Question number	1 - "Skills for creativity in Game Design"
Question	Name 3 academic values/skills for creativity
Answer Summary	Analysis, Playing, Open to knowledge (Openness to knowledge outside of game design, Research Skills).
Disposition	• Analysis of games • Playing games • Openness to knowledge outside of game design • Research skill • Working within external constraints
Full answer	**Analysis of games:** To be able to break down the good bits and identify weaknesses in what's gone on in past games. To be able to analyse why something works, what's great about it, what makes a great game. **Playing games:** To have feeling for gameplay. You need to play and have played, a lot of games. However, you need to have a passion for playing games, but not an addiction. **Openness to knowledge outside of game design:** Being open to knowledge or cultural experiences outside of games design and game culture. **Research skills:** The ability to find out and research about areas you may know very little about, or researching to increase your depth of understanding in an area. For example, research the historical context to design a game set in the 17th Century. **Working within external constraints** The ability to work within fairly constraining parameters forced on you by other people, ie clients, managers, briefs etc. For example restrictions placed on you by budget or what resources you have, the type of platform that you have to design for.

Related questions	**Question 2:** Name 3 practitioner values for creativity reflect on the difference
Related curriculum	Design Studies p. 69 (Jeffries)

Question number	2 - "Skills for creativity in Game Design"
Question	Name 3 practitioner values for creativity
Answer Summary	Visualise, Analysis, Creative facilitator
Disposition	•
Full answer	**Visualise the game and player in your mind:** The ability to visualise the game, or the versions the game could take, in your mind. See a game in its finished state in your head. **Games analysis, and analysis of game mechanics:** Be able to look at existing games, and see the things that are good about the game, or where it has flaws. Then why is that flawed? A particular mechanic or game could have worked if it had been implemented differently? **Creative facilitator:** Bring other peoples ideas into the games design process. You need to be able to take other people's ideas from the team, take them onboard, and be able to give a final call on whether to keep going in a particular direction, or not. *(can be related to the text: The Designer Usually Works With a Team p. 372 - 375 about loving the game and get everybody to love something about the game)* **Gameplay rules:** A good grasp of what makes gameplay interesting. There are learned systems that games, not just computer games but board games and traditional games, all follow. You can look at computer games, and games through ages, and they all have sets of rules and the majority of these rules haven't changed over many years; it's the implementation of these rules that has changed. **The overall vision:** Be able to hold the overall vision of the game. As a game designer, you are in charge of the vision of the whole product. This can require keeping the final product as close to the specific idea you've come up with as feasibly possible.

Related questions	**Question 1:** Name 3 academic values/skills for creativity. Reflect on the differences
Related curriculum	Lecture 2. Design Studies p. 71 (Jeffries)

Question number	3 - "Skills for creativity in Game Design"
Question	What is 'scientific design'?
Answer Summary	Scientific design combines scientifically underpinned knowledge with intuitive design to find the best solutions to a problem. **Note:** Think about Miguels water bottle
Disposition	
Full answer	Refers to modern, industrialized oriented design. Based on scientific knowledge but utilizing a mix of both intuitive and non-intuitive design methods. Design sustain science like: materials science, engineering science and building science. Human design such as interaction and other humanistic approaches can be used in scientific design.
Related questions	**Question 4:** What is 'design science'? **Question 5:** What is 'design as discipline'?
Related curriculum	Design Issues - page 51 (Cross)

Question number	4 - "Designerly Ways of Knowing"
Question	What is 'design science'?
Answer Summary	We improve our understanding of design by applying scientific methods to it.
Disposition	•
Full answer	Design science refers to an explicitly organized, rational, and wholly systematic approach to design; not just the utilization of scientific knowledge of artifacts, but design in some sense as a scientific activity itself. First used by Buckminster Fuller, but it was adapted by Gregory into the context of the 1965.
Related questions	**Question 1:** 3 Academic Values (Research skills, openness to knowledge outside of games design) **Question 3:** What is scientific design? **Question 5:** What is design as discipline?
Related curriculum	Design Issues - page 52 (Cross)

Question number	5 - "Designerly Ways of Knowing"
Question	What is 'design as discipline'?
Answer Summary	Claim design as its own scientific discipline.
Disposition	• Reflective design practice • Design is not just an art NOR part of a discipline - It IS a discipline
Full answer	It's a science of design, but based on reflecting on the practice of design (you reflect on what you and others have designed), and not based on scientific methods of investigation (which is what "science of design" was defined as). There is a kind of knowledge that is unique to the awareness and ability of a designer. Independent of professional domains of the industry. Go beyond the classic science and reflect on existing designs. Wants design to be on the same "level" as engineering.
Related questions	**Question 3:** Name 3 practitioner values for design **Question 4:** What is 'design science'? **Question 5:** What is 'design as discipline'? **Question 6:** What is the domain of knowledge of designers? **Question 7:** Where can you find knowledge about design?
Related curriculum	Design Issues - page 53 (Cross)

Question number	6 - "Designerly Ways of Knowing"
Question	What is the domain of knowledge of designers?
Answer Summary	The artificial social constructionist world.
Disposition	•
Full answer	Design knowledge is of and about the artificial world and how to contribute to the creation and maintenance of that world. The human made world of the artifacts. Their knowledge, skills and values lie in the techniques of the artificial. (Not "the sciences of the artificial.") Author's personal note: But in order to have knowledge about the artificial, you must first learn about the natural. Since the artificial is created by the natural.
Related questions	**Question 3:** What is 'scientific design'? **Question 4:** What is 'design science'? **Question 5:** What is 'design as discipline'? **Question 6:** What is the domain of knowledge of designers? **Question 7:** Where can you find knowledge about design?
Related curriculum	Design Issues - page 53 (Cross)

Question number	7 - "Designerly Ways of Knowing"
Question	Where can you find knowledge about design?
Answer Summary	Fill a natural need with an artificial artefact
Disposition	•
Full answer	Natural science is concerned with how things are. Design is concerned about how things ought to be. Knowledge is found: • In engagement and reflection on the activity of designing an artifact • In the forms, configurations of the artifact • In analyzing the use of that artifact • In the process of manufacturing Only a part of each of these can be taught though. The rest must be experienced and reflected upon. **Personal Note:** Knowledge about design should be searched for in anything and everything. Not just in the domain of the specific artifact. Because - inspiration. Still, you do need to be most educated in the workings of the artifact you are designing.
Related questions	**Question 1:** Academic values (3, openness...) **Question 3:** What is 'scientific design'? **Question 4:** What is 'design science'? **Question 5:** What is 'design as discipline'? **Question 6:** What is the domain of knowledge of designers?
Related curriculum	Design Issues - page 54-55 (Cross)

Question number	8 - "Games as Activity"
Question	How are games 'second order design'?
Answer Summary	Games are rules and structures that guide the player, but the experience is only happening through their activity with the game.
Disposition	•
Full answer	Games are inherently systems that guide play, some games more strictly than others, but the experience is only created when playing. The text asks if games even exists until it is played, there is no game without the player. **Note:** First order design is the physical and logical part that makes gameplay possible.
Related questions	**Question 6:** What is the domain of knowledge of designers?
Related curriculum	

Question number	9 - “Games as Activity”
Question	What is the Digital Fallacy?
Answer Summary	Games are studied as systems, should focus more on player experience
Disposition	•
Full answer	A profound effect on game studies because they have largely focused on the deconstruction and analysis of the structure and mechanics of games. Games are seen as digital systems, which is why the play activity is an under-explored area.
Related questions	**Question :**
Related curriculum	

Question number	10 - "Games as Activity"
Question	What does game activities as 'consciously structured' mean?
Answer Summary	Games are governed by set rules and clear objectives.
Disposition	•
Full answer	All human endeavours are socially situated and embodied so in this way gameplay is not different from shopping or working. The thing that make game different is that it is consciously structured. This means that they are consciously designed by a game designer. Games are governed by set rules and clear objectives. **Note:** IKEA and Supermarkets use consciously structured in real life. But often games does not have a purpose - opposite of shopping.
Related questions	**Question :**
Related curriculum	

Question number	11 - "Games as Activity"
Question	What does game activities as 'enacted experiences' mean?
Answer Summary	Enacted experiences are the actual experience experienced by the player. It does not exist until it is created (enacted). Focuses on "play".
Disposition	•
Full answer	"As discussed previously, game design is realised only as the players engage with the game. Gameplay is thus an enacted experience: What we experience is not 'the game' but a play session, and that session does not exist unless we actively create it."
Related questions	**Question 8:** Games as second order design? **Question 14:** What is play? **Question 15:** When does good play happen? (DeKoven).
Related curriculum	Games as Activity: Correcting the Digital Fallacy (Jaakko Stenros and Annika Waern)

