

TEACHING GAMES WITH GAMES

7 Exercises in Play

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The first rule of
game education:
MAKE GAMES.

Play is like
design
calisthenics.

Learning to play
is half the battle.

Critical play
is the first tool
in the designer's
arsenal.

Playing reveals
the details and
nuances of games.

Play is active
learning.

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Hyper-Gendered Hopscotch

(Teaching Games with Games: 7 Exercises in Play)



Dr. Mary Flanagan @criticalplay

Sherman Fairchild Distinguished Professor in the
Emerging Field of Digital Humanities
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Values at Play toolkit – See more at ValuesAtPlay.org



Four categories or suits in “Grow-a-Game” :



Verbs, or Actions - green: what a player does in a game

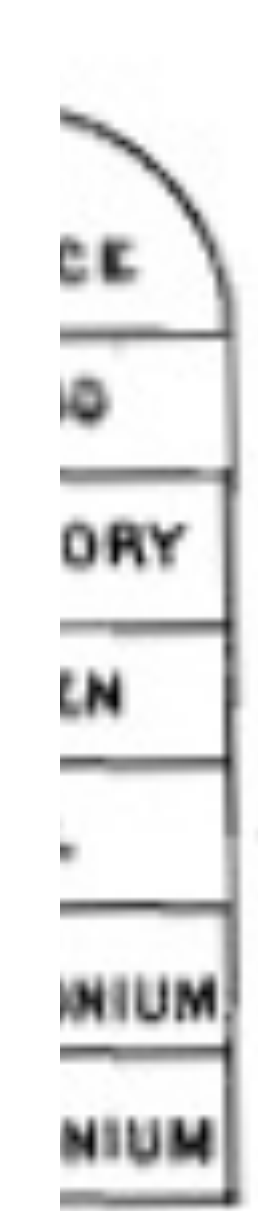
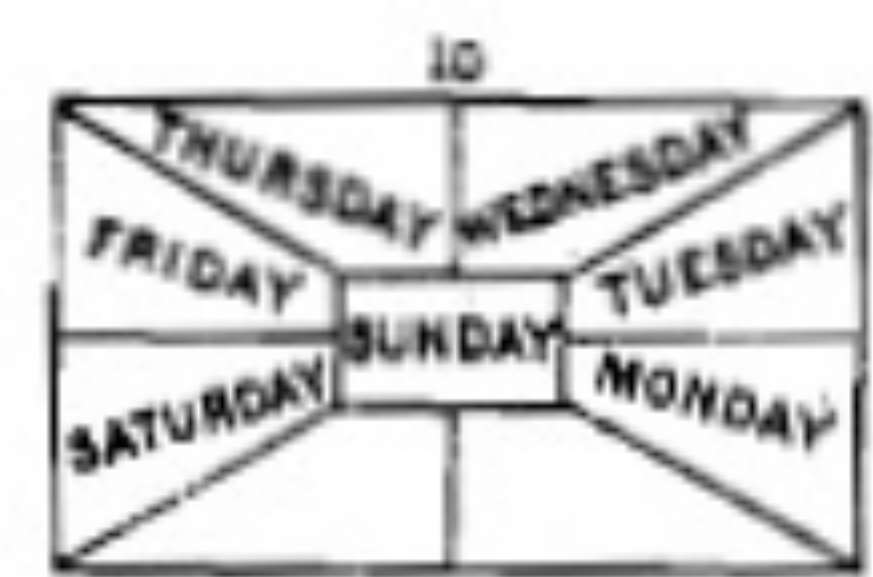
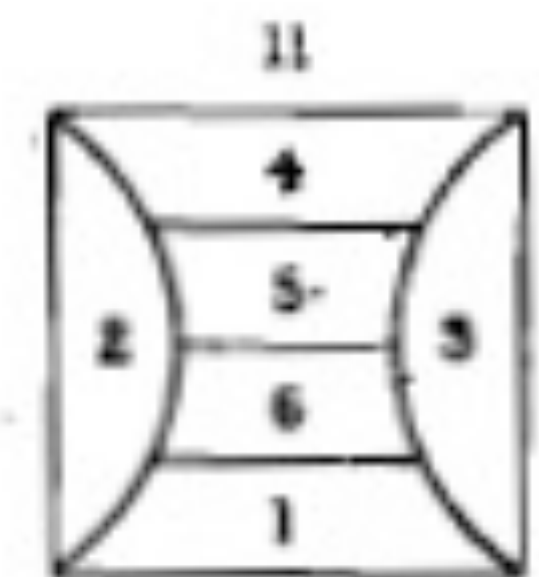
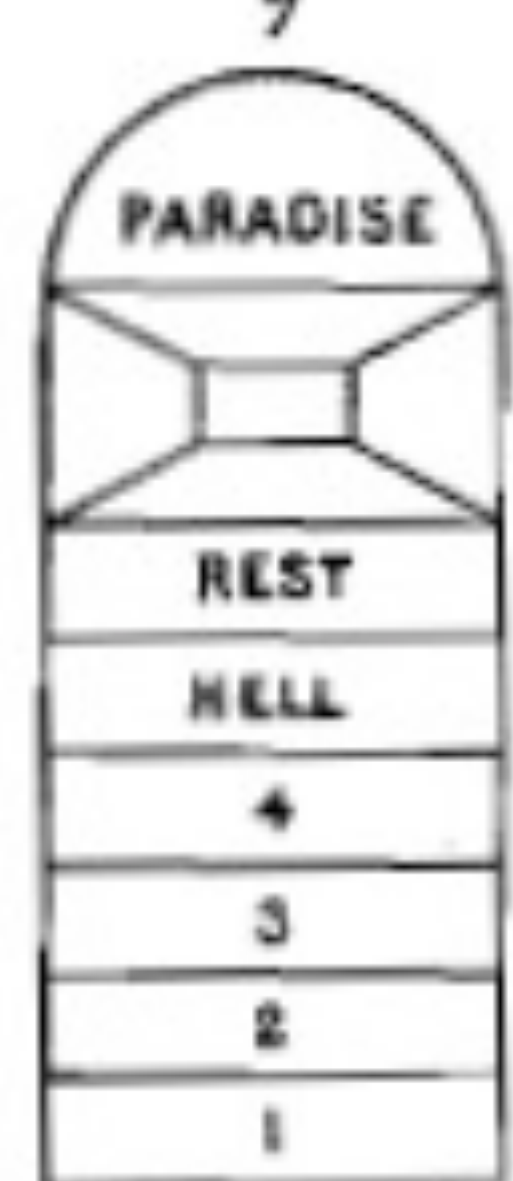
Challenges - yellow: social issues or conflicts

Games - pink: existing games to follow as constraints

Values - blue: ideals for a just and sustainable society



Values at Play toolkit – See more at ValuesAtPlay.org



FIGURES OF THE GAME OF HOP-SCOTCH



"Scotch Hoppers," from *Juvenile Games for the Four Seasons*



1677: "The time when schoolboys should play
at Scotch-hoppers."

Prompt:

Make a Hyper-Gendered Hopscotch.









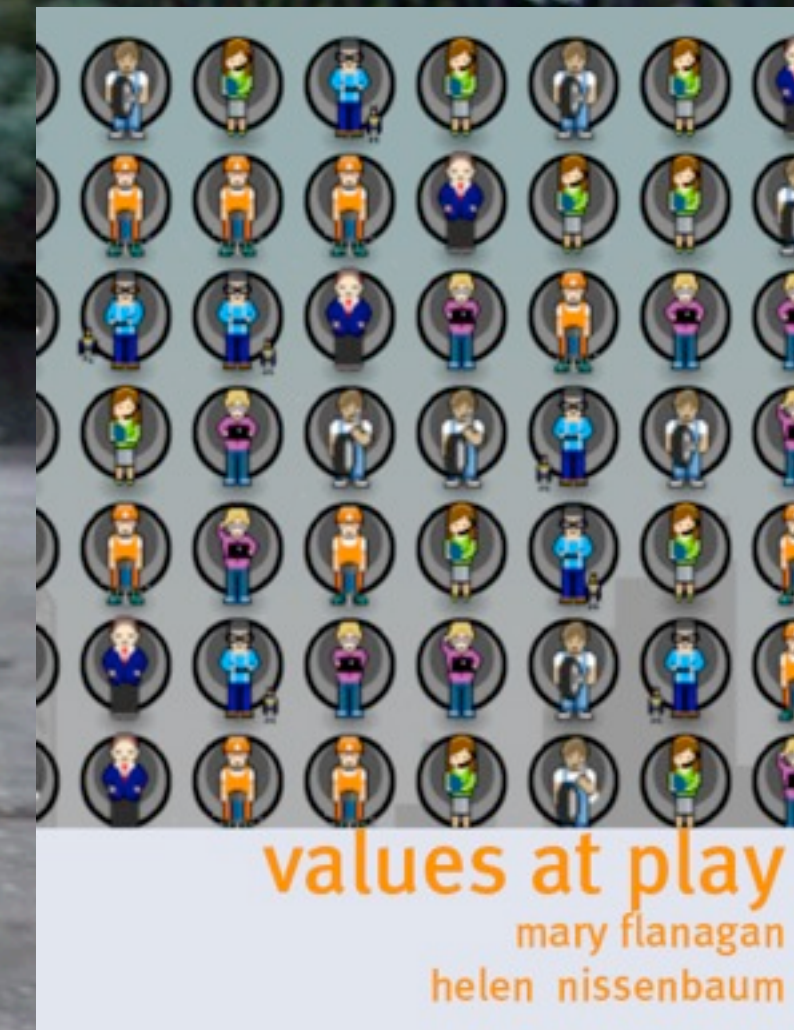




Why Hyper Gendered Hopscotch?

- Environment: Ideal “ice breaker”: Physical, childlike
- History: Ties game design to a larger history of play
- Values: Shows how games can be manipulated by altering or focusing on a value
- Critical Thinking Tool: Uses stereotypes, players end up unpacking them on their own

[thank you] @criticalplay
<http://www.maryflanagan.com>
<http://www.tiltfactor.org>

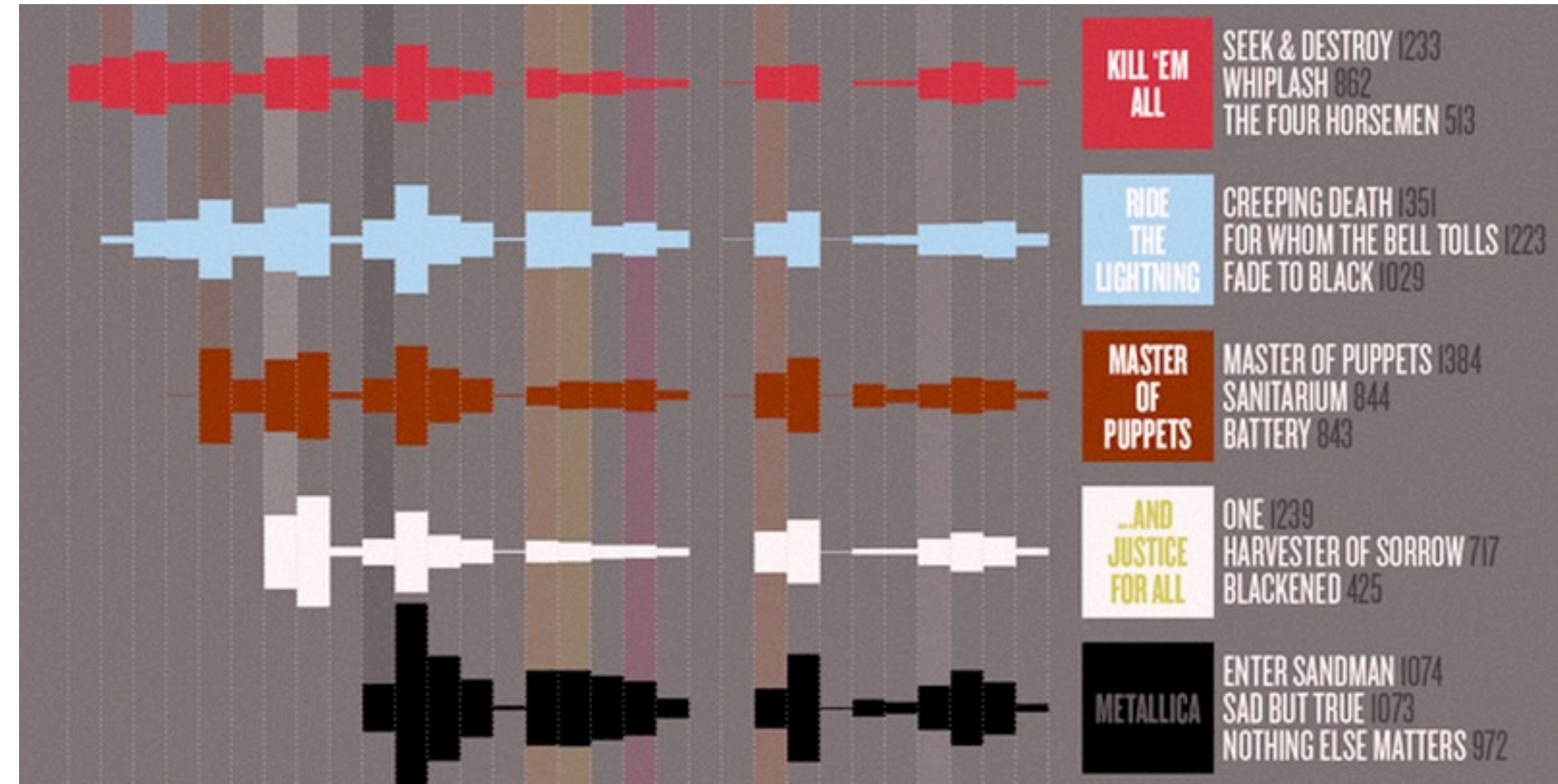


Stay tuned: *Values at Play in Digital Games*
MIT Press w/H. Nissenbaum in 2014; check out
Buffalo: the name dropping game at
Doing it On the Table exhibition here at GDC!!

MICHAEL SWEET
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Berklee College of Music

Deconstructing Musical Scores by breaking the rules of a system.



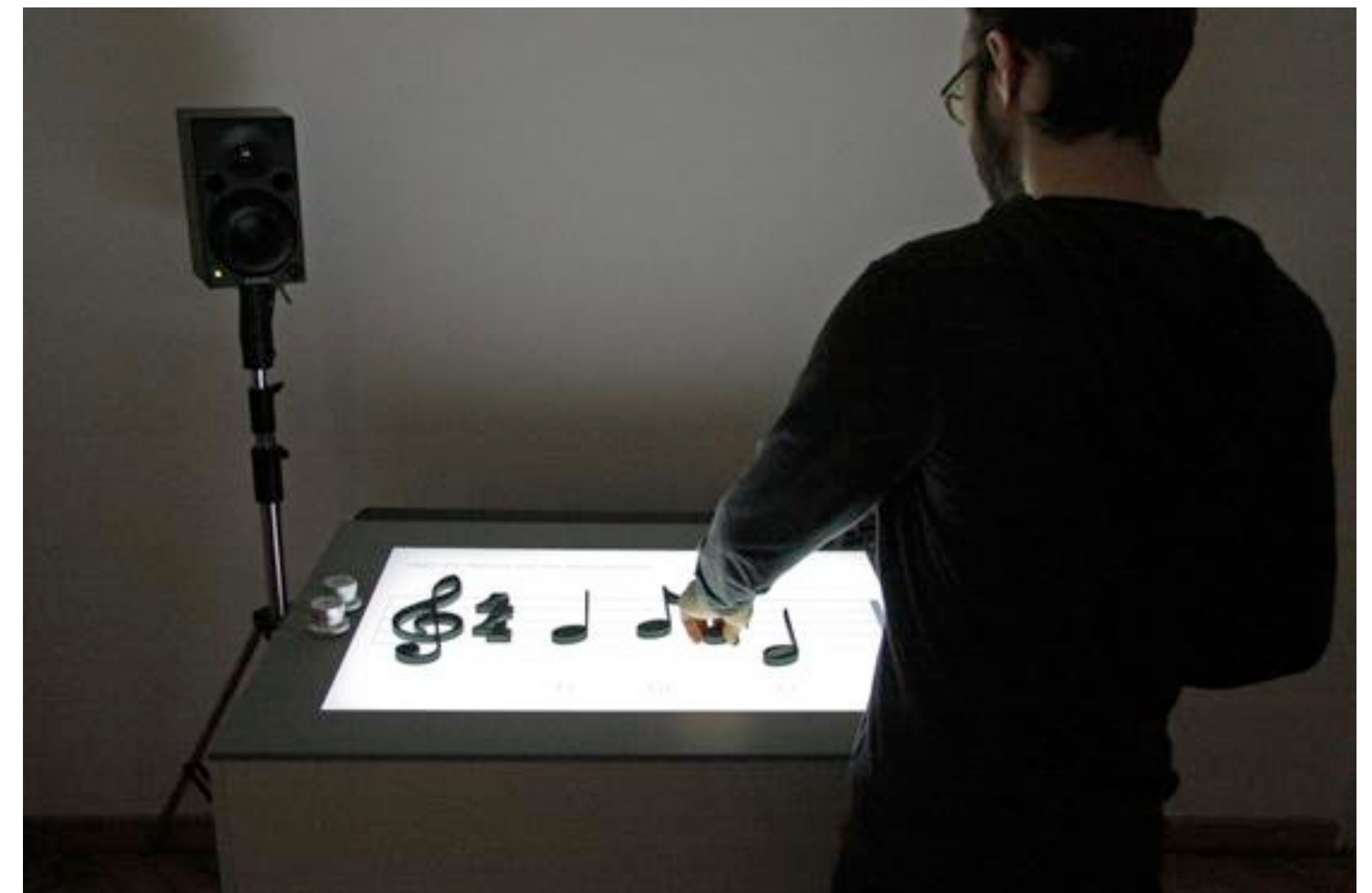
Michael Sweet <msweet@berklee.edu>
Artistic Director, Video Game Scoring
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What is interactive music?

