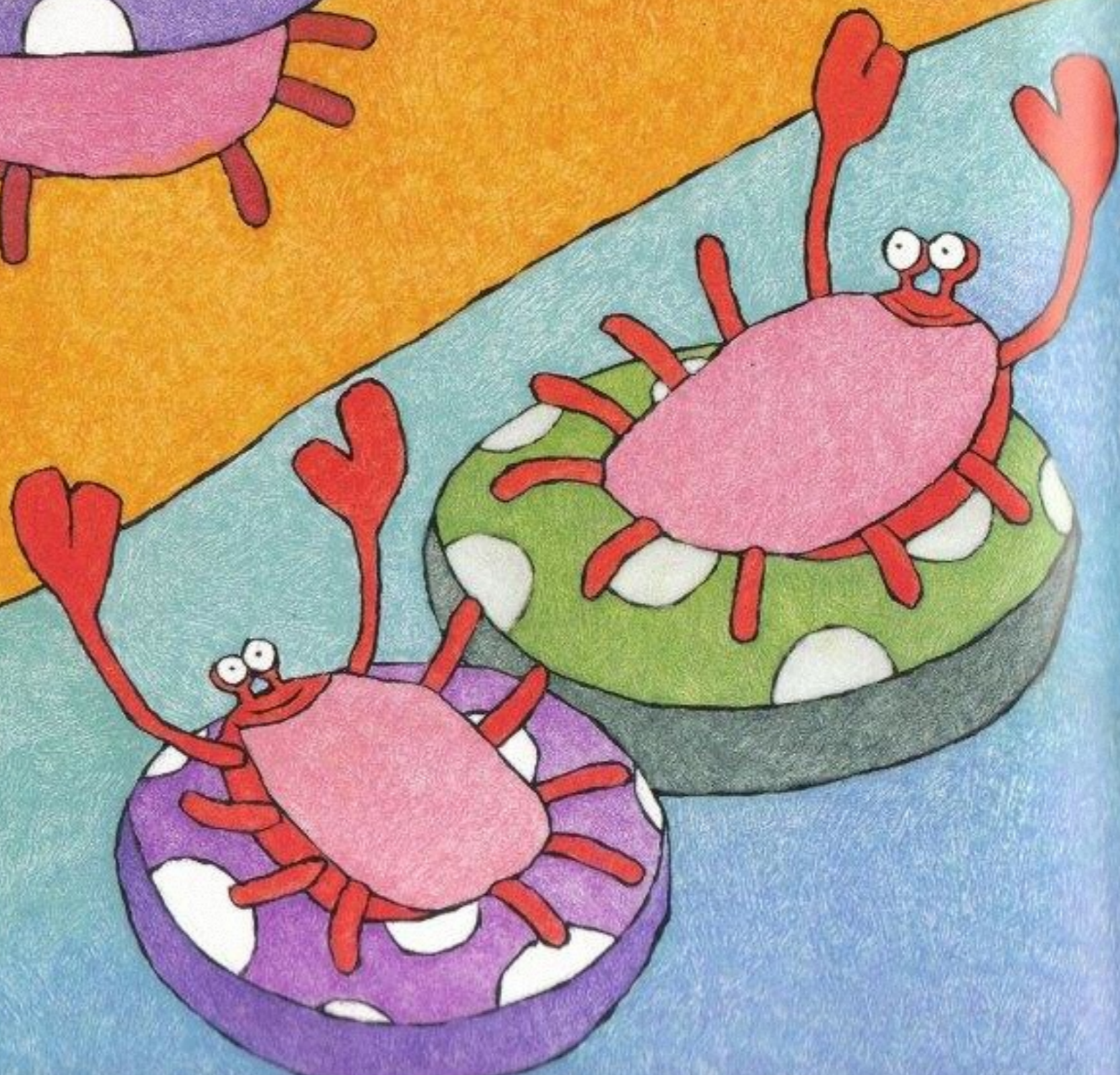
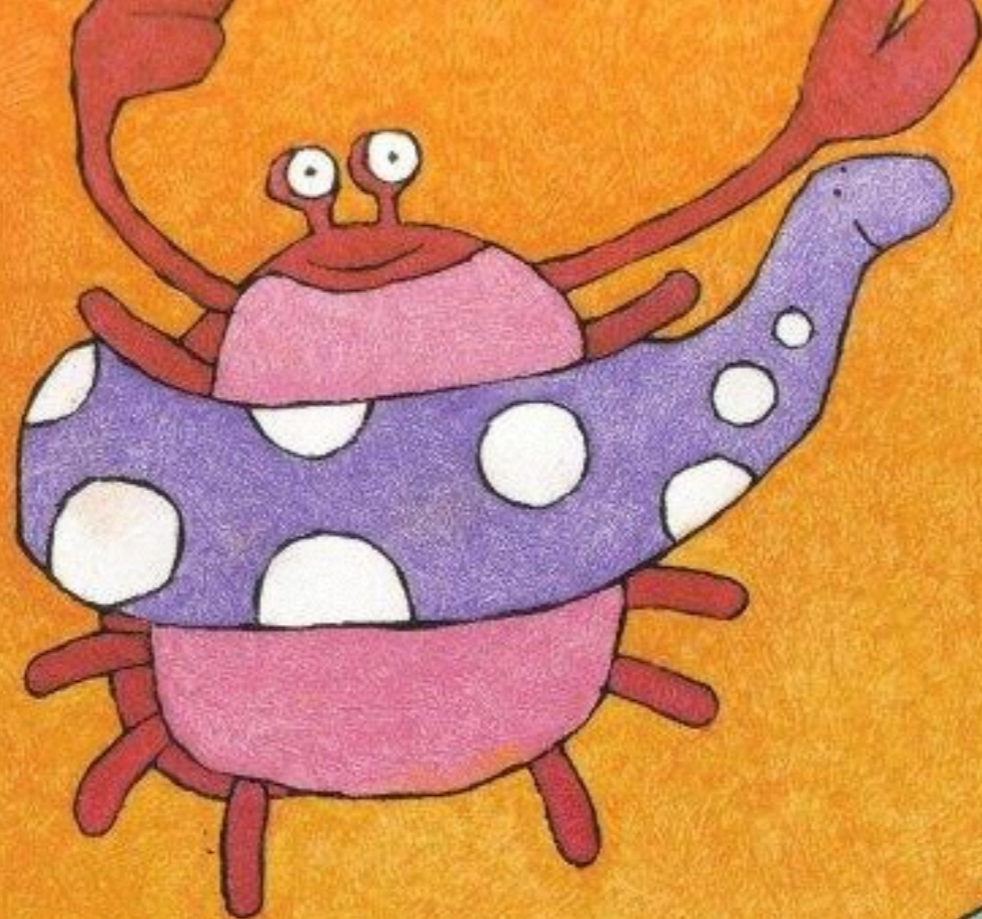