Question number	12 - "Games as Activity"
Question	What is somaesthetics?
Answer Summary	Somaesthetics is a philosophical discipline which is derived from Somatics and Aesthetics.
Disposition	•
Full answer	Somaesthetics is the study of the body as an aesthetic experience. Schusterman says: "There is also the beautiful experience of one's own body from within". It is closely related to Ilinx (Caillois) and one of the examples used is the Nintendo Wii. It is possible to make 99% of all the motions needed to play with small flicks, but players use grand, iconic gestures when playing Wii Sports.
Related questions	
Related curriculum	From: Games as Activity: Correcting the Digital Fallacy (Jaakko Stenros and Annika Waern)

Question number	13
Question	Explain games as social fictions
Answer Summary	Games are a suspension of reality. While playing, you and the ones you play with, create a fictional no-consequence world for play.
Disposition	•
Full answer	"I think of games as social fictions, performances which exist only as long as they are continuously created. They are like plays or songs or dances, belonging to some special sphere of human activity which clearly lies outside of the normal reality of day-to-day living. They are not intended to replace reality but to suspend consequences. They are not life. They are, if anything, bigger than life". Playing a game, even with yourself or with others, you create a shared-fiction. You suspend reality while playing, the real life and consequences come back when the suspension stops. Games exist outside of normal life. **Note:** They can still have consequences. Money-winning in eSports, social consequences from MMO's, monetary from "F2P". Thinking playing as a completely separate from the real world is naïve.
Related questions	**Question 14:** What is play? **Question 15:** What is the well-played game? **Question 16:** When do really good plays happen? **Question 17:** What is the idea behind playing well together? **Question 29:** What is dark play?
Related curriculum	The Well Played Game; Talking about what we're looking for

Question number	14
Question	What is play?
Answer Summary	Fun enactment without consequences
Disposition	•
Full answer	Play is enactment. It is everything that is not for real. Play is intended without consequence and is for fun. We can play fight, play with fear, play with being other than we are. When we are playing we are only playing. **Note:** Is play really without consequence? What about gambling? Social status? Emotional?
Related questions	**Question 13:** Explain games as social fictions **Question 15:** What is the well-played game? **Question 29:** What is dark play?
Related curriculum	The Well Played Game; Talking about what we're looking for.

Question number	15
Question	What is the well-played game?
Answer Summary	A game that becomes excellent because of the way it's being played.
Disposition	•
Full answer	The well-played game is the one where players arrive to a common understanding of what they are expecting the game to be. It is that way of playing together that makes the game feel like a well-played game. By playing well we should understand that during the entire game, players need to share a general state that makes the whole experience meaningful. Game should be balanced. For instance, the unexpected and exceptional events taking place in a game could contribute to that general state as long as they don't favour only one team or one specific player. Usually, when playing a game, our common intentions are to win. Nevertheless, the victory in our game should not be measured by the winning condition, or by the player. It should be determined by the quality of playing together.
Related questions	**Question 14:** What is play?
Related curriculum	The Well Played Game; Talking about what we're looking for

Question number	16
Question	When do really good plays happen?
Answer Summary	Playing at our best, fully engaged and present but yet, only playing.
Disposition	•
Full answer	• Play together. • Do not risk more than they are prepared to loose (I can die when climbing a mountain but it is worth the risk). • Feel safe playing it and with each other. • Familiar with the game or with people played with. • Conventions turn into extension of familiarity: playing fair, respect turns and so on. **Note:** Some games are maybe not safe? Dark play? Deep play? Journey's multiplayer?
Related questions	**Question 17:** What is the idea behind playing well together?
Related curriculum	The Well Played Game; Talking about what we're looking for

Question number	17
Question	What is the idea behind playing well together?
Answer Summary	Common acceptance of the game play.
Disposition	•
Full answer	There is no-one who will hit you with a stick if you do not follow the instructions, but you do so because you want to do so. You want to have fun with your friends and if you accept to play you will respect the rules. If you respect the rules you are playing well. You have also to decide the amount of risk you take. You can punch your opponent to death if everyone agrees, but it has to be fixed. No one wants really to die. **Note:** Left 4 Dead allows people to play alone, but staying together allows for better progression. Counter-Strike opens up for the possibility to camp. But is that fun? Is there a difference in what sort of game you play? **Note:** bulletpoints from the text: • The willingness to play • safety • trust • Familiarity • conventions
Related questions	**Question 16:** When do really good plays happen?
Related curriculum	The Well Played Game; Talking about what we're looking for p. 11 - 13.

Question number	18
Question	How does B.U.T.T.O.N incorporate the social and material circumstances of play?
Answer Summary	By letting players define the rules as the game is played.
Disposition	• Players are the judges
Full answer	The game is open, regarding rules. You will never break game conventions, but will allow people you play against to interpret your actions as "breaking the rules". The games physical layout allows players to keep each others in check. Both when it includes physical objects (controllers e.g.) or when it is about staying a certain distance to it.
Related questions	**Question 16:** When do really good plays happen? **Question 17:** What is the idea behind playing well together?
Related curriculum	

Question number	19
Question	What do anti-achievements encourage?
Answer Summary	They encourage humor as well as system-enacted/dictated behavior
Disposition	• Jokes, theatricality and subversiveness • Facilitating dictated gameplay/formalizing the meta-game
Full answer	**Anti-Achievement:** Ironic achievements. Doing something silly (Killing yourself) **Unachievement:** Finding a way around game rules to do something that is normally not possible (Exploiting a game) A specific type of **joke** achievement celebrating or satirizing the goal (objective or outcome) of the game or the player him/herself. Furthermore, they take something **theatrical** or **subversive** (subversive = anti-norm activities) and formalize them in systems and take over parts of the meta-game. Most importantly, they **facilitate**/instrumentalize system/developer **dictated** gameplay (extrinsic motivation) as well as fun/humor. In other words, they still dictate/control player actions by taking over portions of the meta-game. Opposed to anti-achievements are "unachievements" and intrinsic motivation.
Related questions	**Question 14:** What is play? **Question 17:** What is the idea behind playing well together? **Question 18:** How does B.U.T.T.O.N incorporate the social and material circumstances of play?
Related curriculum	• Games (not) as systems: Stenros and Waern, Correcting the digital fallacy. • Unachievements (also, it's the source text):http://gamestudies.org/1101/articles/wilson • Lecture 2: Play - class

Question number	20
Question	What is the self-effacement strategy?
Answer Summary	Design focus on player interaction with, or interpretation of, very loose game rules with little reinforcement of system dictated objectives. Focus is instead on the playful game experience and creativity and interpretation.
Disposition	• Creative play with basic rule sets as parameters, not formalized and normative rules + objectives • "Play" rather than "gaming" • Playcentric
Full answer	Self-effacement strategy (SES) is a gameplay "**design strategy**" or "principle" where the game, its formalized rules, structures, procedures, objectives, gameplay and even controls are not the focus of the game experience. Instead, SES encourages the player to think **creatively** about game rules, objectives and the very way the game is played. The main game experience is very **player-centric** as opposed to more traditional games or games emphasizing rules and formal elements. In terms of lusory attitude, SES is slightly odd. SES makes the player pursue certain **behaviors and goals,** which are determined by the **player**. which may point to the player not immersing him/herself as deeply in the autotelic component of the lusory attitude as compared to more traditional, formalized games. The SES lusory attitude also has a social component as the loosely defined rules and behaviors are defined and reinforced in a social context (Remember: B.U.T.T.O.N. is strictly a multiplayer game). These concepts are related to the Danish concept of "leg":
Related questions	**Question 14:** What is play? **Question 19:** What do anti-achievements encourage?