Interactive music in games is the ability for music to adapt in real time to decisions that the player makes or changes in game state.

Examples include:

- State changes like explore to battle.
- Location within the game.
- Emotional changes in the player.
- Time of day.
- The speed of play.



Assignment: Break the rules of the music system.

In many games you can break the mechanics of the music system by not playing the game as originally intended thus making the musical score break, by making it do something that the composer and game development team never intended.



Learning Outcomes:

- ◆ How does game design influence the music interactivity.
- ◆ What are the components that make up the music system.
- ◆ What are the control-inputs to a music system.
- ◆ How to create better adaptive music systems in games.



Gameplay: Space Invaders



Gameplay: Space Invaders



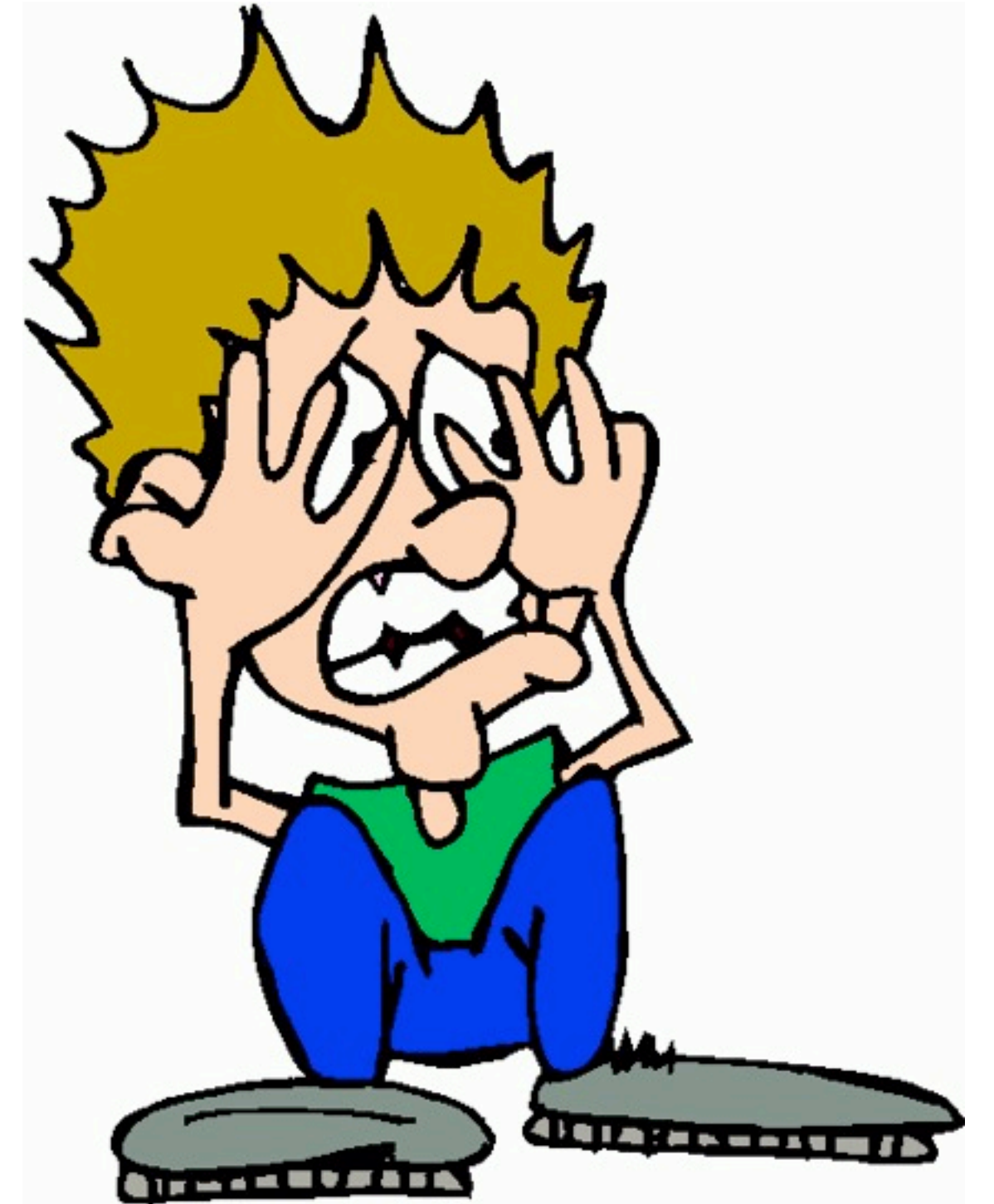
Gameplay: World of Warcraft



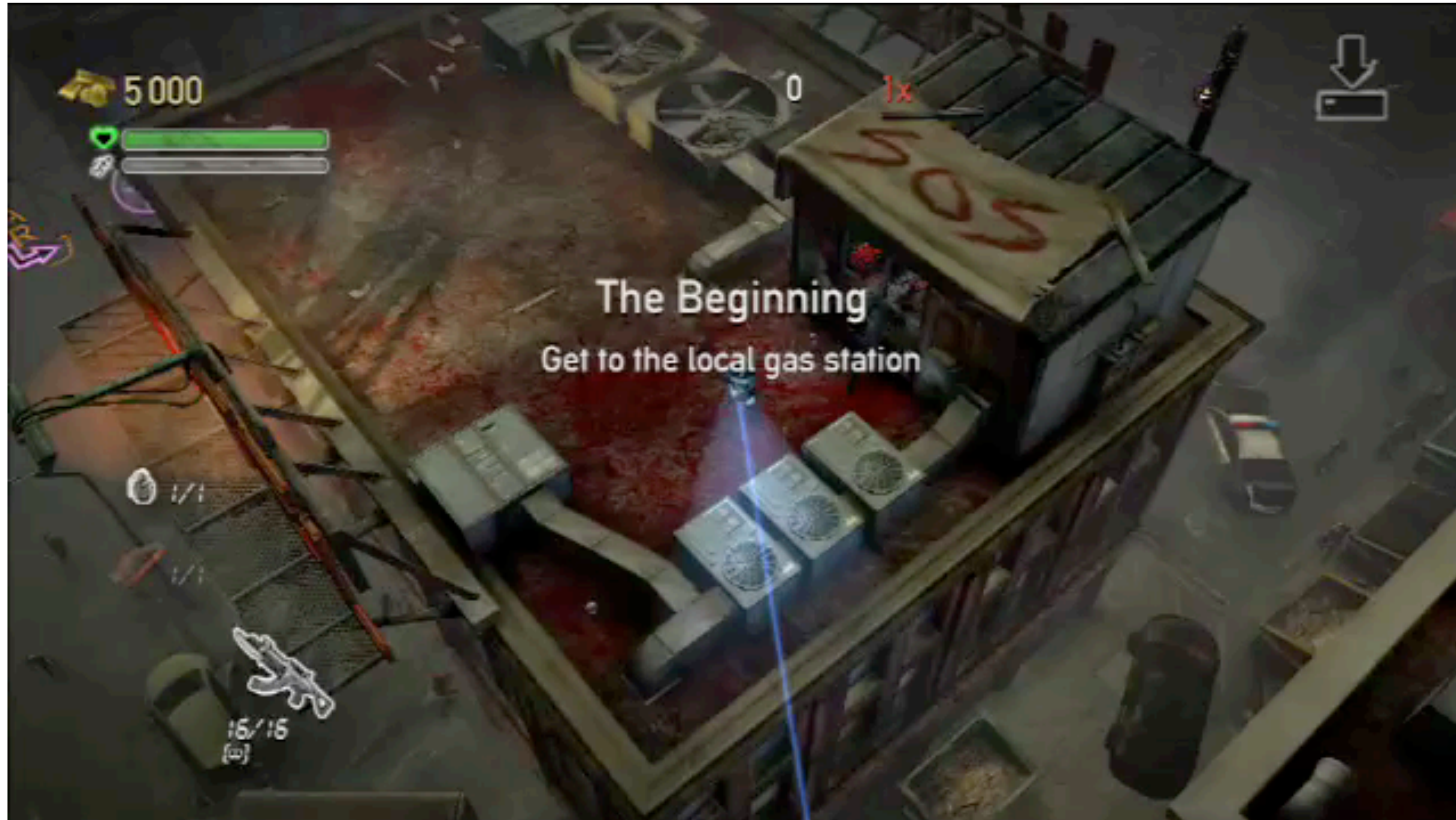
Gameplay: World of Warcraft



Gameplay: Dead Nation



Gameplay: Dead Nation



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NAOMI CLARKE
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Brooklyn Game Ensemble,
NYU, SVA

Game Snippets

Small Mechanics to Elicit Social Dynamics · Naomi Clark, 2014

Sheep vs. Wolves

WOLF



SHEEP



Play with the other six people in your group.

Decide ***silently*** if you're a wolf or a sheep.

On the count of three, hold out a fist if you're a wolf, or an open hand if you're a sheep.

Keep your hands out! Count the number of wolves and sheep in your group.

Sheep vs. Wolves

WOLF



SHEEP



If your group is mostly WOLVES:

Get 2 points if you're a wolf

Get 0 points if you're a sheep

If your group is mostly SHEEP:

Get 5 points if you're a wolf

Get 3 points if you're a sheep

Keep track of your point total!

Sheep vs. Wolves

WOLF



**Play
three
more
rounds!**

SHEEP



If your group is mostly WOLVES:

Get 2 points if you're a wolf

Get 0 points if you're a sheep

If your group is mostly SHEEP:

Get 5 points if you're a wolf

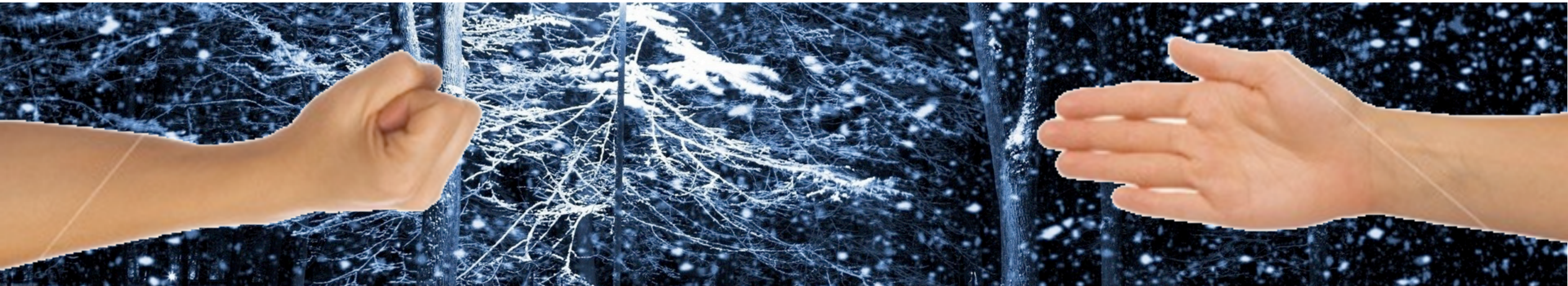
Get 3 points if you're a sheep

Keep track of your point total!

Sheep vs. Wolves vs. THE WINTER

WOLF

SHEEP



Winter is coming. Will your fragile ecosystem hold up?

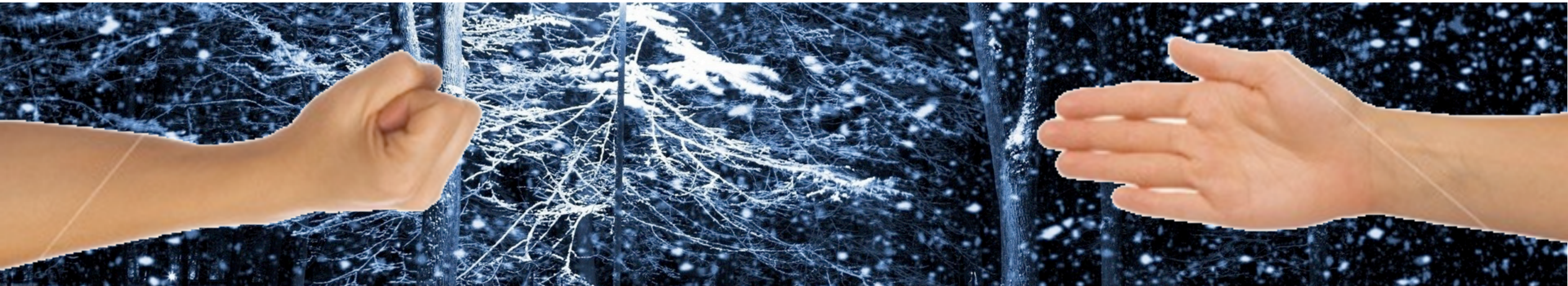
If your group has less than 70 points, you all freeze to death.

If your group has more than 70 points, the three players with the most points survive.

Sheep vs. Wolves: Good for discussion of...?

WOLF

SHEEP

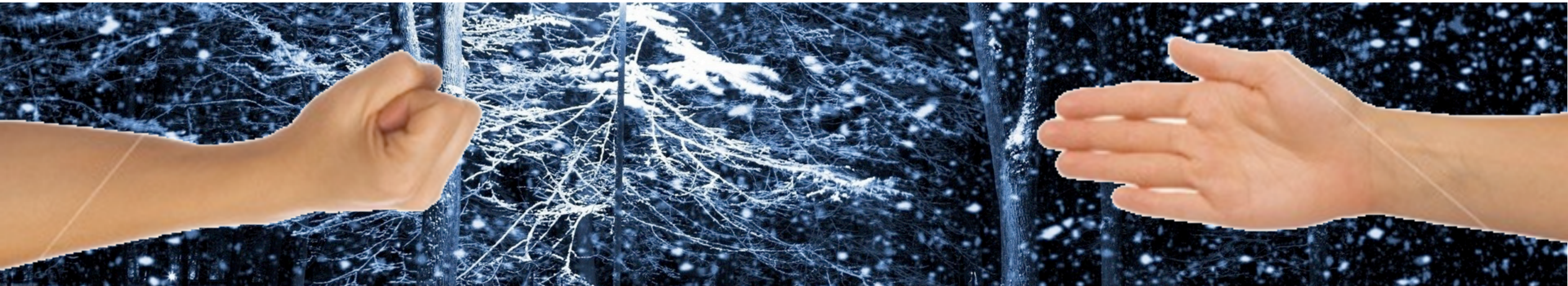


- **Cooperative / Competitive tensions**
- **Adapting the prisoner's dilemma (works in groups, seems to be easier to grasp)**
- **The overlap between prisoner's dilemma and the tragedy of the commons**
- **“Plot Twists” in games: exploiting player assumptions, changing the stakes, is this even fair as a designer?**

Sheep vs. Wolves vs. THE WINTER

WOLF

SHEEP



Winter is coming. Will your fragile ecosystem hold up?

If your group has less than 70 points, you all freeze to death.

If your group has more than 70 points, the three players with the most points survive.