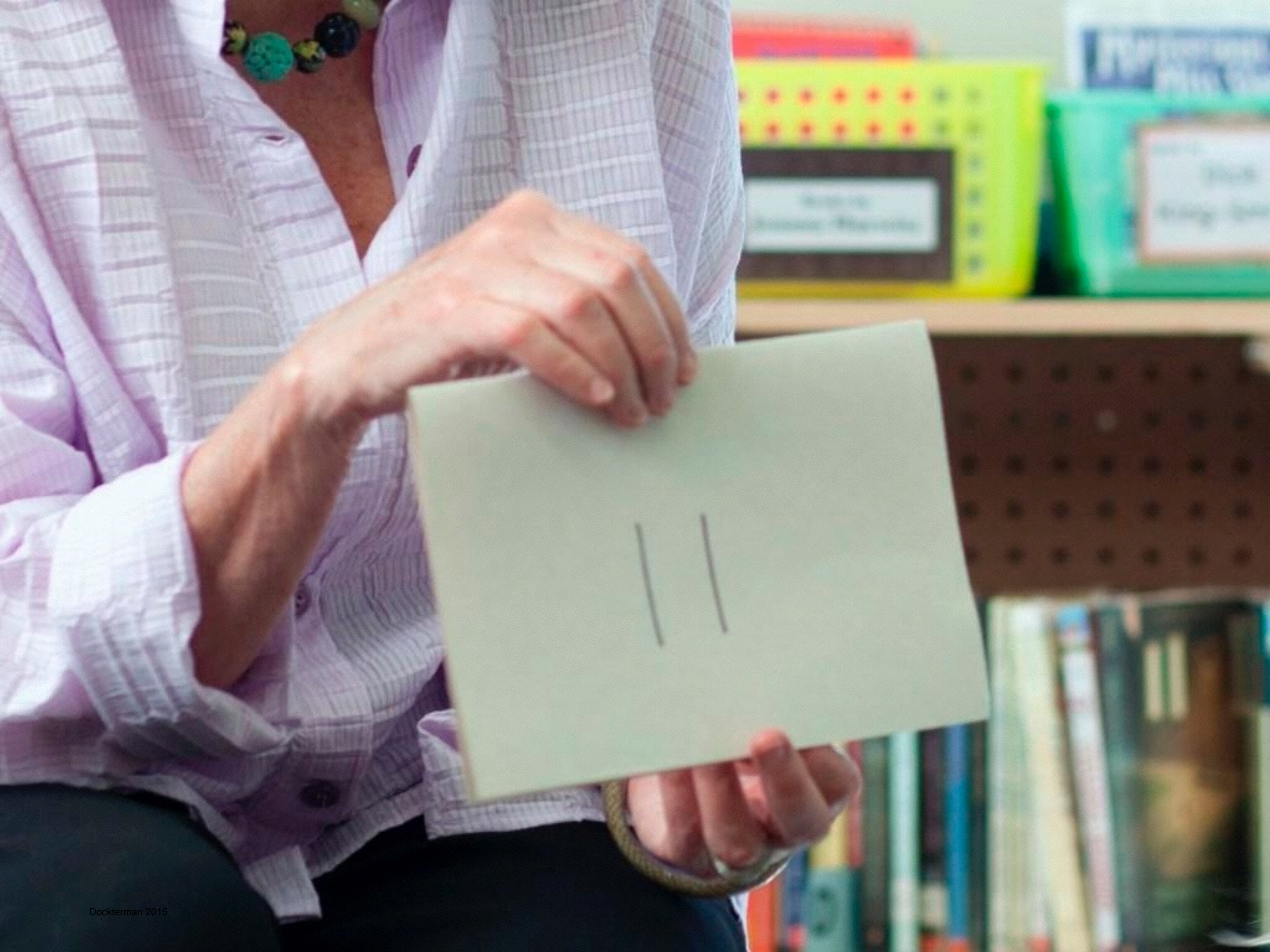
Or ten people and a crab.



So,
100

is ten crabs...





2 dogs + 1 person + 1 snail

$$11 = 8 + 2 + 1$$



$11 = 1 \text{ insect} + 5 \text{ snails}$

$$11 = 6 + 5$$

Predicting provides agency... so does choice.



Can You Believe It?



Predators



Mummies, Bones, and Garbage



It's How You Play the Game



Thrills and Chills



One Man's March

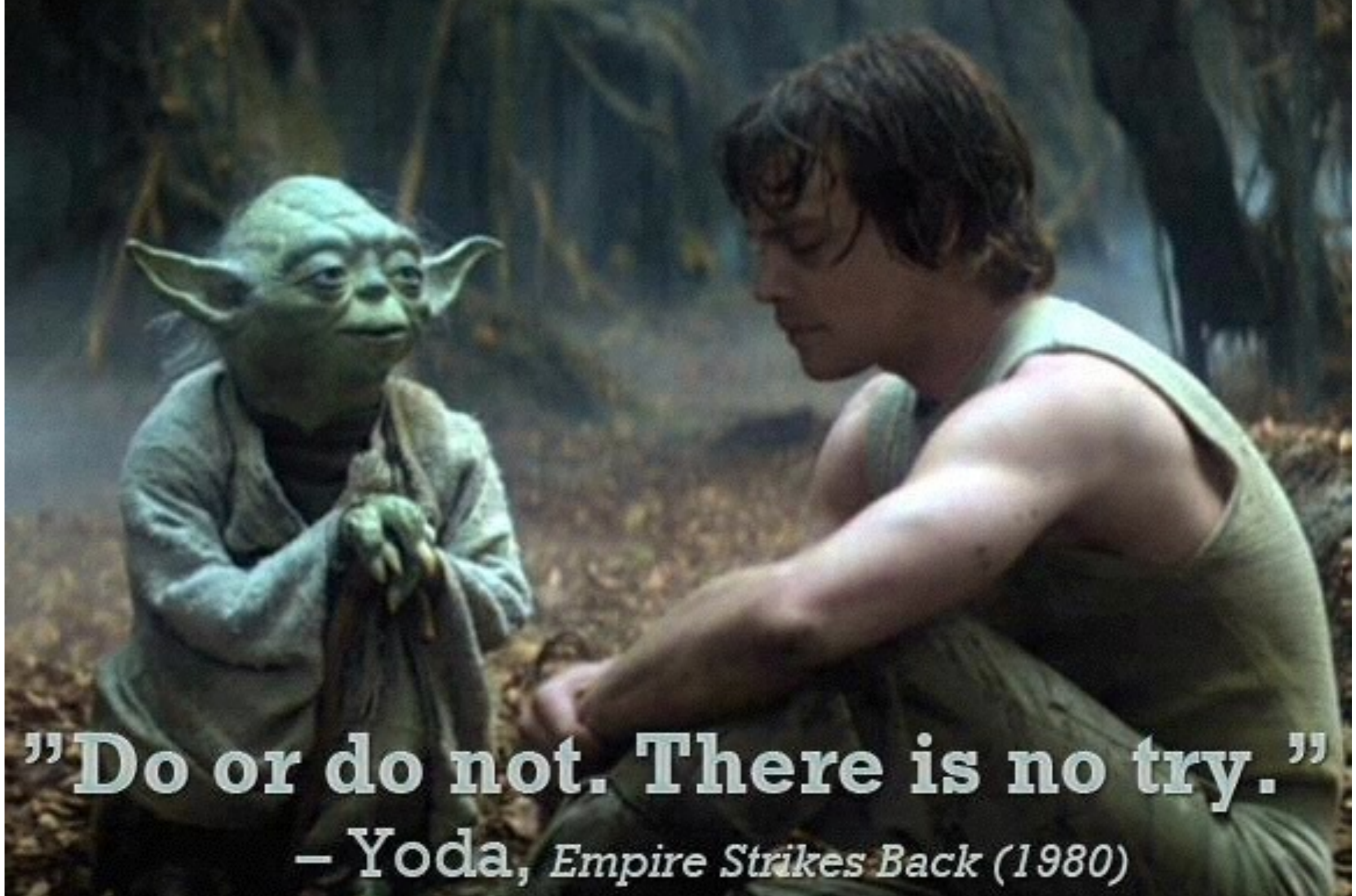


Choice Fuels Value

“I picked it, so I must like it.”

How do we make school worth doing?

- connect to the future - careers and causes (that they choose)
- make it interesting, with a little uncertainty and drama
- give learners agency and choice



”Do or do not. There is no try.”