Related curriculum	• http://gamestudies.org/1101/articles/wilson • Lecture 4: Play and associated literature

Question number	21
Question	Why is laughter important?
Answer Summary	A strategy to nurture togetherness by conveying a mutual vulnerability between players.
Disposition	•
Full answer	With humor our behavior indicate pleasure (usually laughing, smiling, grinning, sometimes screaming with joy or applause) varies with the amount of emotional involvement. Laughter filled acknowledgement of vulnerability that nurtures a feeling of togetherness. **Note:** Laughing can be used to hurt people, by laughing <u>at</u> them and not <u>with</u> them
Related questions	**Question 12:** What is Somaesthetics? **Question 15:** What is a well played play? **Question 20:** What is the self-effacement strategy? **Question 29:** What is dark play?
Related curriculum	Lecture 2: Wilson - B.U.T.T.O.N;

Question number	22 - The structural elements of games
Question	What are the seven structural elements of games?
Answer Summary	Read below
Disposition	● Purpose: The goal ● Procedures: How can you reach the goal ● Rules: How you have to follow procedures ● Number of Players ● Roles: Think at soccer ● Result: Gold, kiss, medal ● Participant interaction patterns ● (Abilities and skills) ● (Equipment)
Full answer	● Purpose: The goal ● Procedures: How can you reach the goal ● Rules: How you have to follow procedures ● Number of Players ● Roles: Think at soccer ● Result: Gold, kiss, medal ● Participant interaction patterns: ○ Intra-individual: Mind or action involving mind of a person. No external contact No external objects. ○ Extra-individual: Action directed by a person toward an object. ○ Aggregate: Toward an object with other persons ○ Inter-individual: Competitive 1v1 ○ Unilateral: Competitive among more persons one is the antagonist (vs saxton hale mode tf2) ○ Multi-lateral: Unilateral but no antagonist (deathmatch) ○ Intra-group: Co-op with mutual goal ○ Inter-group: Team Vs. team ● (Abilities and skills) ● (Equipment)
Related questions	
Related curriculum	The structural elements of games

Question number	23
Question	What are procedures, and how do they map with mechanics?
Answer Summary	The possible actions you are allowed to take to reach the goal
Disposition	• Input-procedure is part of a procedure
Full answer	**Procedure:** "the actions or methods of play allowed by the rules (…) they guide player behaviour, creating interactions" http://gamestudies.org/0802/articles/sicart **Mechanics:** Rule-based methods for playing agency in the gameworld, designed for overcoming challenges in non-trivial ways. Procedures are the way you can reach the goal. They create a tree of possibilities and frame the player action. There is something you can do and something you can't. They are rules about how you can influence and interact with the game. **Example:** In super mario you push the button (procedure) that maps to the action jump (mechanic)
Related questions	**Question 9:** What is the Digital fallacy?
Related curriculum	Chapters 2,3 from Game Design Workshop "Procedures are the methods and actions, allowed by the game, that players can take to achieve the game objectives." --Do they include Mechanics? Debatable.

Question number	24
Question	How does Shadow of the Colossus work?
Answer Summary	SotC uses game mechanics to build up tension and excitement.
Disposition	•
Full answer	In SotC every colossus is its own challenge with a subset of challenges. Each colossus has weak spots that the player must destroy to defeat the colossus. One challenge for example is to run from one weak spot to another without falling, since player movement is affected by the wind and the speed of the moving colossus. The basic mechanics of SotC are “climbing” and “stabbing”. Climbing is determined by a property called "stamina", which is the algorithmic translation of a rule: "players have x stamina units". The climbing mechanic states that when invoked, stamina is lost at a certain ratio. If stamina is below a certain threshold, climbing is not possible anymore so the player has to rest to refill stamina. Stabbing it requires the player to select a specific weapon when placed in a specific spot on a colossus, then press once the x button to "charge" the attack, then press once again to release and effectively stab the colossus. The intensity of the attack depends on the time lapse between the two inputs: the longer the player waits to unleash the attack, the more damaging it will be. Players do not obtain direct output from their initial input, nor do they have to push down the button for "charging" the attack. This builds up tension and excitement because the player is in a weak position between inputs, which reinforces the sense of awe these colossi suggest. SotC has a significant emotional impact on the player by creating situations like this. Through these situations the game intends to create an experience of powerlessness and epic achievement.

	One take on it: http://www.youtube.com/watch?v=SJAW-Ym-jN8
Related questions	**Question 25:** What is the relation between game mechanics and input procedures? **Question 26:** Why are game mechanics methods?
Related curriculum	"Defining Game Mechanics" Miguel Sicart

Question number	25
Question	What is the relation between game mechanics and input procedures?
Answer Summary	In some games mechanics or input procedures are used to affect the player or they are used by the player to affect the game mechanics
Disposition	•
Full answer	To discuss this question it is necessary to know how game mechanics and input procedures are defined in this context: A game mechanic is the action invoked by an agent to interact with the game world, as constrained by the game rules. The input procedures are basically linked to all the devices a player can use to play a game - from mouse and keyboard to the Wii Fit Board. In some games, for example Shadow of the Colossus or most fighting games, the relation between game mechanics and input procedures is really strong. For instance the designers of SotC are using input procedures to build up tension and emotional experiences. In fighting games the relation between mechanics and input is different; they do not really affect the player when he or she is playing the game. But the player can affect the game mechanics by handling the input procedures very well. Through this physical skill the player is able to defeat opponents easier, for example with very fast combinations.
Related questions	**Question 24:**How does Shadow of the Colossus work? **Question 26:** Why are game mechanics methods?
Related curriculum	"Defining Game Mechanics" - Miguel Sicart

Question number	26
Question	Why are game mechanics methods?
Answer Summary	Mechanics are methods because both of them are triggering events, be it in a game mechanic or in a class (programming)
Disposition	• Game is the object • Mechanic is the method on the object
Full answer	In the related article methods and game mechanics are defined as the following: In the object oriented programming terminology, a method is understood as the actions or behaviors available to a class. Methods are the mechanisms an object has for accessing data within another object. A game mechanic is defined as methods invoked by agents for interacting with the game world. Related to the definition of methods in the object oriented programming one could say that rules and mechanics are designed methods and properties which are designed for interaction with the game state. If this approach is used one could say that methods in a game are as much as important for the game like methods in object orientated programming. Both methods are related to each other because they are triggering events be it in a game mechanic or in a class. **Note:** Using this definition game designers could perhaps document and explain their concepts with more precision, enhancing productivity while creating more comprehensive documentation for game development.
Related questions	**Question 24:**How does Shadow of the Colossus work? **Question 25:**What is the relation between game mechanics and input procedures?
Related curriculum	"Defining Game Mechanics" Miguel Sicart

Question number	27
Question	What is the relation between play and ritual?
Answer Summary	Play is more loose and permissive than ritual, which in turn can be defined as playing with strict limitations.
Disposition	• Shadow images • Different purposes
Full answer	Ritual can be defined as performance defined by play. Play is looser and permissive whereas ritual is strict and enforcing. According to Handelman "Ritual and play are shadow images of one another in the kinds of messages they transmit to the social order. They are analogous states of cognition and perception, whose message are complementary for the resolution of the ongoing, immoral, deviant, domain of ordinary reality".
Related questions	**Question 28:** What are 'play acts'? **Question 29:** What is dark play?
Related curriculum	*Richard Schechner. ch. 4; Play,* in Performance Studies: an Introduction

Question number	28
Question	What are 'play acts'?
Answer Summary	Many players can observe the same game from different perspectives. They can be watching the game or simply being forced.
Disposition	• A mouse and cat does not experience a the chase the same way (The cat is amused, the mouse is afraid).
Full answer	Unwilling play is 'part' of the thought of Play Acts, but seeing as the author is within Performance Design he wants to organize play so it can be analyzed. It's more a structural way of separating play into acts. Play-acts are acts of play, but it is important to note that a play-act is not necessarily playing. Rather this term helps us define situations in which playing takes place, but that does not necessarily involve the subjects *playing*. Schechner uses Mayan ball games as an example – in these games sometimes captives would be forced to play a game of ball, which they would lose along with their lives. Here a play-act is taking place, without the captives "playing". Another example is observers of a sport. Fans, Schechner says, can be a part of the play-*act* without being in a play-*mood*. We can also understand play-acts in opposition to, or just as more unorganized games. Play-acts are not by definition under control, but games are. So in part Schecner uses his definition of play-acts to distinct play from games.
Related questions	**Question 27:**What is the relation between play and ritual? **Question 29:** What is dark play?
Related curriculum	*Richard Schechner. ch. 4; Play,* in Performance Studies: an Introduction