The Flavor Changeup: The Abstract Base

Rules for "Seller and Buyers"

In a market where buyers and sellers exchange resources,

- Player A and Player B are **Buyers**. Player C is the **Seller**.
- **Buyers** each start with 10 **resources** and 0 **points**.
- The **Seller** starts with 6 **resources** and 15 **points**.
- Once each turn, **Buyers** may trade 3 **resources** to the **Seller** for 1 **point**.
- Each turn, players may also "take" or "hold."
- The **Seller** must give **Buyers** that "take" 2 **resources** that turn, but gets nothing for "take" themselves.
- Each player must discard 1 **point** each turn or **forfeit the game**.
- A player may pay 16 **resources** for a **victory token**.
- If a player has a **victory token** and chooses to "hold" they win.
- **Buyers** may exchange **resources** and **points** with each other freely.

The Flavor Changeup: Buyers as Hero

Rules for "Life on the Plantation"

On a plantation where an overseer manages work and the company store,

- Player A and Player B are **Field Workers**. Player C is the **Overseer**.
- **Field Workers** each start with 10 **dollars** and 0 **food**.
- The **Overseer** starts with 6 **dollars** and 15 **food**.
- Once each turn, **Workers** may trade 3 **dollars** to the **Overseer** for 1 **food**.
- Each turn, players may also "work" or "plot."
- The **Overseer** must give **Workers** that "work" 2 **dollars** that turn, but gets nothing for "work" themselves.
- Each player must discard 1 **food** each turn or **die of starvation**.
- A player may pay 16 **dollars** for **weapons**.
- If a player has **weapons** and chooses to "plot" they win.
- **Workers** may exchange **dollars** and **food** with each other freely.

The Flavor Changeup: Sellers as Hero

Rules for "Blood Ransom of the Manakittens"

In a crystalline dimension where demons have raided a magical cat's lair,

- Player A and Player B are **Demons**. Player C is the **Mother Manacat**.
- **Demons** each start with 10 **kittens** and 0 **mana crystals**.
- The **Manacat** starts with 6 **kittens** and 15 **mana crystals**.
- Once each turn, **Demons** may trade 3 **kittens** to the **Manacat** for 1 **mana crystal**.
- Each turn, players may also "kidnap kittens" or "blood sacrifice."
- The **Manacat** must give **Demons** that "kidnap kittens" 2 **kittens** that turn, but gets nothing for "kidnap kittens" themselves.
- Each player must discard 1 **mana crystal** each turn or **dissolve into the nether**.
- A player may pay 16 **kittens** for a **chalice of kitten blood**.
- If a player has a **chalice of kitten blood** and chooses to "blood sacrifice" they win.
- **Demons** may exchange **kittens** and **mana crystals** with each other freely.

The Flavor Changeup: Good for discussion of...?

- **Perceiving narratives in “raw” mechanics (vs. the other way around)**
- **Focus testing / Playtesting: player impressions before and after actually experiencing a system**
- **Tension between narrative/dramatic elements and mechanics/formal elements**
- **Manipulating player understanding of a system via narrative elements**
- **“Ludonarrative dissonance”**
- **Can you disguise the leanings of procedural rhetorics? Use the dissonance?**
- **The power of enabling trade/exchange of resources between players**

Thanks!

Naomi Clark · @metasynthie
deadpixel.co · brooklyngameensemble.org

STONE LIBRANDE
@StoneLibrande

Riot Games

WORLD OF RULECRAFT



Stone Librande *Lead Designer, Riot Games*

Overview

Overview

- Players divide into three groups based on character class: Fighter, Wizard and Thief.

Overview

- Players divide into three groups based on character class: Fighter, Wizard and Thief.
- Each group makes up rules for their character class.

Overview

- Players divide into three groups based on character class: Fighter, Wizard and Thief.
- Each group makes up rules for their character class.
- Players duel each other and attempt to balance the classes while playing the game.

Set Up

Set Up



- Pick a class: Fighter, Wizard or Thief

Set Up



- Pick a class: Fighter, Wizard or Thief
- Take 5 beads based on your class:

Set Up



- Pick a class: Fighter, Wizard or Thief
- Take 5 beads based on your class:
 - Fighter: 3 red, 1 white, 1 blue



Set Up



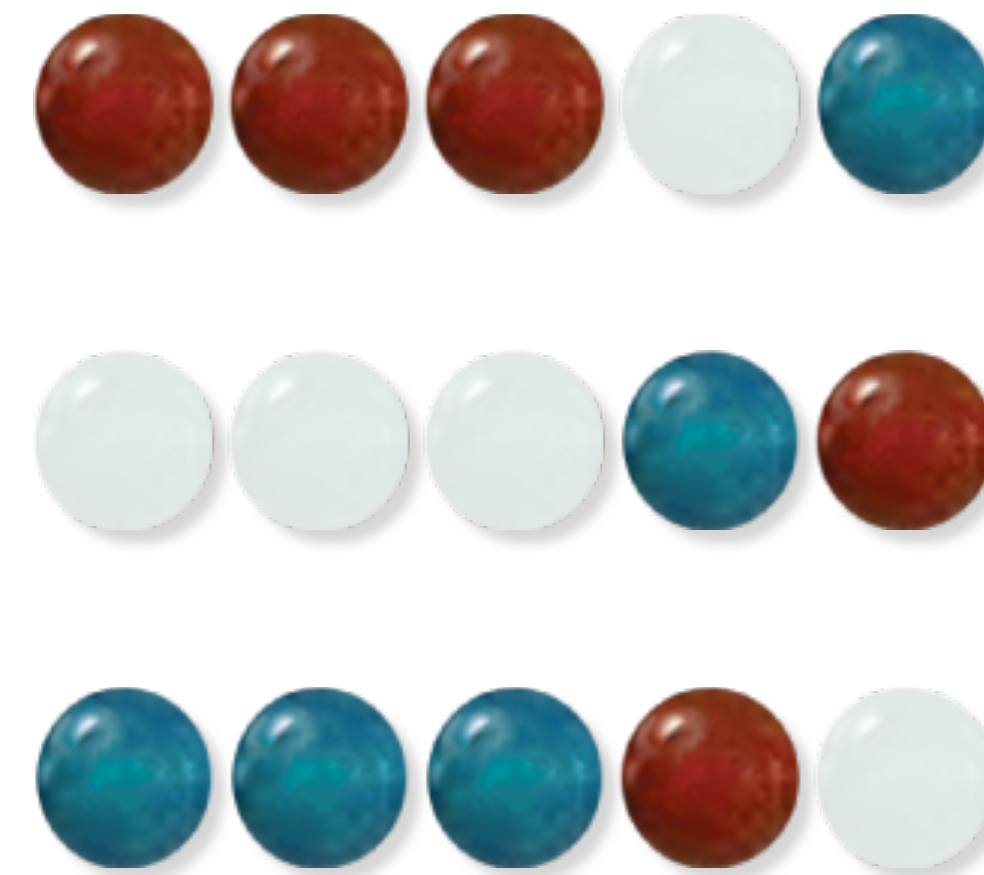
- Pick a class: Fighter, Wizard or Thief
- Take 5 beads based on your class:
 - Fighter: 3 red, 1 white, 1 blue
 - Wizard: 3 white, 1 blue, 1 red



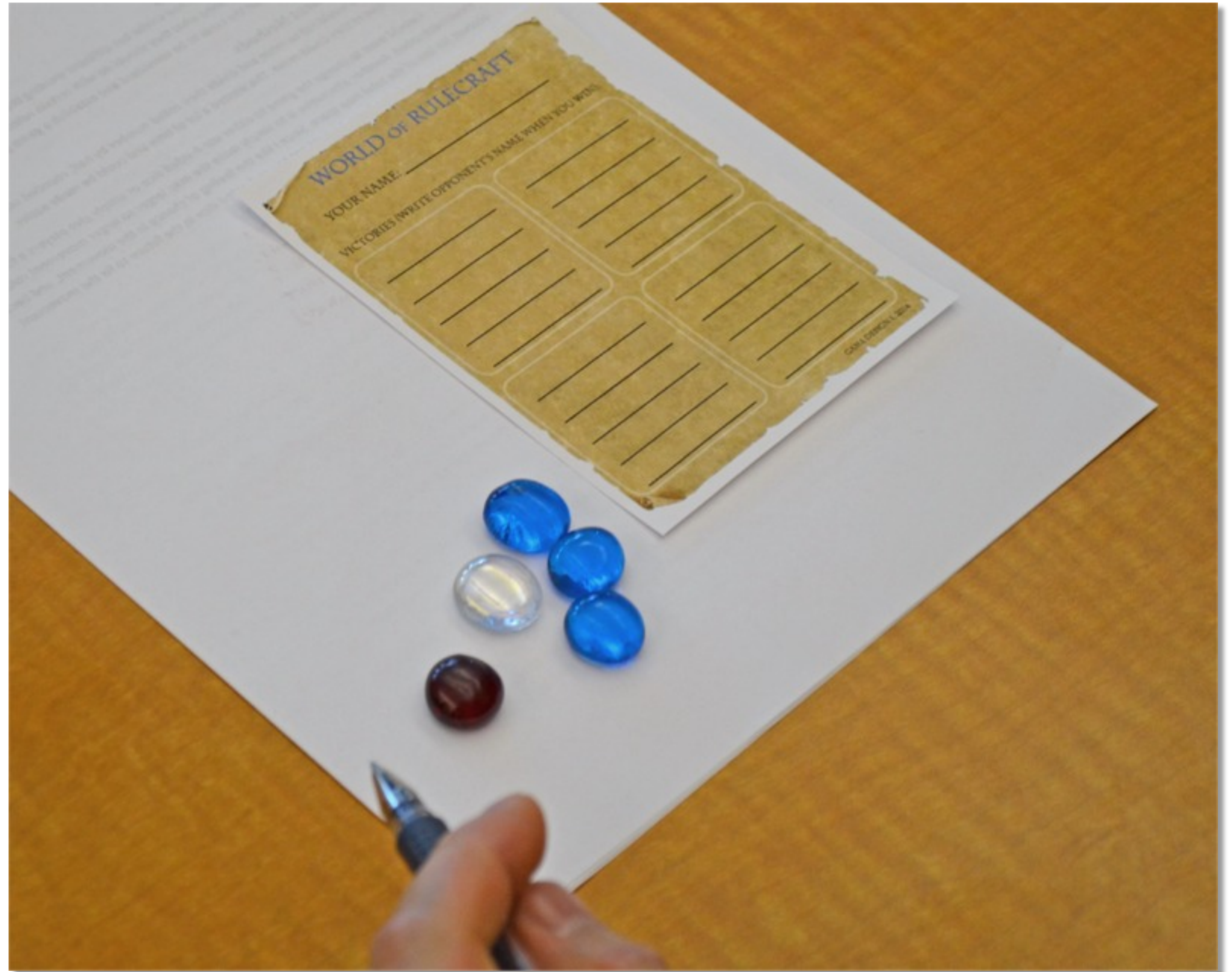
Set Up



- Pick a class: Fighter, Wizard or Thief
- Take 5 beads based on your class:
 - Fighter: 3 red, 1 white, 1 blue
 - Wizard: 3 white, 1 blue, 1 red
 - Thief: 3 blue, 1 red, 1 white

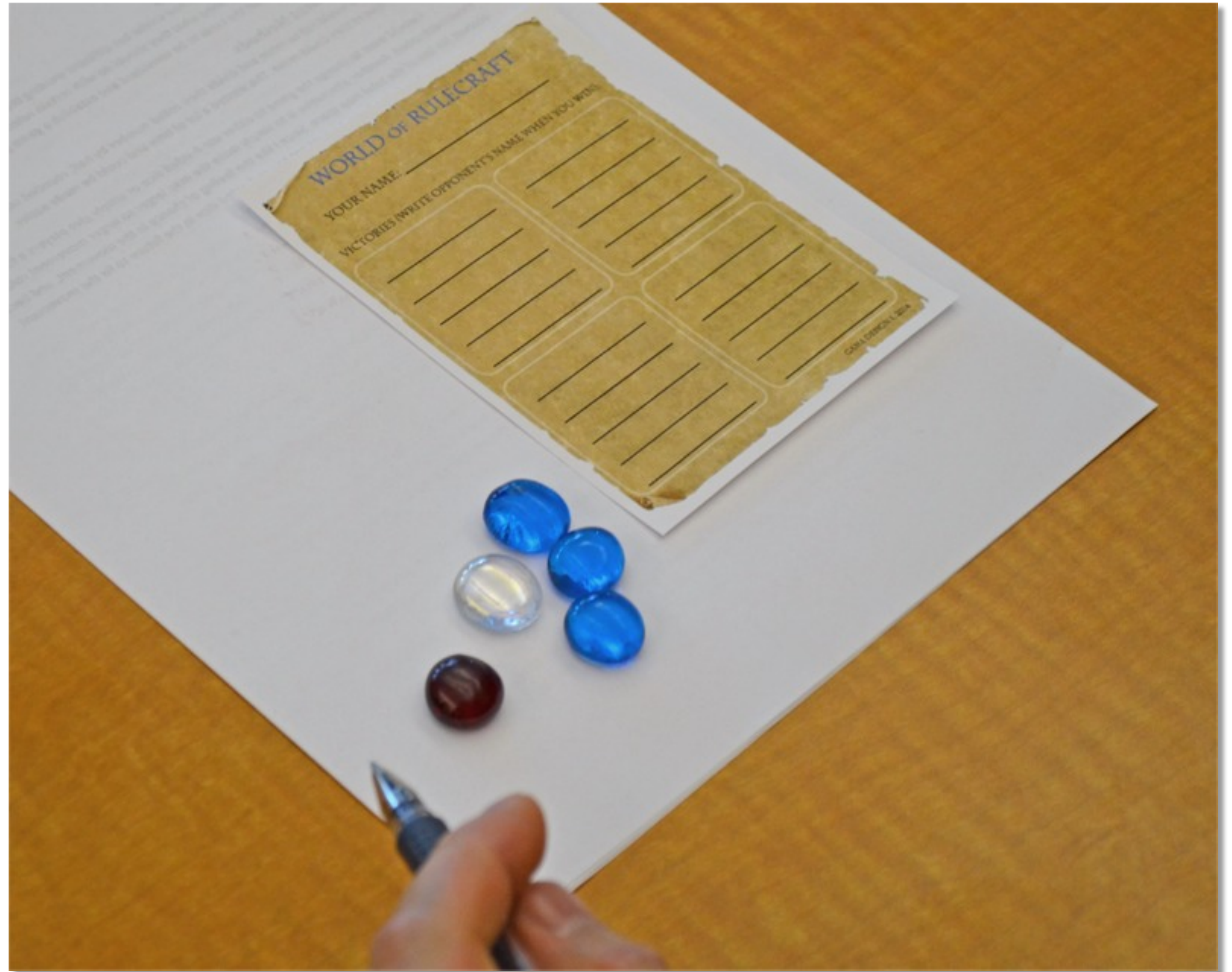


Set Up



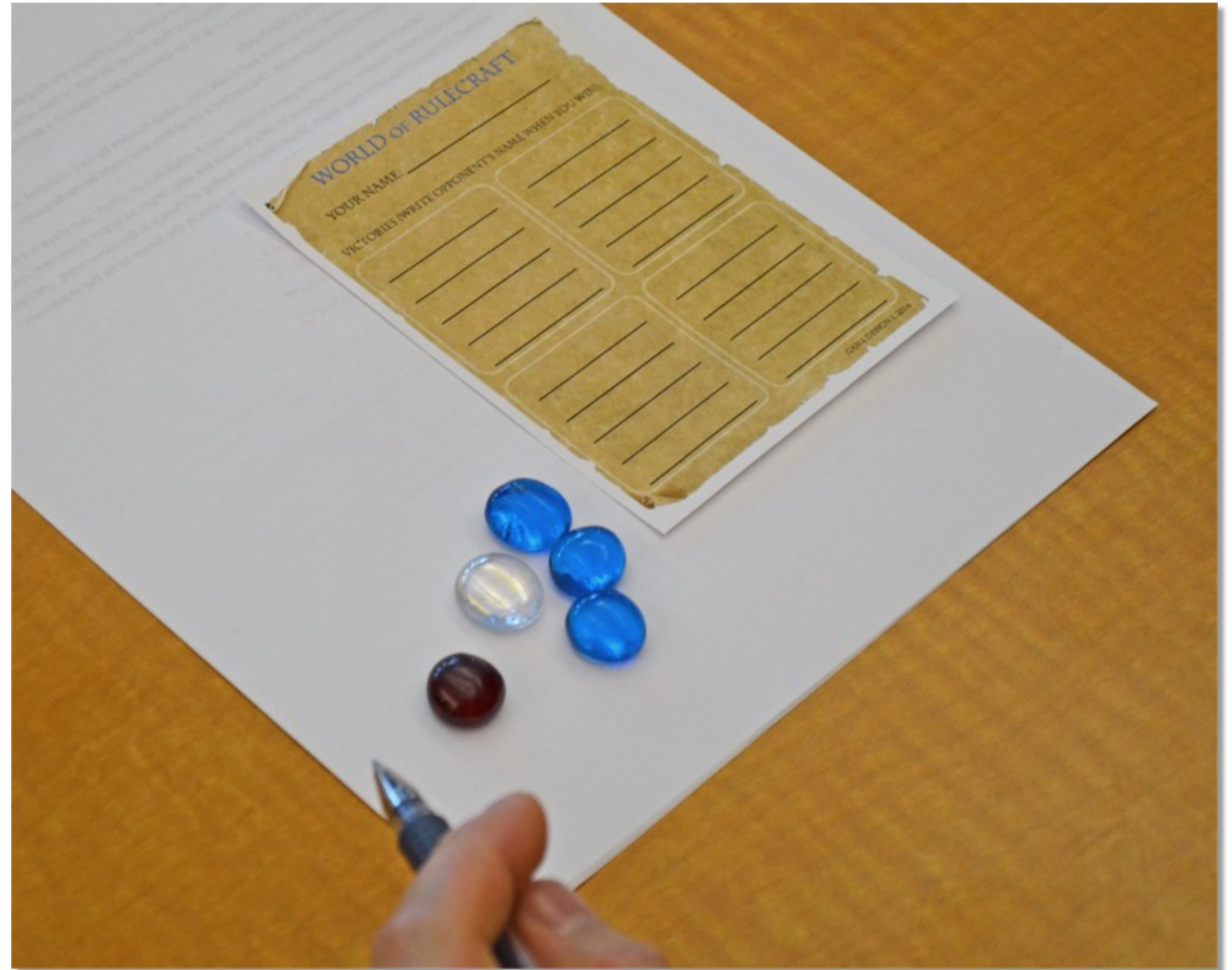
Set Up

- Each player takes a character sheet and writes down his or her character's name.