– Yoda, Empire Strikes Back (1980)

2. How do we get students to believe success is possible?

even when it's hard

Identity

The Disengaged Deflector

The Arrogant Performer

Three student profiles

The Humble Learner

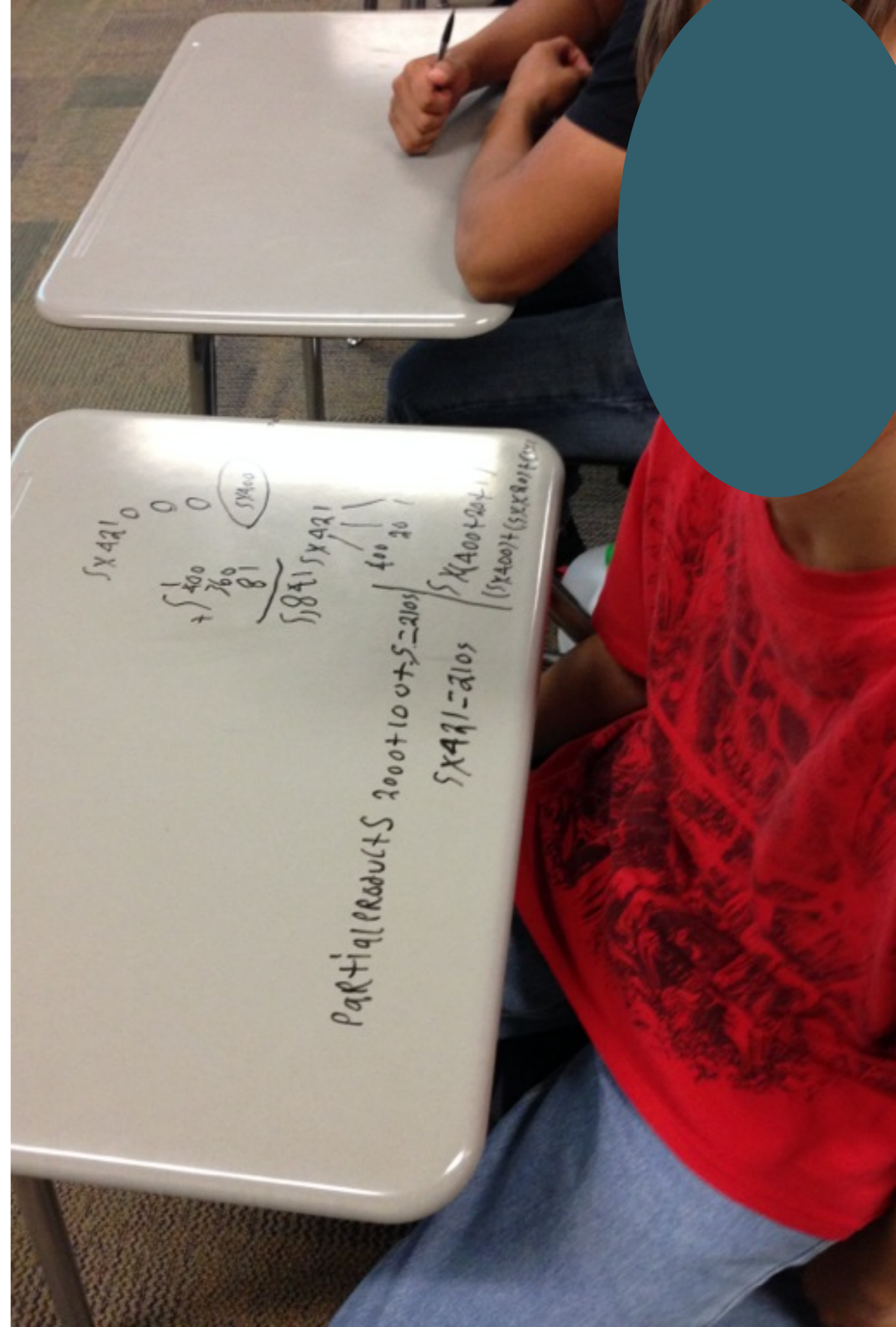


I was all of them.

Identity is fluid.

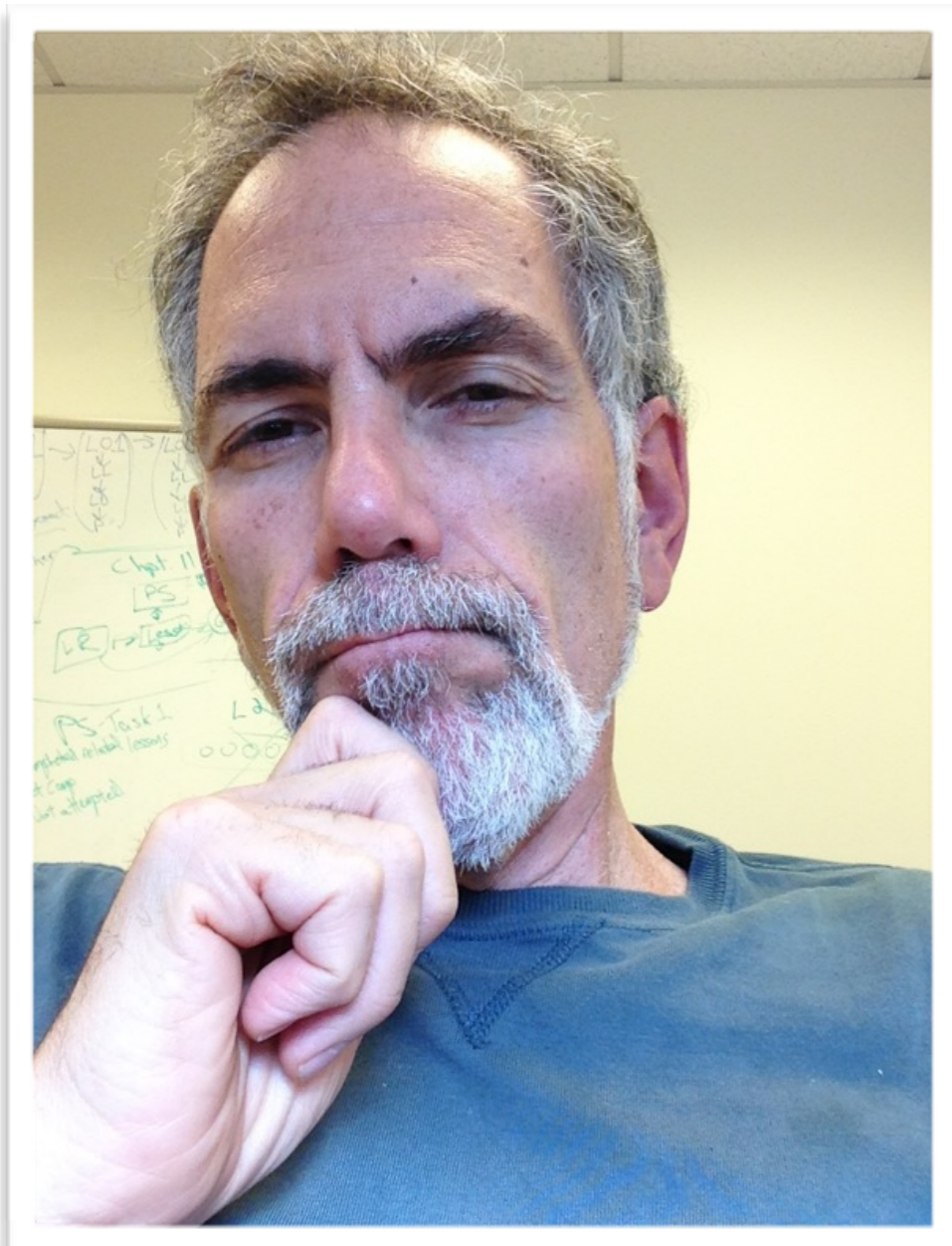
Fluid Confidence

- **“I can multiply like no other!”**
- “But I can’t do fractions...”