Question number	29
Question	What is dark play?
Answer Summary	Dark Play is when not all participants are aware that they are part of the play or game. It often contain high risk or stakes elements.
Disposition	• Closely related to the concepts of deep play (p. 118) and Maya-Lila (p. 113 in Schechner's play).
Full answer	Dark Play is related to deep play which is play involving very high risk or stakes. It subverts the metacommunicative message: "this is play" (Gregory Bateson). The individual who is not aware that he/she is playing will receive all the "playful" communication as "grave seriousness". Two examples that describes variations of Dark Play from *Schechner's 'Play p.119*. *"Dark play involves fantasy, risk, luck, daring, invention and deception."* *"Dark Play subverts order, dissolves frames and breaks its own rules, so much that the playing itself is in danger of being destroyed."* 1: A girl play a form of "russian roulette" with herself. She crosses the street in New York without checking for cars. The stakes are high (she might get hit and die) and the cars are not aware that they are part of the girl's dark play. 2: A girl has made up a fake language. She uses it to communicate with strangers. Obviously they don't understand her, and are not aware that they are part of her Dark Play. **Note:** The Game (movie), Hidden camera
Related questions	**Question 27:**What is the relation between play and ritual? **Question 28:** What are 'play acts'?
Related curriculum	*Richard Schechner. ch. 4; Play,* in Performance Studies: an Introduction. (p. 118 - 121)

Question number	30
Question	Which ways do we have of approaching play? (some of the 7)
Answer Summary	See below
Disposition	- Different ways to approach the activity of play - As Schechner says it "I offer seven interrelated ways to approach play and playing not as a definitive list, but as a strategy for organizing the inquiry to play" - Structure - focus on the sequence of play acts - Process - strategies evolve over time (how to play) - Exprerience - how the game makes players feel - function - how an act serves the game - evolutionary - - ideaology - frame
Full answer	The seven ways to approach play according to Schechner: **1. Structure:** This means the structure of what is being played. Schechner says that the structure is the relationship between the events constituting the play act. Like how does the meaning "at bat" fit into the structure of an "inning" in baseball, and how does each "inning" relate to the shape of the entire baseball game. What Schechner means by this is that every game consist of many play acts and these play acts consist of many sub-acts which all fits into the same whole that is the game, as he says "A coherent sequence of play acts forms a game. To use his example with baseball it contains the play act "Inning" and the "Inning" consist of the sub-act "At Bat" and together these all acts create the game of baseball. **2. Process:** First of all Schechner says that Process and Structure should be looked as a related pair. Process looks at the structure of the game, and looks at how over time the different play acts are generated and how they develop

	throughout the play or game. You could look at how the strategy of play changes the longer we go into the play or game, but also look at how weather, score or other things like that affects the strategy in the play or game. **3. Experience**: This looks at the experience that everyone involved in the game has, like players and observers, like are they happy or angry (their moods and feelings). How does the players' and observers' feelings and mood affect the playing? Are the observers and the players having the same feelings? Also look if the moods and feelings changes throughout the game or play and how that affects the playing. This also concerns how one determines if the play has been good or not. **4. Function:** This looks at the function each play act serves in the play or game. How does each act affect the game, and how do they affect the individual and community learning that happens in the play or game. Does the acts in the play or game have an effect on individual and community creativity, fantasy, aggression and other possible "uses" play has? **5. Evolutionary, species and individual development of play:** This concerns the relationships and differences in play and what impact play has on you as an individual and us as a whole and our culture. For an example what are the relationships between human and animal play, or what are the differences between child and adult play. To move onto the part about individual impact or cultural impact it can be looked on like this, "What is the difference between playing and individual creativity? Or what is the relationship between play and culture (Like religion and arts and more). **6. Ideology:** This approach looks at play to answer what kind of political, social and personal values specific to playing criticize, enunciate or subvert, both unconsciously or knowingly. And if these values that the specific play or game have the same value to all the players or observers, and if there are differences here how are they

	expressed. **7. Frame:** This approach concerns the matter of fact how the players and the spectators know when the play or game begins, takes place and when it is over. How do the players and spectators broadcast and receive the message that the play or game has begun. To dig further how do players and spectators know this in dark play where the message "this is play" is intentionally disguised. It also questions if "I want to stop playing" and "I'm finished playing" means the same (For ME I think it depends of the genre of playing you engage in if it is the same). The seven way of approaching play cannot be separated as clearly as attempted in the list above as they often overlap each other during the act of play.
Related questions	The other questions about play.
Related curriculum	Schechner. "Play". In Schechner. *Performance Studies. An Introduction*. Second Edition. London: Routledge (2006)

Question number	31
Question	What does Sutton-Smith mean by "the diversity of play"?
Answer Summary	Anything can become play, divided in 9 categories
Disposition	• **Mind or subjective play** • **Solitary play** • **Playful behaviors** • **Informal social play** • **Vicarious audience play** • **Performance play** • **Celebrations and festivals** • **Contests (games and sports)** • **Risky or deep play**
Full answer	Within an array of play forms and experiences, object play has a place in each sphere Sutton-Smith outlines (mind or subjective play, solitary play, playful behaviors, informal social play, vicarious audience play, performance play, celebrations and festivals, contests/games/sports, risky or deep play). The rich diversity of play possibility, posits Sutton-Smith, is a main factor in its persistence over time, much like the evolutionary biology of species survival. This diversity is temporal (e.g. duration, frequency, spontaneity) as well as spatial (e.g. domestic, public, international). • **Mind or subjective play:** dreams, daydreams, fantasy, imagination, Dungeons and Dragons, playing with metaphors. • **Solitary play:** Hobbies, collections, listening to music, art projects, pets, reading, yoga, collecting and building cars, Civil War reenactments, bird watching, crosswords. • **Playful behaviors:** Playing tricks, playing around, playing up to someone, playing a part, putting something into play, playing fair, playing by the rules. • **Informal social play:** Joking, parties,

	travel, leisure, dancing, getting laid, potlucks, malls, babysitting, creative anachronism, intimacy, bars and taverns, amusement parks. • **Vicarious audience play:** Television, films, cartoons, spectator sports, theater, jazz, rock music, parades, comic books, Renaissance festivals, museums. • **Performance play:** Playing the piano, playing music, being a play actor, playing the fishes, playing the horses, play voices, playhouses. • **Celebrations and festivals:** Birthdays, Christmas, Easter, Mother's Day, Halloween, gifting, banquets, balls, weddings, carnivals, balls, Mardi Gras. • **Contests (games and sports):** Athletics, gambling, casinos, lotteries, pool, golf, parlor games, drinking, the Olympics, cockfights, poker, chance, board games, card games. • **Risky or deep play:** Caving, hang gliding, kayaking, bungee jumping, skateboarding, windsurfing.
Related questions	
Related curriculum	Brian Sutton-Smith - Play and Ambigity (Page 289 - 301)

Question number	32
Question	What are the rhetorics of play?
Answer Summary	7 ways to understand what play is
Disposition	• **Progress** • **Fate** • **Power** • **Identity** • **Imaginary** • **Self** • **Frivolity**
Full answer	It explores the question of what the levels of play are, the kinds of play there are, and so on. There are seven rhetorics of play (as progress, as fate, as power, as identity, as imaginary, the self, as frivolous). The rhetorics of fate, power, identity, and frivolity are described as the ancient rhetorics, having a much stronger standing in classical literature. The modern rhetorics are progress, imaginary and the self. These all emerged with changing philosophical and psychological trends dating within the past 200 years. • **Progress:** Progress has dominated studies of the play of children. This rhetoric poses play as a developmental arena wherein players learn and practice for adulthood. • **Fate:** This rhetoric is older than the rest, going back to mythologies in which human lives are controlled by destiny, gods, or luck. • **Power:** Power is at the heart of competitions, and this poses that play is the

	expression of conflict. It emphasizes that those who control the play are its heroes. This rhetoric is strongly opposed to modern theories around leisure and progress. • **Identity:** This emphasizes social and cultural roles and structures. There is a focus on communal identity rather than individual. The individually focused complement to this is the rhetoric of the self. • **Imaginary:** The imaginary ties into creativity and flexibility. "This rhetoric is sustained by modern positive attitudes toward creativity and innovation." • **Self:** The rhetoric of the self is usually applied toward solitary activities, but can be characterized by other ideas such as fun, relaxation, and escape. The central focus is in the experience of the player. • **Frivolity:** Frivolity is difficult to characterize: it applies to absurdity and the historical roles of tricksters and fools.
Related questions	**Question 31:** What does Sutton-Smith mean by "the diversity of play"?
Related curriculum	Brian Sutton-Smith - Play and Ambiguity (Page 305)

Question number	33
Question	How do children playground rules illuminate design and the activity?
Answer Summary	The childrens play shows that the relationships between the players is in the foreground, not the rules of the game.
Disposition	• A simplified way of thinking rules? • Relationships in play • The descriptions of play
Full answer	The children's thinking or playing has another focus than the literature, that may have a simplified and monolithic way of thinking about rules: The philosophers think that the term rules in itself is problematic. Because games are an activity, we tend to think that rules are in the foreground and at all time explicit, but the children show us that it is the relationships between the players. We tend to think that the paradoxes derive from the play, rather than from the descriptions of play.
Related questions	**Question 34:** Why aren't games much fun when rules dominate the activity?
Related curriculum	From Hughes