Set Up

- Each player takes a character sheet and writes down his or her character's name.
- Encourage fantastical names!



Set Up

Set Up

- Each player gets one colored sticker.



Set Up

- Each player gets one colored sticker.
- Each sticker represents one level.

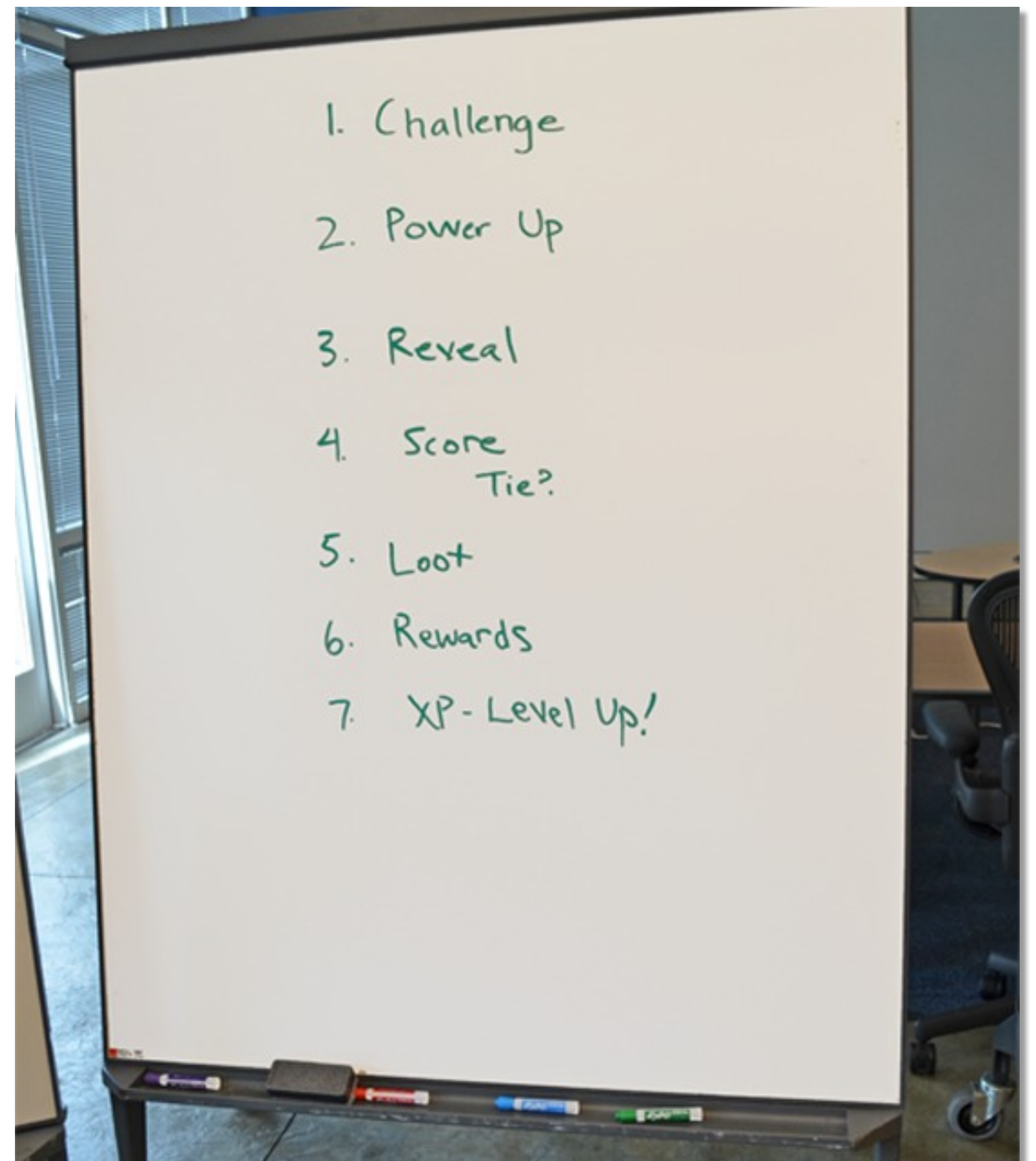


Turn Order

1. Challenge
2. Power Up
3. Reveal
4. Score
Tie?
5. Loot
6. Rewards
7. XP - Level Up!

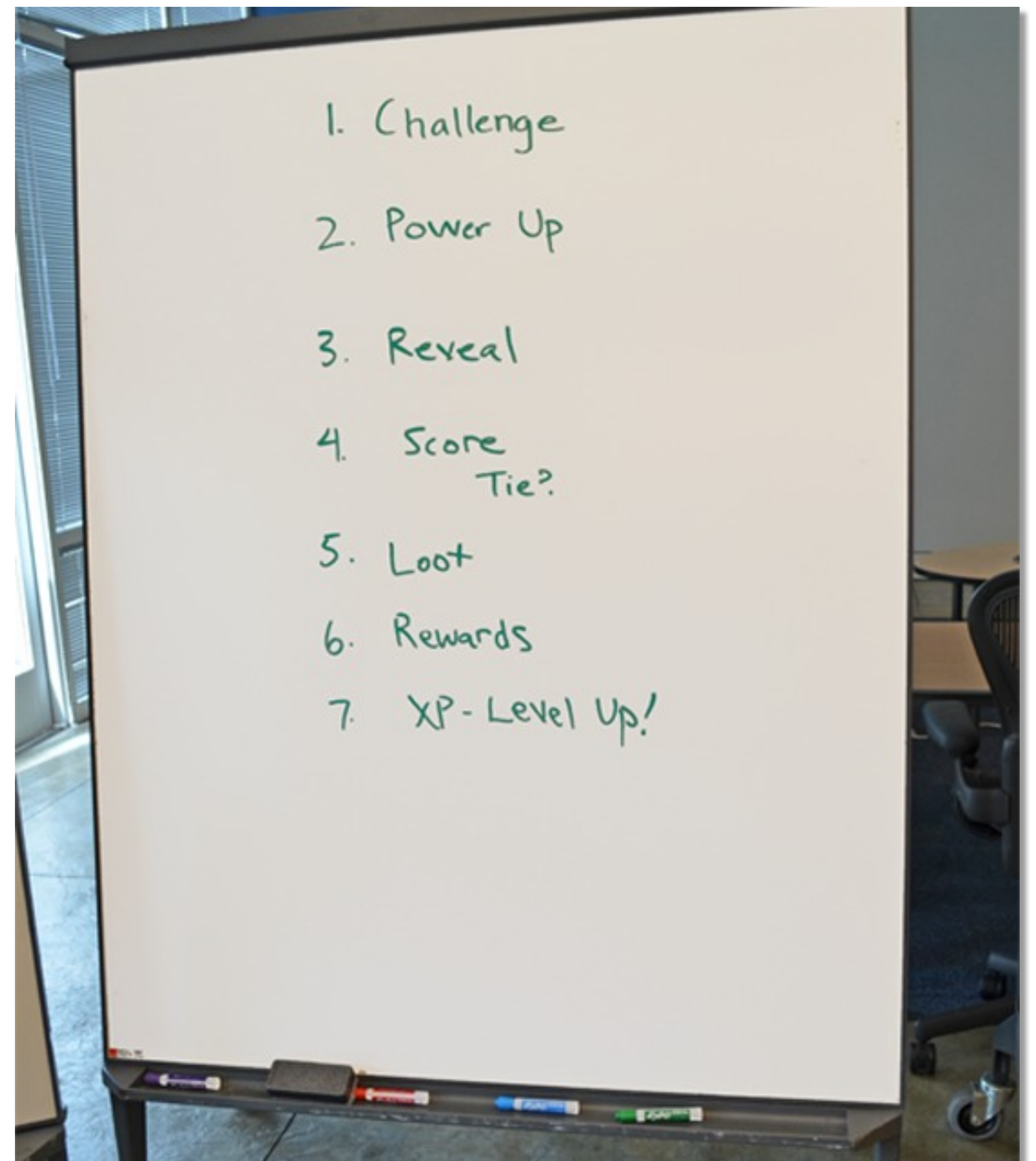
Turn Order

- Write the Turn Order up on a white board.



Turn Order

- Write the Turn Order up on a white board.
- Refer to it frequently throughout the exercise.



Challenge



Challenge

- Find someone to duel.

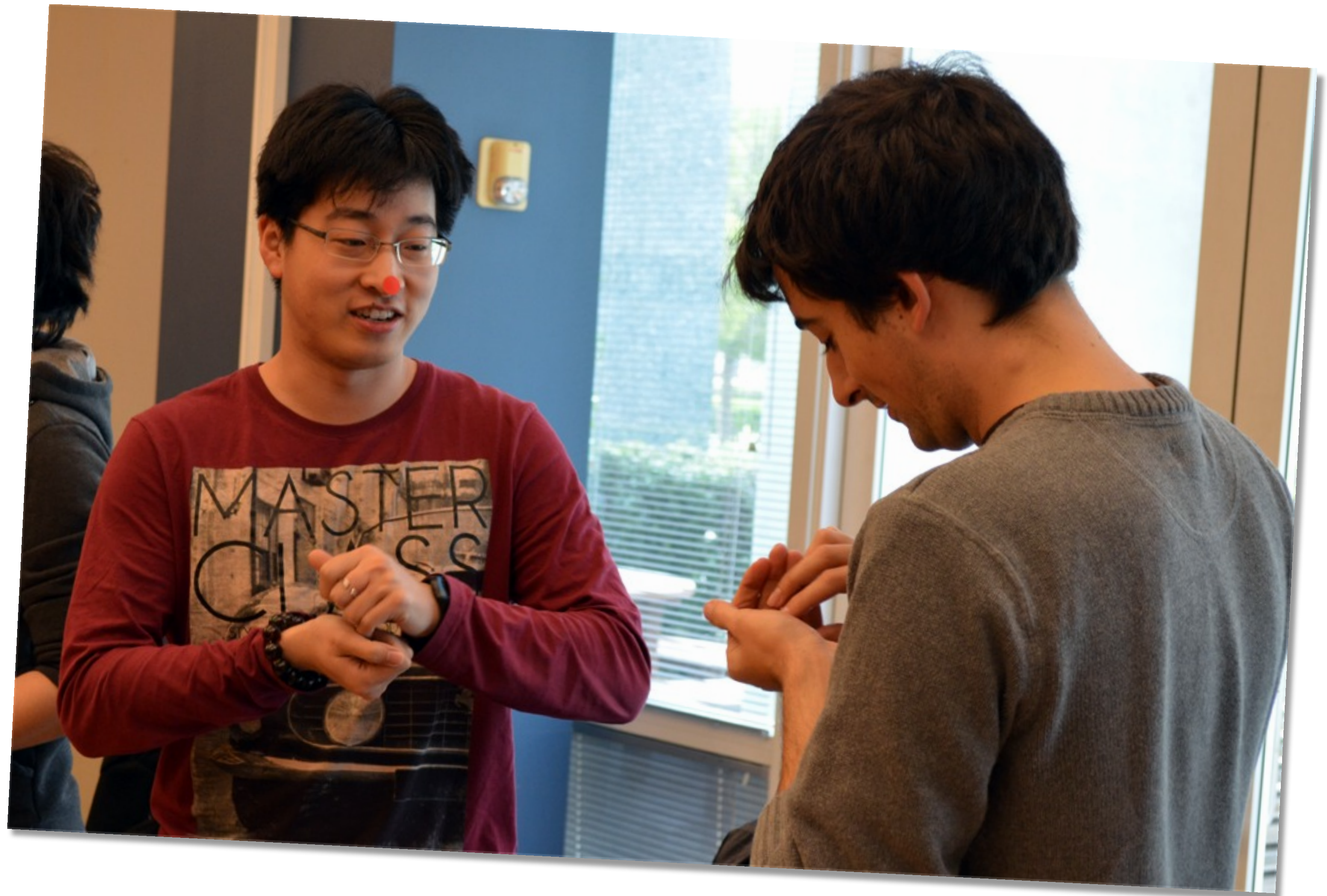


Challenge

- Find someone to duel.
- They can't refuse unless they are a lower level than you are.

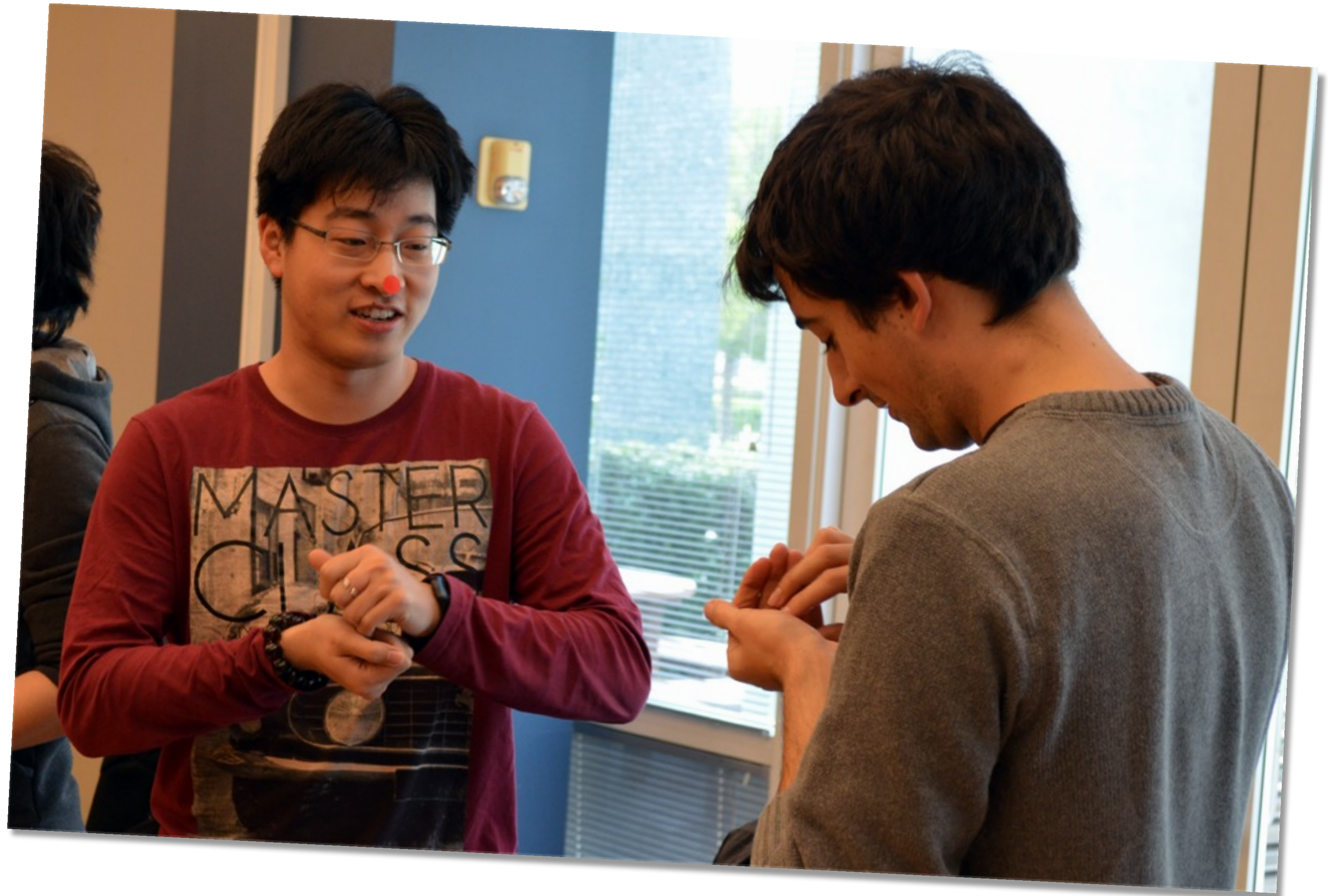


Power Up



Power Up

- Secretly put 1 or more beads in your hand.