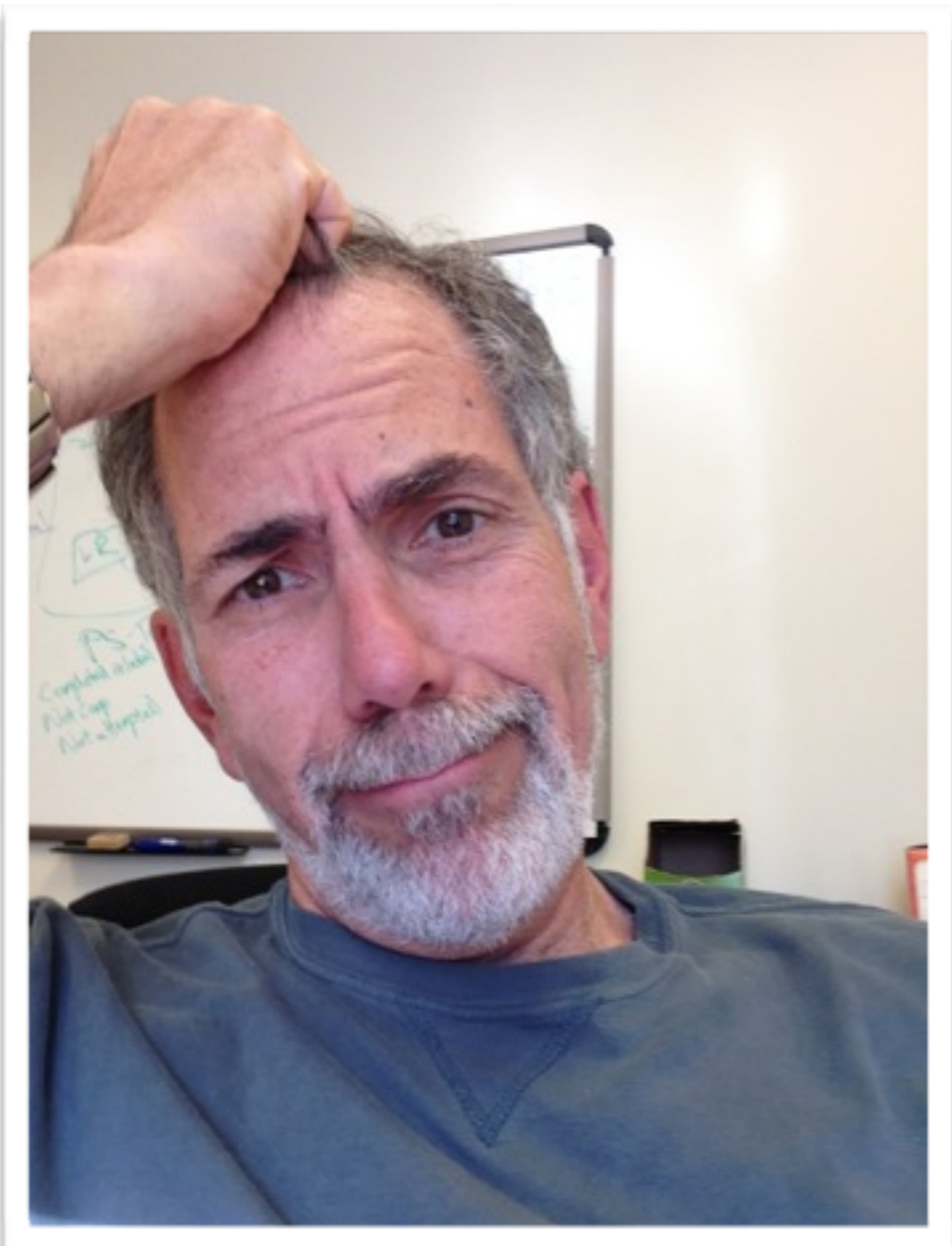


Why?

Persevere



Surrender



Why?

- Could everyone else do it except me?
- Or was it something about one of my identities: fat, color blind, Jewish, straight A, midwestern, public school, left-handed?

June 22, 2015

Manning up: Men may overcompensate when their masculinity is threatened

Deborah Bach

News and Information

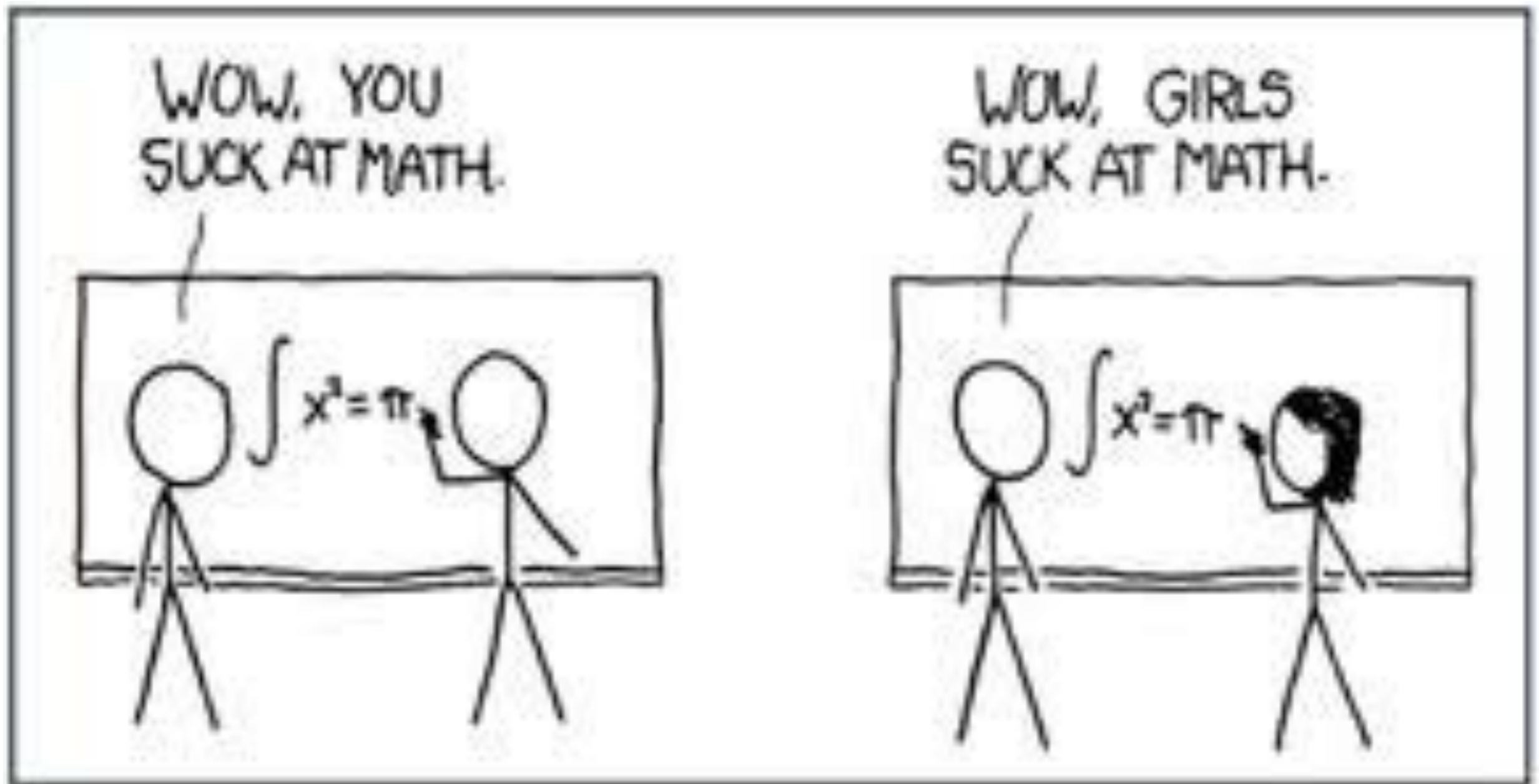
From the old Charles Atlas ads showing a scrawny male having sand kicked in his face to sitcom clichés of henpecked husbands, men have long faced pressure to live up to ideals of masculinity.

