



EDUCATORS
SUMMIT

How to Teach Five Semesters of Game Design in One Course

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Adjunct Faculty, Tufts and Harvard Universities

GDC

GAME DEVELOPERS CONFERENCE

MARCH 18–22, 2019 | #GDC19

My Single Game Design Course



Tufts
UNIVERSITY



HARVARD
Extension School

My Single Game Design Course

- Tabletop Game design
- Alternate Reality Game design
- Game PlayTesting
- Intro to the Unity game engine and C# programming
- intro to 3D Art and Animation
- intro to 2D Art and UI
- Intro to Audio for games
- Paper Prototyping
- Level Design including Rational Game Design and Encounter building
- VR tools and considerations
- Team building and communication
- Digital game Prototyping
- Pipeline Development,
- Modes of Team Management
- Marketing
- Industry Networking,
- ...and more.

My Single Game Design Course

“This [course of yours] breaks all the rules I know for game education... I always tell people to learn one thing at a time... otherwise you are going to end up frustrated with a doomed project... And yet... you just mash it all together and go. In my head I can't imagine how this can possibly work. Do you ever get any decent-quality games out of the class, or is it 100% trainwrecks and learning-by-failure?”

-- Ian Schreiber, phenomenal teacher of Game Design who should be listened to, October 5, 2018.

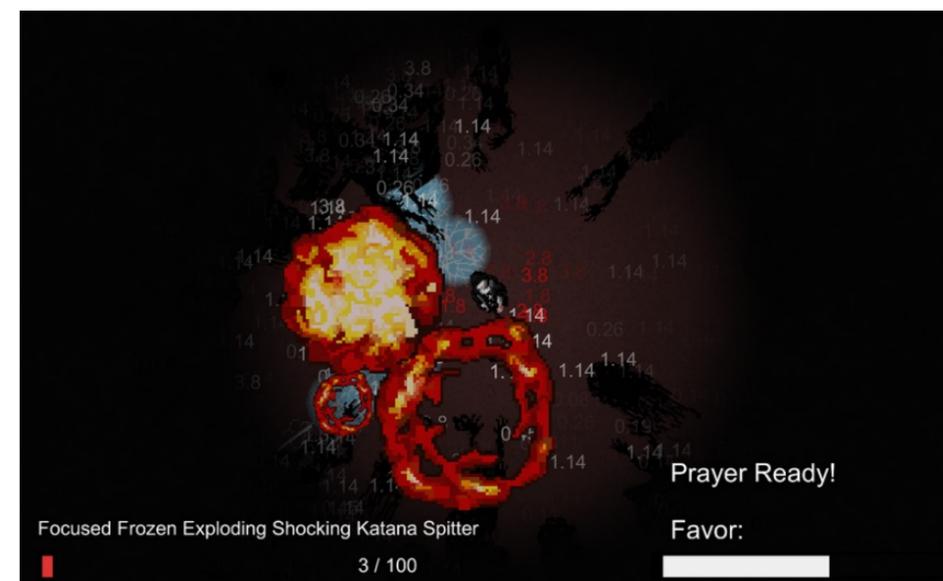
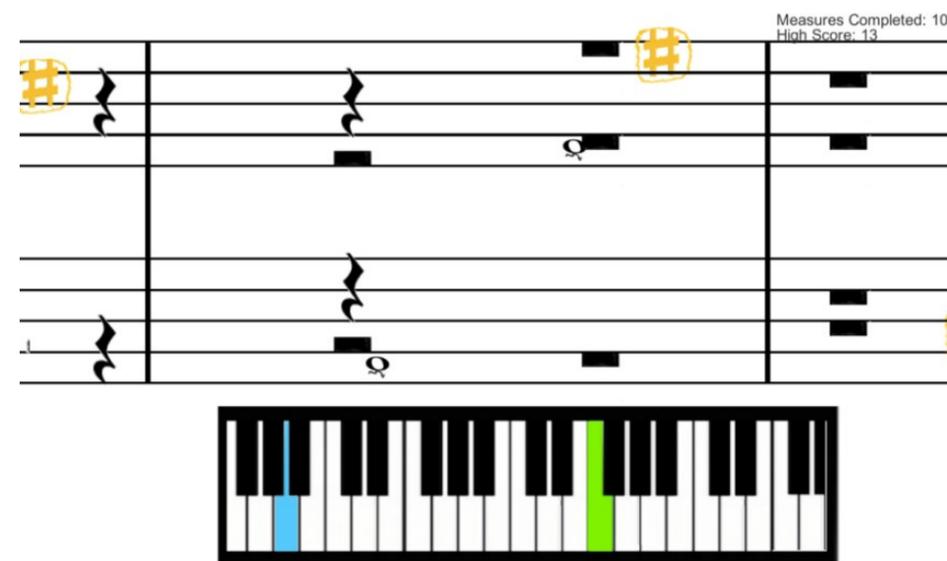
My Single Game Design Course

Or in other words:

***“Who would ever want to take this circus,
and who would ever want to teach it?”***

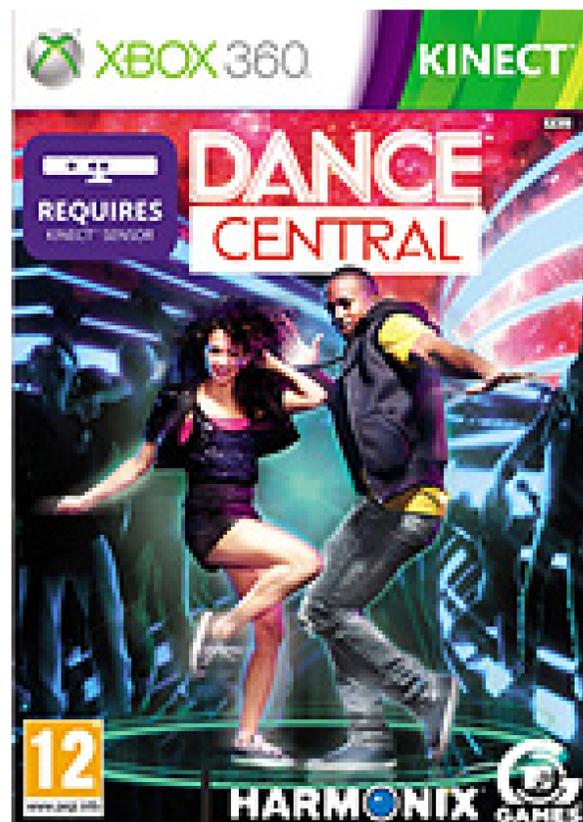
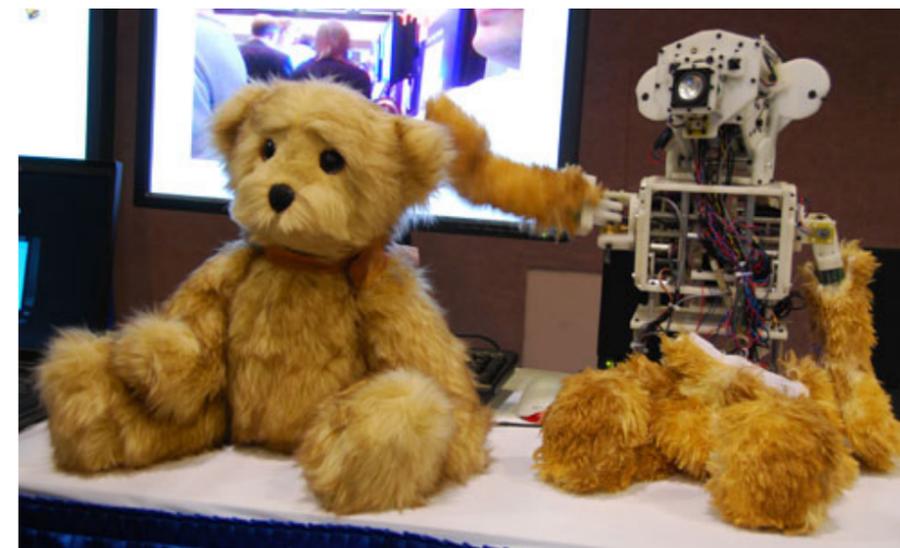
My Single Game Design Course

Tufts
Student
Games:



Who is this guy flapping his gums at you?

Animator for games,
museums, robots and TV.



Who is this guy flapping his gums at you?

Creative Director of **Yaya Play Games**, and award winning family card game **Monsters in the Elevator**.



My Teaching: Old Challenges with Scope

1995: TFA in Baltimore

- School for students who had asked to return to school.
- Many seemed to want all I could teach them, so I taught them everything.
- My classes became known as among the hardest in the school, so the department gave me the most motivated students.

TEACHFORAMERICA



My Teaching: Old Challenges with Scope

2001: The Art Institutes

- Students dedicated to games and animation, took over 15 courses in their fields
- I encouraged portfolio-ready work in every course.
- **My students did not sleep.**



Models by Paulina Guerra and Diana Dolishny

My Teaching: Old Challenges with Scope

Summer 2005: Delivered Pixar Workshop

- Taught 3D to the Layout / Cinematography team
- Created super deep-dive course.
- They soaked up everything.

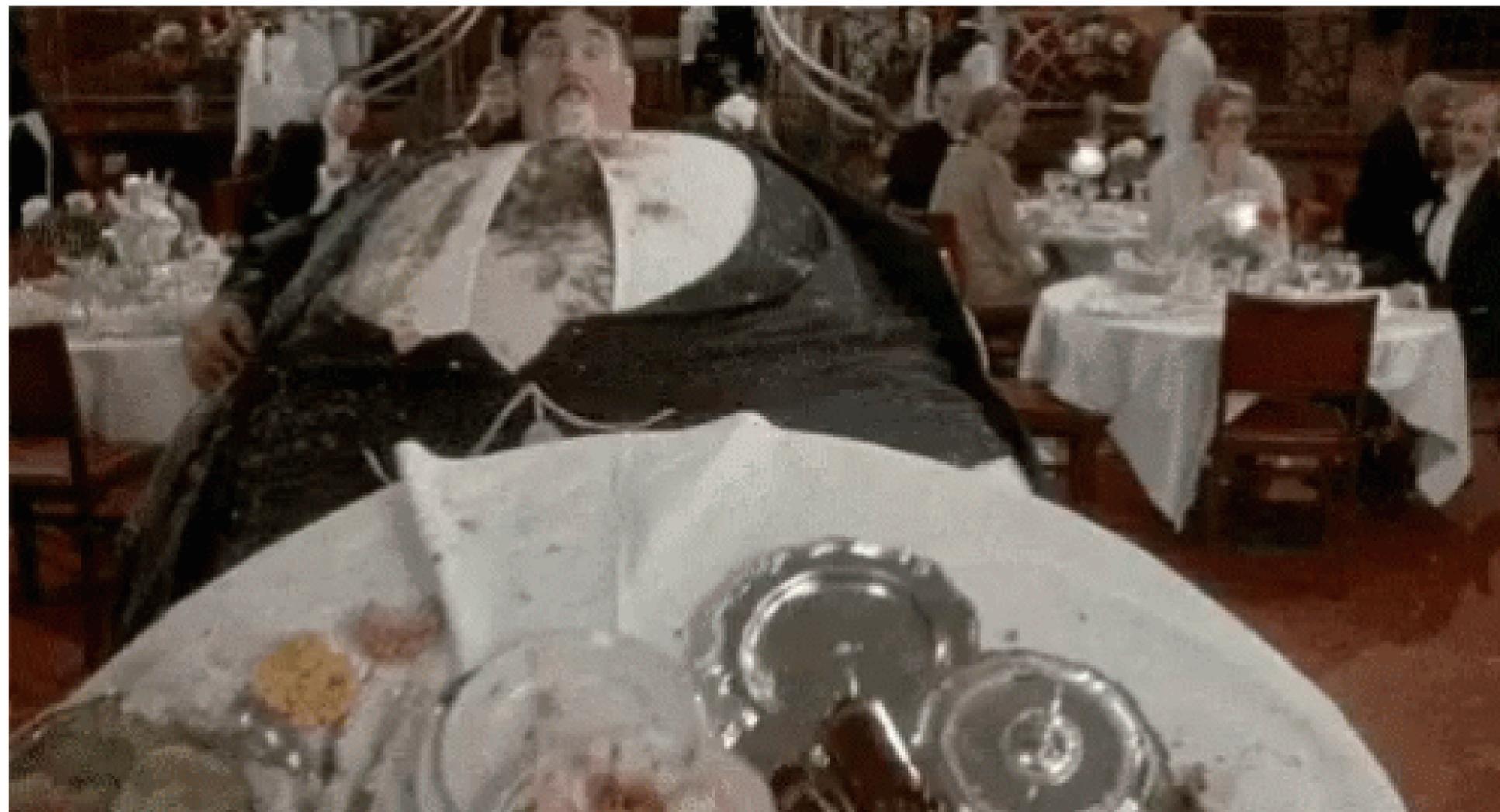
...Totally validated my scope problem!