Question number	34
Question	Why aren’t games much fun when rules dominate the activity?
Answer Summary	They lack "respect", "fairness", "fun", "flow" and "spontaneous involvement"
Disposition	•
Full answer	Treating the description of the game rules as the description of the activity potentially takes the "play" and the "fun" out of games. When the activity is not based on playful relationships and the rules are treated as rigid and tied actions, there is a lack of "fun", "flow" and "spontaneous involvement" in the activity.
Related questions	**Question 33:** How do children playground rules illuminate design and the activity?
Related curriculum	Hughes - “Beyond the rules of the game”

Question number	35
Question	What does Norman mean by cognitive engineering?
Answer Summary	Solving practical problems by making things easier to understand. Designed for the user.
Disposition	•
Full answer	Cognitive Engineering is to come to understand the issues, to show how to make better choices when they exist, and to show what the tradeoffs are when, as is the usual case, an improvement in one domain leads to deficits in another. **Note:** The Fridge story in "Design of everyday things" (Buttons does not make much sense). **Note** *(from the text)***:** A type of applied cognitive science, trying to apply what is known from science to the design and construction of machines.
Related questions	**Question :**
Related curriculum	Donald A. Norman - Cognitive Engineering (Page 31)

Question number	36
Question	What is the relation between the psychological (user) and the physical (system)?
Answer Summary	The gulf between the demands of the machine and the thought processes and actions of the user
Disposition	- The feedback loop between the user and the system. - what the user knows and what the system knows. - Prescriptions for a better human-machine interactions 1. Create a science of user-centric design 2. Take the interface design seriously 3. Separate the design of the interface from the design of the system. 4. Do user-centered system design ***- Refrigerator story***
Full answer	**The feedback loop between the user and the system.** **Keep in mind: what the user knows and what the system knows.** **Prescriptions for a better human-machine interactions:** 1. Create a science of user-centric design 2. Take the interface design seriously, as an independent and important problem. It takes at least three kinds of special knowledge to design an interface: first, knowledge of design, of programming and of the technology; second, knowledge of people, of the principles of mental computation, of communication, and of interaction; and third, expert knowledge of the task that is to be accomplished.

	3. Separate the design of the interface from the design of the system. Modularity in design allows for change: The system can change without affecting the interface; the interface can change without affecting the system. Different users may need different interfaces, even for the same task and the same system. 4. Do user-centered system design: start with the needs of the user. From the point of view of the user, the interface *is* the system. Concern for the nature of the interaction and for the user- these are the things that should force the design. Let the requirements for the interaction drive the design of the interface, let ideas about the interface drive the technology. **The gulfs of Evaluation & Execution** The continuous loop between the user and the system. - Establishing the Goal Forming the Intention - Specifying the Action Sequence - Executing the Action - Perceiving the System State - Interpreting the State -Evaluating the System State with respect to the Goals and Intentions The goal of the designer is to make the 'gulfs' as small as possible. To make the system easy to understand and interact with. What kind of interface is used, the input & output mechanisms are very important here to keep the user in control.
Related questions	**Question 37:** What are the gulf of execution and the gulf of evaluation?
Related curriculum	Donald A. Norman - Cognitive Engineering

Question number	37
Question	What are the gulf of execution and the gulf of evaluation?
Answer Summary	**Execution:** Describes the gap between goal and means to reach it. **Evaluation:** Describes the gap between system representation and goal.
Disposition	•
Full answer	**Gulf of execution:** Describes the gap between a user's goal for action and the means to execute that goal. Usability has as one of its primary goals to reduce this gap by removing roadblocks and steps that cause extra thinking and actions that distract the user's attention from the task intended, thereby preventing the flow of his or her work, and decreasing the chance of successful completion of the task. **Gulf of evaluation:** The gulf of evaluation is the degree to which the system or artifact provides representations that can be directly perceived and interpreted in terms of the expectations and intentions of the user. Or put differently, the gulf of evaluation is the difficulty of assessing the state of the system and how well the artifact supports the discovery and interpretation of that state. **Note:** Shower-story
Related questions	**Question 36:** What is the relation between the psychological (user) and the physical (system)?
Related curriculum	Donald A. Norman - Cognitive Engineering (Page 38-41 and 52-53)

Question number	38
Question	How do you keep the user in control?
Answer Summary	By designing for the user or around the user.
Disposition	• The users need should dominate before constructing the interface. • Testing and refinements. • ***Car story***
Full answer	The needs of the users should dominate the design of the interface, and the need of the interface should dominate the design of the rest of the system. This requires sufficient design principles and simulation tools for establishing the design of an interface before constructing it. There will still have to be continual iterations, testing and refinement of the interface-all areas of design need that-but the first pass ought to be close. **Note:** Too much lets the user have zero-control? Too little gives the user, well, too little.
Related questions	**Question 36:** What is the relation between the psychological (user) and the physical (system)? **Question 37:** What are the gulf of execution and the gulf of evaluation?
Related curriculum	Donald A. Norman - Cognitive Engineering (Page 51-52)

Question number	39
Question	What does Norman mean by the design tradeoffs?
Answer Summary	One design choice ruins another
Disposition	•
Full answer	"Assistance for one stage is apt to interfere with another. Any single design technique is apt to have its virtues along one dimension compensated by deficiencies along another. Each technique provides a set of tradeoffs. The lesson applies to almost any aspect of design. Add extra help for the unskilled user and you run the risk of frustrating the experienced user. Make the display screen larger and some tasks get better, but others get more confused. Display more information, and the time to paint the display goes up, the memory requirement goes up, programs become larger, bulkier, slower. It is well known that different tasks and classes of users have different needs and requirements. The design choices depend on the technology being used, the class of users, and the goals of the design. The designers must decide which aspects of the interface should gain, which can be left wanting. This focus on the tradeoffs emphasizes that the design problem must be looked at as a whole, not in isolated pieces, for the optimal choice for one part of the problem will probably not be optimal for another. According to this view, there are no correct answers, only tradeoffs among alternatives." **Note:** Apple Vs. Windows Computers
Related questions	**Question 35:** What does Norman mean by cognitive engineering?
Related curriculum	Donald A. Norman - Cognitive Engineering (Page 56)

Question number	40
Question	Is there such a thing as a creative leap in the design process?
Answer Summary	Creative events are connections between problem and solution. Happens by random.
Disposition	•
Full answer	Cross suggested that the creativity does not happen as a "leap", but rather as a bridge between creativity and solution. In this text Dorst and Cross lay out that their observations confirm that the creative process involves a period of exploration in which the relation between solution and problem are unstable. A creative event is the moment in which the problem and solution is paired. This is what Schön called "problem framing".
Related questions	**Question 41:** How is 'creative design' defined in this paper?
Related curriculum	Creativity in the Design Process

Question number	41
Question	How is 'creative design' defined in this paper?
Answer Summary	Interrelation between problem-space and solution-space.
Disposition	•
Full answer	Cross and Dorst understand creative design not in terms of aha-experiences or so called leaps of creativity. They understand it as a relation between problem-space and solution-space. The problem-space consists of the problem, and the solution-space consists of the possible solutions. The creative process is the interaction between these spaces, and how they interchange information between each other. We can understand this as creative design being a process of constant iteration.
Related questions	**Question 40:** Is there such a thing as a creative leap in the design process?
Related curriculum	Creativity in the Design Process

Question number	42
Question	How are creative fields characterized?
Answer Summary	Characterized by the outcome they produce
Disposition	• A painter paints paintings • A game designer design games?
Full answer	Creative fields are characterized by the generation and manufacture of objects for reflection and evaluation (Schon 1983). Since this is a text about rapid prototyping, we need to understand this formulation (because Schon did not write this text) in the context of this newer text. What Sass and Oxman wants to say by using this old formulation is, that the creative fields are actually characterized by their output. This means that we should understand the creative fields as a result of the artifacts it produces itself, and as an ongoing characterization. In other words the creative fields are not something theoretical, but rather just *what is* at the moment. **Note:** A painter paints paintings
Related questions	**Question 43:** Why learning by doing, and therefore why Rapid Prototyping? **Question 44:** What are 'technical artifacts'?
Related curriculum	Materializing Design