Societal norms dictating that men should be masculine are powerful. And new University of Washington research finds that men who believe they fall short of those ideals might be prompted to reassert their masculinity in small but significant ways.

less dangerous, according to a new study.

Identity Associations

Gender, Race, Ethnicity, and more



Stereotype Threat

“maybe it’s because I’m a girl”

What's Your Academic Identity?

- Your students'?
- Your classroom?
- Your school?

a place for students who
can and can't

or

a place for students who
have and haven't yet



Prime the Desired Identity

- It's subtle
- Do a values affirmation
- Identify family heroes
- Build a classroom and school identity (more to come)

A versus F: The effects of implicit letter priming on cognitive performance

Keith D. Ciani^{1*} and Kennon M. Sheldon²

¹Department of Educational, School, and Counseling Psychology, University of Missouri, Columbia, USA

²Department of Psychological Sciences, University of Missouri, Columbia, USA

Background. It has been proposed that motivational responses outside people's conscious awareness can be primed to affect academic performance. The current research focused on the relationship between primed evaluative letters (A and F), explicit and implicit achievement motivation, and cognitive performance.

Aim. Given the evaluative connotation associated with letter grades, we wanted to know if exposure to the letter A before a task could improve performance, and exposure to the letter F could impair performance. If such effects are found, we suspected that they may be rooted in implicit approach versus avoidance motivation, and occur without participants' awareness.

“What values are important to you, and why do they matter?”





Fact Grid

Alex Perez

0+0	0+1	0+2	0+3	0+4	0+5	0+6	0+7	0+8	0+9
1+0	1+1	1+2	1+3	1+4	1+5	1+6	1+7	1+8	1+9
2+0	2+1	2+2	2+3	2+4	2+5	2+6	2+7	2+8	2+9
3+0	3+1	3+2	3+3	3+4	3+5	3+6	3+7	3+8	3+9
4+0	4+1	4+2	4+3	4+4	4+5	4+6	4+7	4+8	4+9
5+0	5+1	5+2	5+3	5+4	5+5	5+6	5+7	5+8	5+9
6+0	6+1	6+2	6+3	6+4	6+5	6+6	6+7	6+8	6+9
7+0	7+1	7+2	7+3	7+4	7+5	7+6	7+7	7+8	7+9
8+0	8+1	8+2	8+3	8+4	8+5	8+6	8+7	8+8	8+9
9+0	9+1	9+2	9+3	9+4	9+5	9+6	9+7	9+8	9+9

My Facts **fast** 75 **focus** 0 **study** 25

EXIT



Click Go to start

GO

Progress through Skills

FASTT Math Next Generation



Progress through Skills

iRead

“The brain is like
a muscle. Giving
it a hard
workout makes it
stronger.”

– Carol Dweck, Ph. D.
Author of *MindSet*



TAXI DRIVER'S BRAIN

Medial prefrontal cortex
(tracking distance
to destination)

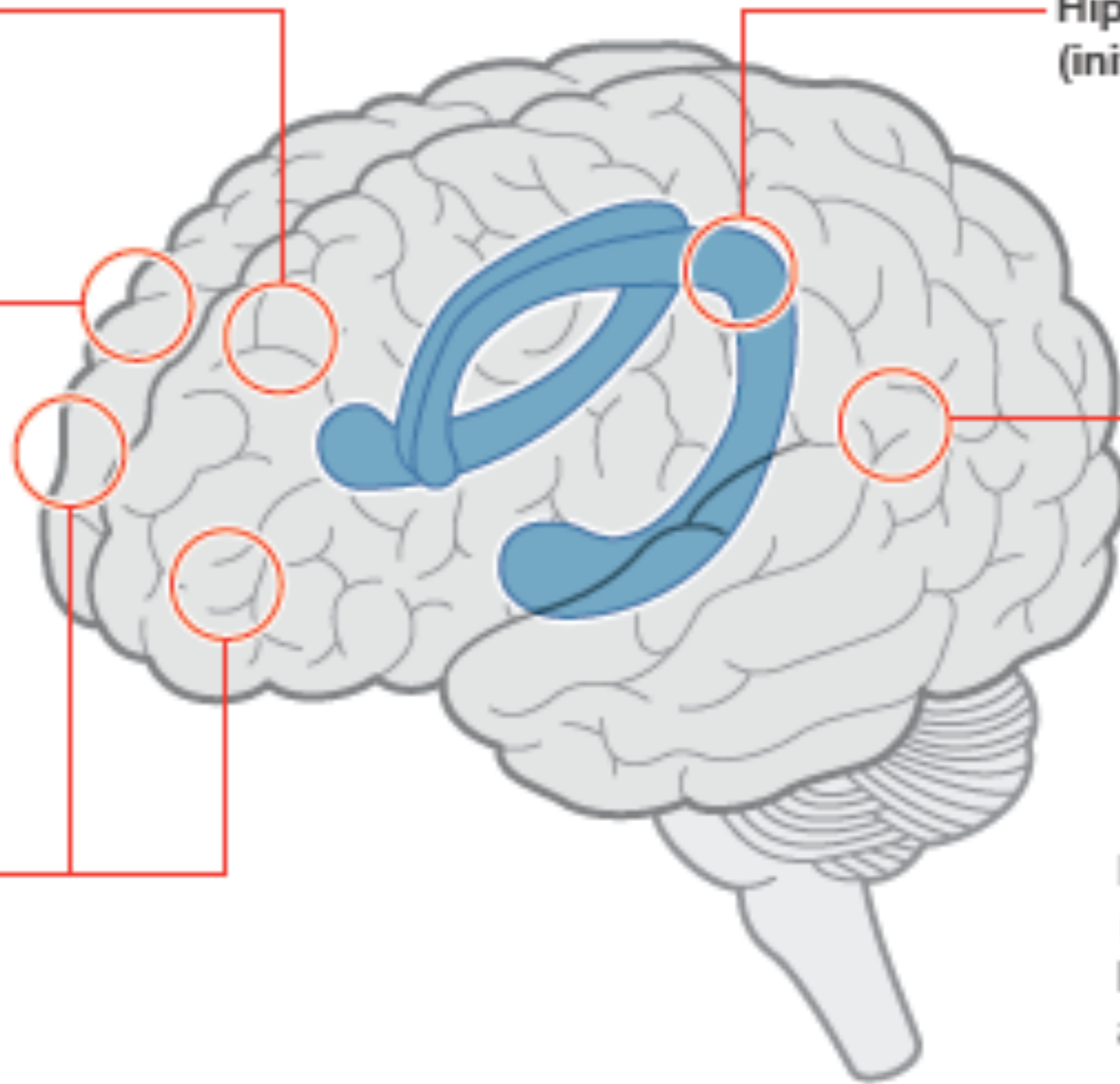
Hippocampus
(initial route planning)

Right lateral
prefrontal cortex
(seeing unexpected
features, eg blocked
off road)

Anterior prefrontal cortex
(spontaneous route
planning - eg if need to
make a diversion)

Retroslenial cortex
(seeing expected
landmarks, streets
and desinations)