P  X A R



My Teaching: Old Challenges with Scope

What I thought was my job:
Fill them until they burst.



My Teaching: No more crazy Scope

2011: Teaching at Other Colleges

- Students have broad interests
- Changed focus from portfolios to competency and confidence building.
- **My students get to sleep!**



Textured Models by Macy Lawrence



HARVARD
Extension School



Northeastern University



EMERSON
COLLEGE



Lesley
UNIVERSITY

I was all done with crazy-scoped courses...

ME: “Hey, Tufts CS department...
What are you folks doing in games?”

I was all done with crazy-scoped courses...

ME: “Hey, Tufts CS department...
What are you folks doing in games?”

TUFTS CS: “Pitch something.”

I was all done with crazy-scoped courses...

Traditional Game Design Curriculum: 5-6 Courses:

- **Tabletop Game Design**
- **Level Design**
- **Game Environment Art**
- **Game Programming & Prototyping.**
- **A Capstone semester or two in Team Production.**

I was all done with crazy-scoped courses...

ME: “Hey, Tufts CS department...
What are you folks doing in games?”

TUFTS CS: “Pitch something.”

ME: “How about 5 courses of Game Design?”

I was all done with crazy-scoped courses...

ME: “Hey, Tufts CS department...
What are you folks doing in games?”

TUFTS CS: “Pitch something.”

ME: “How about 5 courses of Game Design?”

TUFTS CS: “Just one.
And include programming.”

I was all done with crazy-scoped courses...

ME: “Hey, Tufts CS department...
What are you folks doing in games?”

TUFTS CS: “Pitch something.”

ME: “How about 5 courses of Game Design?”

TUFTS CS: “Just one.
And include programming.”

ME: “... You got it.”

What I promised:

I promised to teach the CS students ways to think and plan before they code, and that they would experience a team software development pipeline.

My Secret Mission:

Having spent a few years making manageable courses after a decade of crazy-scoped ones, I wanted my students to leave this course feeling fulfilled and happy, not burned out.

How to Make This Course Work?

- **TAs** offering coding labs
- **Flexible Classroom**
- All lessons built on **Team Production:** motivating, inspiring, and no one feels like the burden is all on them (as long as the teams are well supported).

How to Make This Work? Robust Course Site

A website with all schedules, materials and lecture notes and tutorials covered in class, and opportunities for further learning.

www.Madwomb.com/Tufts



"Usually, the best ideas come from having to fix a really hard problem." --Jesse Schell

"The great challenge for us today... is to integrate games more closely into our everyday lives, and to embrace them as a platform for collaborating on our most important [personal and] planetary efforts." --Jane McGonigal

"What part of my game is fun? Why? What would make it more fun?" --Jesse Schell

COMP50: GAME DESIGN

"The worst thing a kid can say about homework is that it is too hard. The worst thing a kid can say about a game is it's too easy." -- Henry Jenkins

[Download Syllabus](#)

Submit all assignments digitally on our **PIAZZA SITE** (Email teacher for invite)

Instructor: [Jason Wiser](#)
TAs: [Marianne Chiarella](#),
[Russell Ruffolo](#), and [Griffin Richards](#)

Please email us with questions as soon as they arise!

Tuesdays, 6pm-9pm 01/22-05/07/2019
Room 102, Halligan Hall
161 College Avenue Medford

...
DESCRIPTION: This course covers a software development cycle through game design, prototyping, production, and marketing. There is one main Final Project: A completed digital game created in Unity3D. Content related to the theme of Games For Change is encouraged. The game can utilize 2D or 3D art production and interface production pipelines.

...
NOTE #1: The most critical skill in product design is **listening:** to your colleague, your testers, and your intuition.

NOTE #2: Always email the teacher and TAs as soon as possible with any problem, so we can help you find resources for solutions!



How to Make This Work? Stacking Theory

The class does not cover content in a purely linear fashion.

Students are taught one critical concept (*) a week and exposed to other concepts *before* they are needed.

WEEKS	Game Design	Level Design	Unity Engine	3D Art	2D Art	Game Audio	Team Building	Prodctn Mngmnt	Mrktng
1	*								
2	*								
3	*								
4			*						
5	*			*					
6	*		*						*
7							*		
8				*					
9					*	*			
10			*						
11		*							
12		*							
13									*
14									*
15									

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6	*		*						*
7							*		
8				*					
9					*	*			
10			*						
11		*							
12		*							
13									*
14									*
15									

My Game Design Course: Big Summary

Class meets 1/week, 3 hours/class divided into 3-5 lesson-units.

Weeks 1-6: Students work in 2-week teams to make tabletop games, then switch. Lessons in Design, Teamwork, Engine, and Art tools.