Reveal



Reveal

- Simultaneously show your beads.



Score



Score

- Each duelist gets 1 point per bead + his or her current level.



Score

- Each duelist gets 1 point per bead + his or her current level.
- Tie? Take back your beads and duel again.



Loot



Loot

- All beads involved in this duel go into a pool. The winner divides them into 2 equal piles.



Loot

- All beads involved in this duel go into a pool. The winner divides them into 2 equal piles.
- (If there are an odd number of beads, one pile will have 1 extra.)



Rewards



Rewards

- Winner takes one of the piles and gives the other pile to the loser.



XP



XP

- Winner writes the loser's name on his or her character sheet.



Level Up!



Level Up!

- If you defeat 5 different opponents then your level increases by +1.



Level Up!

- If you defeat 5 different opponents then your level increases by +1.
- Get another sticker and one bead of your color.

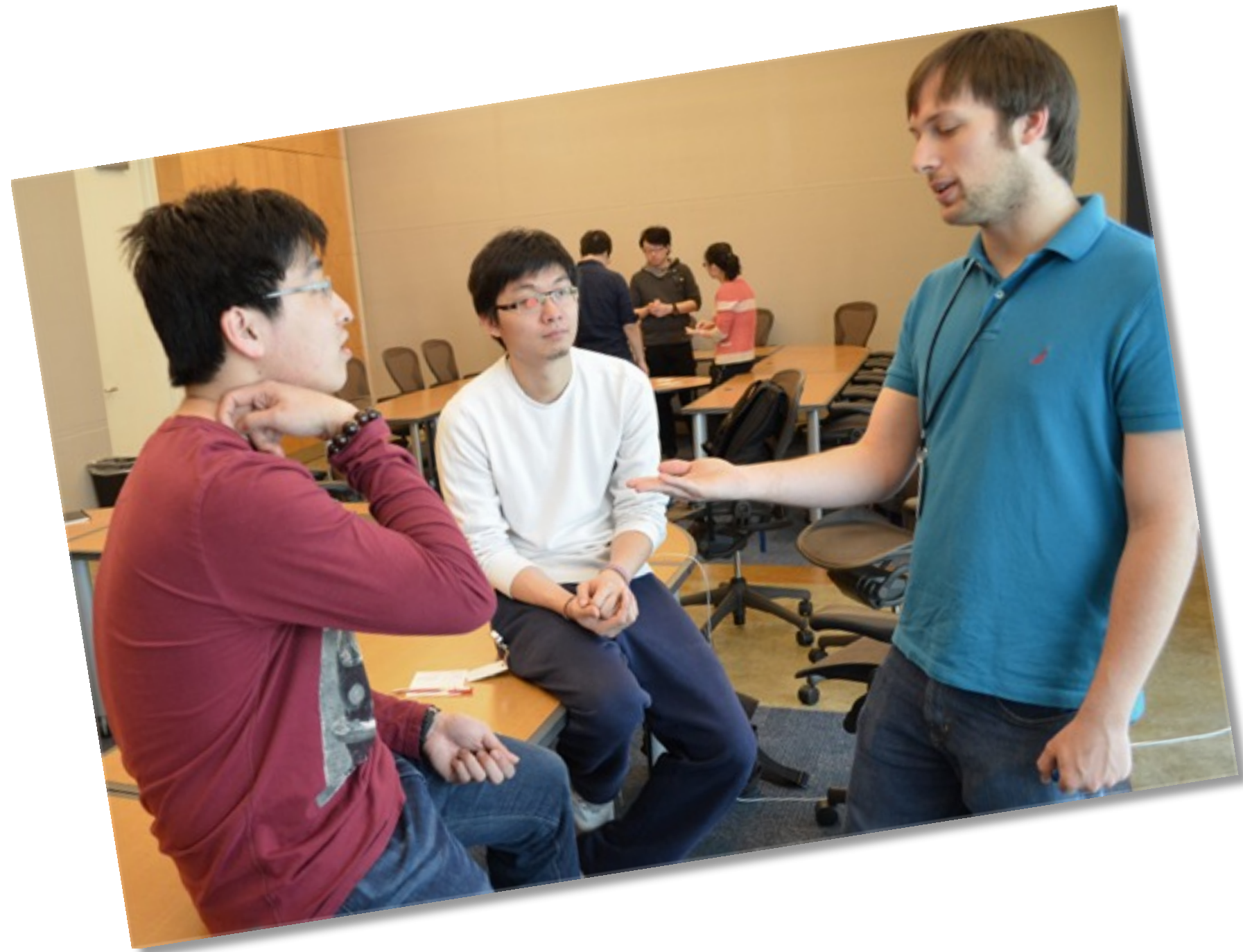


Character Rules

- Break up into three groups:

Character Rules

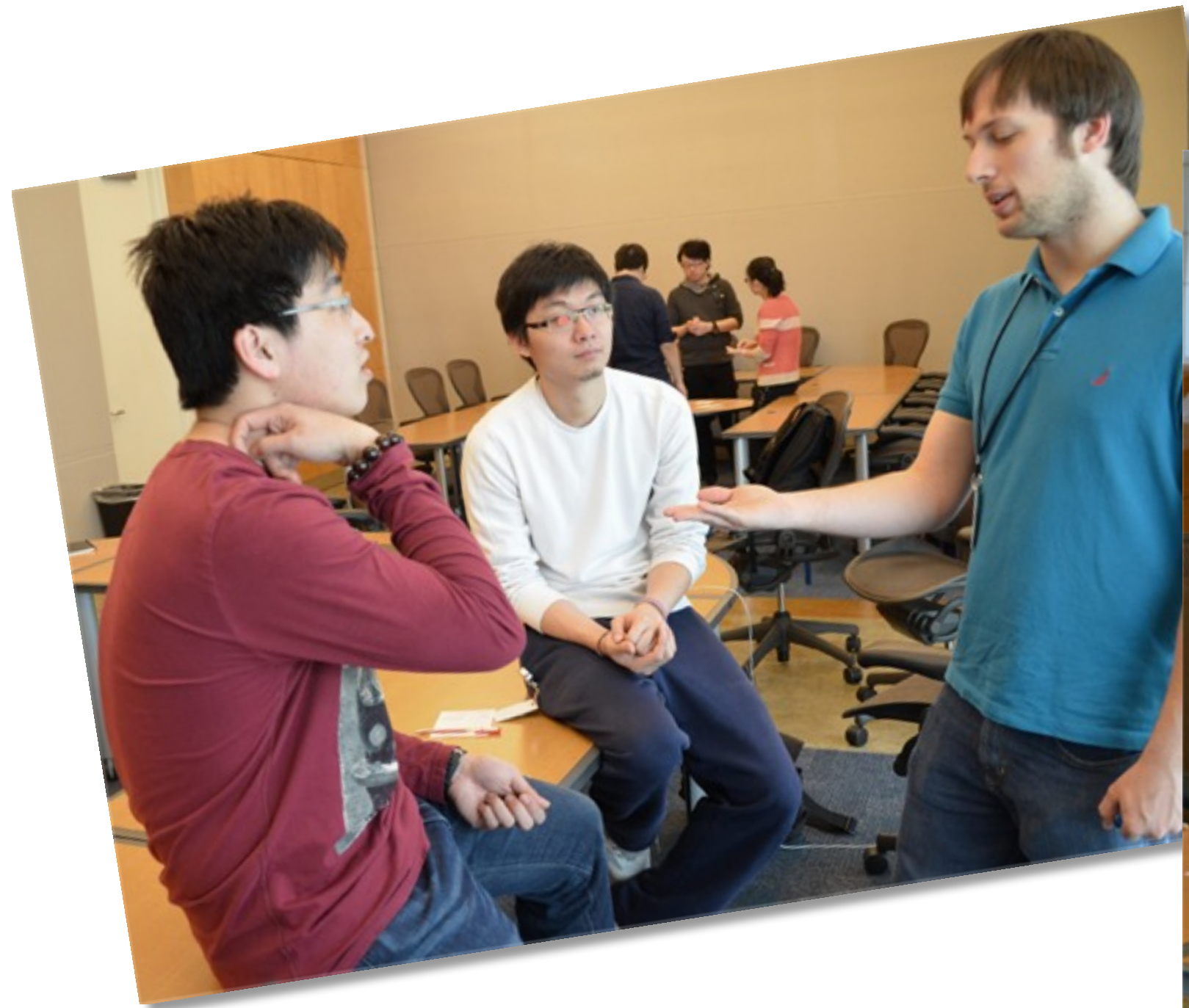
- Break up into three groups:



- Fighters' Pub

Character Rules

- Break up into three groups:



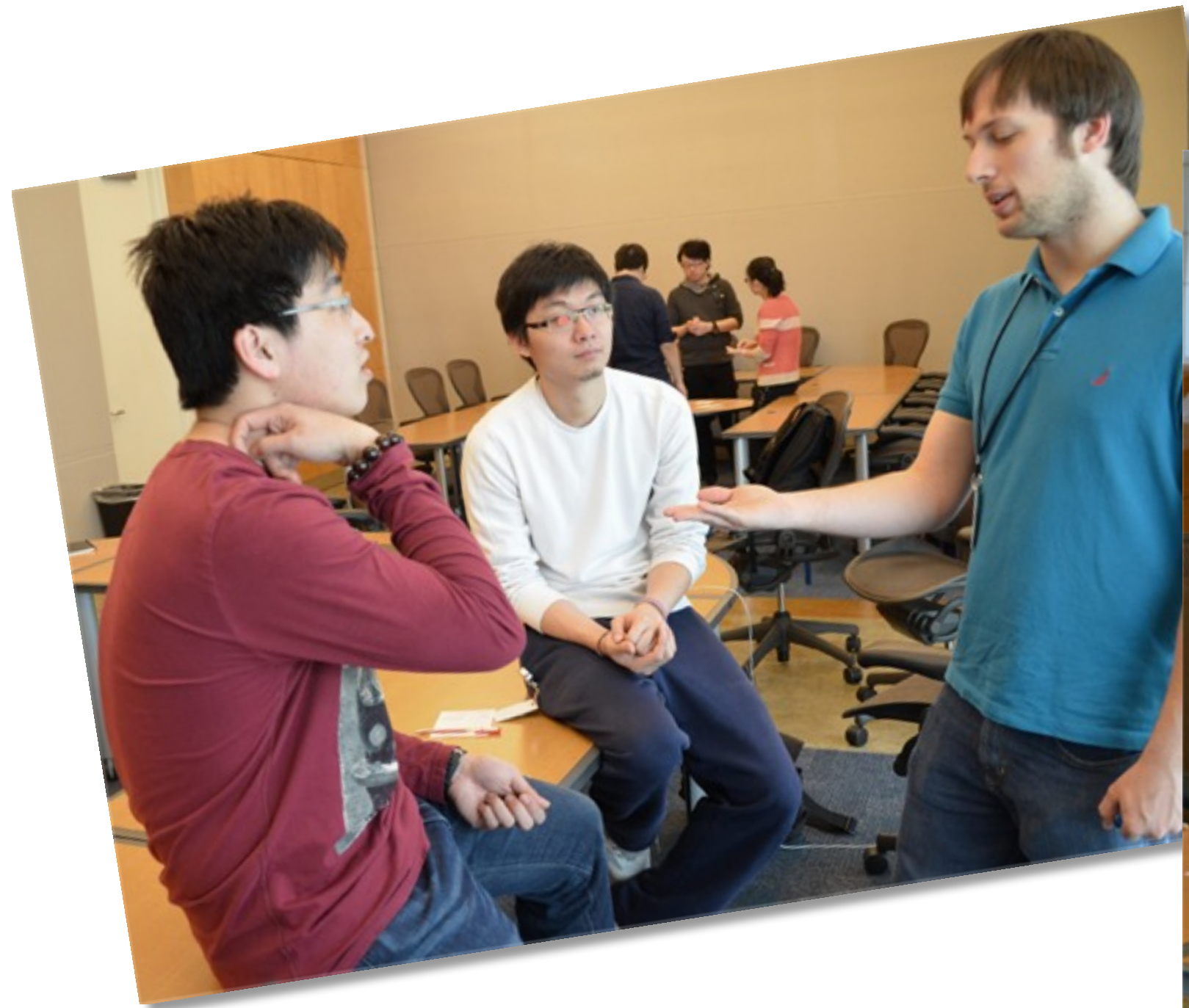
- Fighters' Pub



- Wizards' Tower

Character Rules

- Break up into three groups:



- Fighters' Pub

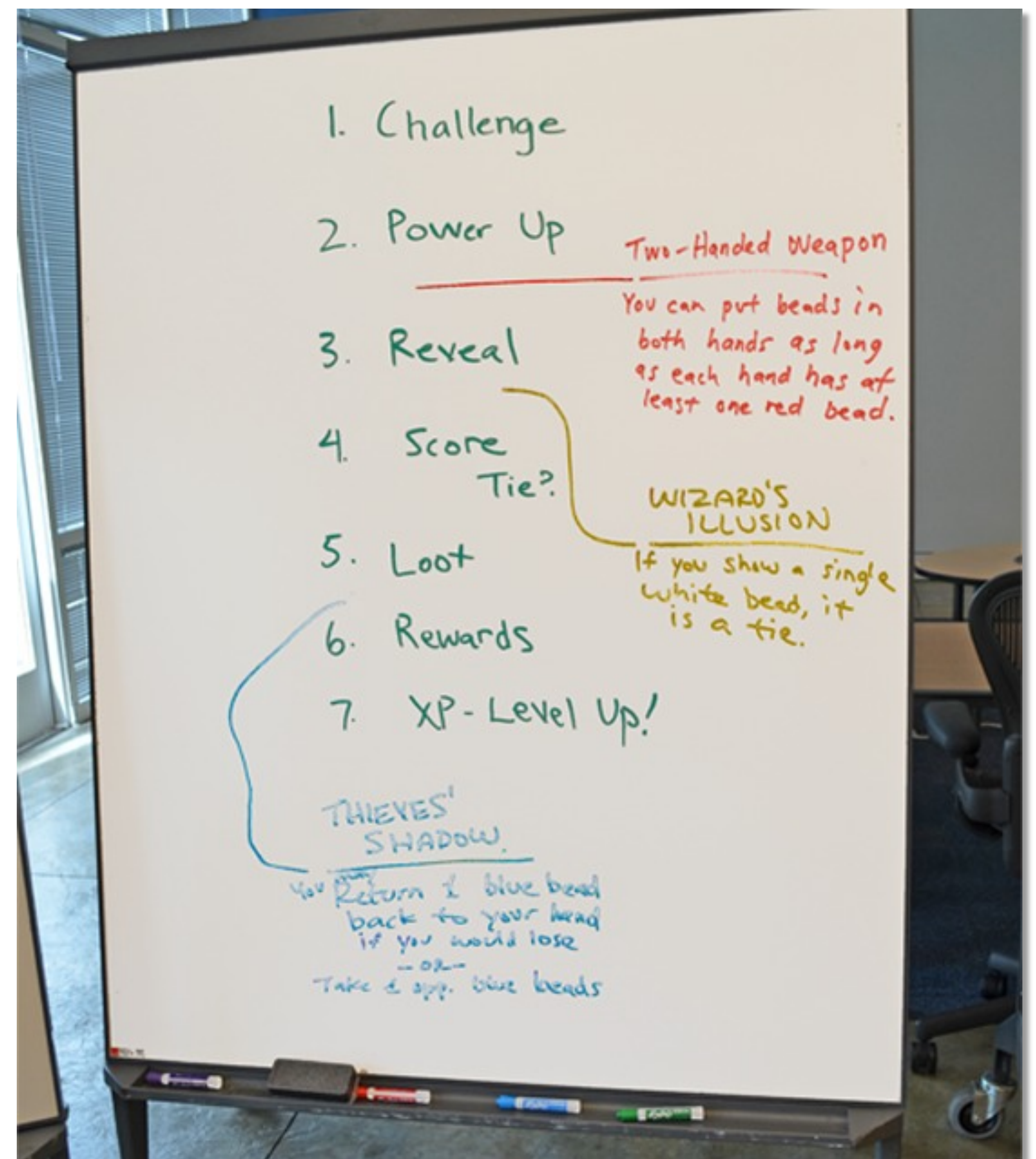


- Wizards' Tower



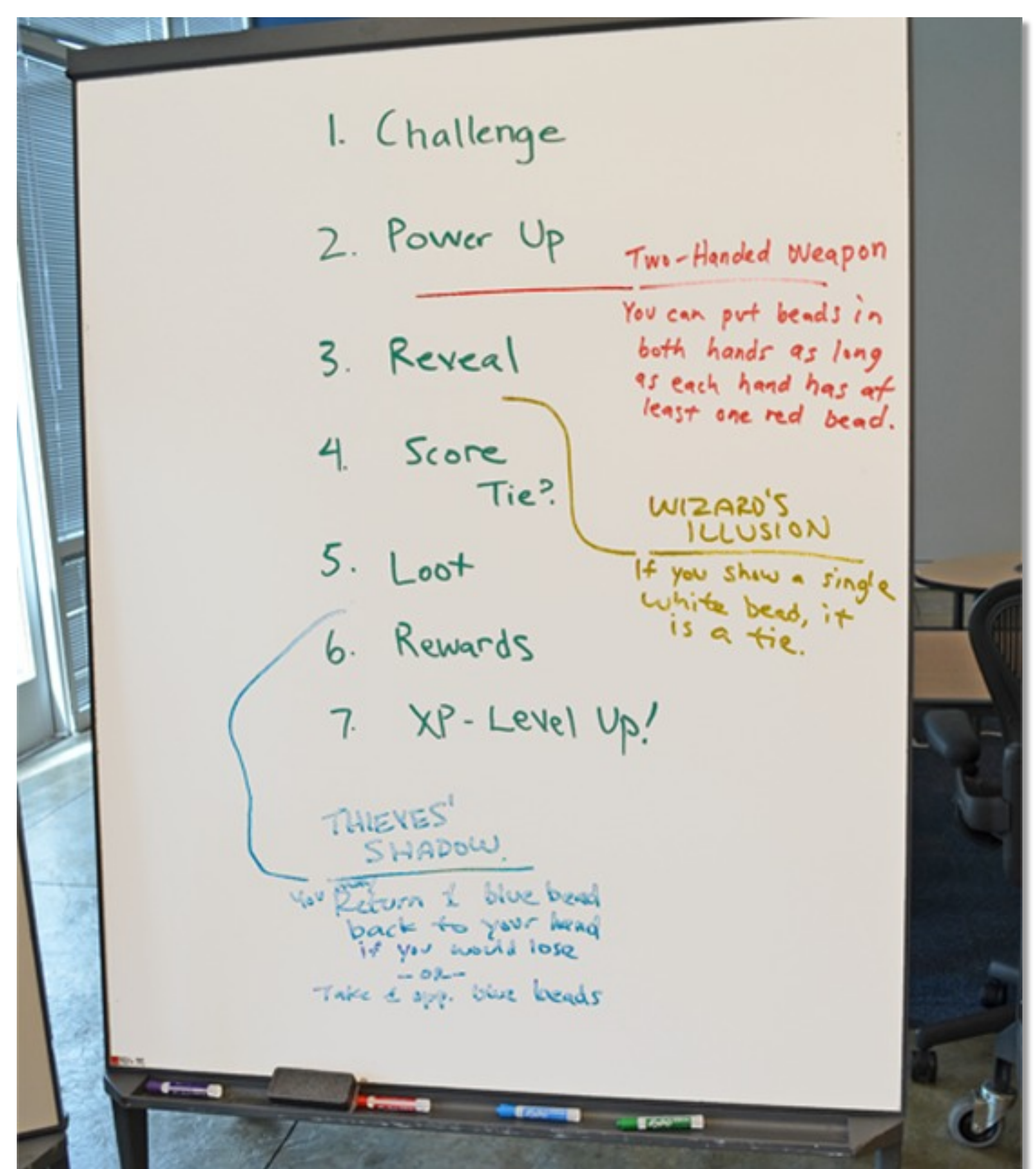
- Thieves' Cave

Character Rules



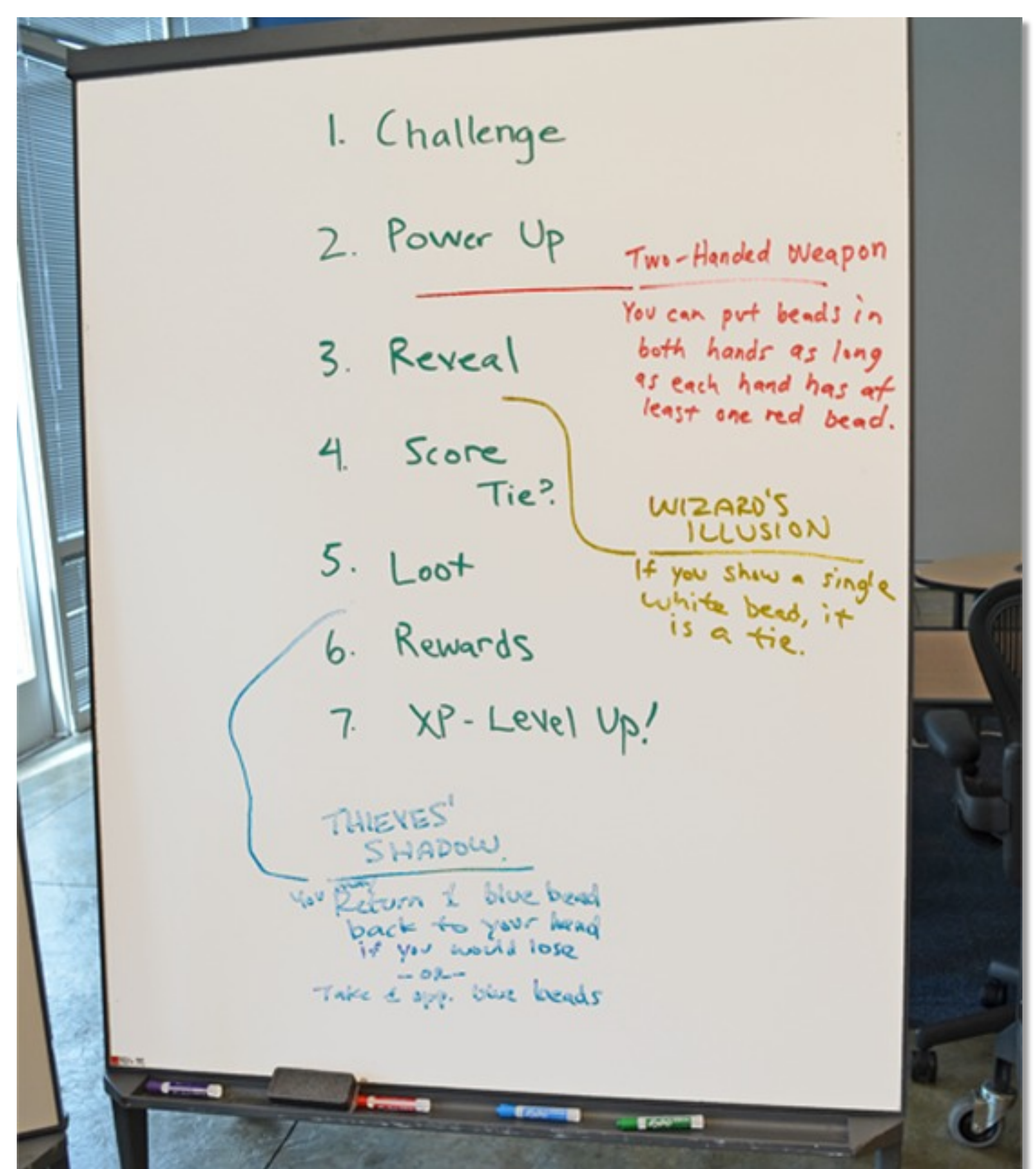
Character Rules

- Make a rule about your character's bead color.



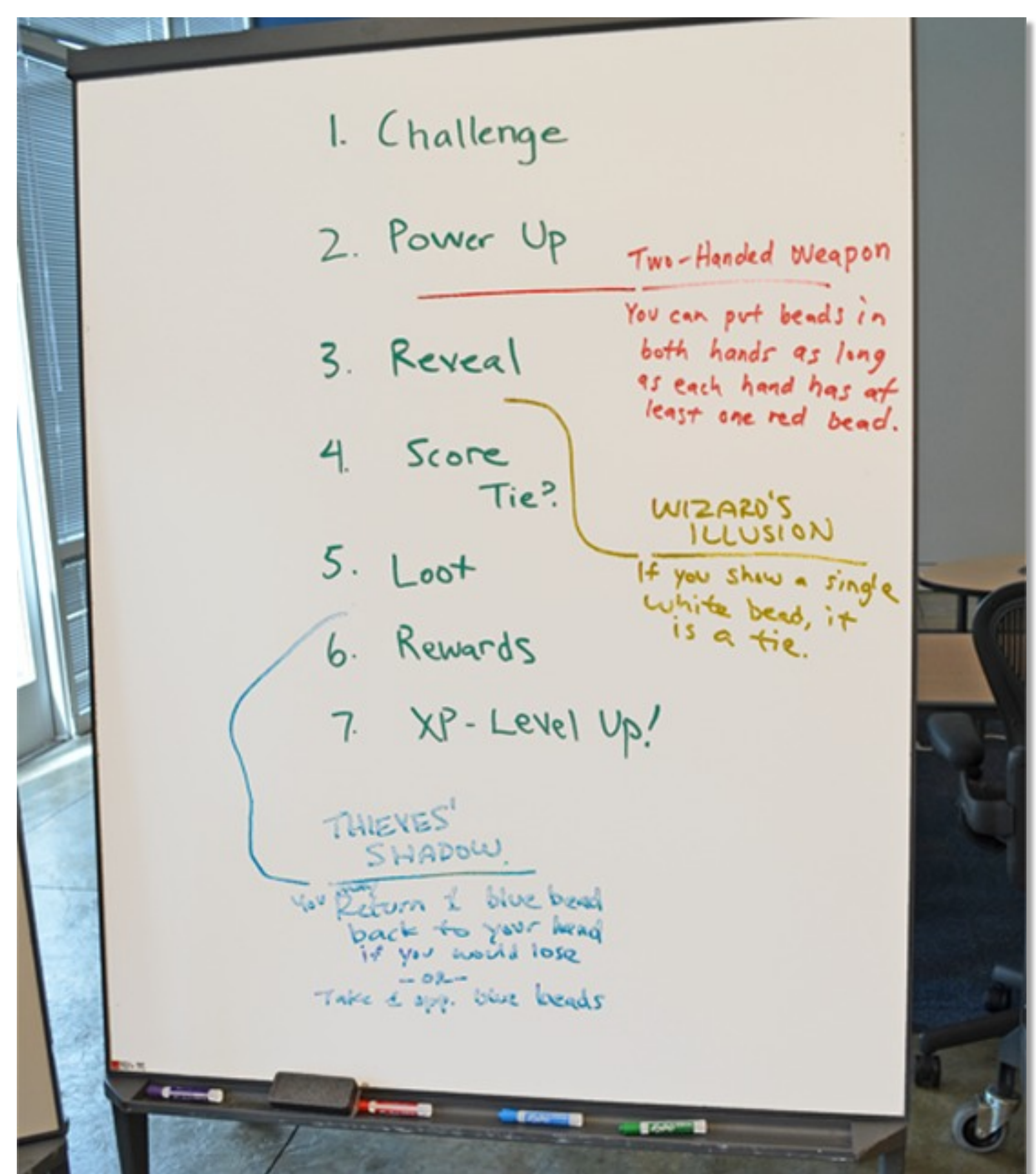
Character Rules

- Make a rule about your character's bead color.
- Fit it into the Turn Order.



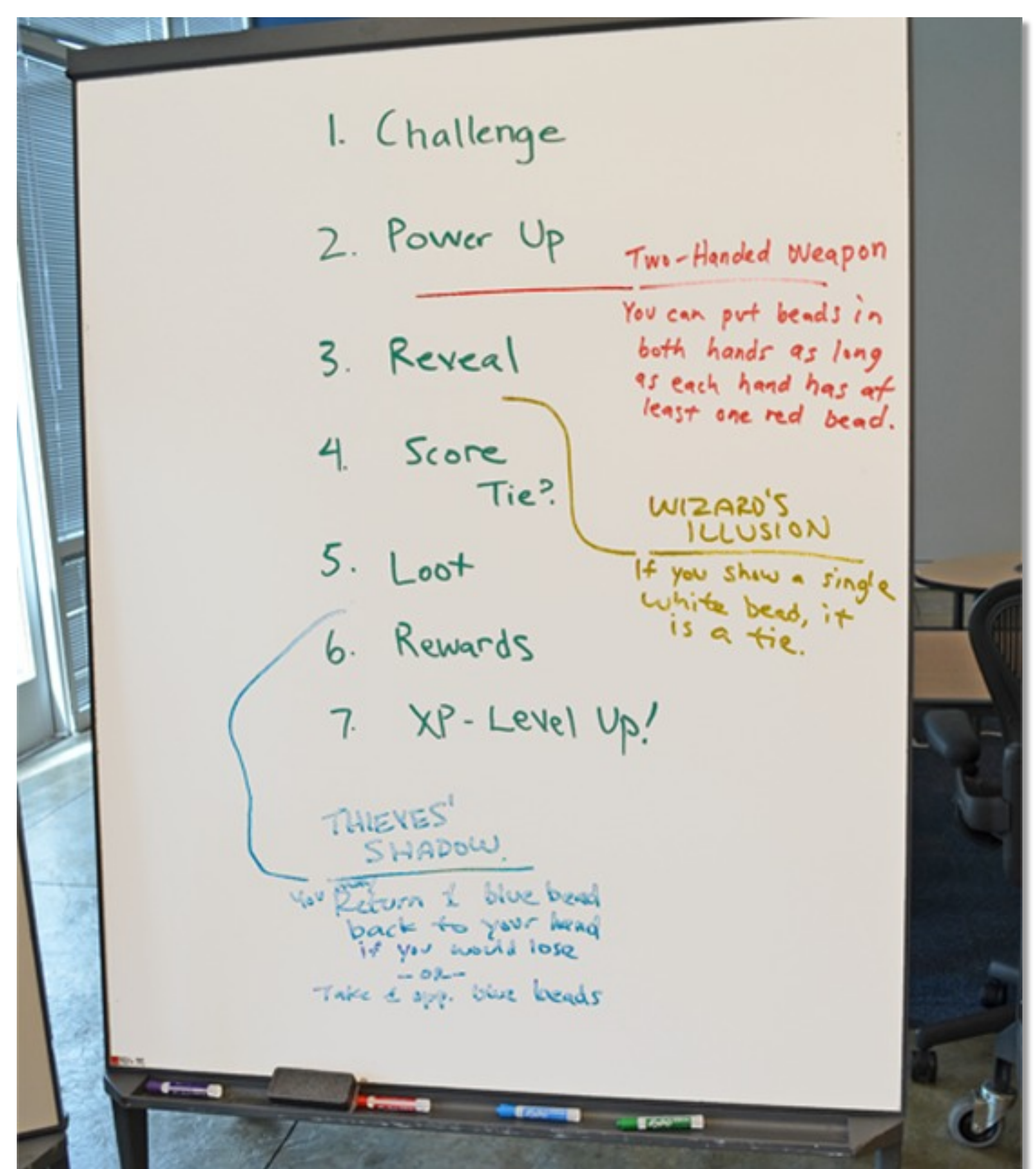
Character Rules

- Make a rule about your character's bead color.
- Fit it into the Turn Order.
- Regroup and discuss.
Questions? Concerns?