Question number	43
Question	Why learning by doing, and therefore why Rapid Prototyping?
Answer Summary	"…RP will facilitate methods to generate high quality design representations (Sass. 351)" "What can we learn from RP? To build early and often technical artifacts (functional, aesthetic, ready) (Slides from Lecture 7, September 20)". Having a working, but not done, product makes it easier to evaluate and correct issues with the product.
Disposition	•
Full answer	"An important attribute of learning in design is acquisition of processes of redescription or redesign based on acquired knowledge from a previously described artifact" (Oxman, 1999, 2003 in Sass.335). "Materialization as a way of designing fulfills Lesgold's presentation of learning by doing, which he defines as an opportunity to manage the full domain or real-life experiences through activity-based learning. He argues that it is necessary to combine rules with conceptually based activity as a means to prepare people for real-world experiences." (Sass. 336) Rapid prototyping is a group of techniques used to make a prototype fast and to aid the creative process. These techniques can help the design concept move towards its final outcome – a finished product. With a prototype in hand, it is possible to find strengths and weaknesses, from both a designer and player perspective and correct them. Since this class has a player-centric outlook it is therefore important to make prototypes often and as early in the design process as possible.
Related questions	**Question 42:** How are creative fields

	characterized? **Question 44:** What are 'technical artifacts'?
Related curriculum	• Chapters 7 & 8 of *Game Design Workshop* • McConnell, S. "Rapid Development. pp. 5 – 28 • Sass, Materializing Design - The implications of rapid prototyping. pp. 1-31

Question number	44
Question	What are 'technical artifacts'?
Answer Summary	Technical artifacts are SPECIFICS or CHARACTERISTICS of a prototype or a design process.
Disposition	• Product or prototype parts to evaluate the prototype performance on.
Full answer	A technical artifact can be specific geometry in a sketch or a specific color palette in modelling 3D assets for a computer game etc. as long as the artifact describes some of the object's structure and is the outcome of conscious production. These artifacts can tell us about the physical aspects of a structure, the sketch could tell us about the orientation on a 2d plane or show a room layout. Rapid prototyping could generate a more advanced technical artifact that could show more aspects of the prototype: "An effective design process can use RP technology for structural models, shape and formal models, interior models, etc." (Sass 338).
Related questions	**Question 42:** How are creative fields characterized? **Question 43:** Why learning by doing, and therefore why Rapid Prototyping?
Related curriculum	Sass, Materializing Design - The implications of rapid prototyping. pp. 1-31

Question number	45
Question	What do the authors mean by minimalist?
Answer Summary	Minimalism is broadly defined as a style or technique that is characterised by extreme sparseness and simplicity. All of the unnecessary components have been stripped away, leaving only the key elements behind.
Disposition	According to the authors minimalist *games*: ○ Have a small ruleset ○ Have few micro-mechanics and possibly only one (macro) core mechanic ○ Have abstract audiovisual representation and are systematically abstract ○ Have low perceived complexity but (possibly) deep systemic complexity ○ May have tightly coupled elements and/or system
Full answer	Minimalist games have a small set of rules, which is contributing to the possibility of the player to perceive the game as having a fairly low complexity. The mechanics of a minimalist games are in this paper described on two levels: micro and macro. Basically the micro-mechanics form the (one) macro-mechanic. It is important for a minimalist game to only have a few mechanics. Just like the small ruleset, this also contributes to the low perceived complexity. Another key feature of minimalist games which is closely related to the mechanics is, that there are few, simple controls, where small inputs from the player can lead to large changes in the game state. A minimalist game is deliberately abstract, although just because a game is abstract visually or systematic, does not make it a minimalist game. Often the visuals in minimalist games are nonrepresentational, with various degrees of independence from visual references in the world. The same goes for example with the control overlay icons in games, which points to an abstract system. By perceived complexity they are referring to how complex the player perceives the game to be. No matter

	how complex the engine and the mechanics behind the game are, the player should be perceiving the game to be fairly simple. Tightly coupled elements and/or systems (such as hitpoints, character size, remaining time, etc.) can provide interesting decisions without adding additional objects. The goal is to give the player less information to process at any given point while raising the number of interesting outcomes.
Related questions	**Question 46:** What do they mean by perceived complexity?
Related curriculum	Lecture 8; from text: Towards Minimalist Game Design

Question number	46
Question	What do they mean by perceived complexity?
Answer Summary	By perceived complexity they are referring to how complex the player perceives the game to be.
Disposition	○ Perceived complexity = How complex the player perceives the game to be ○ Systemic complexity = How complex the engine and mechanics are ○ Low Perceived complexity ≠ Low systemic complexity
Full answer	By perceived complexity they are referring to how complex the player perceives the game to be. No matter how complex the engine and the mechanics behind the game are, the player should be perceiving the game to be fairly simple. It could be a game about moving boxes around the screen without them falling into the wrong place, and because of the simple rules and simple controls related to the actions, that game could be perceived by the player as having a fairly low complexity while the systemic complexity is high for instance due to a high requirement of physics needing to be programmed. Another good example could be, that the game have few decisions that the player can make (which makes it be perceived as having low complexity) but that the consequences of choice can be immense with deep decision trees (which is a complex system).
Related questions	**Question 45:**What do the authors mean by minimalist?
Related curriculum	Lecture 8; the text: Towards Minimalist Game Design

Question number	47
Question	What are manifestation dimensions?
Answer Summary	Manifestation dimensions are categories of aspects of how prototypes are implemented relative to a final artifact. Specifically, the dimensions are: material, resolution, and scope. Each comprises a number of variables determined for the individual analysis.
Disposition	•
Full answer	Proposes that prototypes are perceived in two dimensions: as filters and manifestations of design ideas, respectively. For each of these perspectives, there are several dimensions along which prototypes classified. When prototypes are created, design ideas are manifested in the physical world, being developed in the process (Lim, 9). A manifestation dimension is a category of aspects of how prototypes are implemented relative to a final artifact. Which aspects are considered may vary between analyses. The manifestation dimensions are, with example variables (Lim, 11: Table III): • Material: "Medium [...] used to form a prototype". Physical media, tools for manipulating physical matters, computational prototyping tools, physical computing tools, stamps, available existing artifacts • Resolution: "Level of detail or sophistication of what is manifested (corresponding to fidelity)". Accuracy of performance, appearance details, interactivity details, realistic versus faked data • Scope: "Range of what is covered to be manifested". Level of contextualization
Related questions	**Question 48:** What are filtering dimensions?
Related curriculum	Lim et al. 2008

Question number	48
Question	What are filtering dimensions?
Answer Summary	Filtering dimensions are categories of aspects of how prototypes mimic final artifacts. Specifically, the dimensions are: appearance, data, functionality, interactivity, and spatial structure. Each comprises a number of variables determined for the individual analysis.
Disposition	•
Full answer	Propose that prototypes are perceived in two dimensions: as filters and manifestations of design design ideas, respectively. For each of these perspectives, there are several dimensions along which prototypes classified. Filtering dimensions allow prototypes to traverse design spaces through their incompleteness, that is, allow for the examination of an idea's qualities without the need for a complete model (Lim, 7). Specifically, a filtering dimension is a category of aspects of how the prototype mimics a final artifacts; "These dimensions correspond to the various aspects of a design idea that a designer tries to represent in a prototype" (Lim, 11). Which aspects are considered may vary between analyses. The filtering dimensions are, with example variables (Lim, 11: Table II): • **Appearance (physical properties of design):** Size, color, shape, margin, form, weight, texture, proportion, hardness, transparency, gradation, haptic, sound • **Data (information architecture and data model):** Data size, data type, data use, privacy type, hierarchy, organization • **Functionality:** System functions, user's functionality need • **Interactivity:** Input behavior, output behavior, feedback behavior, information behavior • **Spatial structure:** Arrangement of interface or information elements,

	relationship among interface or information elements (two-/three-dimensional/mixed, intangible/tangible/mixed)
Related questions	**Question 47:** What are manifestation dimensions?
Related curriculum	Lim et al. 2008

Question number	49
Question	What do the authors claim is the 'fundamental prototyping principle'?
Answer Summary	To find the manifestation that in its simplest form will filter the qualities the designer wants, without distorting the whole.
Disposition	•
Full answer	That the purpose of designing prototypes is to find the manifestation that, in its simplest form, will filter the qualities the designer is interested in without understanding the whole (this is almost a direct quote p. 10 beginning of chapter 5).
Related questions	
Related curriculum	The Anatomy of Prototypes: *Prototypes as Filters, Prototypes as Manifestations of Design Ideas*. Lim, Stolterman and Tenenberg p. 7:10