SOURCE: UCL

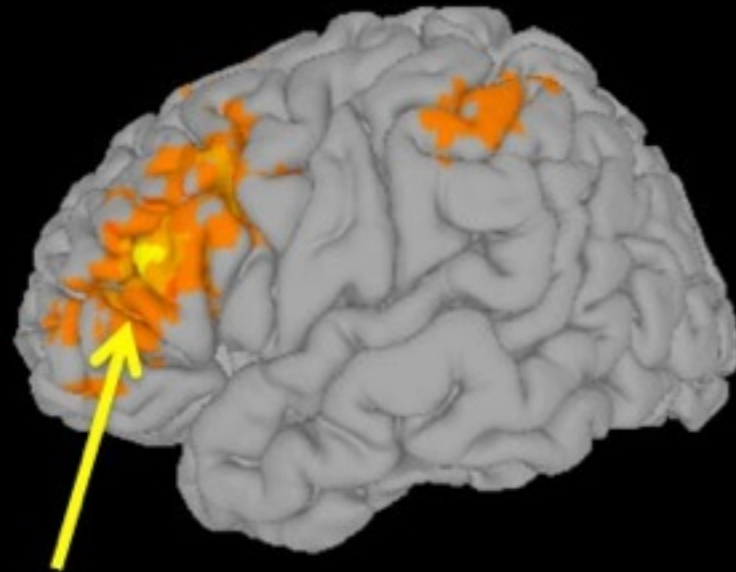


London Cab Driver brain

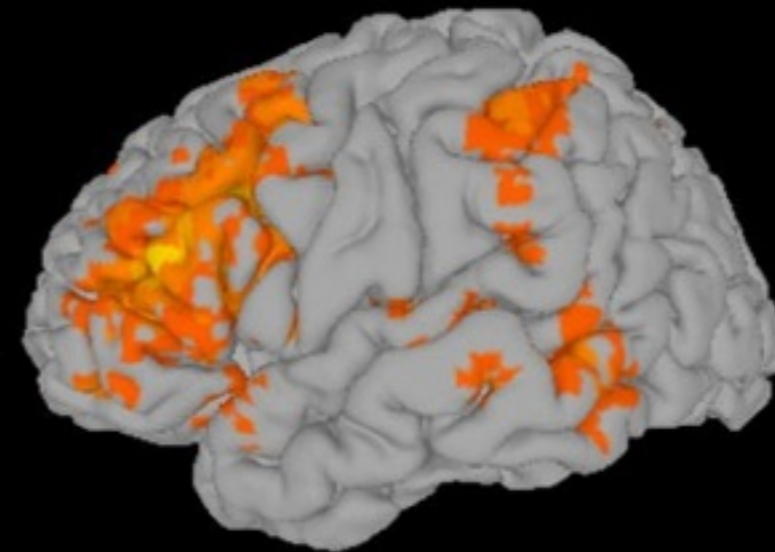
lumpy hippocampus

Before intervention

After intervention



10 weeks



Broca's area

Autistic brain change

10 week reading intervention

Teacher: Mr. Martinez
Class: Morning Class
Student: Rodriguez, Cris

	Beginning of Year	Middle of Year	End of Year
Oral Language Development			
Vocabulary	P	E	D
Sentence Structure	P	B	E
Phonological Awareness			
Rhyme Identification	P	D	D
Sound Matching	B	E	D
Segmentation	P	B	E
Blending	P	B	E
Alphabet Knowledge			
Letter Recognition	—	E	D
Letter Naming Fluency	—	D	D
Letter Sounds	—	E	D
Mathematics			
Number Sense	P	B	E
Geometry	P	B	D
Sorting	B	D	D
Patterns	—	B	E
Social-Emotional Development			
Self-Awareness	P	B	E
Self-Regulation	P	B	E
Social-Competence	B	E	D
Social-Awareness	B	E	E

Using This Report

Use this report to share information about this child's growth.

Legend

P Pre-Emergent B Beginning E Emerging D Developed

THEME 1 Ready for School

SOCIAL-EMOTIONAL FOCUS Cooperation

KNOWLEDGE FOCUS Children learn the expectations, routines, and behaviors of school.

WEEK 1 My School

BIG Ideas I am getting to know my school.

WEEK 2 Making Friends

BIG Ideas I will make friends at school.

WEEK 3 Learning Together

BIG Ideas I work and play with my friends at school.

WEEK 4 Getting Along

BIG Ideas I know how to share and I care about the feelings of others.

8 Moving On

Curiosity Children learn about the natural world by investigating its characteristics.

Persistence Children reflect on all the ways they have grown and changed during the year.

How Do Plants Grow? I plant a seed and watch it grow.

Going New Places I am ready to go to new places.

What's in the Sky? I look at the sky and try to identify things.

Trying New Things I feel comfortable trying new things.

Weather Weather affects what we wear and do every day.

I Can Do It! I always try my best.

The Seasons We see how the seasons change.

We're Big Now! Look at what I can do now.

Teach Social and Learning Skills

“Noncognitive” stuff matters

Focusing on Concentration

› Describe a situation when you were **focused** and **concentrated** while learning something new. How did your focus and concentration make you feel about yourself?

› Describe a situation when you were **not focused** or **concentrated** while learning something new. How did your lack of focus and concentration make you feel about yourself?

Focus & Concentration Strategies

› Focus and concentration will help you be successful. Use these strategies to plan how to improve your focus and concentration in *MATH 180*.

CONCENTRATION STRATEGIES	EXPLAIN HOW YOU WILL USE THESE STRATEGIES
Calm Your Mind	My mind feels a little stressed in <i>MATH 180</i> during _____. One way I will calm my mind is to...
Acknowledge and Release Random Thoughts	I sometimes have random thoughts when working on _____. One way to release these thoughts and concentrate is to...
Focus on One Thing Only	The most difficult thing to focus on in <i>MATH 180</i> is _____. One way to direct my focus and attention during class is to...
Identify and Eliminate Distractions	I sometimes get distracted in <i>MATH 180</i> while working on _____. One way to eliminate distractions during class is to...

Teach Learning Behaviors

Build Executive Function

How do we get students to believe success is possible...even when it's hard?

- Foster an academic identity; monitor identities that undermine persistence.
- Help students see themselves gaining knowledge and skills.
- Teach students that brains change with effort.
- Develop learning behaviors.

3. How do we create a climate for productive struggle, where students (and workers) believe it's okay to stumble on the path to learning, creating, and producing?

Reference Points

- List price
- hot or cold?
- am I “smart”?



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Classroom Reference Points

- your words
- your actions
- stories of struggle

“You got that so quickly. You’re so smart.”

vs

“That took you 4 tries! I love the way you shifted strategies.”

“You haven’t learned it...YET.”

“Let’s start with an easy one.”

vs

“This might take a few tries.”

What is the classroom “error climate”?

- How does the teacher respond to wrong answers?
- Are errors analyzed and strategically used for learning?
- Are students willing to take academic risks in front of their peers?
- How can you create a climate that gives status for learning?

Learning Reference Points

Mastery

- Personal progress -- where am I vs where I was before
- all about getting better
- best for struggling students who have a history of failure
- choose when and with whom to share growth

Performance

- Competitive -- where am I compared to others
- all about winning
- good for high performers who think they have a chance of winning
- performance always on display

Make it Normal

- to make mistakes during learning.
- to be confused. It's a sign you're ready to learn.
- to seek help.
- to *get* smart.



"I have not failed. I've just found 10,000 ways that won't work."

