Get in the Game!

Using Games to Support Teaching + Learning @ CUNY



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CUNY IT Conference 14 December 2010

Let's learn about grammar!



Caraininai Basco Collin





That was fun, but where's the proof?



Proof via Critical/Close Reading

"I played my first video game four years ago when my six-year-old son Sam was playing Pajama Sam: No Need to Hide When It's Dark Outside.... When I saw how well the game held Sam's attention, I wondered what sort of beast a more mature video game might be. I went to a store and arbitrarily picked a game, The New Adventures of the Time Machine."

Proof via Critical/Close Reading

"As I confronted the game I was amazed. It was hard, long, and complex. I failed many times and had to engage in a virtual research project via the Internet to learn some of things I needed to know. All my Baby-Boomer ways of learning and thinking didn't work. I felt myself using learning muscles that hadn't had this much of a workout since my graduate school days in theoretical linguistics."

Proof via Critical/Close Reading

"As I struggled, I thought: Lots of young people pay lots of money to engage in an activity that is hard, long, and complex. As an educator, I realized that this was just the problem our schools face: How do you get someone to learn something long, hard, and complex and yet enjoy it."



--Gee: "Good Video Games and Good Learning"

Learning Principles in Good Games

- Identity
- Interaction
- Well-ordered problems
- Challenge and consolidation
- Just-in-time information
- Production
- Risk-taking
- Performance before competence



Proof via Educational Psychology

"We learn by becoming part of a community of practice and thus developing that community's ways of knowing, acting, being, and caring -- the community's situated understandings, effective social practices, powerful identities, and shared values."

--Shaffer, Squire, Halverson & Gee: "Video Games and the Future of Learning"



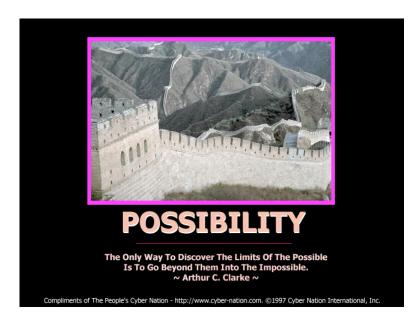
Proof via Educational Psychology

"A large body of facts that resists out-ofcontext memorization and rote learning comes easily if learners are immersed in activities and experiences that use these facts for plans, goals, and purposes within a coherent domain of knowledge."

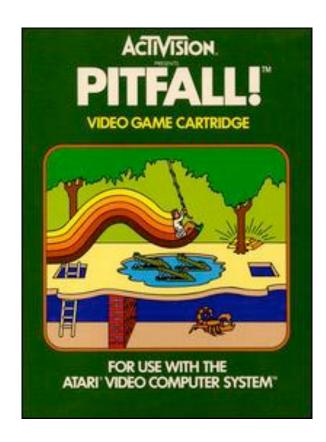
--Shaffer, Squire, Halverson & Gee: "Video Games and the Future of Learning"



Digital Games







Meet Generation Play

Fully 97% of teens ages 12-17 play computer, web, portable, or console Games.



Video games are a social activity

- three-quarters of teens play games with others at least some of the time

80% of teens play five or more different game genres, and 40% play eight or more types

The typical college student plays an estimated 1.8 hours a day of video games

-- The Pew Research Center, http://pewresearch.org/pubs/953/teens-video-games-and-civics

-- Marc Prensky, "Digital Natives, Digital Immigrants, Part II," 2001

Digital Natives

"[S]chool often feels pretty much as if we've brought in a population of heavily accented, unintelligible foreigners to lecture [digital natives]. They often can't understand what the Immigrants are saying. What does 'dial' a number mean, anyway?"



-- Marc Prensky, "Digital Natives, Digital Immigrants," 2001





"Bueller? Bueller? Bueller?
Anyone?"

"Life moves pretty fast. If you don't stop and look around once in a while, you could miss it."

What do they want from us?

"Digital Natives are used to receiving information really fast. They like to parallel process and multitask. They prefer their graphics before their text rather than the opposite. They prefer random access (like hypertext). They function best when networked. They thrive on instant gratification and frequent rewards. They prefer games to 'serious' work. (Does any of this sound familiar?)"