Question number	50
Question	What is the economic principle of prototyping?
Answer Summary	Defined as "The best prototype is one that, in the simplest and most efficient way, makes the possibilities and limitations of a design idea visible and measurable".
Disposition	• The simplest and most efficient way to make a design idea visible and measurable. • When prototyping after the economical principle one has to determine the values of manifestation: material, resolution, and scope.
Full answer	The economic principle of prototyping is finding the most simple and efficient approach to a prototype in a rational and systematic way, through determining values of manifestations: • Resolution (how detailed is the prototype?) • Scope (Level of inclusiveness) • Material (the most honest and representative building material that simultaneously is the most cost and time saving efficient). Thereby indicating the possibilities and limitations of a design idea that is measurable.
Related questions	**Question 43:** Why learning by doing, and therefore why Rapid Prototyping? **Question 47:** What are manifestation dimensions?
Related curriculum	"The Anatomy of Prototypes" Page - 3-4

Question number	51
Question	Why is sketching the archetypal activity of design?
Answer Summary	Because drawing or sketching is the one common action of design of all kinds. It is an action central to design, thinking and learning.
Disposition	• Why – Central to design thinking and learning • How – how can a designer use the activity or sketching to his/hers advantage.
Full answer	A sketch is the basis for all design thinking and learning because a sketch is: • Quick • Timely • Inexpensive • Disposable • Plentiful • Clear vocabulary • Distinct gesture • Minimal detail • Appropriate degree of refinement • Suggest and explore rather than confirm • Ambiguity
Related questions	**Question 52:** Can you name some characteristics of sketching (and why they are relevant for game design)?
Related curriculum	Bill Buxton "Anatomy of Sketching" - Page 111

Question number	52
Question	Can you name some characteristics of sketching (and why they are relevant for game design)?
Answer Summary	Sketching is generated in the course of realizing a product, working through a design or to aid to thought process. A designer can explore and communicate ideas through sketching.
Disposition	• Quick • Timely • Inexpensive • Disposable • Plentiful • Clear vocabulary • Distinct gesture • Minimal detail • Appropriate degree of refinement • Suggest and explore rather than confirm • Ambiguity
Full answer	Sketching can quickly generate alternatives to a current design. Also it give the visual intend of different style and representation. This gives the viewer a detailed form of the concept being pursued in an early stage.
Related questions	**Question 51:** Why is sketching the archetypal activity of design?
Related curriculum	Bill Buxton "Anatomy of Sketching"

Question number	53
Question	What do the authors mean with the design transition in history from 'invention' to 'ongoing practices'?
Answer Summary	The change from looking at the invention (or design) as a singular event over to making it an ongoing practice of demonstration, practice and assembly via prototyping and user testing.
Disposition	• The idea of design moves from invention to an ongoing process
Full answer	...to look at "how new technologies emerge shifts from a focus on invention, understood as a singular event, to an interest in ongoing practices of assembly, demonstration, and performance. The shift from an analysis in terms of form and function to a performative account."
Related questions	**Question 40:** Is there such a thing as a creative leap in the design process? **Question 54:** What do prototypes do? (discover user needs) **Question 55:** How were the accountabilities of the prototype multiple?
Related curriculum	'Working artefacts' by Lucy Suchman - Page 1

Question number	54
Question	What do prototypes do? (discover user needs)
Answer Summary	Prototyping practice simultaneously recovers and invents work requirements and technological possibilities, that each make sense in relation to the other.
Disposition	• Tools for evaluation. • Making any object aligns the social(context) with the technological (material). • Prototyping helps exploring the process of discovering "user needs". • Prototypes account for (explores) many things, some predicted, some not. • (for the user)
Full answer	Prototyping represents a strategy for 'uncovering' user needs, taken as already existing but somehow latent, unarticulated or even unrecognized by practitioners themselves. The project then is to elicit these pre-existing attributes from the prospective user, to express them precisely and thereby to make them available for use by professional system designers. (p.3&4) An alternative position, adopted in the case reported here, (paper: 'Working artefacts' by Lucy Suchman p.4) is that prototyping practice simultaneously recovers and invents work requirements and technological possibilities, that each make sense in relation to the other. "Prototypes are the means by which designers organically and evolutionarily learn, discover, generate and refine designs. They are design thinking enablers deeply embedded and immersed in design practice and not just tools for evaluating or proving successes or failures of design outcomes." - The Anatomy of Prototypes
Related questions	**Question 53:** What do the authors mean with the design transition in history from 'invention' to 'ongoing practices'? **Question 55:** How were the accountabilities of

	the prototype multiple?
Related curriculum	'Working artefacts' Lucy Suchman - Page 3 and 4

Question number	55
Question	How were the accountabilities of the prototype multiple?
Answer Summary	They were relevant to research and innovation, product development and marketing and effective incorporation into various fields of professional practice.
Disposition	• For the company
Full answer	Perhaps even more than a 'finished' artefact, the prototype's accountabilities were multiple, orienting alternately to relevances of research and innovation, product development and marketing, and effective incorporation into various fields of professional practice. In this respect the prototype worked as a reflexive probe into the practical materializations that configure new technological objects. **Note:** New eyes on the prototype will spawn new ideas and inspiration for the next prototype.
Related questions	**Question 53:** What do the authors mean with the design transition in history from 'invention' to 'ongoing practices'? **Question 54:** What do prototypes do? (discover user needs)
Related curriculum	'Working artefacts' by Lucy Suchman - Page 13

Question number	56
Question	What is conjuring (and how does it relate to pitching)?
Answer Summary	Conjuration is illusion involving depth of conviction to create suspension of disbelief (suspension) in its audience as well as deception to obscure the technical details (techniques) of the performer. Showmanship facilitates conviction.
Disposition	• Conviction/Deception • Pitches and conjuration • Frames/Perception • Ethics
Full answer	**Conjuration**, or illusion, has two main components: • **Conviction**: A temporary suspension (willingly believing in something even though it may be physically impossible or the context very contrastive etc.). • **Deception**: The technique of obscuring the way a performance is done. Metaphor: Conviction is the suspension, the frame of understanding. Like a scene, scenery, audio etc. in a theater play. Deception is the specific techniques that the actors make characters come to life. In relation to **pitching**: Good pitches involve and motivate the audience like a play, creates an aura of conviction from suspension using some form of showmanship (optional, but emphasized). In other words: Putting on an intriguing show with convincing elements can cause conviction in your audience. Similarly, the "deception" of a good pitch is the specific presentation techniques used by the speaker: The speaker must convince the audience that his words are true and genuine, even if disagreeable.

	Related (extracurricular) topics are **framing**: how language can frame a situation (etc.: Abortion - murder or human right?). Frames help us understand and categorize the world from our specific socio-cultural perspective. Further related content: **Constructionism** **Ethics:** Outright lying whether in conjuration or pitching is frowned upon for both practical and ethical reasons. Conjuration is not about lying, but more about putting on a convincing show. The same goes for pitching. **Note:** ALIEN$
Related questions	**Question 57:** How does interest relate to magic and showmanship? **Question 58:** What is the actor's rule?
Related curriculum	Source: Neims (1969): Magic and Showmanship. A Handbook for Conjurers. Game Design Workshop: Ch. 14 and Ch. 16

Question number	57
Question	Interest depends on meaning, but how does that relate to magic (illusions, ed.) and showmanship?
Answer Summary	Conjuration needs to be more than a trick. A meaning or reason for the performance: Enter interest and meaning.
Disposition	• Making a sandwich appear in a pocket is good. v Asking if a person is hungry and then making a sandwich appear in his pocket is amazing!
Full answer	Good illusions have a sort of "**theme**". Houdini was a famous escape artist and magician. However, it was not his tricks that autotelically entertained people, but his uncanny ability to escape. In other words: Illusion is more than tricks, illusion is tricks with **meaning**. Illusion is **more than tricks** because it has meaning/drama/themes to **motivate** the audience to make their own assessment and guesses about the illusion: To gain and keep their interest for more than the duration of the trick/illusion. Showmanship is largely the "dramatic elements" of illusion, the facilitator of drama and meaning. By putting on a show, using theatricals etc. the theme or the meaning can more easily be communicated due to several matching/similarly themed elements in the performance. **Note:** Playcentric games and development is "illusions" which makes the player immerse and imagine his/her own added meaning to the product. **Note 2:** Different Kickstarter videos: Good videos sell more.