Thomas A. Edison

"zone of optimal confusion"

Sydney D'Mello, Ph.D.
Notre Dame

GEEK IS

The New Sexy

Not all Mistakes are the Same

$$0.8 + 0.5 = 0.13$$

$$5 + 2 = 8$$



frontier learning

routine performance



failure tolerant

goal of error-free



low stakes

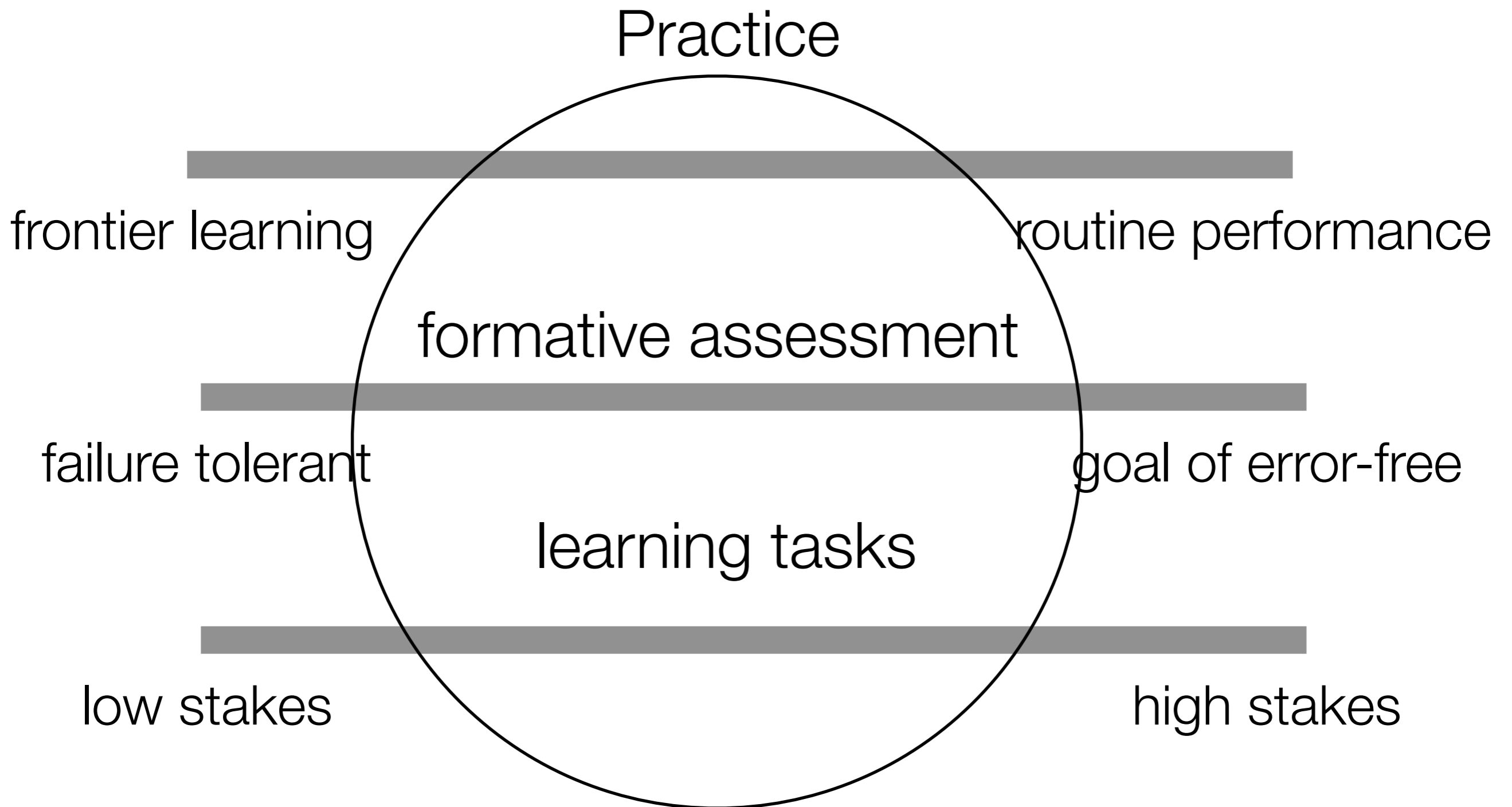
high stakes

Learning

Instruction

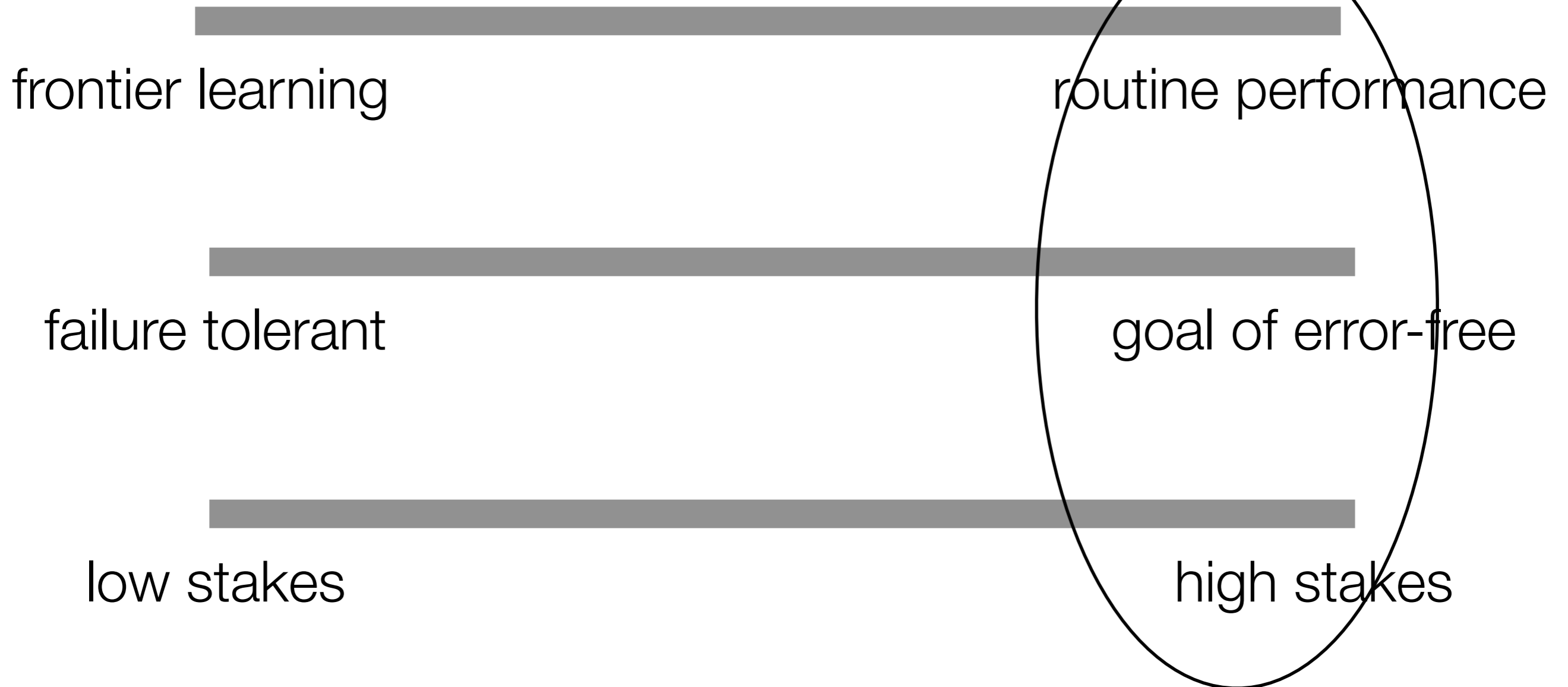


Practicing



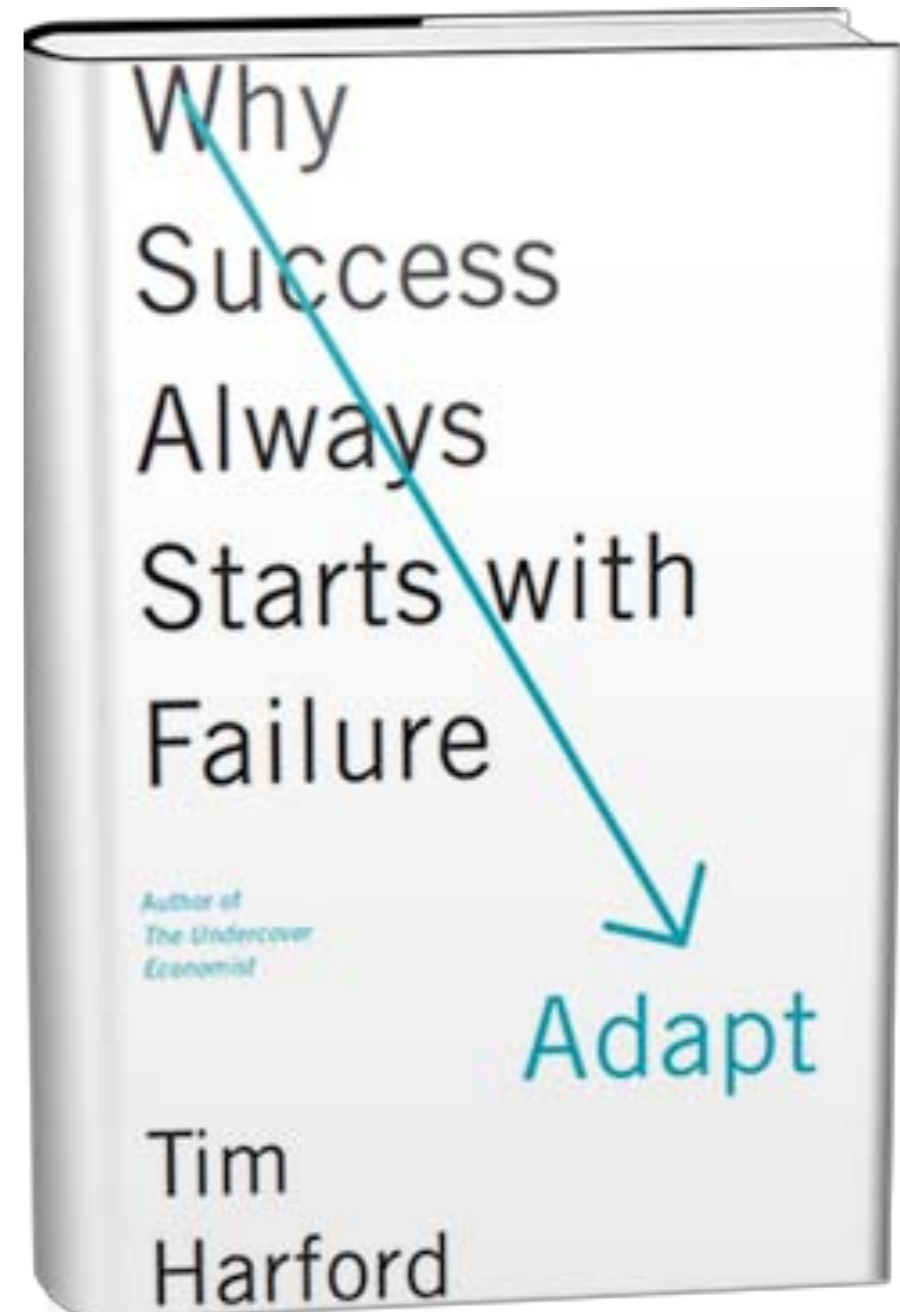
Performing

Performance Assessment



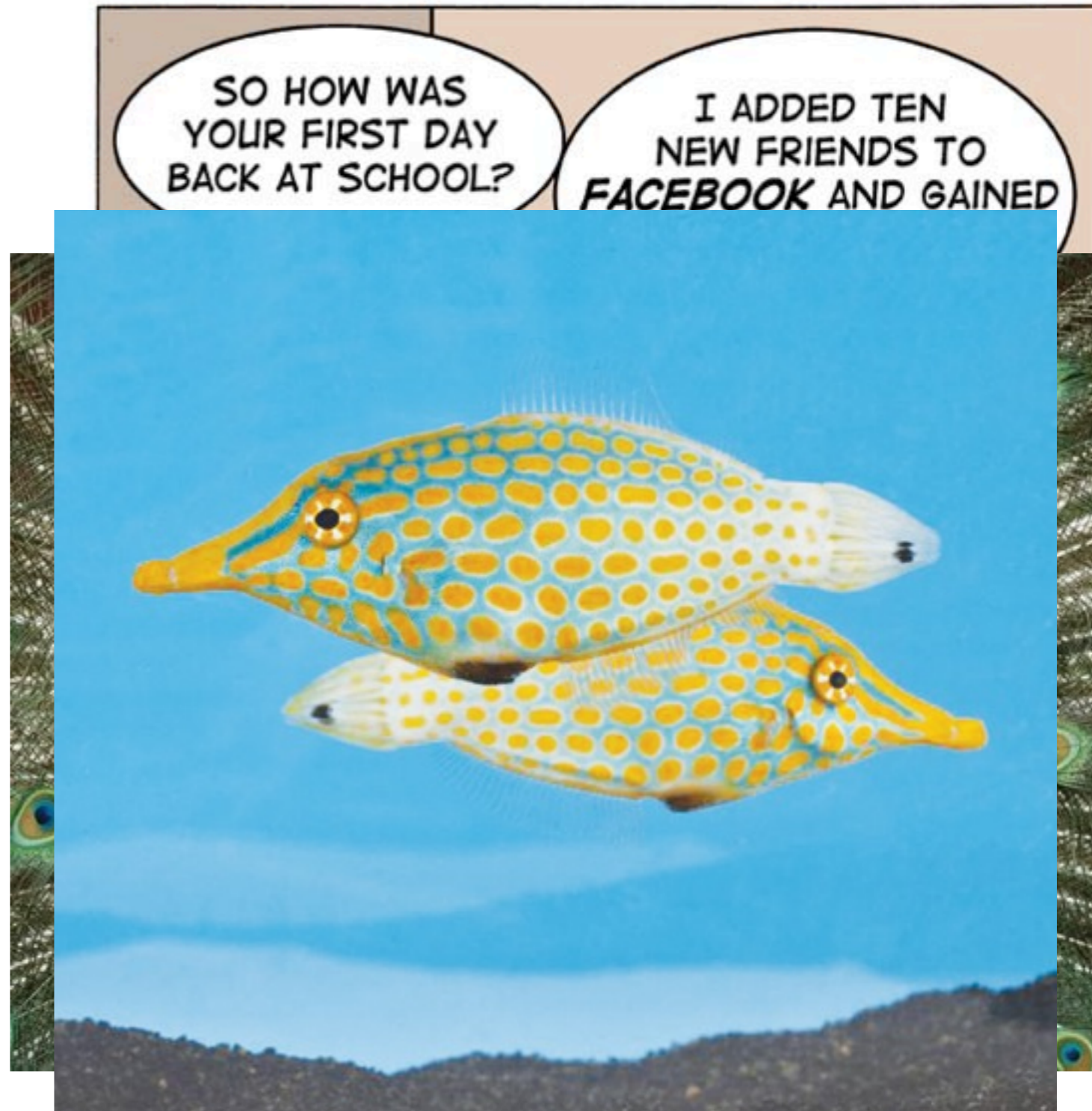
Tim Harford - 3 Steps

“first, try lots of different things;
second, make sure the experiments are at a small scale so that when things go wrong, it’s not a catastrophe;
and third, make sure there’s a reliable way to tell the difference between success and failure.”



A word about status

- The quest for status may be our most basic evolutionary drive.
- Risky fish get the girls.
- Humans crave social acceptance, and self-efficacy (and grades) are related to peer group support.



How can we create a climate for productive struggle?

- Use words and actions to set reference points/norms for learning (vs performance).
- Establish a mastery- and growth-based classroom.
- Foster a constructive error climate and teach students how to respond to others' mistakes constructively.
- *Give status (fish research) for meeting the learning norms.*

Potential vs Realized Intelligence

at the intersection of the individual and the environment

Questions? Comments?

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