Week 7: Students Pitch Final Game Concepts, and Form Final Teams

Weeks 8-14: Students Develop Final Games. Lessons in Pipeline Dev, Project Management, Level Design, UI, Audio, Tutorials, Marketing

Week 15: Final Presentations Party

Email Before the Semester

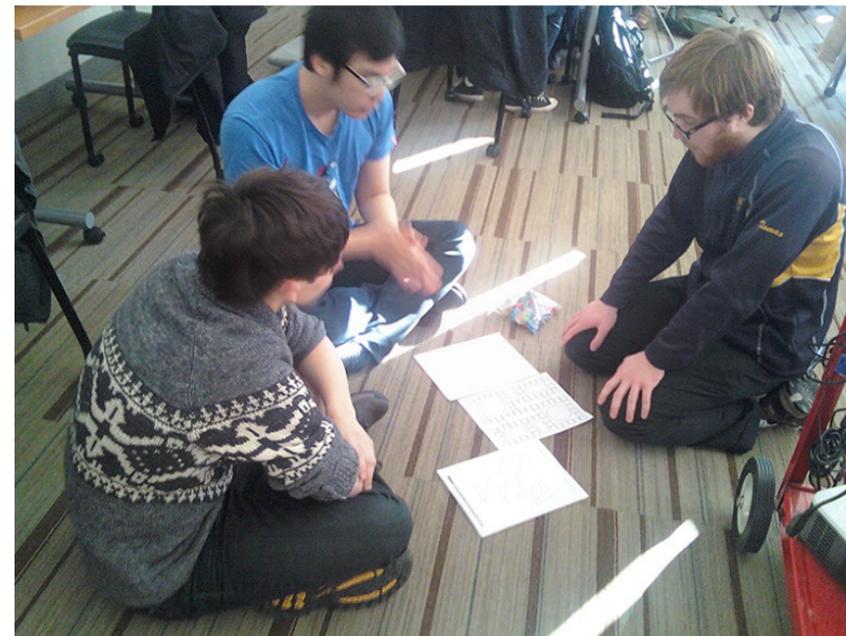
1. Welcome to the course
2. What games do you love?
3. What do you want to make?
4. Download Unity and Maya
5. Get familiar with tabletop games:
thanks, Wil!



Week 1: Mechanics vs Story

Game Design Principles/Prompts:

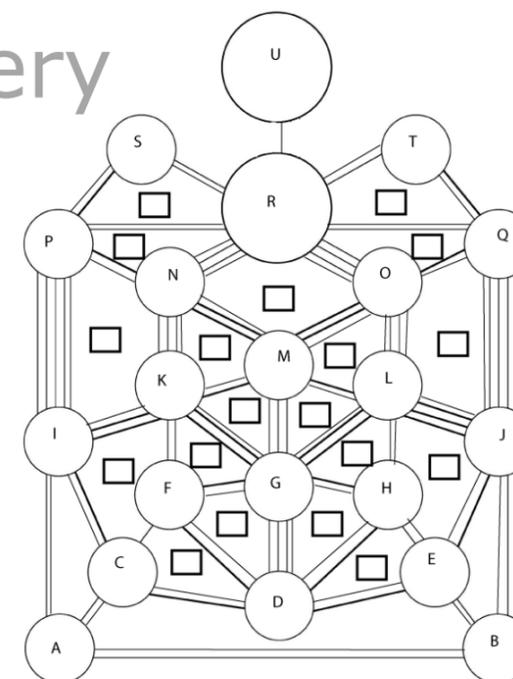
1. Mechanics vs Story
2. Playtesting and Radical Revision
3. Disruption of Existing Games
4. Alternate Reality Games to solve misery
5. Workplace Routine Games



Week 2: Playtesting and Radical Revision

Game Design Principles/Prompts:

1. Mechanics vs Story
2. Playtesting and Radical Revision
3. Disruption of Existing Games
4. Alternate Reality Games to solve misery
5. Workplace Routine Games



“Breach”
by Jim Kim, Seth Kahn,
and Jared Bronen



Week 3: Disruption

Game Design Principles/Prompts:

1. Mechanics vs Story
2. Playtesting and Radical Revision
3. Disruption of Existing Games
4. Alternate Reality Games to solve misery
5. Workplace Routine Games

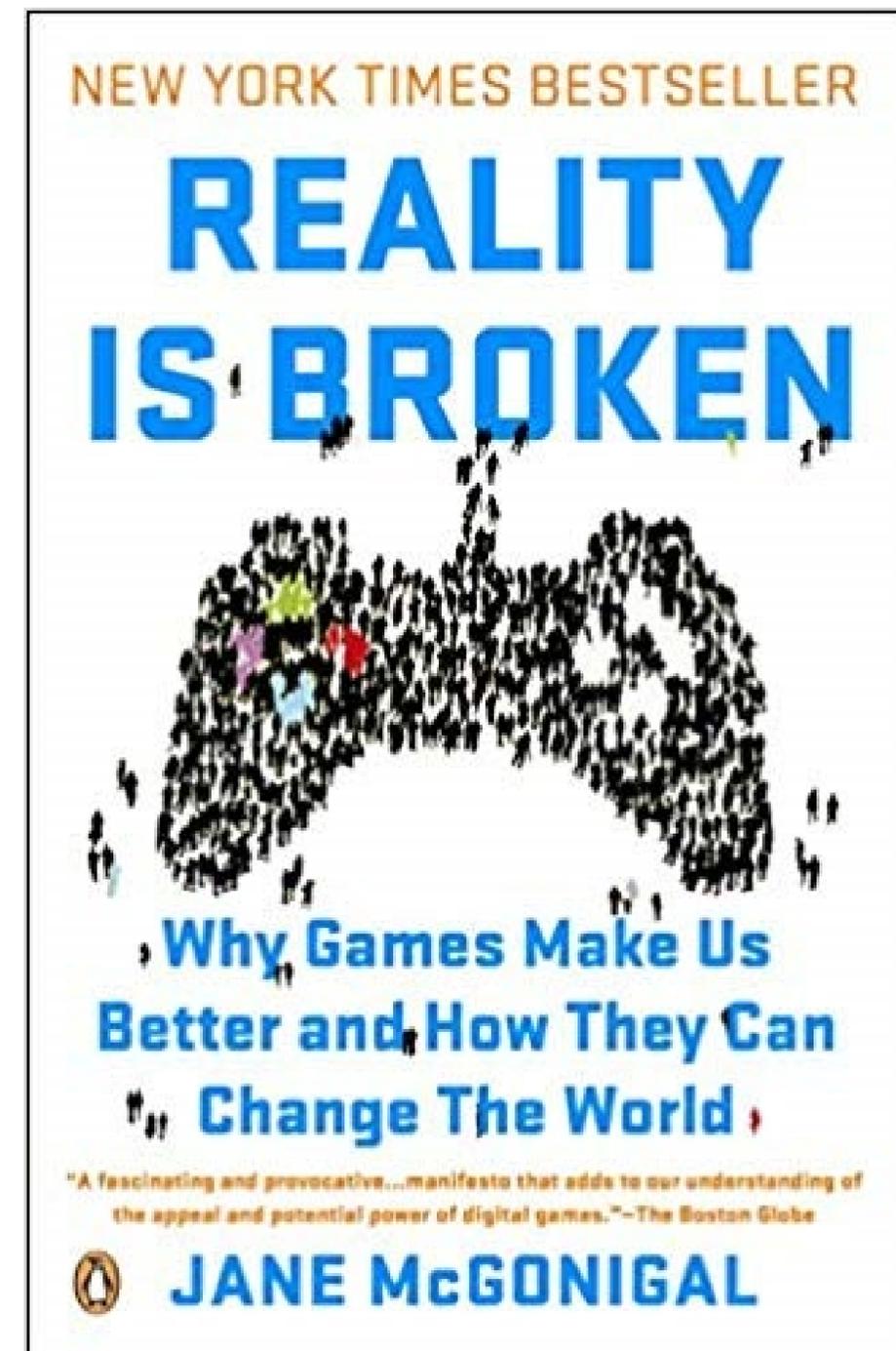
"Sand Wizard of Catan"
by Alex Pantuck, Jack Collins,
Simon Chen, and Eduardo Barrera