-- Marc Prensky, "Digital Natives, Digital Immigrants" 2001

Theory of Flow

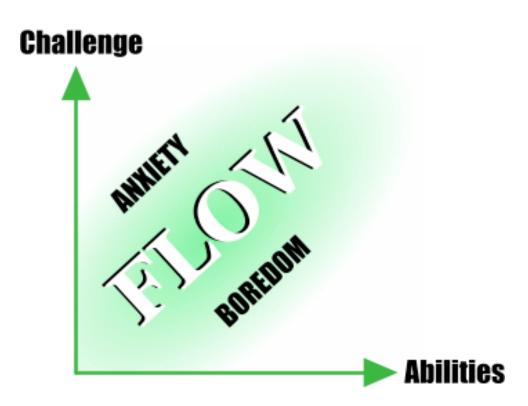
"the feeling of complete and energized focus in an activity, with a high level of enjoyment and fulfillment"

- We are up to the activity.
- We are able to concentrate on the activity.
- The activity has clear goals.
- The activity has direct feedback.
- We feel that we control the activity.
- Our worries and concerns disappear.
- Our subjective experience of time is altered.



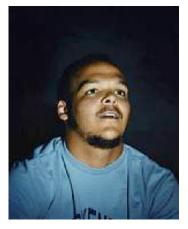
-- Psychologist Mihaly "Call me Mike" Csikszentmihalyi

Aim for "the Zone"





-- Psychologist Mihaly "Call me Mike" Csikszentmihalyi



Bobby (playing NASCAR), 2005



Robert (playing Smuggler's Run II: Hostile Territory), 2002



Matt (playing Grand Theft Auto: Vice City), 2005



Todd (playing Test Drive), 2002



Zach (playing Crash Bandicoot), 2002



Brandon (playing Halo 2), 2005

-- Photographer Shauna Frischkorn, *Game Boys*, http://www.artnet.com/galleries/Exhibitions.asp?gid=424670535&cid=107749,

Play "Serious" Games

Serious games are "designed for a primary purpose other than pure entertainment.... Serious games are designed for the purpose of solving a problem. Although serious games can be entertaining, their main purpose is to train, investigate, or advertise. Sometimes a game will deliberately sacrifice fun and entertainment in order to make a serious point."

-- Wikipedia

Persuasive games use "procedural rhetoric [ie. arguments embedded in computer processes] to support *or* challenge our understanding of the way things in the world do or should work. Such games can be produced for a variety of

purposes, be they entertainment, education, activism, a combination of these and others."

-- Ian Bogost, Persuasive Games, 2007

HOME PLAY NOW KEEP SAFE. STAY IN. TIMELINE

21:00





THE CURFEW







THE GAME WHY THIS GAME? DOWNLOAD AREA COVERAGE & SHOWS

PRESS & CONTACTS

The Game



Making money in a corporation like McDonald's is not simple at all! Behind every sandwich there is a complex process you must learn to manage: from the creation of pastures to the slaughter, from the restaurant management to the branding. You'll discover all the dirty secrets that made us one of the biggest company of the world.









McDonald's Videogame by MolleIndustria - Some rights reserved CC 2006

Pandemic 2



Seriously Play Games

Analyze games as multimedia "texts"

Closely examine the "procedural rhetoric"

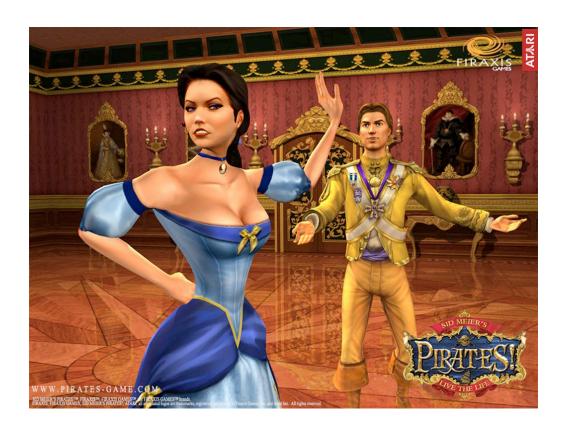
Find external sources that corroborate and contradict the game argument

Encourage "modding" – modifying (in theory or practice) technology to perform a function not originally conceived of by the designer

Sid Meier's Pirates!