Character Rules

- Make a rule about your character's bead color.
- Fit it into the Turn Order.
- Regroup and discuss.
Questions? Concerns?
- Playtest and repeat.



Rule Prompts

Rule Prompts

- Death

Rule Prompts

- Death
- Role identities

Rule Prompts

- Death
- Role identities
- Economy:
 - getting more beads in
 - taking beads out

Rule Prompts

- Death
- Role identities
- Economy:
 - getting more beads in
 - taking beads out
- Team combat

Rule Prompts

- Death
- Role identities
- Economy:
 - getting more beads in
 - taking beads out
- Team combat
- Guilds

Rule Prompts

- Death
- Role identities
- Economy:
 - getting more beads in
 - taking beads out
- Team combat
- Guilds
- Other Level Bonuses

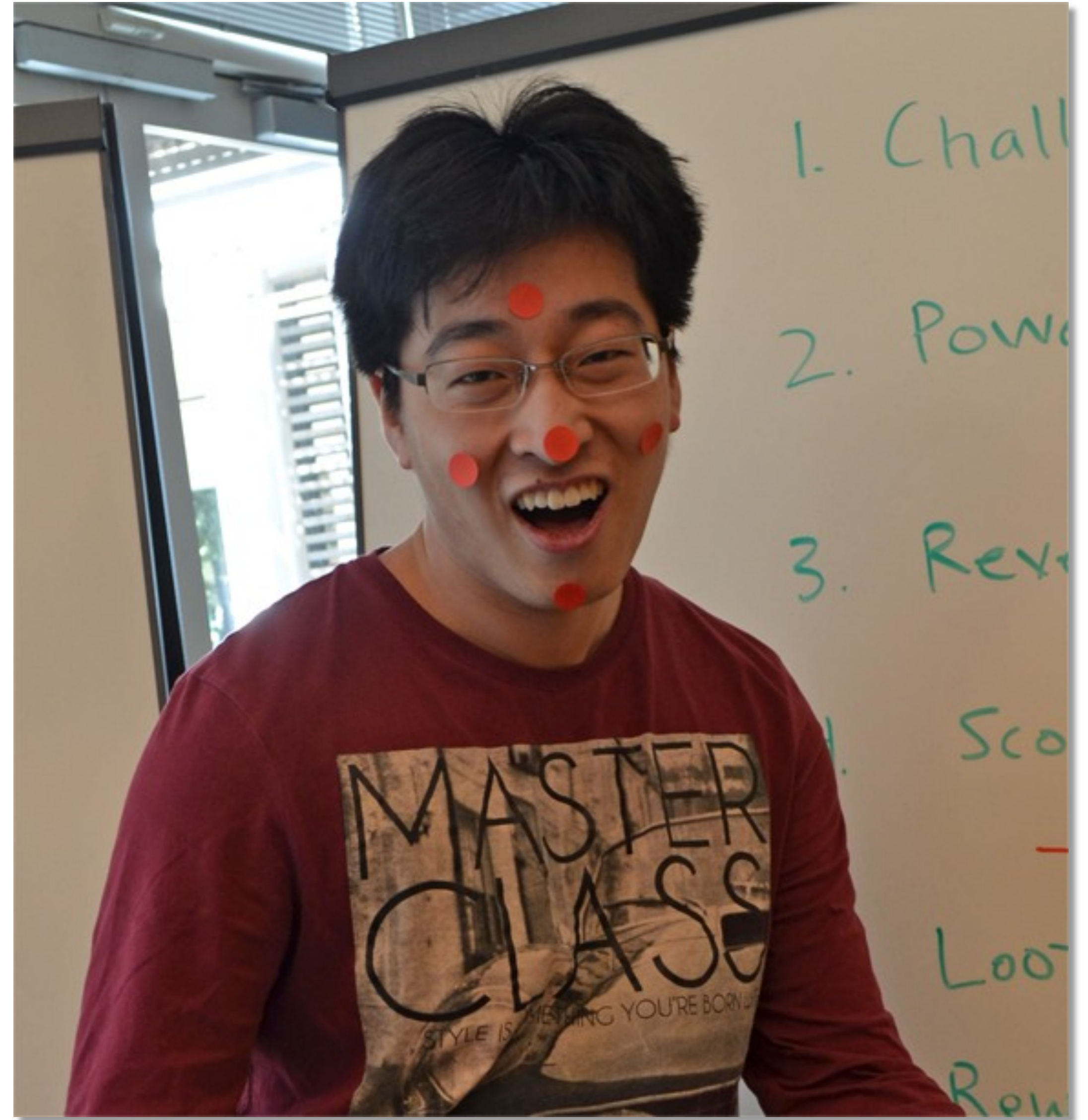
Rule Prompts

- Death
- Role identities
- Economy:
 - getting more beads in
 - taking beads out
- Team combat
- Guilds
- Other Level Bonuses
- Scaling power by level

Rule Prompts

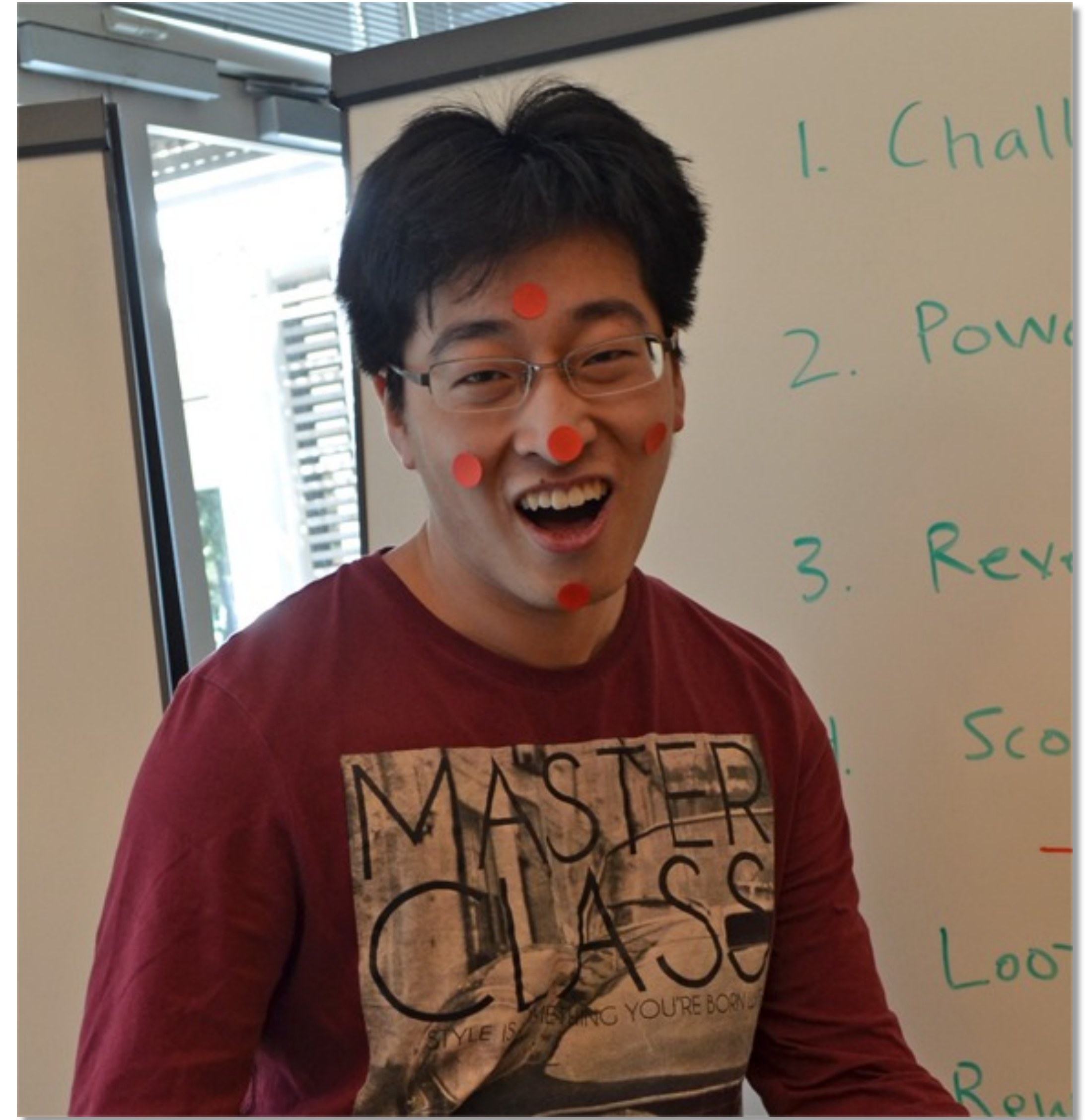
- Death
- Role identities
- Economy:
 - getting more beads in
 - taking beads out
- Team combat
- Guilds
- Other Level Bonuses
- Scaling power by level
- One rule for every step in the Turn Order

End of Game



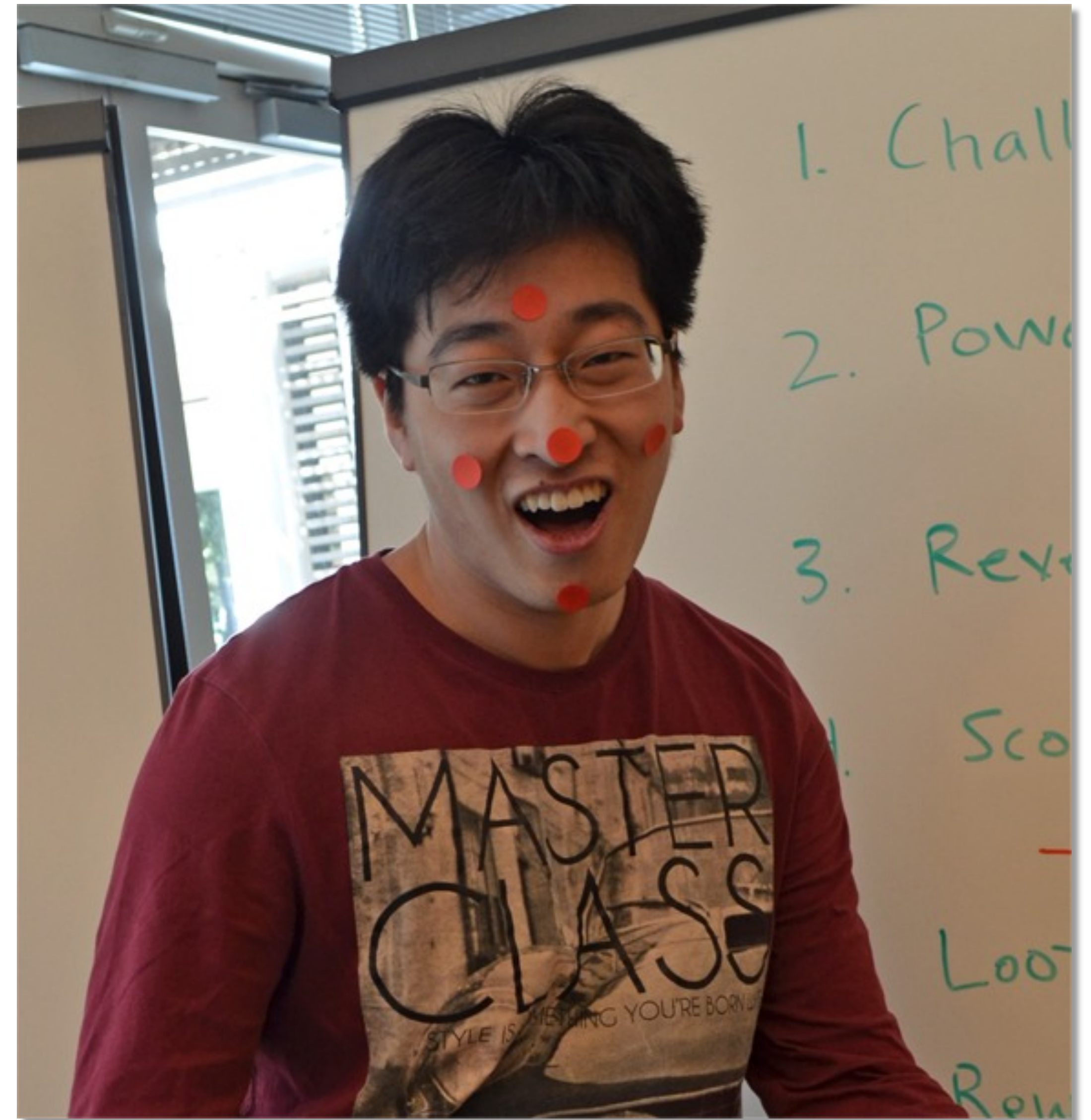
End of Game

- There is no explicit end state. Play until you run out of time or a player reaches a certain level.



End of Game

- There is no explicit end state. Play until you run out of time or a player reaches a certain level.
- Compare power levels. Does each class have the same average number of stickers and beads?



Discussion Points

Discussion Points

- Balancing: Strengthen the weak or weaken the strong?

Discussion Points

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- Opinions (forums) vs. objective data (telemetry).

Discussion Points

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- Opinions (forums) vs. objective data (telemetry).
- Add new rules or modify existing rules?

Discussion Points

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- Big projects have multiple design groups. How do they communicate and keep in sync?

Discussion Points

- Balancing: Strengthen the weak or weaken the strong?
- Opinions (forums) vs. objective data (telemetry).
- Add new rules or modify existing rules?
- Big projects have multiple design groups. How do they communicate and keep in sync?
- Did the rules make you feel in character?

Thanks!

Thanks!

These slides and character sheets are available for download at:

www.stonetrnix.com

@StoneLibrande

KATHERINE ISBISTER

@kcisbister

NYU Poly

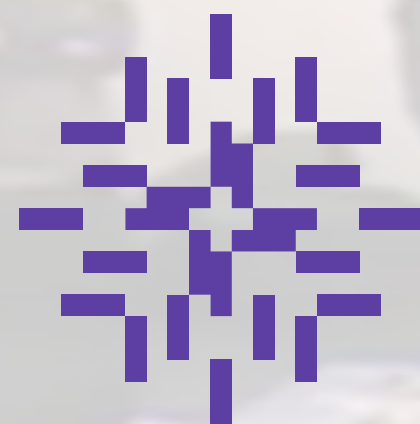


Dance to Learn

Doing Game User Research through Play



Katherine Isbister, NYU Game Center/NYU Game Innovation Lab



GAME
INNOVATION
LAB



NYU GAME CENTER



Lab A









Coding Scheme

We are focused on emphasizing the difference between them. As we observe, the social interactions between the spectators and the players are much different. In order to analyse it, we design 4 momentary variables to contrast the difference.

Spectators' gazes drawn from the screen to players, identified by at least 3 spectators turning their heads off the screen towards the players within 5 continuous seconds.

We record the times it happens during the game play, in order to compare the social relationships between spectators and players, by analysing how much the spectators are aware of players.

Spectators helping players, identified by spectators tell the player how to form the pose right or gives hints about the information on the screen.