Week 4: ARGs (In Class)

Game Design Principles/Prompts:

1. Mechanics vs Story
2. Playtesting and Radical Revision
3. Disruption of Existing Games
4. Alternate Reality Games to Solve Misery
5. Workplace Routine Games



First Six weeks: Also Digital Tools

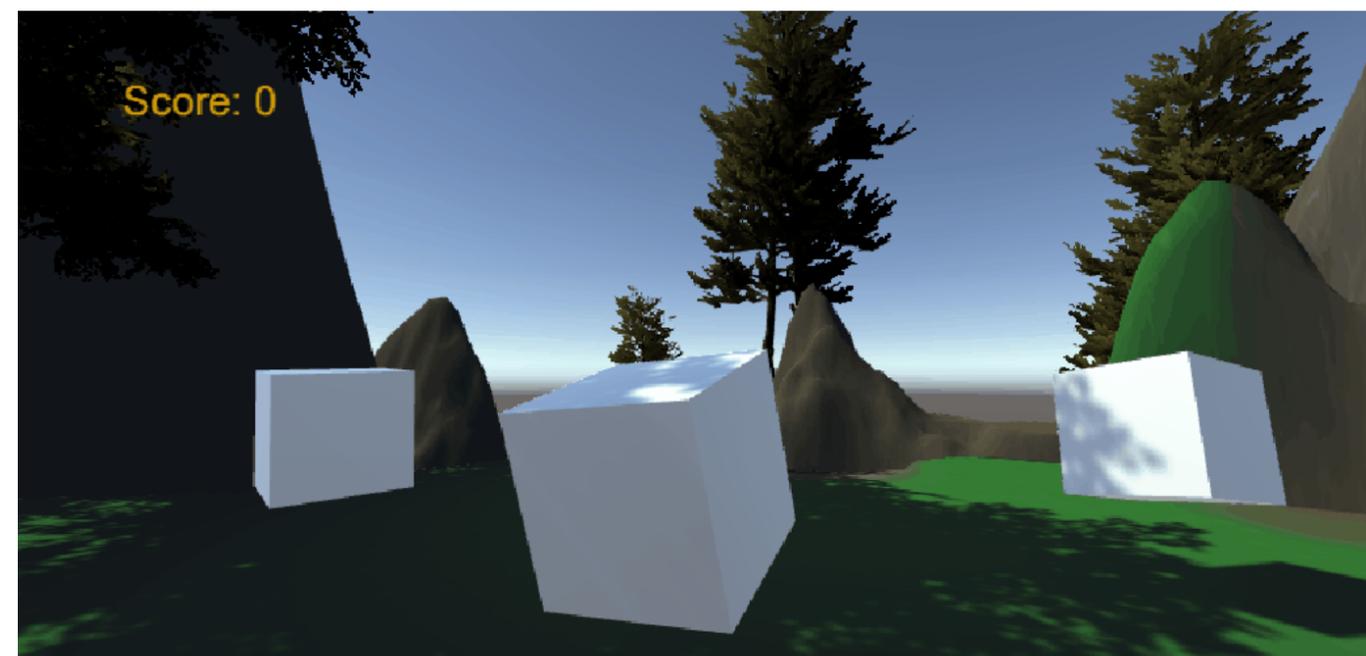
Digital Lessons:

Week 3: Unity 3D

Week 4: Unity 2D

Digital Homeworks:

Week 4: Roll-a-ball

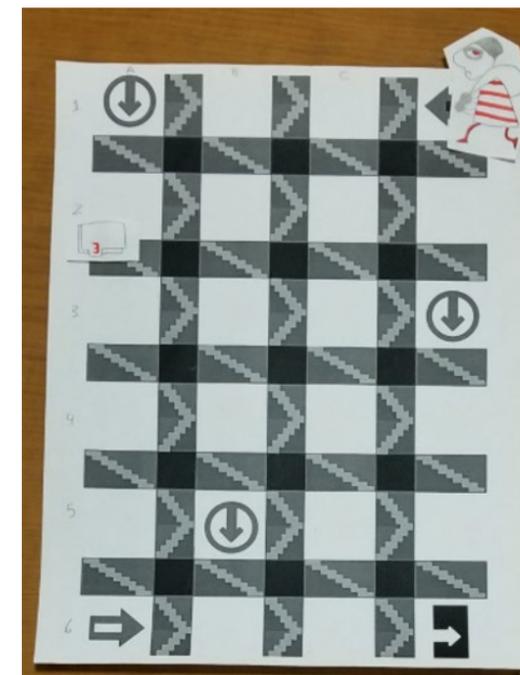


Week 5: Workplace Routines

Game Design Principles/Prompts:

1. Mechanics vs Story
2. Playtesting and Radical Revision
3. Disruption of Existing Games
4. Alternate Reality Games to solve misery
5. Workplace Routine Games

Window Washing Workplace Game
by Frank Cao, Beckett Reed,
Brian Lin, and Andrew Farm



First Six weeks: Also Digital Tools

Digital Lessons:

Week 3: Unity 3D

Week 4: Unity 2D

Week 5: Intro Maya

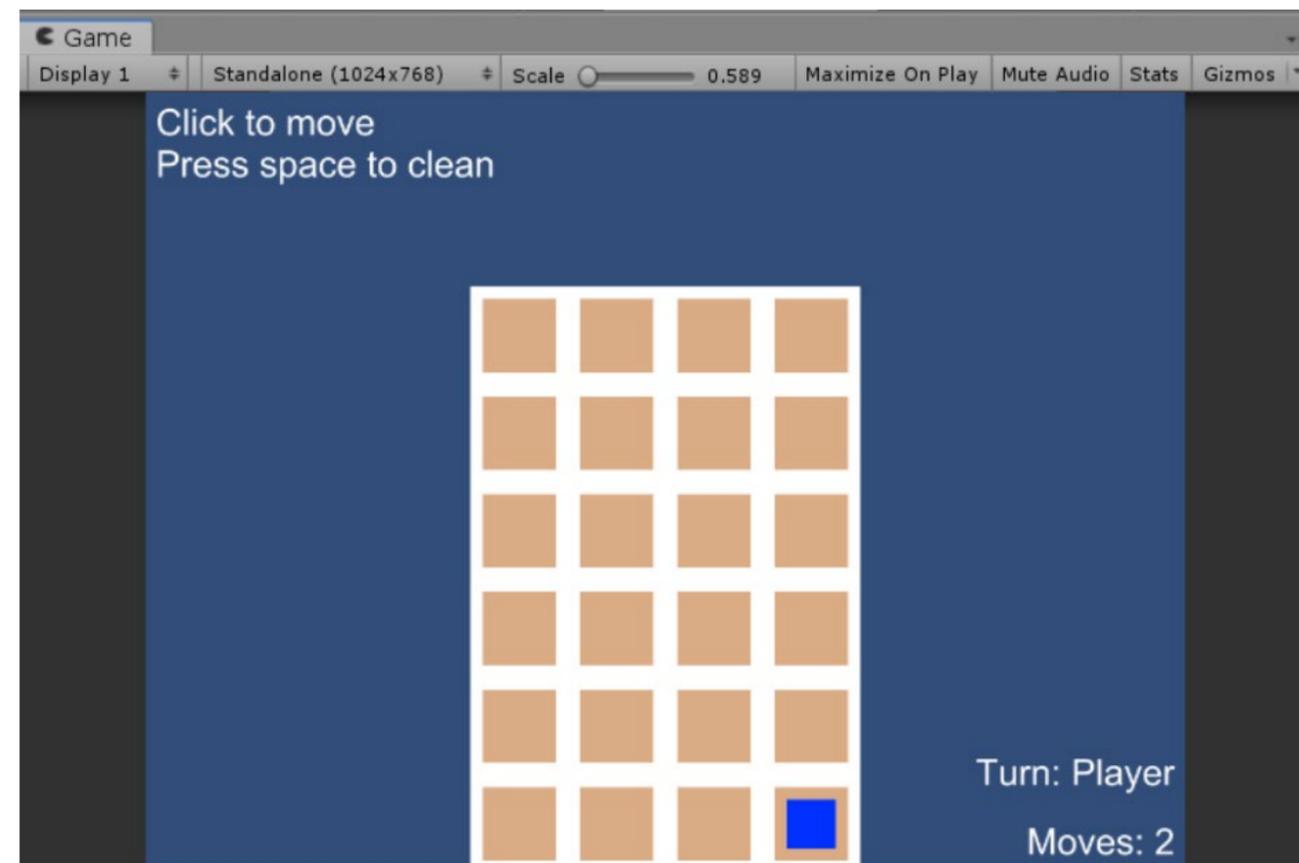
Week 6: Intro VR, Unity builds

Digital Homeworks:

Week 4: Roll-a-ball

Week 6: Make the Workplace
Game Digital

Window Washing
Workplace Game
by Frank Cao,
Beckett Reed,
Brian Lin, and
Andrew Farm



Week 7: Final Games Pitch Day!

1. Brainstorming and Silent Reflection.
2. Everyone chooses a colored sticky-note for their production role, adds their name.

Code

=



+ name

Art

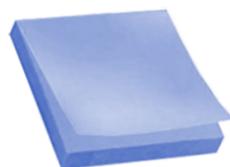
=



+ name

Audio

=



+ name

Project Mgmt

=



+ name

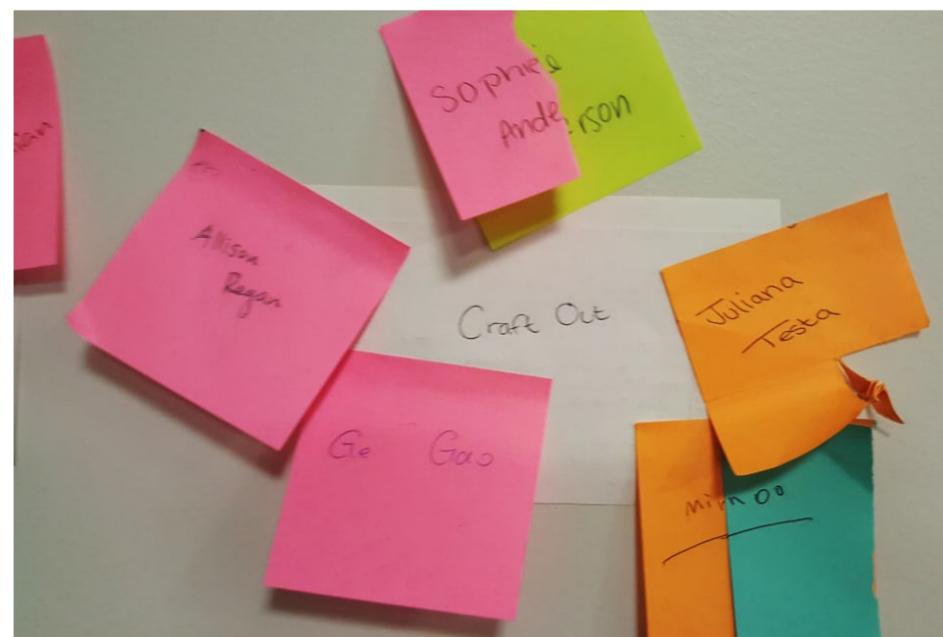
(NOTE: everyone participates in design)



Week 7: Final Games Pitch Day!