Sid Meier's Pirates!



Real Women Pirates



Sid Meier's Pirates!



Primary Document: Pirate Data from Voyages: The Transatlantic Slave Trade Database

Vessel	Flag	Year arrived with slaves*	Principal region of slave landing*	Particular outcome of voyage	Outcome of voyage for slaves	Total slaves embarked	Total slaves disembarked
Beurs van Amsterdam	Netherlands	1691	Dutch Guianas	Captured by pirates or privateers - after disembarkation	Slaves disembarked in Americas	512	487
Jacob and Jaell	Great Britain	1718	Jamaica	Captured by pirates or privateers - after disembarkation	Slaves disembarked in Americas	250	200
Dragon	Great Britain	1699	Barbados	Captured by pirates or privateers - after disembarkation	Slaves disembarked in Americas	50	42
Fortune	France	1735	Guadaloupe	Captured by pirates or privateers - after disembarkation	Slaves disembarked in Americas	96	77
Prince d'Angole	France	1744	Martinique	Captured by pirates or privateers - after disembarkation	Slaves disembarked in Americas	26	21
Poelwijk	Netherlands	1691	Dutch Guianas	Captured by pirates or privateers - after disembarkation	Slaves disembarked in Americas	210	169
Adventure		1747	Jamaica	Captured by pirates or privateers - after disembarkation	Slaves disembarked in Americas	271	217
Betsy	U.S.A.	1746	Jamaica	Captured by pirates or privateers - after disembarkation	Slaves disembarked in Americas	292	240
Thomas and William	Great Britain	1683	Jamaica	Captured by pirates or privateers - after disembarkation	Slaves disembarked in Americas	362	275
Princess	Great Britain	1723		Captured by pirates or privateers - after disembarkation	Slaves disembarked in Americas	237	190
Whidaw Gally	Great Britain	1716	Jamaica	Captured by pirates or privateers - after disembarkation	Slaves disembarked in Americas	367	313
Victory	Great Britain	1720	Barbados	Captured by pirates or privateers - after disembarkation	Slaves disembarked in Americas	165	141
Wapen van Zierikzee	Netherlands	1689	Dutch Caribbean	Captured by pirates or privateers - after disembarkation	Slaves disembarked in Americas	481	414
Samaritaan	Netherlands	1688		Captured by pirates or privateers - after disembarkation	Slaves embarked, transhipped or no further record	481	414

Windhond	Netherlands	1701	Dutch Guianas	Captured by pirates or privateers - after disembarkation	Slaves disembarked in Americas	496	468
Comte de Toulouse	France	1721		Captured by pirates or privateers - after embarkation of slaves	Slaves embarked, transhipped or no further record	250	222
Elizabeth		1681	Rhode Island	Captured by pirates or privateers - after embarkation of slaves	Slaves disembarked in Americas	181	155
Rover		1746	Martinique	Captured by pirates or privateers - after embarkation of slaves	Slaves disembarked in Americas	271	217
Geertruid Galei	Netherlands	1722		Captured by pirates or privateers - after embarkation of slaves	Slaves embarked, transhipped or no further record	10	9
		1696	Bahia	Captured by pirates or privateers - after embarkation of slaves	Slaves embarked, transhipped or no further record	200	179
Fair Parnelia		1726	St. Kitts	Captured by pirates or privateers - after embarkation of slaves	Slaves embarked, transhipped or no further record	273	236
S Antonio de Padua		1618	Puerto Rico	Captured by pirates or privateers - after embarkation of slaves	Slaves disembarked in Americas	236	168
Havanna		1747	Santo Domingo	Captured by pirates or privateers - after embarkation of slaves	Slaves disembarked in Americas	271	217
Heroine	Great Britain	1719		Captured by pirates or privateers - after embarkation of slaves	Slaves embarked, transhipped or no further record	367	313
Princess	Great Britain	1717		Captured by pirates or privateers - after embarkation of slaves	Slaves embarked, transhipped or no further record	273	236
Cornwall	Great Britain	1721		Captured by pirates or privateers - after embarkation of slaves	Slaves embarked, transhipped or no further record	276	209
Prince of Orange	Great Britain	1743	Guadaloupe	Captured by pirates or privateers - after embarkation of slaves	Slaves disembarked in Americas	276	209
Porcupine	Great Britain	1720		Captured by pirates or privateers - after embarkation of slaves	Slaves embarked, transhipped or no further record	273	236
Glasgow		1747	Martinique	Captured by pirates or privateers - after embarkation of slaves	Slaves disembarked in Americas	253	219
Peterborough	Great Britain	1719		Captured by pirates or privateers - after embarkation of slaves	Slaves embarked, transhipped or no further record	237	190
Sainte Agnès	France	1720		Captured by pirates or privateers - after embarkation of slaves	Slaves embarked, transhipped or no further record	367	313