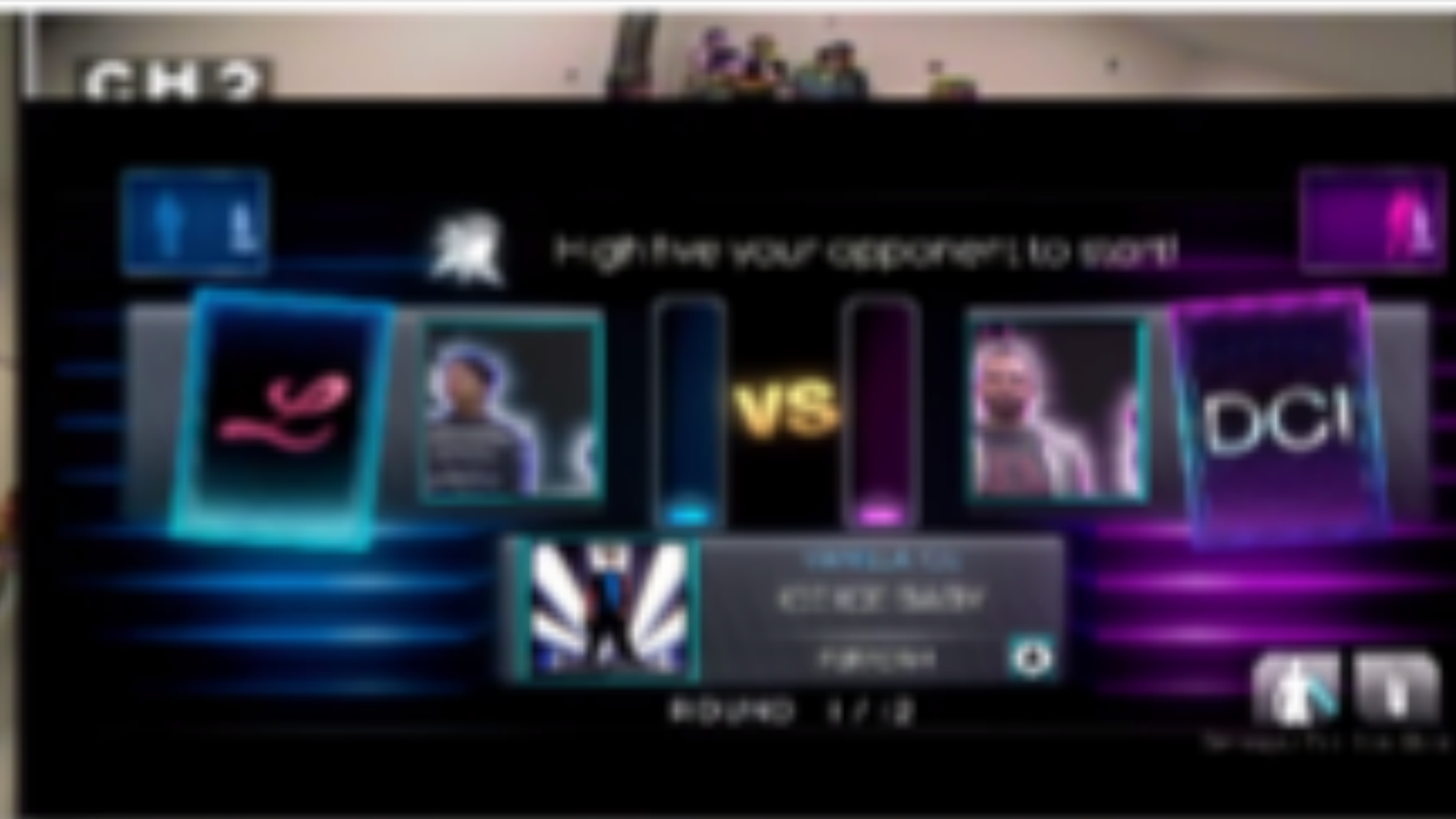
We record the times it happens in order to analyse the interactions between the players and the spectators, how the spectators get agency in group play. In this sense, the group play cooperatively together, which is the purpose of having this variable.

Spectators calling out players' names, identified by spectators call the players' names or the players' avatars (e.g. "Red") directly.

We record the times it happens in order to analyse how the spectators feel excited about the players' playing and care about the results. It is also individual interaction between a player and a spectator in group play, which is a characteristic of social experience.

Laughter or excitement together, identified by spectators and players laugh or talk loudly on a game event's happening.

We record the times it happens in order to analyse how the group enjoy games together, how the game make design decisions for group play, and specifically for spectating.







Thanks!

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SEAN DUNCAN
@scd

Indiana University-Bloomington

METAGAMING AT TWO CORNERS OF GAMES EDUCATION



SEAN DUNCAN

INDIANA UNIVERSITY

SECDUNC@INDIANA.EDU / PLAYFULCULTURELAB.ORG / @PLAYCULT

meta game

THE GAME DEBATE GAME®



Fountain



MARCEL DUCHAMP
1917
Sculpture

CS-CL006/340

Which has
been more
influential?

QS-CP006/340

The Big Mac



JIM DELLIGATTI &
MCDONALD'S
1967
Cuisine

CS-CL193/340



1



2



1

"JUDGE AND IMPROVE"



Peggy



2007
PC
PopCap
PopCap

Which
requires more
finesse?

Glitch Games

VVVVVV



2010
PC
Developer: Terry Cavanagh
Publisher: distractionware





FANDOM → CRITIQUE



2

"METAMETAGAMING"

PABST BLUE RIBBON



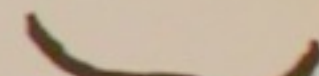
"Heineken? Fuck that shit!
Pabst Blue Ribbon!"
-Blue Velvet's Frank Booth
on the 1944 brew

WHICH IS
WHISPERED IN AWE
BY THE HIPSTERS
IN BROOKLYN?

THE MOUSTACHE



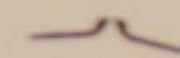
the Chevron



the Dali



the Handlebar



the Pencil



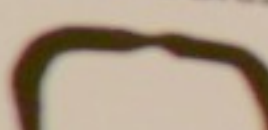
the Painter's Brush



the Toothbrush



the Horseshoe



the Fu Manchu



the Walrus

Timeless icon of ironic
masculinity.



LIKE A VIRGIN



Madonna celebrates her Catholic upbringing. Album released 1984.

SAVED BY THE BELL



The jock, the nerd, the cheerleader. PARIS

PARIS



PLAYGIRL

PLAYGIRL



Tasteful spreads, hairy chests, and scintillating interviews. 1973.

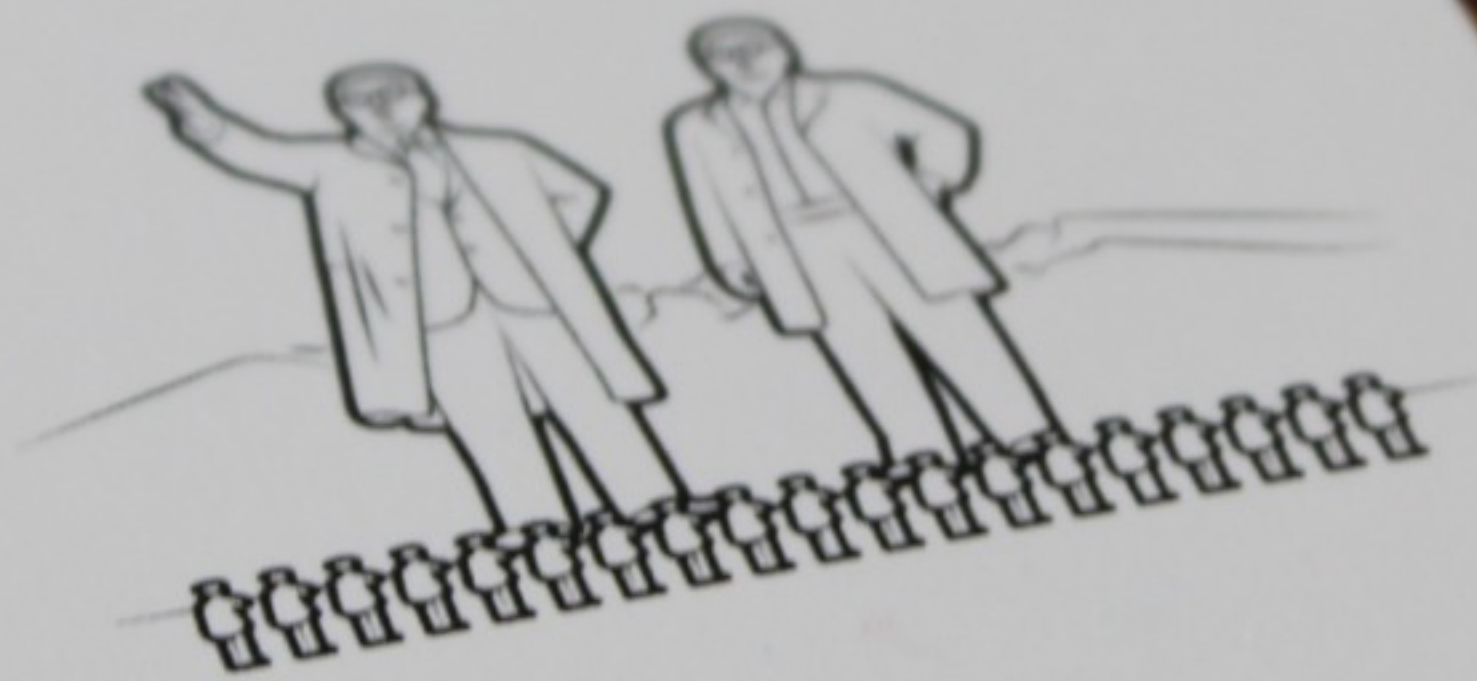
TOFU RISKY



The vegan pilgrims ate the vegan Native American. The first vegan Thanksgiving. Island Foods, 1980.



NORTH KOREA



What happens in North Korea,
stays in North Korea. 1948,
Kim Il Sung.



WHICH BETTER
CAPTURES
THE ZEITGEIST OF
ITS TIME?

WHICH REPRESENTS
THE SOUL
OF AMERICA?

MAKES THE
PERFECT
ADVERTISEMENT
FOR _____

WHICH IS
GUARANTEED TO

WHICH GOES
PERFECTLY WITH
A DASH OF _____

BEST ENJOY!
A YEAR-0

BEST GLIMPSE
AT THE FUTURE
OF OUR SPECIES.

WHICH BEST
ENABLES THE SIN
OF _____?

WHICH WILL
YOU LAID IF
MENTION

WHICH WILL
SAVE THE WOR

MOST LIKELY
TO BE FOUND
AMONG THE RICH
AND FAMOUS.

THE DAILY SHOW

News spoof that demonstrates
how fake the real news can be.
Comedy Central, 1996.

THE INTERNET

The world belongs to the 1990s.
Not the 21st century. © Carol 1993

YOU CAN FIND
THE _____
THE _____
FOR _____

WHICH IS
SIMPLY THE MOST
BEAUTIFUL?

WHICH IS
RESPONSIBLE
FOR THE FRAYING
OF OUR
MORAL FABRIC?

WHICH BEST
ENABLES THE SIN
OF _____?

PEOPLE HALFWAY
AROUND THE
WORLD FROM US
COULD CARE LESS
ABOUT IT.

WHICH SHOULD
BE REQUIRED
IN SCHOOLS?

MAKES THE
PERFECT
ADVERTISEMENT
FOR _____.

VOTED MOST
LIKELY TO
_____.

PROOF OF THE
SUPERIORITY OF
_____ PEOPLE.

MAKES YOU
THINK OF THE
COLOR _____.

IMPOSSIBLE TO
UNDERSTAND
WITHOUT EXPERT
GUIDANCE?

EVIDENCE THAT
OUR SOCIETY
IS TOTALLY
SCREWED UP.

WHICH IS
A LEADING CAUSE
OF DEATH?

QUE ES
MAS MACHO?

WHICH HAS
THE MOST
EMPTY CALORIES?

WHICH IS MORE
LIKELY TO INCITE
A REVOLUTION?

WHICH IS
MOST MAGICAL?

WHICH MAKES
A BIG DEAL OUT
OF NOTHING?

WHICH IS
THE BEST ICON
FOR THE DECADE
OF THE _____'S?

WHICH IS
A BETTER TOOL
FOR DICTATORS?

WHICH HAS THE
MOST SUBVERSIVE
POTENTIAL?

MOST LIKELY
TO BE FOUND
AMONG THE RICH
AND FAMOUS.

WHICH LULLS
YOU INTO
COMPLACENCY?

_____ IS HOT



CRITIQUE → DESIGN

FANDOM → CRITIQUE

CRITIQUE → DESIGN

LEARNING IN CONTEXT

PHOENIX PERRY
@phoenixperry

Code Liberation Foundation,
NYU Poly

Make programming fun

Physical, visual and memorable learning experiences

Hello world. I'm Phoenix Perry

I teach games at NYU at Game Center, Poly and in our Computer Science department.

However it really bothers me I'm behind a 100k pay wall

So I founded Code
Liberation
Foundation to unite
a group of like
minded female
educators to teach
women to program
games for free.

**They were Jane Friedhoff, Nina Freeman
and Catt Small**



@codeliberation

And I infused our classes with
one single idea
learned from teaching at NYU

Programming should
be fun

But game programming is hard



The list of complex things you need to understand is never ending.....

Constant failure is
the norm

Students are easily
overwhelmed



Solution?

**make it visual, physical
and fun**

Use visual metaphors

Big ideas can be explained in photos



Pointers



The stack

And they can be humorous

//comments

//slide from our oF workshop Jane made



To go further make
it physical

and games are a great way to do this.



And who doesn't love CUPCAKES!



The while / if structure

**while some condition is/ is not met
do some stuff**

**if something is happening
make some changes**

This is the core architecture of most games

while my game is running

move my character

if my character reaches the end

reward the player

quit my game

This is called a
main game loop.

**It's a critical logical structure for
gaming**

It's the ideal time to
pull out all the stops

The cupcake game

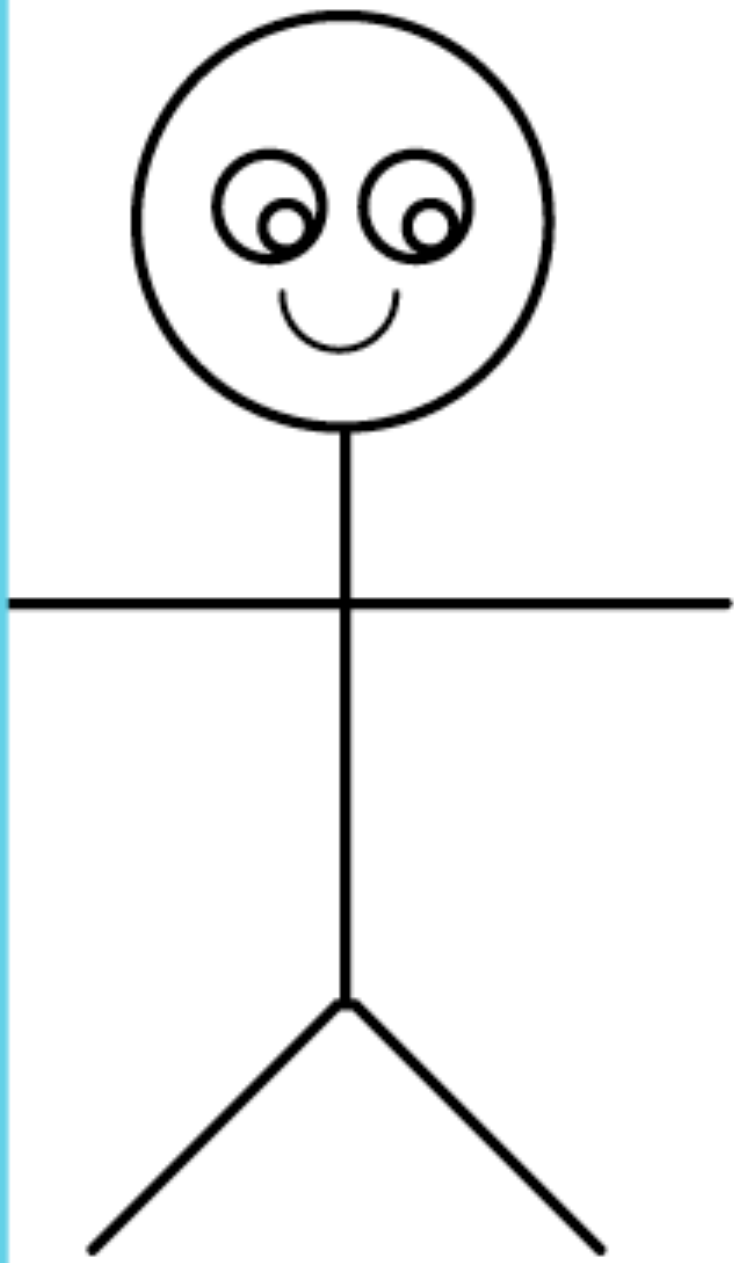
- **I turn up with really decadent looking cupcakes and put them on clear display.**
- **I break the class into 2 teams**
- **A round consists of a turn by each team**
- **I go and stand at one end of the room.**
- **The game runs until I get to the other end of the room**
- **Each team came move me to the right or the left one step.**
- **The team that gets me to touch the wall first, gets all the cupcakes**

ending wall

← 1 turn is 1 step right or left →

start position

mmm...cupcakes



The structure looks like this

playing game is true

while playing game is true

team one take a turn

team two take a turn

if the teacher is touching the wall

reward winning team

playing is false

Other reason to use physical games to teach?

Students will remember concepts easier

Encourages collaboration

Builds friendships within the class

@phoenixperry



TEACHING GAMES WITH GAMES

7 Exercises in Play