3. All have the option to write their idea on a postcard and **pitch the class** (45 seconds)
4. Everyone **votes** by attaching their sticky-name on the game they want to make.
5. Teacher **Rebalances**

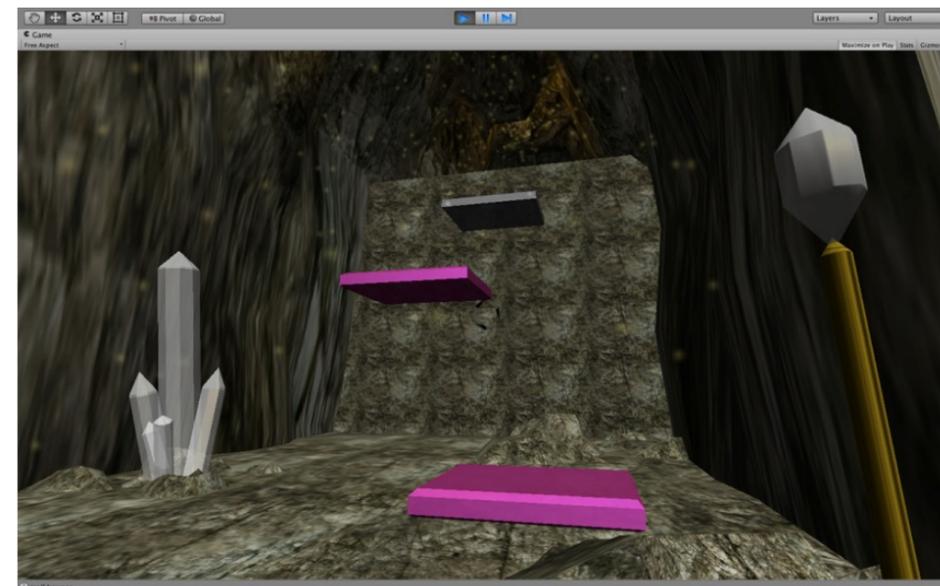
We Have Our Teams!



Last 8 Weeks of Class: Final Digital Games

Final Teams Make Games:

- 2 weeks of predevelopment: **paper prototypes**, design docs, tools research, and pipeline development
- 3 weeks to get a **full functioning prototype**
- 3 weeks to get a **revised prototype built-out to multiple levels** and more polished art and audio.



Last 8 Weeks of Class: Final Digital Games

In the last 8 weeks we also cover:

- Photoshop for 2D assets,
- Animation and VFX in Unity
- intro to Audio design
- Intro to UI design
- 3 weeks on Level Design
- 2 weeks on Marketing
- Weekly in- and out-of-class playtesting.

Week 15: Final Games Presentations!

Playtesting + Presentations + Pizza + Guests = Party!



We Stand on Many Shoulders

- MIT Gambit Game Lab (Philip Tan, Rik Eberhart, and others)
- Fire Hose Games
- Paul Schuytema
- Jenna Hoffstein
- Forest Dowling
- Alexis Jolis Desautels/Ubisoft
- Jesse Schell's **Art of Game Design**
- Jane McGonigal's **Reality is Broken**

...And so many others!



We Stand on Many Shoulders

Jane McGonigal's **Reality is Broken:**

Our favorite definition of *games*:

**Voluntary engagement in
Unnecessary Obstacles**

Our definition of *fun*:

- **Flow** (feeling like we can make progress with every turn)
- **Fiero** (frequent chances for excitement and victory).



How We Give Feedback

The rubric for all projects uses these five measures:

- **CLARITY** []: Do players know what to do?
- **INNOVATION** []: What new gameplay to stimulate interest?
- **IMMERSION** []: Is the “story” compelling (implied in setting, art, music)?
- **FLOW** []: Does the player feel constantly productive?
- **FIERO** []: Are there multiple big victory moments for players?

In grading the final game, this rubric provides the *structure* for feedback; a game that is intentionally obscure or designed to inhibit flow is taken and discussed on its intentions and merits.

Accountability

Accountability in this course comes in four forms:

- Weekly **Playtesting** and **responses** to rubric.
- Posting weekly **Task Divisions**
- Posting weekly **Personal Progress Report.**
- 3 times in the semester: **Peer Evaluation form.**

Industry Engagement

- Off-campus Networking Event attendance and write-up.
- Weekly videos by game industry designers.



Student Samples

RED VS BLUE

<https://bit.ly/2FbsVNk> by Daniel Cetlin, Mohsin Rizvi, Ralfi Salhon, Tommy Tang, Tommy Zhu

A VERY AFFECTIONATE BOA CONSTRICTOR

<https://bit.ly/2UBbL0V> by Harrison Downs, Jimmy Hopkins, Matt Manfre, Vlad Hugec, Maddie Duke

SPECIAL

<https://bit.ly/2TGnKgH> by Timothy Ho, Ben Fuligni, Brinley Macnamara, Charlie Yang, Theodore Tan

DESIGN-DELEGATE-DESTRUCT

<https://bit.ly/2TLaaZn> by Kenneth Slaby, Max Greenwald, Brendan O'Neill

CRYSTAL CAVERNS

<https://bit.ly/2T2rC7f> by Zoe Baghdoyan, Dariusz Adamczyk, Richard Zhang, Walton Lee, Will Luna, Seth Kahn

GRAVITY ASSASSIN

<https://bit.ly/2FbL4e4> by Ryan Magnuson, Eric Magalhaes, Sam Oakley, Isabelle Sennett, Rob Greenberg

THE HUNT

<https://bit.ly/2HxXxKD> by Alex Pantuck, Chase Troxell, Rex Umezuruike, Simon Chen, Yifan Yang