Spore





What would Darwin do?

Build a Better Game?



"Mankind is always looking for a 'better mousetrap.' It is only natural to attempt to find an easier way to perform difficult tasks.

Unfortunately, desiring an easier method doesn't mean that one exists.

Sometimes, at a given level of technology, the 'easy way' is the 'hard way'.



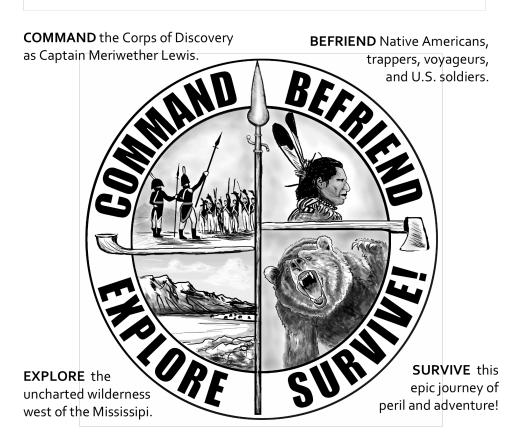
-- Armstrong Duct, Vent and Chimney Experts: Hearth and Home Specialists, http://www.cleanerducts.com/index.html



http://www.mission-us.org/

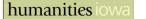
MERIWETHER

- America's epic -



Of courage undaunted, possessing a firmness and perseverance of purpose which nothing but impossibilities could divert from its direction.

> - Thomas Jefferson (on Meriwether Lewis)









Build a Better Game?

Video-game designers and college professors are the products of intensive but very different training.

- Academics are used to lecturing and writing, presenting material in words, and taking things step by step.
- But video games are about pictures, especially animated ones, and letting the player decide in what order to perform tasks
- You'll need graphic artists, animators, and programmers
 -- this is not a task for academics to handle alone.
 - -- Adapted from Rebecca Teed, Carleton College,http://serc.carleton.edu/introgeo/games/digigbl.html

Build a Better Game?

Video games are expensive to build:

- Animation software is available to educators at a deep discount, but a commercial-grade video game will still cost university consortia millions to make.
- Educational video games do not need to be as visually spectacular as commercial ones. But an "engine", the part of the software that makes a game interactive, flexible, and easy to use, is still quite expensive and time-consuming to design.

-- Adapted from Rebecca Teed, Carleton College, http://serc.carleton.edu/introgeo/games/digigbl.html

Build a Better Game?