Related questions	**Question 56:** What is conjuring (and how does it relate to pitching)? **Question 58:** What is the actor's rule?
Related curriculum	Source: Neims (1969): Magic and Showmanship. A Handbook for Conjurers. Game Design Workshop: Ch. 14 (showmanship and design document presentation), Ch. 16 (selling out).

Question number	58
Question	What is the actor's rule?
Answer Summary	As a performer, never turn your back on an audience.
Disposition	•
Full answer	Turning your back on the audience or somehow losing eyesight connection with them is potentially a loss of control and connection. **Extracurricular info:** Facial expressions and eye movement etc. are cultural signifiers of several expressed feelings and interpersonal relations. Suffice to say is that some form of eye contact (or the illusion of it) signifies sincerity and good intentions in most western cultures (in a mass communication context). Hence, always turn your front towards the audience, and never turn too much to either side. **Note:** When pitching or performing: remember the cultural context. The difference lies in who you are pitching for.
Related questions	**Quesiton 56:** What is conjuring (and how does it relate to pitching)? **Question 57:** Interest depends on meaning, but how does that relate to magic (illusions, red.) and showmanship?
Related curriculum	Source: Neims (1969): Magic and Showmanship. A Handbook for Conjurers. Game Design Workshop: Ch. 14 (showmanship and design document presentation), Ch. 16 (selling out).

Question number	59
Question	What are cultural probes?
Answer Summary	A design-led approach to understanding users through evocative tasks that obtain inspirational responses from people.
Disposition	•
Full answer	Cultural probes is a technique used to inspire ideas in a design process. It serve as a means of gathering inspirational data about the peoples, lives, values and thoughts. The Probes are small packages that can include any sort of artifact (like a map, postcard, camera or diary) along with evocative tasks, which are given to participants to allow them to record specific events, feelings or interactions. The aim is to elicit inspirational responses from people, in order to understand their culture, thoughts and values better, and thus stimulate designers imaginations. **Note:** Is subjective - getting a general idea of the environment that e.g. a game is played in. Is very ambiguous.
Related questions	**Question 60:** In which way(s) are they useful for design? **Question 61:** What should 'probology' be?
Related curriculum	(Gaver) Cultural Probes and the Value of Uncertainty

Question number	60
Question	In which way(s) are they useful for design?
Answer Summary	Sometimes the design ideas can be traced back to Probe returns, if not, referring to the returns often helps explaining the issues and predicting user preferences.
Disposition	•
Full answer	The stories that emerge from the Probes are rich and multilayered, integrating routines with aspirations, appearances with deeper truths. They give us a feel for people, mingling observable facts with emotional reactions. The Probes simultaneously make the strange familiar and the familiar strange. Sometimes the trajectory from Probes to designs is relatively straightforward, and design ideas can clearly be traced back to Probe returns. Even if the designs are not dictated by Probe returns, referring to the returns often helps explaining the issues the designs address and the experiences they encourage. Moreover, after producing prototype systems, the Probe returns allow us to predict with confidence which system the volunteers might prefer, just as we might predict which item in a shop our friends might like. The Probes give us a deep sense of familiarity and engagement with the people who might use the designs, and this nourishes the design process at every stage. **Note:** Mobile game expected to be played at public transport, but was mostly played at a couch.
Related questions	**Question 59:** What are cultural probes? **Question 61:** What should 'probology' be?
Related curriculum	(Gaver) Cultural Probes and the Value of Uncertainty

Question number	61
Question	What should 'probology' be?
Answer Summary	An approach, using Probes to encourage subjective engagement, empathetic interpretation and a pervasive sense of uncertainty.
Disposition	•
Full answer	If Probes are collections of materials posing tasks to which people respond over time, then "probology" is an approach that uses Probes to encourage subjective engagement, empathetic interpretation, and a pervasive sense of uncertainty as positive values for design. Probes, the technique, may be appropriated for a variety of different ends. **Note 1:** The way of doing it is "more strict", but what probe and its purpose is not decided. **Note 2:** Mobile game expected to be played at public transport, but was mostly played at a couch.
Related questions	**Question 59:** What are cultural probes? **Question 60:** In which way(s) are they useful for design?
Related curriculum	(Gaver) Cultural Probes and the Value of Uncertainty

Question number	62
Question	Why is success or failure difficult to measure?
Answer Summary	• No clear distinction of what it means to succeed • Variation in how people achieve a meaningful relationship with a given design • Success depends on objectives and goals

Disposition	• Financial success and creative failure
	  ○ COD
	• Creative success and financial failure
	  ○ SWTOR

Full answer	Some systems are designed to achieve predefined goals such as allowing some task to be completed or problem to be solved. This permits the establishment of criteria against which system success can be measured. The system reported in the article, in contrast, embodies a style of design, and design research, in which human-machine interaction is seen as locally situated meaning making and the role of design as the provision of multilayered resources for this process. The open-endedness of this approach raises challenges for how systems should be evaluated, because what it means to succeed, and indeed the dimensions relevant for success, may vary widely depending on how people achieve a meaningful relationship with a given design. **Note 1:** Succeed and failure can be the same thing? **Note 2:** I have not failed. I've just found 10,000 ways that won't work. (Thomas Edison on creating the first lightbulb)
Related questions	**Question 63**: What are the symptoms for success or failure?
Related curriculum	(Gaver) Anatomy of a Failure

Question number	63
Question	What are the symptoms for success or failure?
Answer Summary	Engagement, reference, accommodation, surprise and insight.
Disposition	•
Full answer	They can be divided into four themes: **Engagement:** Volunteers engage with a design prototype. The evidence is not only the explicit declaration of liking (might be out of politeness), but also the enthusiasm about discussing it, persistence in use, suggestions for new enhancements that reflect the original design intentions, showing the prototype to friends, disappointment that the field trial must end and expressions of desire to own the prototype. Failure can be seen through puzzled hesitancy and no interest in discussing the prototype and their experience with it. **Reference:** Volunteers are discussing prototypes through reference to other technologies or experiences that they like (successful prototypes) or the ones that they disliked or about which they were suspicious (failed prototypes). **Accommodation:** The degree to which people accommodate successful designs to their existing domestic activities and rhythms, finding patterns of use within the activities of home. **Surprise and insight:** Successful systems continue to occasion new surprises and new insights over the course of encounters with them. New content might appear, or unfamiliar, potentially rare, behaviours might be observed, and this might give rise to new perceptions of the

	system or the things it indicates. Equally, people may find new meanings for relatively rich but unchanging experiences. Without new surprises there is little incentive to persist with the system and accommodate it into ongoing routines, and without such accommodation and engagement new insights were unlikely to be pursued.
Related questions	**Question 62:** Why is success or failure difficult to measure?
Related curriculum	(Gaver) Anatomy of a Failure (p. 2219 -2220)

Question number	64
Question	What is the role of emotion in the context of technologies?
Answer Summary	We perceive technology through certain embedded emotions. To design good user-centered technology, the notions of culture and emotions need to be considered.
Disposition	• Traditional view: Task performance • Emotions and user experiences • Emotions and interaction: End result **and** enacted process
Full answer	Emotions are relevant to tech and game development in the sense that they shape the way we interact with and experience technology. GPS and navigational technology is **traditionally** seen from a point of view of **task performance** (how to practically do something). However, perception of space and navigation is very much based on the places we go to. For example, the notions of home or place of study are also related to emotions rather than just task performance. **Emotions** shape the way we perceive **user experiences**. Is the user experience of a game good, is it bad? Those are not only task performance related objective evaluations, but our perception of phenomena through our "own lenses" of culture and emotions. Hence, technology and game design need to take into account how products are perceived through emotions and culture as well as through practical task performance. Emotions also shape the way we **interact** with technology (human-computer interaction etc.) not only in user experience recollections (after the incident has taken place), but also while we perform the incidents. Think the gulfs of execution and evaluation (Norman). While we work with technology, we set immediate goals and evaluate while interacting, This posts a design implication that technology should be designed considering

	emotions **while** interacting with it. Not just for final evaluation of product/user experience reviews. After all, play is **enacted** while playing, not only as an experience summary after the play experience is done (the digital fallacy) **Note 1:** Culture is keyed to the concept of tech and emotions, but it will not be elaborated here. See the wiki. **Note 2:** Users see technology through their own cultural lens.
Related questions	**Question 11:** What does game activity as 'enacted experiences' mean? **Question 13:** Explain games as social fictions **Question 59:** What are cultural probes? **Question 60:** In which way(s) are they useful for design? **Question 61:** What should probology be?
Related curriculum	Source: *Dourish. Responsibilities and Implications: Further thoughts on Ethnography and Design.* Games as activity: correcting the digital fallacy