Student Sample

DISPLACED

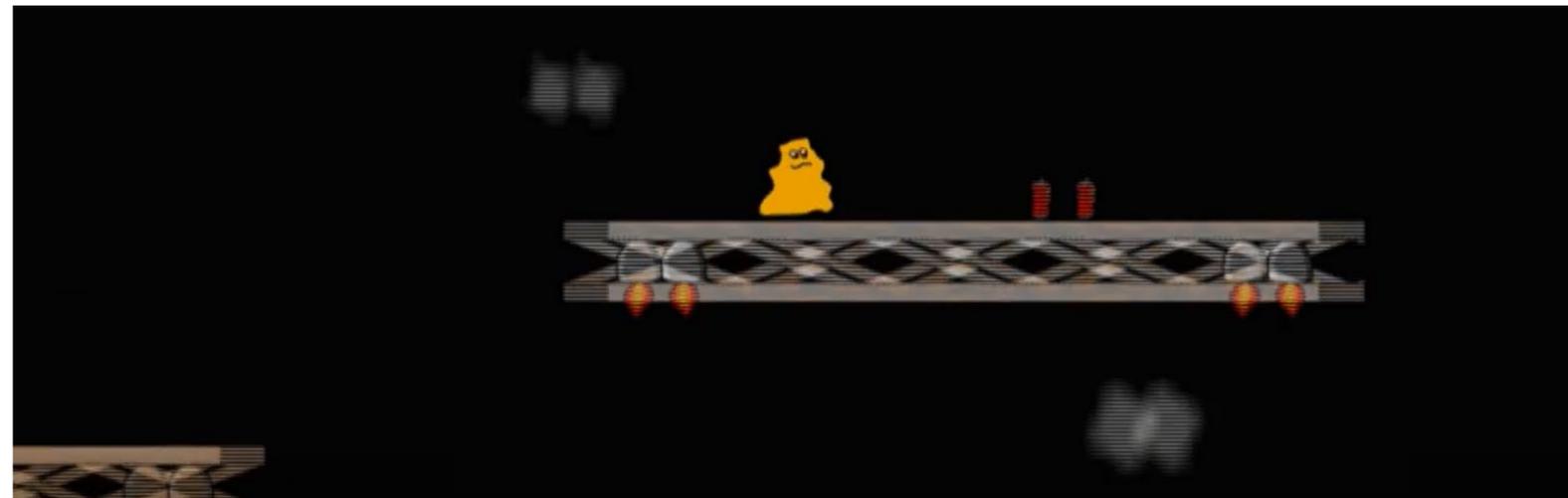
by Jim Kim,

Matt Long,

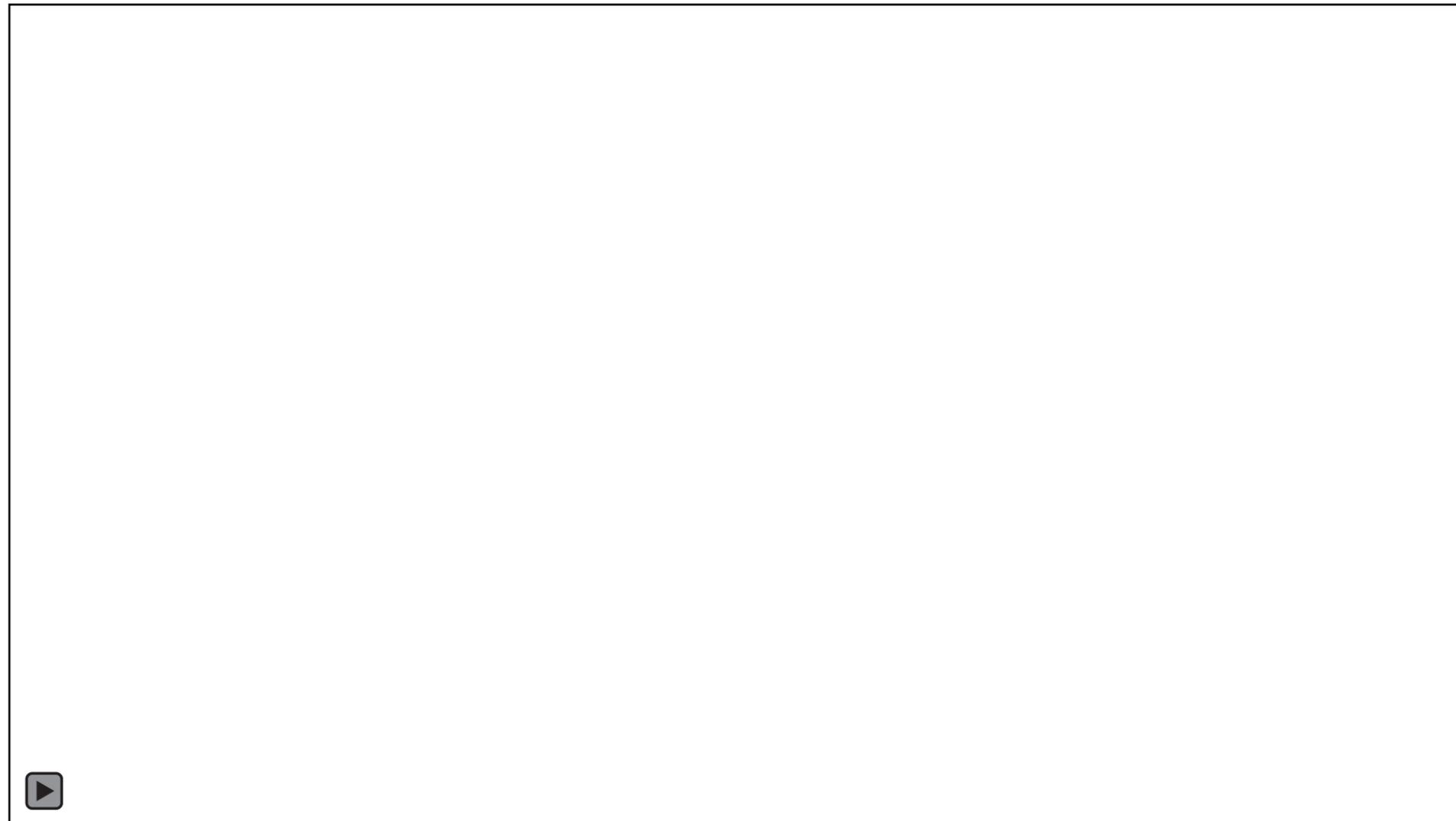
Chris Shultz,

Thomas Schaffner

<https://bit.ly/2TF46SK>



Student Sample



Questions?

Thank you for listening!

Jason Wiser

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www.MadWomb.com

www.YayaPlay.com

@YayaPlay