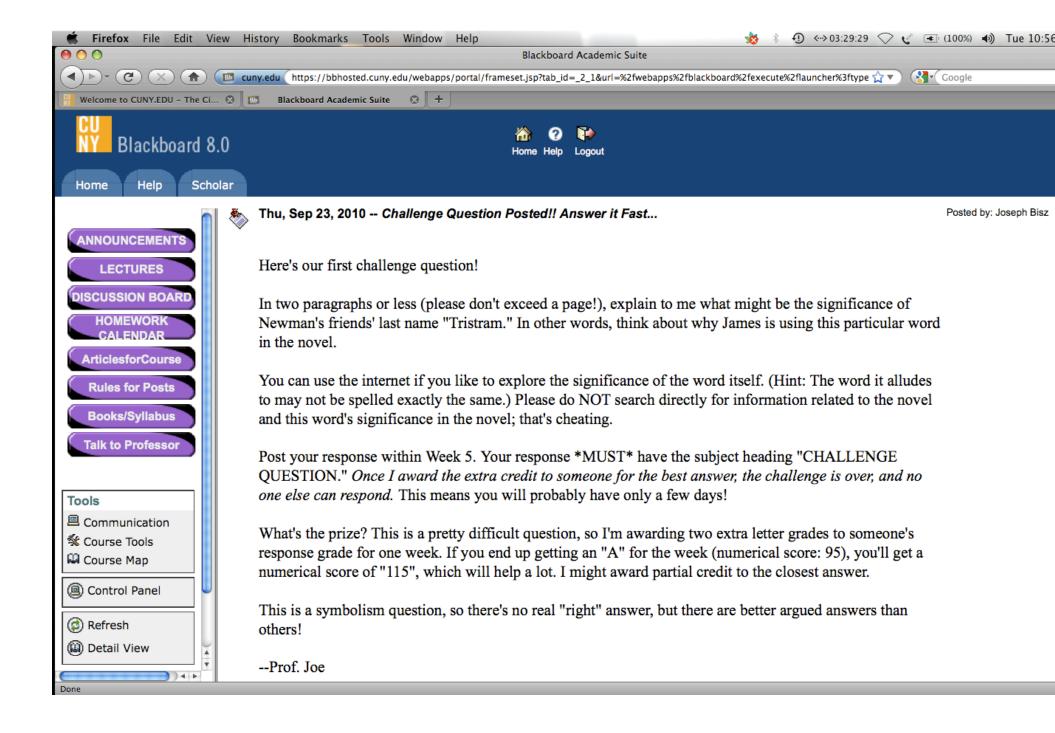
Why you still should be interested:

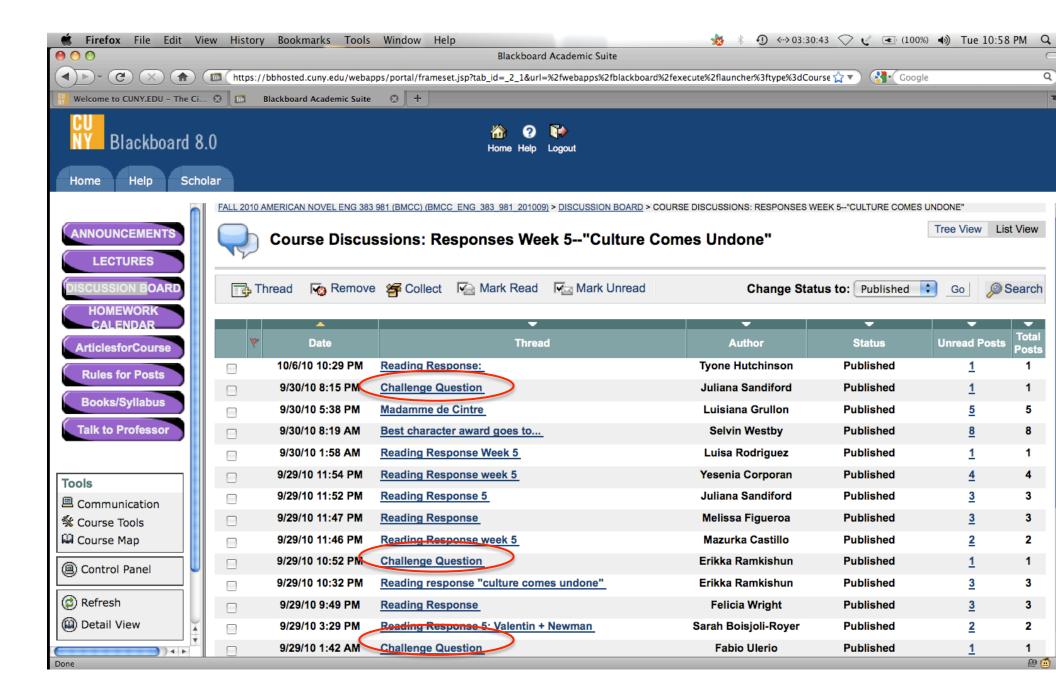
- You are a SME (subject-matter expert)
- There is funding
- Trying will make you a better teacher



Non-Digital Games







It's All in the Details: Connecting Your Supports to Your Topics

Prof. Joe Bisz English 095

This beginning student brainstormed three good reasons for her topic sentences, then came up with several strong supporting details, but since organization is not her strength, she's having trouble deciding which of her topic sentences those details should go with. Can you help her, oh skilled writer of many ACTs?

Topic Sentences:

(1ST Body) First, to be an academic and do well in classes is the true reason students attend this university and use the computer lab.

 $(2^{ND}\ Body)$ Students not only use computers for academic purposes, but also for recreation and personal reasons.

(3RD Body) The technology on campus would be improved by adding new computers that would have faster computation speed and larger storage capacity for the latest software.



Mixed-up Supporting Details (random order):

More computers would allow students the luxury of experimenting at their leisure, without preventing another student from doing assignments.

During the course of almost every class, a student will most likely have to use a computer to type a paper, make a graph, or perform research on the web.

All this is sort of informal training in the use of computers.

Many students have complained about insufficient hard disk space, RAM sizes, or slow CPU's.

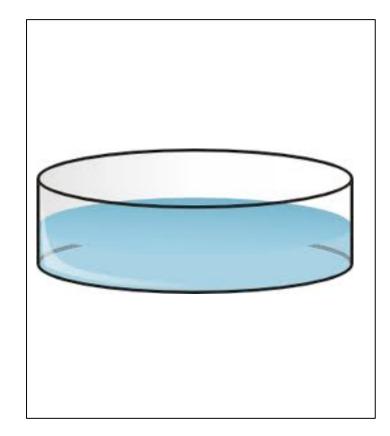
Computers are not just for word processing and internet browsing; the new software used in many classes needs more powerful computers.

Additional computers in the computer lab would benefit the students' lives greatly because those who do not have access to the internet or computers would be able to use them at labs without waiting or being frustrated by old technology.

They have fun chatting, emailing, surfing the web, and while they do all these things, they learn about the computers themselves.









From Exercise to Game: The Magic Spectrum of Interactivity

- 1. Make it VISUAL WITH KEYWORDS (ex. bullets, checklist, graph, etc.) and Classifications
- 2. Make it VISUAL WITH IMAGES
- 3. Give them an IDENTITY (ex. role play discussions, peer workshops where each student has a special function)
- 4. Give them STRATEGIC CHOICES

Allow them to PLAY (Manipulate the Rules of the System)

Time Management Exercise

SCENARIO 1: You are working 20 hours a week, and you are also attending classes for 12 hours a week. Your classes are from 8-12, three days a week, Tuesday, Wednesday and Friday. Your work days are Saturday, Sunday and Monday, 8 hours on Saturday and 6 hours on Sunday and Monday. That means you have to be somewhere every day. You usually study Tuesday, Wednesday and Friday afternoons. You have kept up with all the homework so far, but a big paper is due next week and you haven't had a chance to start it. In fact, you're not sure you understand what the professor expects. One of the people where you work has suddenly quit, and so the boss has asked you to work extra hours Sunday and Monday. It's Friday and the paper is due Tuesday. What would you do?





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Issue	Му	Other's		Priority Level (1-10)	Solution
	Needs	Needs	More Info.	Level (1-10)	
I have a paper due Tuesday	~				
Boss asked me to work extra		√			



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SECRET CODE SHEET (FOR ENGLISH 088 FINAL EXAM) Do the following in every descriptive or narrative essay: MANDATORY MOVES 1) Description: Deeply describe at least 2 things in each paragraph 2) Examples: Give a list of examples at least twice per paragraph SPECIAL POWERS 1) Metaphor or Simile: 2 times per essay



2 times per essay

	h academic or social behavior listed below, indicate whether the behavior is:						
H: honest D: dishonest or inappropriate							
V: variable, depending on the circumstances of the situation							
Some behav	viors may not violate a specific rule, but they may still violate someone's expectation of you.						
1.	Taking an exam in place of another student or having someone take an exam in your place						
2.	Rewriting passages of a paper for your friend so they sound better						
3.	Having someone write a paper to submit as your own work						
4.	Discussing your outline/ideas for a paper with a friend in your class who is writing on the same subject						
5.	Allowing another student to copy from you during an exam						
6.	Changing your lab results to reflect what you know they should have been, rather than what you got						
7.	Turning in the same paper to two different classes						
8.	Studying from old exams						
9.	Getting questions and/or answers from someone whom has already taken the same exam						
10.	Borrowing an idea for a paper without footnoting or citing the source						

CATEGORIES of DISHONEST or INAPPROPRIATE BEHAVIOR

<u>VIOLATIONS</u>

- Violates a Rule/Law
- Violates an Expectation



POWER OVER OTHERS

- Exercises Theft from Others
- Exercises Lying to Others
- Exercises Unfairness to Others



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THE JUDGE WHO WOULD DO IT

ANYWAY

(AND IS THEREFORE NOT SUCH A

GREAT JUDGE)

(AKA BART SIMPSON)



THE JUDGE OF WHAT IS TOTALLY INAPPROPRIATE

(AKA JUDGE JUDY)

THE JUDGE OF HOW THINGS (sigh)
COULD HAVE BEEN DIFFERENT

(AKA OPRAH)



THE JUDGE WHO KNOWS HOW TO SPLIT HAIRS AND MAKE IT MORE COMPLICATED

(AKA DOCTOR HOUSE)



"This feels dishonest to me, but I'd probably do it anyway, because..."

<Have the group help you write down a new behavior that is not from the list on a piece of paper. Write it as a full sentence that begins with an "-ing" verb, just like the behaviors on the list.>

"Of the whole list, this behavior really bothers me the most. It is completely dishonest/inappropriate because..."



<Have the group help you invent a new category that you think some of these behaviors fall into. On a piece of paper, write the name of the category, what it means, and a few behaviors it applies to.>

From Exercise to Game: The Magic Spectrum of Interactivity

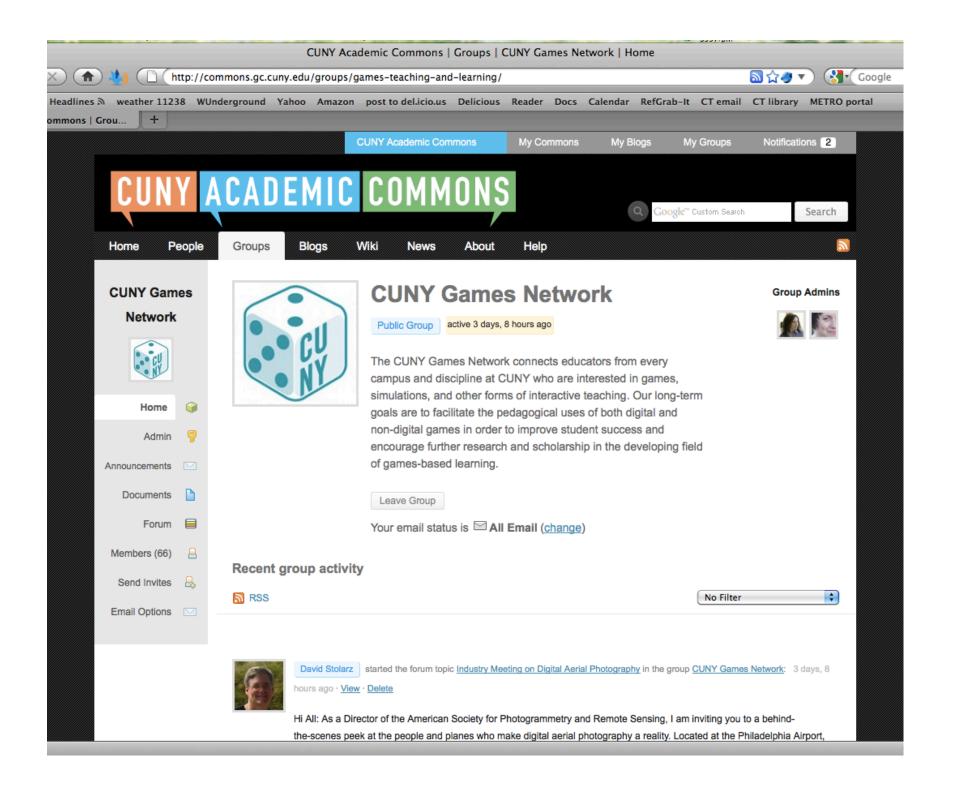
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How can you get started with games-based learning?











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Thank you!



http://games.commons.gc.cuny.edu